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COVER STORY

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ECONOMY

- ❖ **GST COLLECTION IN OCTOBER CROSSES ₹1.3 LAKH CRORE, SECOND HIGHEST EVER**
- ❖ **HOW INDIA'S INFORMAL ECONOMY IS SHRINKING, AND WHY THAT'S GOOD NEWS IN THE LONG TERM**
- ❖ **RBI ISSUES REVISED PCA FRAMEWORK FOR BANKS**
- ❖ **RBI COMMITS TO INTEGRATE CLIMATE-RELATED RISKS INTO FINANCIAL STABILITY MONITORING**
- ❖ **CENTRE TO UTILISE REVENUE SURGE TO FUND WELFARE PROGRAMMES**
- ❖ **INDIA'S SHARE OF TRADE AMONG DEVELOPING NATIONS DIPS**
- ❖ **STUDIES SHOW PANDEMIC- URBAN INDUCED INFLATION HIT POOR HARDEST**
- ❖ **'INDIA NOW AHEAD OF CHINA IN FINANCIAL INCLUSION METRICS'**
- ❖ **RBI TO ORGANISE ITS FIRST GLOBAL HACKATHON WITH THEME 'SMARTER DIGITAL PAYMENTS'**
- ❖ **TAXMAN MAY USE BLACK MONEY ACT TO TRACE CLOSED FOREIGN ACCOUNTS**
- ❖ **CBIC ASKS GST OFFICERS TO BLOCK ITC ONLY ON BASIS OF EVIDENCE, NOT SUSPICION**
- ❖ **PM MODI LAUNCHES TWO INNOVATIVE CUSTOMER CENTRIC INITIATIVES OF RBI- OPENS ONE TRILLION DOLLAR GOVT BOND MARKET TO INDIVIDUAL INVESTORS**
- ❖ **CURRENT ACCOUNT DEFICIT TO HIT 1.4% OF GDP BY MARCH: BARCLAYS**
- ❖ **EXPERTS CALL FOR CRYPTO WITH PROPER REGULATION**
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- ❖ **SIDBI LAUNCHES SECOND WINDOW OF SWAVALAMBAN CHALLENGE FUND**
- ❖ **RBI PANEL MOOTS LAW TO REGULATE DIGITAL LENDING**
- ❖ **CREDIT LINKED CAPITAL SUBSIDY SCHEME FOR SERVICES SECTOR**
- ❖ **RBI RELEASES DRAFT SCHEME FOR AMALGAMATION OF PMC BANK, UNITY SMALL FINANCE BANK**
- ❖ **ROLE REVERSAL: INDIA INC 'LENDING' TO BANKS VIA AT-1 BONDS**

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Longer term, better impact – CBI, Director

The Central government promulgated ordinances to give a five-year tenure to heads of the Central Bureau of Investigation (CBI) and the Enforcement Directorate (ED).

Structure of CBI

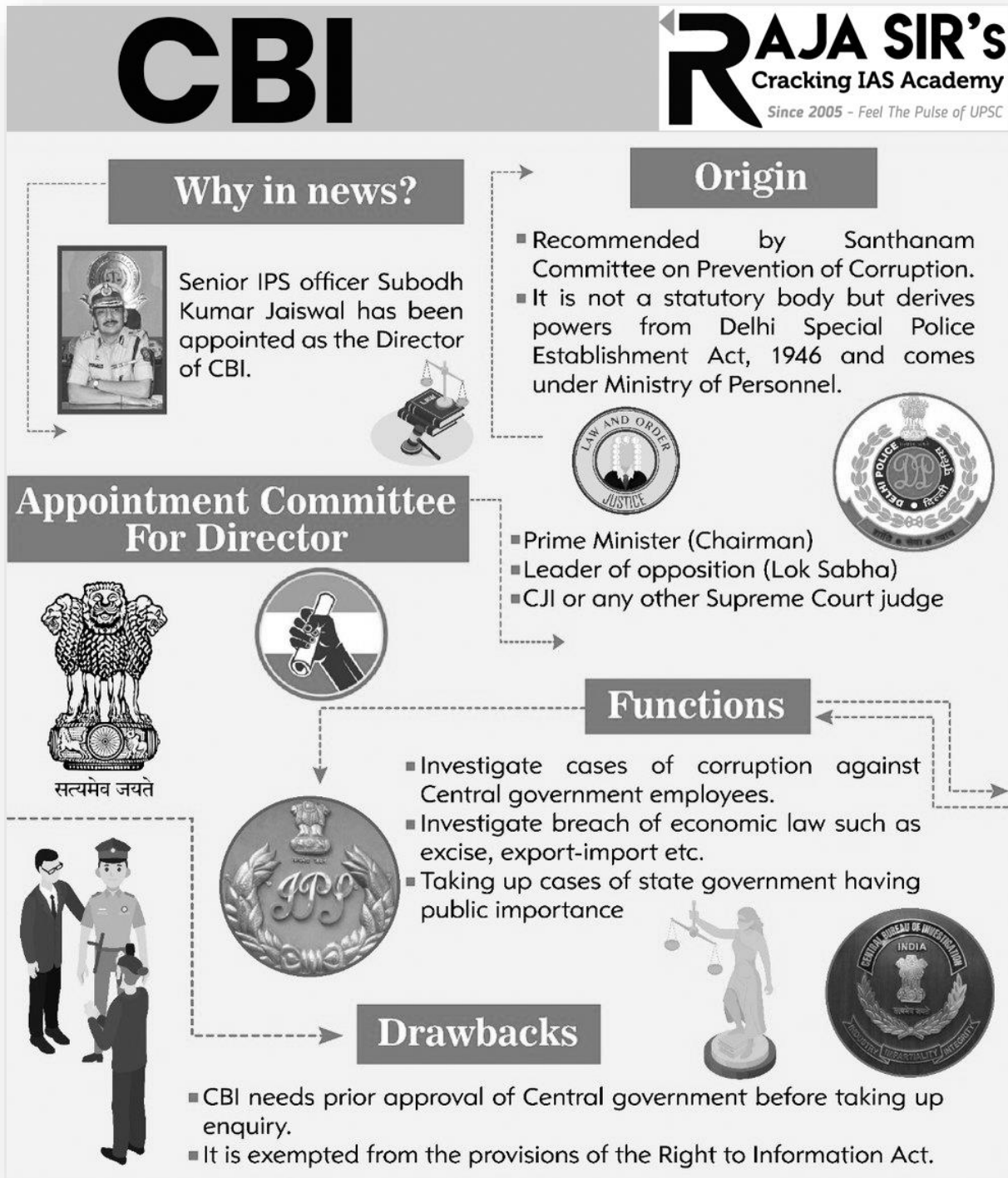
- It owes its origin to the Special Police Establishment (SPE), which was established by the colonial government in 1941 through an executive order to deal with corruption involving war-time purchases and supplies.
- In 1946, the then government enacted the **Delhi Special Police Establishment Act** to give the organisation a statutory cover.
- Later, based on the recommendations of the **Santhanam Committee on Prevention of Corruption**, CBI was established by a resolution of the **Ministry of Home Affairs**.
- Later, it was **transferred to the Ministry of Personnel**.
- The **CBI is not a statutory body**. It derives its powers from the Delhi Special Police Establishment Act, 1946.
- The CBI is the main investigating agency of the Central Government.
- It works under the overall superintendence of Central Vigilance Commission in matters related to the **Prevention of Corruption Act, 1988**.

As on date, the CBI has jurisdiction to investigate offences pertaining to 69 Central laws, 18 State Acts and 231 offences in the IPC.

Director of CBI

- The CBI is headed by a Director.
- The Director of CBI as Inspector General of Police, Delhi Special Police Establishment, is responsible for the administration of the organisation.
- The Director of the CBI is appointed as per section 4A of the **Delhi Special Police Establishment Act of 1946**.
- He/she may not be transferred except with the previous consent of the high-level committee.

- The **Director of CBI has been provided security of two-year tenure in office by the CVC Act, 2003 (Vineet Narain Case).**
- The **CVC Act** also **provides** the mechanism for the selection of the **Director of CBI** and other officers of the rank of SP and above in the **CBI**.
- CBI appointments are guided more by the **Vineet Narain judgment, the CVC**



Act and the Lokpal Act.

Appointment of CBI Director

- The Director of CBI has been provided **security of two-year tenure** in office by the CVC Act, 2003 (**Vineet Narain Case**).
- The **Lokpal and Lokayuktas Act (2013)** amended the **Delhi Special Police Establishment Act (1946)** and made the following changes with respect to appointment of the Director of CBI:
 - According to the said section, a CBI director shall be appointed by the central government on the recommendation of a committee consisting of:
 - **The Prime Minister as its chairperson;**
 - **The Leader of Opposition in Lok Sabha/leader of the single largest opposition party in Lok Sabha; and**
 - **The Chief Justice of India or a judge of the Supreme Court nominated by the CJI — the latter two as committee members.**

Further, the committee is required to recommend a panel of officers on the basis of seniority, integrity and experience in the investigation of anti-corruption cases, chosen from amongst officers belonging to the Indian Police Service constituted under the All-India Services Act, for being considered for appointment as CBI Director.

Amendment in Acts -

- **Delhi Special Police Establishment Act (1946)**- amendment was made under this act to change the tenure of CBI director
- **Central Vigilance Commission Act (2003)**- by amending this act changes were brought to tenure of ED director
- **Fundamental Rules, 1922**
 - Fundamental rules are guiding principles applicable to all public servants and cover the full range of their in-service and post-retirement work scenarios.
 - It prohibits the extension of service to any public servant beyond the retirement age of 60 years, except a few, including the Secretary to the Cabinet, those engaged in budget-related work, eminent scientists, the Cabinet Secretary, the heads of the IB and RAW in addition to the director of the CBI, among others with certain conditions.
 - Amendment was made in rules to bring them in sync with amendments to Delhi Special Police Establishment Act and Central Vigilance Commission Act

Key provisions

- Earlier media CBI director could be appointed for two years, now the ordinance extends it to **three more years thus a total of 5 years tenure**. However, no extension can be given after 5 years

- The original fundamental Rule 56(d) included top functionaries like home secretary, defence secretary, foreign secretary, chief of intelligence Bureau and research and analysis wing whose term could be extended by government to maximum of two years and beyond
- The amendment to the rule mentions directors of ED as well as CBI along with defence secretary, home secretary, director of Intelligence Bureau and R&AW secretary

Pros of the ordinances

- **A two-year tenure for a CBI head is too short** for any officer to make an impact on the organisation. The Federal Bureau of Investigation chief in the U.S. gets a 10-year term.
 - 5-year tenure provides them the **much-needed continuity** that a Director needs in an outfit charged with the task of conducting highly sensitive investigations, which sometimes impinge on the longevity and stability of a democratically elected government.
- **Better Investigation of cases-** the director will have an opportunity to pursue cases longer and thus can help in taking logical conclusions.
- **Transparency in extension-** All extensions will have to be approved by the PM-led committee where the Chief Justice of India and Leader of Opposition will also have an opinion

Cons of the ordinance:

- **One-Year extensions:** At the end of the mandatory two-year tenure, the government will have to issue orders granting one-year extensions at a time.
 - It would have been better if there was a straight five-year term for the Director.
 - The rule about three annual extensions can be misused by a tendentious government.
 - It may be construed as a reward for an obliging Director.
- **Promulgation of ordinances-** Article 123 of Indian constitution allows centre and state governments to frame laws through ordinance making however, constitution makers envisaged a much restrained use of this practice.
- **DC Wadhwa Case (1986)-** the Supreme court clarified that Power to promulgate ordinance is essentially a party to meet an extraordinary situation and should not be perverted to serve political ends

Challenges for autonomy of CBI

- **Dependence on State governments:** Successive chiefs have suggested the drafting of a CBI Act to ensure that the organisation is not dependent on the State governments, many of which have withdrawn consent for the CBI to function in that State.
 - The Supreme Court has recently made references to this objectionable development.

- Eight States — West Bengal, Maharashtra, Kerala, Punjab, Rajasthan, Jharkhand, Chhattisgarh, and Mizoram — have withdrawn the general consent.
- **The government is sometimes arbitrary in choosing the Director.** It is not rare to see temporary appointments given to favour some individuals. Seniority was often ignored in appointments and Directors were removed frequently.

Need for an independent CBI

- **Vineet Narain Case (1997)**- in the landmark judgement the supreme Court held that the agencies need permanent insulation against external influence and down a dictum that directors of CBI & ED should have a minimum tenure of two years.
- **Any dishonest interference in the working of the organisation** interrupts straightforward investigations. The government will therefore have to show enormous restraint in its interactions with the head of the CBI.
- As a measure of accountability, the Director will have to keep the government informed of all major administrative decisions.
- He or she should inform the executive but **not take orders from it.**

The CBI should be made to derive its authority for launching investigations from its own statute instead of depending on the Criminal Procedure Code, which makes the CBI a police organisation. Apt analogies are the Income Tax Act and the Customs Act, which enable the officers of the two departments to act on their own.



GST COLLECTION IN OCTOBER CROSSES ₹1.3 LAKH CRORE, SECOND HIGHEST EVER



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Recently, India's GST collections in October 2021 soared to ₹1.3 lakh crore, which is the second highest monthly GST collection ever.

Highlights:

- Gross **GST revenue in October this year** is **₹1,30,127 crore** along with a 24% year-on-year jump and a 36% increase over October 2019.
- **Goods and Services Tax (GST)** revenue in October surged to **₹1.3 lakh crore**, the second-highest since the new tax was launched in July 2017.

GST (Goods and Services Tax)

- It is an **indirect tax** (or consumption tax) used in India on the supply of goods and services.
- It has **subsumed several taxes** including central excise duty, services tax, additional customs duty, surcharge and state-level value added tax.
- The tax came into effect from **1 July 2017** through the **implementation of the One Hundred and First Amendment of the Constitution** of India.
- The GST is imposed at every step in the production process, but is meant to be refunded to all parties in the various stages of production other than the final consumer and as a destination-based tax.

- Revenue shortfalls arising from the transition to the GST regime is being from a pooled GST Compensation Fund **for five years that is set to end in 2022.**
- Goods and services are divided into five different tax slabs for collection of **tax: 0%, 5%, 12%, 18% and 28%.**
 - Petroleum products, alcoholic drinks, and electricity are not taxed under GST and instead are taxed separately by the individual state governments.
- GST is spearheaded by the **GST Council**, which has **34 members** and is **headed by the Union Finance Minister.**

Types of GST:

- **Central Goods and Service Tax:** Tax levied on intra- State supplies of both goods and services by the Central Government and is governed by the CGST Act.
- **State Goods and Service Tax:** Tax levied on the same intra-State supply but will be governed by the State Governments.
- **Integrated Goods and Service Tax:** Tax levied on all inter-State supplies of goods and/or services and is governed by the IGST Act.

HOW INDIA'S INFORMAL ECONOMY IS SHRINKING, AND WHY THAT'S GOOD NEWS IN THE LONG TERM

Recently, a report on India's informal economy was launched by State Bank of India.

Highlights:

- India's **informal economy has shrunk around 15-20 % of the formal GDP** as against 52 % three years ago following the adoption of GST.
- At least Rs 13 lakh crore has come into the **formal economy** through various channels over the last few years.
- Since 2016, certain measures, **accelerated the digitisation** of the economy and the emergence of the gig economy, have facilitated higher formalization at rates that are much faster than that of most other nations.
- Around **93 per cent** of India's workforce is part of the informal economy (NSSO 2014).
 - The pandemic has impacted all sectors, it has been felt more by the informal sector.
- **The informal size** of the trade, hotels, transport, communication, and broadcasting sectors, is 40 per cent.
 - The informal sector in construction is around 34 per cent, and in public administration around 16 per cent.
 - **Manufacturing sector** has an informal component of around 20 per cent.
- The government's formalization efforts have led to almost 100 per

cent formalization in finance, insurance, and real estate.

- Since FY18, **agriculture** has been formalised by 20-25 per cent due to the increasing penetration of KCC credit.
- In the agriculture sector informal share is now in the range of 70-75 per cent.

Government efforts towards Formalization:

Employees Provident Fund Organisation (EPFO)

- One of the sources to analyse the extent of formalization is the monthly **EPFO payroll**.
- It provides data on establishments remitting first **ECR** (Electronic Challan-cum-Return) in a particular month.

E-Shram Portal

- It is the first national database of **unorganised workers**, on which 5.7 crore workers have registered until October 30.
 - Top four states accounted for 72 per cent of total registrations, with West Bengal on top followed by Odisha and Uttar Pradesh.
 - **62 per cent of workers** are in the 18-40 age group, and 92 per cent have a monthly income of less than Rs 10,000.
- Workers from the **agriculture sector** account for 55 per cent of registration, followed by the construction sector (13 per cent).
 - Of the 5.7 crore **registered workers**, 81.2 per cent have bank accounts, but only 24 per cent of them have Aadhaar-linked bank accounts.

- **E-Shram** is a big step towards the formalization of employment.
- The rate of formalization of unorganised labour due to e-Shram is around 3 per cent of GDP in just 2 months.

Usage of Kisan Credit Cards (KCC)

- In agriculture, the **usage of KCC cards** has increased significantly.
- Around Rs 4.6 lakh crore formalization accounted only through KCC route, with more marginalized farmers coming under the banking sector ambit through such usage.

RBI ISSUES REVISED PCA FRAMEWORK FOR BANKS

The RBI on Tuesday issued a revised Prompt Corrective Action (PCA) framework for banks to enable supervisory intervention.

Highlights:

- **Capital, asset quality and leverage** will be the key areas for monitoring in the revised framework.
- The revised PCA framework will be effective from January 1, 2022.

Prompt Corrective Action (PCA) framework:

- Prompt Corrective Action Framework refers RBI's **watchlist of weak banks**. RBI **imposes restrictions** like curbs on lending on such banks.
- The PCA Framework applies **only to commercial banks** and **does not cover cooperative banks and non-banking financial companies**.

Objective of PCA framework:

- To enable **supervisory intervention** at an appropriate time and require the supervised entity **to initiate and implement remedial measures** in a timely

manner, so as to restore its financial health.

When was PCA introduced?

- The RBI's PCA Framework was introduced in **December 2002** as a structured early intervention mechanism.
- The revised PCA Framework was issued by the RBI in 2017.

What are the types of restrictions placed under a PCA?

- Under the Prompt Corrective Action Framework there are two types of restrictions
- **Mandatory:** This category includes the restrictions on dividend branch, extensions and director's compensations.
- **Discretionary:** This includes restrictions on lending and deposit.

When exactly does a bank fall into this list?

- A bank will be placed under PCA framework based on the audited Annual Financial Results and the Supervisory Assessment made by RBI.
- However, RBI may impose PCA on any bank during the course of a

year in case the circumstances so warrant.

- The **parameters** that **invite corrective action** from the central bank are:
 - Capital to Risk weighted Asset Ratio (CRAR)
 - Net Non-Performing Assets (NPA) and
 - Return on Assets (RoA)
 - Leverage ratio

What the banks under PCA should do?

- When a bank is brought into the PCA framework, it should **face restrictions on distributing dividends, remitting profits and even on accepting certain kinds of deposits.**

- Besides, there are restrictions on the expansion of branch network, and the lenders need to maintain higher provisions, along with caps on management compensation and directors' fees.
- Some of the structured and discretionary actions that could be taken by the Reserve Bank are:
 - Recapitalization
 - Restrictions on borrowing from inter-bank market to steps to merge/amalgamate/liquidate the bank
 - Impose moratorium on the bank if its CRAR does not improve beyond etc.

RBI COMMITS TO INTEGRATE CLIMATE-RELATED RISKS INTO FINANCIAL STABILITY MONITORING

The Reserve Bank of India (RBI) published Statement of Commitment to Support Network for Greening the Financial System (NGFS).

Highlights:

Aim: to identify vulnerabilities in business models of supervised entities.

Objectives:

- To **build awareness about climate-related risks** among regulated financial institution.
- To **spread knowledge about issues relating to climate change** and methods to deal with them accordingly.

Network for Greening the Financial System:

- It is a network of **83 central banks** and financial supervisors.
- Launched: **Paris in 2017.**

- **Aim:** to accelerate the scaling up of green finance and develop recommendations for central banks' role for climate change.
- **Objectives:**
 - to help **strengthening the global response** required
 - to **meet the goals of the Paris agreement**
 - to enhance **the role of the financial system** to manage risks and
 - **to mobilize capital for green and low-carbon investments** in the broader context of environmentally sustainable development.

What is Green Finance?

Green finance comprises:

- **financing of public and private green investments** (including preparatory and capital costs) in the following areas
 - **environmental goods and services** (such as water management or protection of biodiversity and landscapes)
 - **prevention, minimization and compensation of damages to the environment and to the climate** (such as energy efficiency or dams)
- **financing of public policies** (including operational costs) that encourage the implementation of environmental and environmental-damage mitigation or adaptation projects and initiatives (for example: feed-in-tariffs for renewable energies)

- **components of the financial system that deal with green investments**, such as the Green Climate Fund or financial instruments for green investments (e.g., green bonds and structured green funds).
 - The US, China and France are the three biggest issuers of green bonds.

Projects that fall under the green finance include:

- **Renewable energy** and energy efficiency
- **Pollution prevention and control**
- **Biodiversity conservation**
- **Circular economy initiatives**
- **Sustainable use of natural resources and land**

CENTRE TO UTILISE REVENUE SURGE TO FUND WELFARE PROGRAMMES

India will utilise a big jump in revenue collection to fund welfare programmes instead of reducing its fiscal deficit target or lower borrowing.

Highlights:

- For the current financial year, the government expects the fiscal deficit at **6.8 % of GDP or 15.45 lakh crore**.
- The fiscal deficit for 2020-21 was 9.3 % of GDP.
- **Government of India** will provide an additional Rs 50,000 crore each for its free food drive and an incentives programme for exporters.
- It has approved Rs 40000 crore in **fertiliser subsidies**.

Fiscal Deficit?

- **Fiscal Deficit** is the difference between the total income of the government (total taxes and non-debt capital receipts) and its total expenditure.
- A fiscal deficit occurs when the **government's expenditure** exceeds its income.
- A recurring high fiscal deficit means that the government has been spending beyond its means.

Components of Fiscal Deficit:

1. Revenue Receipts of the Government

- Corporation Tax
- Income Tax
- Custom Duties

- Union Excise Duties
- GST and taxes of Union territories.

2. Non-Tax Revenue

- Interest Receipts
- Dividends and Profits
- External Grants
- Other non-tax revenues
- Receipts of union territories

How it affects the Economy?

- A fiscal deficit will tend to increase overall **government debt**.
- As government debt rises, so do interest rates.
- When government borrows more, it needs to offer higher rates to attract investors
- This is because a higher debt increases the likelihood of a potential default.

INDIA'S SHARE OF TRADE AMONG DEVELOPING NATIONS DIPS

According to the World Trade Organization (WTO), India slipped from **4th to 8th position** each in its share of merchandise **imports and exports** by developing countries to the rest of the world.

Highlights:

- **India improved** to the second position among exporting developing countries in commercial services trade.
- **For imports**, the country remained in the third position.
- India's share in **merchandise exports** by developing countries dropped to 3.6% in 2020 from 3.9% in 2018.
- The share in **merchandise imports** by developing countries fell to 5.2% from 6.4%.

Service Exports:

- India's exports contracted 14.7% to \$276.5 billion in 2020.
- **In service exports**, India's share rose to 14% in 2020 from 11% in 2018, while in services imports, its share increased to 9.4% from 8.1%.

- Among the top 10 export destinations of developing countries, India slipped from the ninth position in 2018 to the 10th in 2020.

Imports:

- India's **imports dipped** by 23.2% to \$373.3 billion as the pandemic disrupted supply chains and recession in many developed countries reduced demand for goods as a result
- **Merchandise exports** of developing economies dropped by 6% in nominal terms in 2020, less than exports of the rest of the world (-9%).
- In 2020, China and India, saw slower declines than other developing economies.
- **Expanding IT services** and business services (+5%) helped India's services.
- Before the pandemic, these sectors accounted for 65% of India's services exports.

Merchandise trade of Developing Countries

- **Merchandise exports** of developing economies continue to be dominated by exports of manufactured goods.
- China, South Korea, and Mexico remained the top merchandise traders among developing economies.
- **China** being the leading exporter with a share of 34% in 2020, followed by South Korea (7%), Mexico (5%) and Singapore (5%).
- Out of the seven other top 10 exporters, **India** (-15%), Turkey (-7%), Thailand (-2%) suffered declines in manufacturing exports.

Committee on Trade and Development:

- The Committee on Trade and Development (CTD) serves as a focal point for the consideration and coordination of work on development in the WTO.
- It considers a broad range of issues relating to the trade of developing countries.

Functions:

1. Technical Assistance

- The CTD is mandated to provide guidelines for the technical assistance activities of the WTO and to review periodically these activities.

2. Special Provisions

- The **Doha Ministerial Declaration** states that all special and differential treatment (S&D) provisions for developing countries will be reviewed
 - To strengthening them and making them more precise, effective, and operational.

3. Aid for Trade

- The **Aid for Trade** is a biennial work programme, guides the work of the Committee with workshops held regularly on topics of interest to WTO members.

4. Regional Trade Agreements

- The Committee serves as the forum for the notification and review of **regional trade agreements** (RTAs) between developing countries.

STUDIES SHOW PANDEMIC- URBAN INDUCED INFLATION HIT POOR HARDEST

As per two recent studies, the urban poor felt inflation's heat more because they spend a larger share of their budgets on items that got costlier.

Inflation:

- It means the rate of increase in prices over a given period of time.

Causes of inflation:

- **Monetary Policy:** It determines the supply of currency in the market. Excess supply of money

leads to inflation. Hence decreasing the value of the currency.

- **Fiscal Policy:** It monitors the borrowing and spending of the economy. Higher borrowings (debt), result in increased taxes and additional currency printing to repay the debt.

• **Demand-pull**

Inflation: Increases in prices due

to the gap between the demand (higher) and supply (lower).

- **Cost-push Inflation:** Higher prices of goods and services due to increased cost of production.
- **Exchange Rates:** Exposure to foreign markets is based on the dollar value. Fluctuations in the exchange rate have an impact on the rate of inflation.

Types:

- **Demand-pull Inflation:** Rising demand in economy.

- **Cost-push Inflation:** It occurs when the cost of production increases.
- **Core Inflation:** Inflation rate excluding temporary factors.
- **Hyperinflation:** Inflation over 1000% a year
- **Wage inflation:** Inflation caused by rising real wage.
- **Imported Inflation:** Inflation caused by rising price of import, e.g., due to devaluation.

‘INDIA NOW AHEAD OF CHINA IN FINANCIAL INCLUSION METRICS’

India is now ahead of China in financial inclusion metrics, with rise in mobile and Internet banking transactions.

Financial inclusion (FI):

- Financial inclusion is defined as the availability and equality of opportunities to access financial services.
- It refers to a process by which individuals and businesses can access appropriate, affordable, and timely financial products and services.
 - These include banking, loan, equity, and insurance products.

Efforts by India to boost Financial Inclusion - Pradhan Mantri Jan Dhan Yojana:

- **National Mission for Financial Inclusion** aims to ensure access to financial services in an affordable manner.
- Under the scheme, a **basic savings bank deposit (BSBD)** account can be opened in any bank branch or Business Correspondent (**Bank**

Mitra) outlet, by persons not having any other account.

- One basic savings bank account is opened for unbanked person.

Integration of Financial Services:

- **Jan Dhan- Aadhar- Mobile Trinity (JAM Trinity)** has a positive impact on the banking sector and financial inclusion in the country.
 - JAM trinity refers to the government of India initiative to link Jan Dhan accounts, mobile numbers and Aadhaar cards of Indians to **plug the leakages of government subsidies.**
- The Aadhar-enabled payment system (AEPS) enables an Aadhar enabled bank account (AEBA) to be used at any place and at any time.

Digital India:

- Under Digital India, information and communication technology has provided convenient tools

to **spread awareness about financial schemes and services.**

- Digital payments have been made secure with the strengthening of the **Unified Payment Interface (UPI) by National Payments Corporation of India (NPCI).**
- The payment system has been made more accessible due to offline transaction-enabling platforms, like **Unstructured Supplementary Service Data (USSD)**, which makes it possible to use mobile banking services without internet, even on a basic mobile handset.

International Forums:

- India has also been actively engaged with other countries and multilateral fora viz. **Global Partnership for Financial Inclusion (GPII)** and **Organization for Economic Co-operation and Development (OECD).**

Basic Savings Bank Deposit Account or No-frills Account:

- The Basic Savings Bank Deposit (BSBD) Account has been designed as a savings account which will offer **certain minimum facilities**, free of charge, to the holders of such accounts.

National Strategy for Financial Inclusion 2019-2024:

- The strategy has been prepared by RBI under the **aegis of the Financial Inclusion Advisory Committee.**
- The strategy aims to provide **access to formal**

financial services in an **affordable manner**, broadening & deepening financial inclusion and promoting financial literacy & consumer protection.

Project Financial Literacy:

- The aim of this initiative is to **create awareness** about financial products and services, good financial practices, going digital and consumer protection.

RBI and National Bank for Agriculture and Rural Development (NABARD):

- Opening of bank branches in remote areas
- Issuing Kisan Credit Cards (KCC)
- Using information technology to spread awareness and literacy
- Linkage of self-help groups (SHGs) with banks
- Increasing the number of automated teller machines (ATMs)

Securities and Exchange Board of India (SEBI):

- **Pocket Money** is a financial literacy initiative by the Securities and Exchange Board of India (SEBI) and the National Institute of Securities Markets (NISM).
- The objective of this is to **help school-going children** to understand the **importance of financial management** and the value of money.

Banks:

- The **Bank Mitra / Banking Correspondent Agent (BCAs)** at the Grass Root level has now become the extended arm of the Banks.

- These BCAs have a vital role in successful implementation of Financial Inclusion and PMJDY.

Road Ahead:

Set targets for usage

- An **initial target** could be set for account holders to use their accounts at least once every 90 days.

Ensure agents are transaction ready

- **Small corner stores should be made** as agents for banks where people can deposit and withdraw money from their accounts and transact.
- However, not all those agents have equipment or are being paid enough by banks to conduct transactions.

Build an acceptance network

- The acceptance network for debit cards is virtually non-existent.
- There are solutions to develop that network more rapidly and India could work with global partners to make that happen.

Emphasize mobile

- The financial inclusion campaign should also make a bigger effort to emphasize mobile channels that have been a catalyst for financial inclusion elsewhere.

Leverage payment banks

- Allowing Payments Banks to process government payments would break the monopoly of public sector banks and be a boon for customers.

Index on Financial Inclusion:

- The **Reserve Bank of India (RBI)** introduced the Financial Inclusion Index (FI-Index).
- It will **assess the quality and extent of financial inclusion** in India and will be published every July for the previous financial year.
- There are **three** broad parameters with certain **assigned weights**:
 - Access (35 percent)
 - Usage (45 percent)
 - Quality (20 percent).
- Each parameter consists of various dimensions computed based on **97 indicators**.
- The FI-Index **doesn't have a base year**.
- The FI-Index for the year ended March 2021 is 53.9 as against 43.4 for the year ended March 2017.
 - A 100 on this score would mean that all customers are fully aware of all kinds of financial services, have access to all products and do not feel constrained to make transactions.

RBI TO ORGANISE ITS FIRST GLOBAL HACKATHON WITH THEME 'SMARTER DIGITAL PAYMENTS'

The Reserve Bank of India (RBI) announced its first global hackathon '**HARBINGER 2021** – Innovation for Transformation with the theme '**smarter digital payments**'.

Objectives:

- Identify and develop solutions that have the potential to make **digital payments accessible to the underserved**.
- Enhance the **ease of payments** and user experience.

- **Strengthening the security** of digital payments and promoting customer protection.
- Solve the problem in the payment and settlement systems by creating;

- non-mobile digital payment solutions for **converting small ticket cash transactions to digital mode.**
- **Context-based retail payments** to remove the physical act of payment.

TAXMAN MAY USE BLACK MONEY ACT TO TRACE CLOSED FOREIGN ACCOUNTS

Income Tax Appellate Tribunal ruled that Black money act can be used against a holder of an old, undisclosed offshore bank account that continues to exist after 2015 if he/she has failed to report it prior to the existence of this law.

Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act:

- It is an act to **curb black money**, or undisclosed foreign assets and income and imposes tax and penalty on such income.
- It came into effect from 1 July **2015**.
- The law was passed to **overcome the limitations** in existing statutes like the **Income tax Act**, and tax undisclosed funds parked in foreign bank accounts and often held through discretionary trusts.
- **Under the act, the year in which the tax department gets hold of any information is the year for which income is deemed to have been earned by the person in question.**
- An amendment was made in 2019 in the Act **retrospectively**, to cover even persons who are non-residents but were resident when the asset was

acquired or income was earned outside India.

Salient Features of the Act:

- **One – time compliance window:**
 - A one-time compliance opportunity to persons who discloses their foreign income and assets will be provided.
- **Income and assets that qualify the disclosure:**
 - Income, from a source located outside India, which has not been disclosed in the tax returns filed.
 - Income, from a source outside India, for which no tax returns have been filed
 - Value of an undisclosed asset, located outside India.
- Non-disclosure of income and assets will be liable to penalties, prosecution and the criminal procedures.
- **Administering authority:**
The **Central Board of Direct Taxes** and the existing hierarchy of tax authorities under the provisions of the Income Tax Act, including the appeals machinery, have been tasked with implementation of the new legislation.

CBIC ASKS GST OFFICERS TO BLOCK ITC ONLY ON BASIS OF EVIDENCE, NOT SUSPICION

The Central Board of Indirect Taxes and Customs (CBIC) has come out with guidelines on blocking of tax credit on the basis of 'material evidence' and not just out of 'suspicion'.

Highlights:

Circumstances under which credit can be blocked are:

- Availment of credit without any invoice or any valid document **would be blocked by the senior tax officer.**
- Availing of credit on invoices by purchasers on which **IGST has not been paid by sellers.**
- The Input tax credit is availed by **the registered person on invoices.**

Rule 86A

- The officer should consider that the registered person's input tax credit obtained **fraudulently or is ineligible.**
- Disallowing such debit is necessary to **prevent from utilizing ineligible input tax credit.**
- The amount disallowed for debit from electronic credit ledger **should not be more than the amount of input tax credit.**
- The Commissioner may examine the matter and, if the input tax credit is no longer ineligible then one **may allow the use of the credit.**

Monetary Limit:

- **Principal commissioner or Commissioner** will take a decision for blocking of ITC when

the monetary amount is above Rs 5 crore.

- **Additional commissioner or Joint Commissioner** will take a decision when the monetary amount is in the range of Rs 1-5 crore.
- **Deputy commissioner or Assistant Commissioner** will take decision when the amount is less than Rs 1 crore.

Input Tax Credit:

- It refers to the **tax already paid by a person at time of purchase of goods or services** and which is available as deduction from tax payable.
- The taxes include- **the central tax (CGST), State tax (SGST), integrated tax (IGST) or Union territory tax (UTGST).**

Conditions necessary for obtaining ITC:

- A **person is in possession of tax invoice** or debit note or such other tax paying documents as may be prescribed;
- He has **received the goods** or services or both;
- The supplier has **actually paid the tax charged** in respect of the supply to the government;
- He has furnished the return under **section 39.**

Time Limit:

- Due date of return for **month of September of next financial year.**
- **Annual return filed** for relevant year.

How Input Tax Credit can be used?

- Credit of CGST **cannot be used for payment of SGST.**

- Credit of SGST **cannot be utilised for payment of CGST.**

PM MODI LAUNCHES TWO INNOVATIVE CUSTOMER CENTRIC INITIATIVES OF RBI- OPENS ONE TRILLION DOLLAR GOVT BOND MARKET TO INDIVIDUAL INVESTORS

The Prime Minister launched two customer-centric initiatives of the Reserve Bank of India (RBI) recently.

The initiatives are: **Retail Direct Scheme** and **Integrated Ombudsman Scheme.**

Retail Direct Scheme

- **Aim:** Enhancing access to government securities market for retail investors in both primary and Secondary market.
- The investors will **invest in securities** by opening a Retail Direct Gilt (RDG) account with the RBI.
- **Registered investors** can access the secondary market transaction to buy or sell government securities through NDS-OM (**Negotiated Dealing System-Order Matching**).
- NDS-OM is a screen based electronic anonymous order matching system for secondary market trading in **Government securities** owned by RBI.

Importance of Retail Direct Scheme

- It will increase **retail participation in government securities** and improve ease of access in banking system.
- The ease of investment and safety will develop the **wealth of the nation.**
- The retail direct scheme allows **more retail investor to buy bonds** and thus government can

borrow **more money for developmental works.**

- The rising inflation in India adds pressure on the RBI to adopt tighter monetary policy to decrease inflation which is likely to weaken the demand for bonds/securities.
- Less demand for bonds means government can **borrow less money** from general people and hence the developmental works can't be fulfilled entirely.

Integrated Ombudsman Scheme:

- **Aim:** Improving the grievance redress mechanism for resolving customer complaints against RBI's regulated entities.
- It has amalgamated the three existing ombudsman schemes:
 - Banking ombudsman Scheme (BOS), 1995,
 - Ombudsman for non-banking financial companies (NBFCs), 2018 and
 - Ombudsman Scheme for Digital Transactions (OSDT), 2019.

Features:

- Customers will be able to **file complaints**, and give feedback through a single email address.
- The redressal will continue to be **cost-free** for customers of banks and members of the public.
- The complaints that are **not covered** under ombudsman scheme

will continue to be attended to by the **Customer Education and Protection Cells (CEPCs)** located in RBI's 30 regional offices.

- It also includes under its ambit **non-scheduled primary co-operative banks** with a deposit size of **Rs 50 crore and above**.
- Minimum investment: 10,000,
- Maximum investment: 2 crores.
- There will be **no income tax benefits** attached to this investment.

Importance of Integrated Ombudsman Scheme

- A common man **will not have to run around to lodge his complaints**.
- No matter what the nature of the financial grievance, the complainant can lodge it online, and can easily track it.
- It will do away with **the jurisdictional limitations** as well as limited grounds for complaints.
- It will help in **preventing fraud**.
- It will **improve digital penetration and customer confidence** in the banking system.

CURRENT ACCOUNT DEFICIT TO HIT 1.4% OF GDP BY MARCH: BARCLAYS

According to a report by British brokerage Barclays, India's trade deficit has been jumping continuously since July, 2021.

Highlights:

- India's widening current account deficit (CAD) is driven by the massive **spike in commodity prices led by crude oil**.
- Another force driving down the foreign exchange is **gold imports**.

Causes and Effects of Current Account Deficit:

Balance of Payments:

- **Balance Of Payment (BOP)** is a statement which **records all the monetary transactions** made between residents of a country and the rest of the world during any given period.
- This statement includes **all the transactions made by/to individuals, corporates and the government** and helps

in **monitoring the flow of funds** to develop the economy.

- A BOP statement of a country indicates **whether the country has a surplus or a deficit of funds**.
- When a country's export is more than its import, its BOP is said to be in surplus.
- On the other hand, the BOP deficit indicates that a country's imports are more than its exports.

Significance:

- The BOP of a country reveals its **financial and economic status**.
- A BOP statement can be used as an **indicator** to determine whether the **country's currency value** is appreciating or depreciating.
- The BOP statement helps the Government to decide on **fiscal and trade policies**.
- It provides important information to analyze and understand

the **economic dealings** of a country with other countries.

Elements of BOP:

Current Account:

- The current account is used to monitor the **inflow and outflow of goods and services** between countries.
- This account covers all the receipts and payments made with respect to raw materials, manufactured goods and services.
- When all the goods and services are combined, together they make up to a country's **Balance of Trade (BOT)**.
- There are various categories of trade and transfers which happen across countries.
 - It could be **visible or invisible trading, unilateral transfers or other payments/receipts**.
 - Trading in goods between countries are referred to as visible items and import/export of services (banking, information technology etc.) are referred to as invisible items.
 - Unilateral transfers refer to money sent as gifts or donations to residents of foreign countries.

Capital Account:

- All **capital transactions** between the countries are **monitored through the capital account**.
- Capital transactions include the **purchase and sale of assets (non-financial)** like land and properties.

- The capital account also includes the **flow of taxes, purchase and sale of fixed assets** etc. by migrants moving out/into a different country.
- The deficit or surplus in the current account is managed through the finance from the capital account and vice versa.
- There are 3 major elements of a capital account:
 - **Loans and borrowings** – It include all types of loans from both the private and public sectors located in foreign countries.
 - **Investments** – These are funds invested in the corporate stocks by non-residents.
 - **Foreign exchange reserves** – Foreign exchange reserves held by the central bank of a country to monitor and control the exchange rate does impact the capital account.

Financial Account

- The **flow of funds from and to foreign countries through** various investments in **real estates, business ventures, foreign direct investments etc.** is monitored through the financial account.
- This account **measures** the **changes** in the **foreign ownership of domestic assets and domestic ownership of foreign assets**.
- On analyzing these changes, it can be understood if the country is selling or acquiring more assets (like gold, stocks, equity etc.).

EXPERTS CALL FOR CRYPTO WITH PROPER REGULATION

Recently, Experts and key bodies have favored a tightly controlled cryptocurrency regime in India over a blanket ban on the alternative payment ecosystem.

Cryptocurrencies?

- It is a **collection of binary data** which is designed to work as a **medium of exchange**.
- Individual coin ownership records are stored in a ledger, which is a computerized database using strong cryptography to secure transaction records, control the creation of additional coins, and verify the transfer of **coin ownership**
- Cryptocurrencies are **generally fiat currencies**, as they are **not backed by or convertible into a commodity**.
- Cryptocurrency does not exist in physical form (like paper money) and is typically not issued by a central authority.
- Cryptocurrencies typically use **decentralized control** as opposed to a central bank digital currency (CBDC).
- **Bitcoin** is the first **decentralized** cryptocurrency.

Benefits of Cryptocurrencies

- **Protection from inflation:**
 - Inflation has caused many currencies to surge their value to decline with time.
 - At the time of its launch, almost every cryptocurrency is released with a tough and fast amount.
- **Self-governed and managed:**

- Governance and maintenance of any currency is serious factor for its development.
- The cryptocurrency transactions are stored by developers/miners on their hardware, which they get the transaction fee as a gift for doing so.

- **Decentralized:**

- A major pro of cryptocurrencies is that they are mainly decentralized.
- cryptocurrencies are controlled by the developers using them and those who have a significant amount of the coin or by a corporation to develop it before it's released into the market.

- **Cost-effective mode of transaction:**

- One of the most uses of cryptocurrencies is to send money across borders.
- With the help of cryptocurrency, the transaction fees paid by a user are reduced to a negligible or zero amount.

- It does so by eliminating the need for third parties to verify a transaction.

- **Easy transfer of funds:**

- Cryptocurrencies have always kept themselves as an optimal solution for transactions.

- **Secure and private:**

- Privacy and security have always been concerns for cryptocurrencies.
- The blockchain ledger relies on different mathematical puzzles, which are hard to decode.
- It makes cryptocurrency safer than ordinary electronic transactions.

Drawback of Cryptocurrencies

- **Illegal transactions:**

- The privacy and security of cryptocurrency transactions are

- high, it's hard for the government to trace down any user by their wallet address or keep tabs on their data.
- Bitcoin has been used as a mode of payment (**exchanging money**) during many illegal deals in the past, like buying drugs on the dark web.
 - **Risk of Data Loss:**
 - If any user of a cryptocurrency loses the private key to their wallet, the wallet will remain locked away along with the number of coins inside it.

- **No refund or cancellation:**
- If there is a dispute between concerned parties, or if someone mistakenly sends funds to a wrong wallet address, the coin cannot be retrieved by the sender.
- **Vulnerable to hacks:**
- Cryptocurrencies are very secure; exchanges don't seem to be that secure.

RBI INTRODUCES INTERNAL OMBUDSMAN MECHANISM FOR SELECT NBFCs

Reserve Bank of India (RBI) introduced internal ombudsman mechanism for select Non-Banking Financial Companies (NBFCs).

Who is ombudsman?

- An ombudsman is an official, usually appointed by the government, who investigates complaints against businesses, financial institutions, universities or other public entities.
- He/she attempts to resolve the conflicts or concerns raised, either by mediation or by making recommendations.

Key features of the scheme:

- Integrated Ombudsman Scheme is '**One-nation-One Ombudsman**', with one portal, one mail and one address.
- Under this scheme, RBI has directed to appoint Internal Ombudsman (IO) within a period of six months to the:
 - Deposit-taking NBFCs (NBFCs-D) with 10 or more branches and
 - Non-deposit taking NBFCs (NBFCs-ND) with asset size of ₹ 5,000 crore

and above having public customer interface.

- Implementation will be monitored by the **NBFC's internal audit system.**
- **The person appointed as the IO shall be either a retired or a serving officer.**

Non-Banking Financial Company (NBFC):

- It is a company that **offers various banking services but do not have a banking license.**
- It is registered **under the Companies Act, 1956.**
- NBFC is governed by both the **Ministry of Corporate Affairs and the RBI.**

Examples of NBFC: Investment banks, mortgage lenders, money market funds, insurance companies, hedge funds, private equity funds, and Peer 2 Peer lenders.

Limitations of NBFC:

- NBFC **cannot accept demand deposits;**
- NBFCs **do not form part of the payment and settlement system.**

- It **cannot issue cheques** drawn on itself;
- **Facilities of Deposit Insurance and Credit Guarantee Corporation** is not available.

Advantages of NBFC:

- It can **provide loans and credit facilities**.

- It can **trade in money market** instruments.
- **NBFCs are the last resorts** of borrowing;
- It is an **alternate source of funding**.
- It is a **liquidity for the finance system**.

SIDBI LAUNCHES SECOND WINDOW OF SWAVALAMBAN CHALLENGE FUND

Recently, Small Industries Development Bank of India (SIDBI) launched the second window of Swavalamban Challenge Fund (SCF).

Swavalamban Challenge Fund:

- SIDBI in partnership with Foreign, Commonwealth & Development Office, UK launched 'Swavalamban Challenge Fund' (SCF) to help the **entrepreneurs**.
- **Aim:** To provide financial support to non-profit organizations, educational institutions, or social startups for addressing developmental gaps.
- **Themes of the challenge:** Women empowerment, financial literacy and inclusion, responsible business, sustainable livelihood, focus on green initiatives including climate change mitigation, adaptation measures, and offering solutions to reduce carbon footprint.

Categories:

- **Pilot Category:** Applicants can apply with their proposal to pilot their innovative ideas
- **Scale-up Category:** Ongoing or completed projects done by the

applicants for scaling-up will be nominated.

Outlay:

The total outlay of fund will depend on number of proposals selected in various themes

- **Pilot category:** Up to Rs 20 lakh
- **Scale-up Category:** Up to Rs 35 lakh for the

Eligibility:

- Project period shall be more than **six months** and up to **two years**.

What is a Challenge Fund?

- A challenge fund is a **fund support mechanism** to allocate funds for specific purposes using competition among organisations.
- If there is an idea which needs to be scaled up, but funds are an issue, challenge fund provides a platform to present the idea in prescribed theme, implement and validate it.
- The same can be scaled up by leveraging another donor or **financier support**.

SIDBI:

- The SIDBI was established under the Act of the Parliament 1988.
- **Headquarters:** Lucknow, UP.

- **Aim:** To promote, develop and finance MSME (Micro, Small and Medium Enterprise) sector.

Objectives:

- Focus on **cleaner production** and energy efficiency.
- **It helps MSMEs** in acquiring the funds required to grow, and commercialize their technologies and innovative products.
- The bank provides **several schemes**, financial services for meeting the individual's requirement of various businesses.

Functions:

- It discounts and rediscounts bills.
- It helps in **expanding marketing channels** for the products of SSI

(Small Scale Industries) sector in domestic and international markets.

- **It offers services** like factoring, leasing etc. to the industrial concerns in the small-scale sector.
- **Promotes employment-oriented industries** in semi-urban areas for creating employment opportunities.
- **Initiate steps** for modernization and technological up-gradation of current units.
- It enables the **timely flow of credit** for working capital as well as term loans to Small Scale Industries in cooperation with commercial banks.

RBI PANEL MOOTS LAW TO REGULATE DIGITAL LENDING

A Reserve Bank of India (RBI) Working Group (WG) on digital lending has recommended a separate legislation to oversee digital lending.

Digital Lending:

- Digital lending is the process of offering loans that are applied for, disbursed, and managed through digital channels, in which lenders use digitized data to inform credit decisions and build intelligent customer engagement.

Digital-lending models:

- **Bank/NBFC-owned digital platforms** operating under the direct regulatory purview of RBI.
- **Fintech companies' proprietary digital platforms**, working in partnership with banks/NBFCs.

○ These platforms are not required to seek any registration with RBI, and are only **indirectly regulated** through RBI's outsourcing guidelines applicable to Banks/NBFCs

- **Peer-to-peer (P2P) lending platforms**, which usually involve the otherwise unregulated retail lenders.
- RBI has mandated such platforms to seek registration as NBFC-P2P; thus, they are **directly regulated by RBI.**

Concerns over Digital Lending:

- Unauthorised lenders
- Exorbitant rates of interest
- Use of coercive repayment methods

- Non-consensual collection or use of user data.

Road Ahead:

- Development of certain **baseline technology standards** and compliance with those standards as a pre-condition for offering digital lending solutions should be mandated.
- **Disbursement of loans directly into the bank accounts** of borrowers and

disbursement and servicing of loans only through bank accounts of the digital lenders should be enforced.

- Data collection with only **prior and explicit consent** of borrowers with verifiable audit trails should be undertaken.
- Each digital lender should provide a **key fact statement** in a standardised format including the Annual Percentage Rate.

CREDIT LINKED CAPITAL SUBSIDY SCHEME FOR SERVICES SECTOR

Recently, Union Minister for Ministry of Micro, Small, and Medium Enterprises launched the Special Credit Linked Capital Subsidy Scheme for the services sector.

- SCLCSS scheme will help in meeting the **technology-related requirements of enterprises** in the services sector.
- It has a provision of **25% capital subsidy for procurement of Plant**

& Machinery and service equipment.

- It will give through institutional credit to the SC-ST MSEs without any sector-specific restrictions on technology upgradation.
- The scheme will felicitate **SC/ST Entrepreneurs of the North-eastern region to take up entrepreneurship** to become job givers than job seekers.

RBI RELEASES DRAFT SCHEME FOR AMALGAMATION OF PMC BANK, UNITY SMALL FINANCE BANK

The Reserve Bank of India (RBI) released a draft scheme of amalgamation of Punjab and Maharashtra Cooperative (PMC) Bank and Unity Small Finance Bank.

Benefits of Bank Merger:

Better Global competition

- Larger Bank is capable of facing **global competition.**
- In the global market, the Indian banks will gain **greater recognition and higher rating.**

Lower Risk factor:

- Merger will result in **better Non-Performing Asset (NPA)** and Risk management.
- There is a **minimization of overall risk** is there due to mergers and acquisitions which is always good from the business point of view.

Reduction of Cost:

- The merger will **reduce the cost** of banking operation.
- Multiple posts of Chairman, Managing Director, General

Manager and Zonal Managers will be abolished, resulting in substantial financial savings.

- It leads to **increase in profitability** and helps in raising the standard of living which is absolutely crucial for a growing economy like India.
- With a larger capital base and higher liquidity, the burden on the central government to **recapitalize the public sector banks** again and again **will come down** substantially.

Increased Efficiency:

- It provides **better efficiency ratio** for business operations as well as banking operations which is beneficial for the economy.

Expands Coverage:

- The objectives of **financial inclusion and broadening the geographical reach** of banking can be achieved better with the merger of large public sector banks and leveraging on their expertise.
- The merger will help the geographically concentrated regionally present banks to **expand their coverage**.

Expertise sharing:

- Merger will help in improving the **professional standards**.
- With the large-scale expertise available in every sphere of banking operation, the scale of **inefficiency** which is more in case of small banks, **will be minimized**.

Other benefits:

- Larger size of the Bank will help the merged banks to offer **more products and services** and help in **integrated growth** of the banking sector.
- A larger bank can manage its **short- and long-term liquidity better**.
 - There will not be any need for overnight borrowings in call money market and from RBI under Liquidity Adjustment Facility (LAF) and Marginal Standing Facility (MSF).
- For the bank, retaining and enhancing its identity as a larger bank becomes easier.
 - After the merger, benefits of merger are enormous and the biggest is generation of a **brand-new customer base, empowering of business, increased hold in the market share**, opportunity of technology upgrade.
 - Thus overall, it proves to be beneficial to the overall economy.
- The chances of **survival of underperforming banks increases** hence customer trust remains intact which is vital for the Economy.

Personnel Benefits:

- **Decisions** on high lending requirements **can be taken promptly**.
- Bank staff will be under single umbrella in regard to their service conditions and wages instead of facing disparities.

Challenges due to Mergers & Acquisitions in Indian Banking:

- **Compliance needed in every decision**, which might not be favorable as thinking perspectives and risk-taking abilities of different organizations are different.
- It leads to **friction and rift** which, if not managed well may lead to the downfall of the organization as a whole.
- Banks are **merged only on papers**. Their **people and culture** are **difficult to change**.
- It can lead to disaster as it leads to **poor culture fit** not ideal for the organization or the economy.
- Risk of failure increases if the **executives are not committed enough in bringing the merger platforms** together for the merging and taking over bank.
- Impact of customers on banking merger or acquisition is often quite **emotional**.
- If customer perception is not managed with frequent and careful communication it may lead to loss of business.
- Many banks focus on regional banking requirements.
- With the merger the very **purpose** of establishing the bank to cater to regional needs **is lost**.
- Large bank size may create more problems also.
- Large global banks had collapsed during the global financial crisis

while smaller ones had survived the crisis due to their strengths and focus on micro aspects.

- With the merger, the **weaknesses of the small banks** are also **transferred** to the bigger bank.
- So far small-scale losses and recapitalization could revive the capital base of small banks.
- Now if the giant shaped bank books huge loss or incurs high NPAs as it had been incurring, it will be **difficult for the entire banking system to sustain**.

Small Finance Banks:

- Small Finance Banks is a **specific segment** of banking **created by Reserve Bank of India (RBI)** under the guidance of Government of India.

Objective:

- To **further financial inclusion** by primarily undertaking basic banking activities.

Areas of Operations:

- Un-served and underserved sections including small business units, small and marginal farmers, micro and small industries and unorganized entities.
- The banks will **not be restricted** to any region.

Features:

- Like other commercial banks, these banks can undertake **all basic banking activities** including lending and taking deposits.

Promoters:

- These banks can be **promoted by individuals, corporate houses, trusts or societies.**
- Joint ventures are **not** permitted.
- **Foreign shareholding** will be allowed in these banks **as per the Foreign Direct Investment rules** in private banks in India.

Eligibility:

- The Small Payment Banks should have capital of at least Rs. **100 crores.**
- At net worth of Rs. **500 crores, listing will be mandatory within three years.**
- Those Small finance banks having net worth of below Rs.500 crore could also get their shares listed voluntarily.

- Existing Non-banking Financial Companies, NBFCs, Micro Finance Institutions (MFI) and Local Area Banks (LAB) may convert themselves to become small finance banks by making applications to RBI.

Banking Regulations:

- These Small Finance Banks need to be **registered as Public Limited Companies** under:
 - The Companies Act, 2013
 - Reserve Bank of India Act, 1934
 - Banking Regulation Act, 1949 and other relevant statutes, are applicable to them.
- **75%** of its Net Credit should be lent to **Priority Sector** and **50% of its loans** should be in the **range of up to Rs. 25 lakhs.**

ROLE REVERSAL: INDIA INC 'LENDING' TO BANKS VIA AT-1 BONDS

A role reversal is happening in the Indian financial markets, with India Inc lending to banks instead of borrowing from them.

What is a Bond?

- A bond is a fixed-income instrument that represents a loan made by an investor to a borrower.
- Bonds are used by **companies, municipalities, states, and sovereign governments to finance projects and operations.**
- Bonds have maturity dates at which point the principal amount must be paid back in full or risk default.
 - It also includes the terms for variable or fixed interest payments made by the borrower.

- Bond prices are inversely correlated with interest rates
 - when rates go up, bond prices fall and vice-versa.

Types of bonds:

- **Corporate bonds** are debt securities issued by private and public corporations.
 - These bonds are characterized by higher yields because there is a higher risk of a company defaulting than a government.
- **Investment-grade:** These bonds have a higher credit rating, implying less credit risk, than high-yield corporate bonds.
- **High-yield** bonds have a lower credit rating, implying higher credit risk, than investment-grade

bonds and, therefore, offer higher interest rates in return for the increased risk.

- **Municipal bonds**, called “munis,” are debt securities issued by states, cities, counties and other government entities.
- **U.S. Treasuries** are issued by the U.S. Department of the Treasury on behalf of the federal government.

Benefits of Bonds

- Bonds can provide a means of preserving capital and earning a predictable return.
- Bond investments provide steady streams of income from interest payments prior to maturity.
- The interest from municipal bonds generally is exempt from federal income tax and also may be exempt from state and local taxes for residents in the states where the bond is issued.

Risks of bonds:

- **Credit risk.** The issuer may fail to timely make interest or principal payments and thus default on its bonds.
- **Inflation risk.** Inflation reduces purchasing power, which is a risk for investors receiving a fixed rate of interest.
- **Liquidity risk.** This refers to the risk that investors won't find a market for the bond, potentially preventing them from buying or selling when they want.

- **Call risk.** The possibility that a bond issuer retires a bond before its maturity date, something an issuer might do if interest rates decline, much like a homeowner might refinance a mortgage to benefit from lower interest rates.

Additional Tier-1 bonds (AT-1 Bonds)

- Additional Tier-1 bonds, are a type of **unsecured, perpetual bonds** that banks are allowed to issue to meet their long-term capital requirement.
- **RBI is the regulator** for these bonds.
- AT-1 bonds pay a **slightly higher rate of interest.**
- They are **listed and traded on the exchanges.**

Benefits of AT-1 Bonds:

- The bonds carry **no maturity date.**
 - However, the bonds have **call options** that allow banks to redeem them after five or 10 years.
 - This way the issuing banks can give an exit option to AT1 bond holders.
- **Banks can skip interest payments** for a particular year or even reduce the bonds' face value, provided their capital ratio falls below a certain threshold level.
- **RBI can ask a bank to cancel its outstanding AT-1 bonds** without consulting its investors.
 - This is possible when the RBI feels that a bank is tottering on the brink and needs a rescue.



INDIA, ISRAEL TO FORM TASK FORCE FOR COMPREHENSIVE ROAD-MAP TO IDENTIFY NEW AREAS OF COOPERATION

Recently, India and Israel have agreed to form a task force that will work to formulate a comprehensive Ten-Year Roadmap to identify new areas of cooperation.

India – Israel relations

India and Israel are strategic partners. India and Israel will celebrate 30 years of **up-gradation of diplomatic relations** in 2022.

Economic and Commercial Relations:

- India is the **largest buyer of Israeli military equipment** and **Israel is the second-largest supplier of military equipment to India after Russia.**
- India is the **third-largest Asian trade partner of Israel**, and its tenth-largest trade partner overall.
- Bilateral trade between India and Israel sales stood at **\$4.52 billion.**
- Major imports by India from Israel include precious stones and

metals, chemicals and mineral products, base metals and machinery, and transport equipment.

- Indian investments in Israel totaled **USD 122.4 million.**

Agriculture

- Under a comprehensive Work Plan for cooperation in agriculture, bilateral projects are implemented through **MASHAV** (Center for International Cooperation of Israel's Ministry of Foreign Affairs) and **CINADCO** (Centre for International Agricultural Development Cooperation of Israel's Ministry of Agriculture and Rural Development).
- India has benefited from Israeli expertise in **horticulture mechanization, protected cultivation, orchard and canopy management**, and post-harvest management particularly in Haryana and Maharashtra.

- **Israeli drip irrigation technologies** and products are now widely used in India.

Cultural and Traditional Partnership:

- India is known in Israel as an ancient nation with **strong cultural traditions** and as an attractive tourist destination.
- Students studying Indian culture and religion have often found it to be similar to Israeli culture.

- **Judaism and Hinduism are two of the world's oldest religions.** Indian scriptures like the **Mahabharata** translated in Hebrew have helped people in Israel realise the similarities between the two religions.
- India and Israel were split into Muslim and Hindu majority and Muslim and Jewish majority respectively after the British rule.

INDIA, WORLD BANK SIGN AGREEMENT TO STRENGTHEN HEALTH SYSTEMS IN MEGHALAYA

Government of India, the Government of Meghalaya and the World Bank signed health project for Meghalaya.

Meghalaya Health Systems Strengthening Project:

Aim: to enhance the health facilities in the state of Meghalaya.

Objectives:

- To **enhance the management and governance capabilities** of the state and its health facilities.
- To expand the design and **coverage of the state's health insurance program**;
- To improve the **quality of health services** through certification and better human resource systems;
- To enable efficient access to **medicines and diagnostics**.

Benefits:

- The project will help strengthen the effectiveness of Meghalaya's health insurance program known as the **Megha Health Insurance Scheme (MHIS)**.

- It currently covers **56% of the households**.
- MHIS plans to offer a more **comprehensive package** and cover 100% of the households.
- It will reduce barriers to **accessing hospital services** and preventing catastrophic out-of-pocket costs for poor families.
- It will enable women to better **utilize healthcare services at the community level**.
- It will aid Meghalaya to **check on the quality of health services**.

Funding:

- The project will adopt **performance-based financing system**.
- It will increase the **accountability of the health subsidiaries of the state and central government**.

Strategies:

- The project will move towards a **performance-based financing**

system where **Internal Performance Agreements (IPAs)** between the **DoHFW** and its subsidiaries would foster more accountability at all levels.

- The project will also focus on **promoting synergy** between various schemes and augment the

capacity of the state insurance agency.

- The project will invest in **infection prevention and in improving the overall ecosystem** for bio-medical waste management.

JOINT STATEMENT ON ITALY-INDIA STRATEGIC PARTNERSHIP IN ENERGY TRANSITION

President of the Italian Republic and Prime Minister of India had a bilateral meeting in the G20 Leaders' Summit recently.

Key Points:

1. India and Italy will task the "**Joint Working Group**" established by the Memorandum of Understanding on Cooperation in the field of Energy, towards cooperation in areas such as:

- Smart Cities, mobility, smart-grids, electricity distribution and storage solutions.
- **Gas transportation** and promoting natural gas as a bridge fuel.
- Integrated **waste management** and green energies (green hydrogen; CNG & LNG; bio-methane; bio-refinery; etc.)

2. Initiate a dialogue to support the development and **deployment of green hydrogen** and related technologies in India.

3. To support a large size **green corridor project** in India and to capitalize its target to produce and integrate 450 GW of renewable energy by 2030.

4. Encourage Italian and **Indian companies** to develop joint projects in

natural gas sector, technological innovation for decarbonization, Smart Cities and electrification of urban public transport.

5. Encourage **joint investments** in energy transition-related fields.

6. **Share useful information** in the field of policy and regulatory framework, to facilitate the transition in:

India and Italy Relations:

1. Trade and Investment

- Italy is among India's top 5 trading partners in the **European Union**. The balance of trade has been in India's favour since the early eighties.
- India ranks 19th as country of origin of **Italian imports**, accounting for 1.2%.
 - Main items of Indian exports to Italy are ready-made garments, leather, iron ore, motor vehicles, textiles, chemicals, gems & Jewellery.
 - Six **Italian banks** have representation in India.
- The **Joint Economic Commission** is an institutional mechanism chaired by the respective Commerce Ministers of both countries.

- There are Joint Working Groups in the following areas: Infrastructure, Tourism, Railways, Food Processing, Renewable Energy, Information Technology and Agriculture.

2. Scientific Co-operation

- An Agreement on **Science and Technology** exists since 1978. This agreement was replaced in Nov 2003.
- The prime areas of joint research are Electronics, Biotechnology, Design Engineering Automotive Technologies, Energy, etc.
- **An Executive Programme of Cooperation** (EPOC) was signed for exchange of research and 10 significant joint research projects were selected from the priority areas of renewable energy, and health.
- **India-Trento Programme for Advanced Research** (ITPAR) was launched on 19 June 2018. recommended joint activities in the areas of

- Microsystems
- Telecommunication
- Cognitive Neurosciences
- Renewable Energy
- Quantum Physics.

3. Defence:

- An MOU on **Defence Cooperation** was signed in November 1994.
- More than 50,000 Indian troops played a significant role in one of the bitterest advances of the allied forces for the liberation of Italy in the Second World War.
- **Chief of Army Staff** recently inaugurated an Indian Army memorial in the famous town of Cassino, Italy.
- The memorial has been built to pay **homage to Indian soldiers** who lost their lives during World War II.

INDIA, FRANCE TO EXPAND DEFENCE, SECURITY PARTNERSHIP

The two countries resolved to expand the defence ties at a meeting of India-France strategic dialogue.

India and France agreed to strengthen defence and security partnership by enhancing intelligence and information sharing, bolstering capabilities, expanding military drills and pursuing new initiatives in maritime, space and cyber domains.

India- France Relations:

- The two countries had entered into a Strategic Partnership with the areas of defence & security cooperation, space cooperation

and civil nuclear cooperation constitute the principal pillars of the Strategic Partnership.

Economic Relations:

- India and France have important bilateral investments and trade and commercial cooperation, particularly in sectors involving **IT corridors, smart-cities, railways, capital and trade exchanges, skill development etc.**
- France has emerged as a **major source of Foreign Direct Investment** for India.

Global Political Relations:

- France has continued to support **India's claim for permanent membership of the United Nations** Security Council and the reforms of the United Nations.
- France's support was vital in India's accession to **Missile Technology Control Regime (MTCR), Wassenaar Arrangement (WA) and Australia Group (AG)**.
- France continues to support India's bid for accession to the **Nuclear Suppliers Group (NSG)**.
- There exist vibrant bilateral cultural and educational linkages as also growing people-to-people contacts. Indian diaspora also has a sizeable presence in metropolitan France and its overseas departments/territories.

Defence Cooperation:

- The three services also have regular defence exercises; viz.
 - Exercise Shakti (Army),
 - Exercise Varuna (Navy),
 - Exercise Garuda (Air Force).
 - The Indian Navy also participated in the French led **La Perouse** exercise, along with other Quad members.
 - Various staff courses, training programmes etc. also take place regularly.

Space Cooperation:

- ISRO and the French Space Agency, **CNES** have been carrying on various joint research

programmes and collaborating in satellite launches

- As part of the ongoing bilateral cooperation between ISRO and Arianespace, **GSAT-11** was launched from **Kourou (French Guyana)**.
- France continues to be a major supplier of **components and equipment for the Indian space programme**

Environment and Renewable Energy:

- France is a founding member of the **International Solar Alliance (ISA)**, announced by India in 2015 at UN Climate Change CoP21.
- Both countries have announced to celebrate 2021-22 as **Indo French Year of Environment**.
- Agence Française de Développement (AFD) and Solar Energy Corporation of India Limited (SECI) signed a letter of intent for developing 150 MW floating solar power system.

Cooperation in the fields of S&T and Education:

- In the field of S&T, the Indo-French Centre for the Promotion of Advance Research (CEFIPRA) based in New Delhi, plays a major role by identifying and funding joint proposals for research projects.
- The two sides set the **student exchange target** to 20,000 by 2025.
- A **Migration and Mobility Partnership Agreement** between India and France.

- It has been ratified by India and is soon to be ratified by the French Parliament as well.

Cyberspace and Digital technology:

- The Indo French Roadmap on Cybersecurity and Digital Technology lays down areas of cooperation such as cybersecurity, fight against cybercrime, regulation of Artificial Intelligence, protection of personal information and digital governance.
- In the field of exascale computing, **Atos** in collaboration with CDAC has developed "**PARAM-Siddhi- AI**", India's fastest supercomputer.
- Additionally, there exist immense potential in collaborating in future technologies such as **5G and beyond**, developing global tech standards.

COVID-19 Cooperation:

- India supplied France with nearly 2 million **hydroxychloroquine** tablets and 36 MT of **paracetamol** (API).

- France expressed its gratitude by sending 120 ventilators, 50 thousand serological tests and 50 thousand nose/throat swabs as aid.
- France also announced a 200-million-euro loan to India to help the vulnerable sections most severely affected by the pandemic.

Cultural Cooperation:

- An Indian Cultural Centre, named **Vivekananda Cultural Centre**, is being opened in Paris.
- **Namaste France** was held across France displaying various facets of Indian art and culture.
- Similarly, the **Bonjour India** festival will be held in India in 2022.
- Government of India has also offered five **scholarships for study of Sanskrit** in India to French nationals.
- The **International Day of Yoga** has been organized by the Embassy of India, Paris in Paris and in other cities of France since 2016.

GODDESS ANNAPURNA'S IDOL BROUGHT BACK FROM CANADA AFTER 108 YEARS, INSTALLED AT TEMPLE IN UP'S VARANASI

An ancient idol of Goddess Annapurna was recently brought back to the Kashi Vishwanath temple in Varanasi, Uttar Pradesh, from Canada.

Highlights:

- The idol was stolen from the temple and smuggled out of the country around 100 years ago.

- **Annapurna** is the 18th-century idol, carved in the Benares style.
- Annapurna is the **goddess of food**.

Key Facts on Kashi Vishwanath Temple:

- **Kashi Vishwanath Temple** is located at the western bank of

the holy river Ganges in Varanasi Uttar Pradesh.

- **The Jyotirlinga** present in the Kashi Vishwanath Temple is considered as the 12th of all the Jyotirlingas.
- **Lord Shiva** is the main deity in Hinduism and known as the Vishwanatha or Vishweshwara.
- According to the **Shaiva philosophy**, it is considered that the Temple is the midpoint of the worship for a long time.
- There are various small temples like the **Kaalbhairav**, Avimukteshwara, Vishnu, Vinayaka and Virupaksh Gauri in the main campus of the temple.

Archaeological Survey of India:

- The **Archaeological Survey of India** (ASI) comes under the Ministry of Culture.
- It was set up in 1861 with the primary object of surveying antiquarian remains in this country and their study.

- **Aim:** To “explore, excavate, conserve, preserve and protect the monuments and sites of National & International Importance.”

Functions:

- **Preservation**, conservation and environmental development of centrally protected monuments and sites, including World Heritage Monuments and antiquities.
- **Maintenance of gardens** & development of new gardens surrounding centrally protected monuments and sites.
- Exploration and **excavation of ancient sites**.
- Specialized study of inscription and various phases of Indian architecture.
- Maintenance of Archaeological site **Museums**.
- Operation of the Antiquities and **Art Treasures Act**.

WHY UNESCO HAS DESIGNATED SRINAGAR AS CREATIVE CITY

Recently, the United Nations Educational, Scientific and Cultural Organization (UNESCO) designated Srinagar as a part of UNESCO Creative Cities Network (UCCN)

The UNESCO Creative Cities Network (UCCN):

- **Launched:** 2004
- It covers **seven creative fields:** Crafts and Folk Art, Design, Film, Gastronomy, Literature, Media Arts, and Music.

- **Aim:** to **promote cooperation with and among cities** that have identified creativity as a strategic factor for sustainable urban development.
- The Network further commits to **supporting the United Nations frameworks**, particularly the 2030 Agenda for Sustainable Development.

Objective:

- **Strengthen international cooperation between cities** that

have recognized creativity as a strategic factor of their sustainable development;

- **Stimulate initiatives** led by member cities to make creativity an essential component of urban development, notably through partnerships involving the public and private sectors and civil society.
- **Strengthen the creation, distribution of cultural activities, goods and services;**
- **Develop hubs of creativity and innovation and broaden opportunities** for creators and professionals in the cultural sector;
- **Improve access to and participation in cultural life** as well as the enjoyment of cultural goods and services, notably for

marginalized or vulnerable groups and individuals;

- **Fully integrate culture and creativity** into local development strategies and plans.

Areas of Action:

- Sharing experiences, knowledge and best practices;
- Pilot projects, partnerships and initiatives associating the public and private sectors, and civil society; professional and artistic exchange programmes and networks;
- Studies, research and evaluations on the experience of the Creative Cities;
- Policies and measures for sustainable urban development;
- Communication and awareness raising activities.

PM WELCOMES USA TO INTERNATIONAL SOLAR ALLIANCE

The Prime Minister of India welcomed the United States of America to International Solar Alliance.

International Solar Alliance (ISA)

- It is an alliance of 124 countries initiated by **India**.
- **Founded by:** India and France
- **Headquarters:** Gurugram, Haryana, India
- **Objective:**
 - To work for efficient consumption of solar energy to reduce dependence on fossil fuels.
 - To bring together a group of nations to endorse clean energy, sustainable environment, public transport, and climate.

- **Members:** The alliance is a **treaty-based inter-governmental organization**.
- **Countries that do not fall within the Tropics can join the alliance** and enjoy all benefits as other members, except for voting rights.
- Most of the members of ISA have lots of daytime sunlight as they lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn.
- **Priorities enlisted by ISA**
 - Assisting member countries in drafting solar policies;

- Development of standards, specifications, and test protocols for solar energy systems;
- Encouraging collaborations in solar resource mapping in member countries and the deployment of suitable technologies;
- Designing training programs for students/engineers/policymakers, etc., and organizing workshops, focused meetings, and conferences.
- Working with ISA member countries to strive for universal access to solar lighting.

Key Facts about ISA

- The idea behind the project is to develop solar resources in various countries to reduce their reliance on non-renewable resources.
- Countries that have come together for the project identify and address gaps in their energy requirements through a collective approach.
- ISA aims to invest \$1 trillion, raised from public and private investors, for solar projects that will provide 1 TW of solar energy globally.
- India will also provide **500 training slots** for ISA member countries and start a solar tech mission to lead R&D.
- The **ISA** is the first international body to have a **secretariat in India**.

India's Contribution to ISA

- India has pledged a target of installing **175 GW** of renewable

energy of which **100 GW** will be solar energy by 2022.

- India aims for reduction in emission intensity by **33–35% by 2030** to let solar energy reach the most unconnected villages and communities and also towards creating a clean planet.
- **NTPC (National Thermal Power Corporation Limited)** to contribute \$1 million to the Corpus fund of \$15 million that India is providing to the ISA.
- India has also set aside five acres of land in Gurugram, next to the National Institute of Solar Energy to house the Headquarters of ISA.

Significance of solar energy

- It is necessary to use sunrays for electricity generation, which can significantly meet the requirement of the local population which, in turn, would improve the standard of living of the population.
- It has been observed that since countries located between “**Tropic of Cancer and Tropic of Capricorn**” have access to uninterrupted sun rays, it is necessary to tap these resources for the betterment of society.
- It is harnessed from **nature free of cost** and is abundantly available. This is in contrast to oil and gas-based energy.

THE DELHI REGIONAL SECURITY DIALOGUE ON AFGHANISTAN

Recently, India hosted the Delhi Regional Security Dialogue on Afghanistan.

Highlights:

Delhi Regional Security Dialogue:

- It is a **first** such **meeting on Afghanistan** to be **chaired by India**.
- The other countries who participated in the dialogue include **Iran, Kazakhstan, Kyrgyz Republic, Russia, Tajikistan, Turkmenistan and Uzbekistan**.
- The main aim of the dialogue is to discuss **measures to promote peace** in the region and **address security challenges**.

- The **five** main threats and challenges addressed in the **dialogue** are:
 - Terrorism within Afghanistan and across its borders
 - Radicalisation and extremism
 - Cross-border movements
 - Drug production and trafficking
 - The danger posed by vast amounts of weapons and military gear left behind by US troops.

INDIAN AND FRENCH TROOPS BEGIN SIXTH EDITION OF EX SHAKTI 2021 EXERCISE

The 6th Edition of the **biennial training exercise "EX SHAKTI 2021"** is being conducted in France.

EX SHAKTI 2021:

- In this exercise, Indian contingent of Gorkha Rifles participated.
 - Their contributions were recognized by **Battle Honour SHINGO River Valley and Theatre Honour of Jammu & Kashmir**.
- **Aim:** to enhance military cooperation and inter-operability between the two Armies.
- **Objective:** To focus on Counter Terrorism operations in backdrop

of semi-urban terrain under United Nations

- The last edition of Exercise SHAKTI was conducted at **Foreign Training Node in Mahajan Field Firing Ranges, Rajasthan**

India and France carry out three biennial training exercises:

- Exercise GARUDA with Indian Airforce,
- Exercise VARUNA with Indian Navy
- Exercise SHAKTI with Indian Army.

US INFLATION AND ITS IMPACT ON INDIA

At 6.2%, retail inflation in the US has made the highest year-on-year jump in 3 decades. This could have direct impact on India.

- India's National Statistical Office (NSO) data showed that retail

inflation rose to 4.5 per cent for the same month.

Inflation Rate:

- It is the **rate** at which **prices increase over a given period**.
 - India, where the inflation rate is calculated on a **year-on-year basis**,

has adopted an inflation target of **4% (+/-2)**.

Why is US inflation a matter of concern?

- The Federal Reserve (or Fed), the US central bank, targets an inflation rate of just **2 per cent**.
- Hence, the rise of inflation to 6.2%, is a matter of concern.

Causes of inflation in US:

- The **rapid rollout of Covid-19 vaccine** created unexpectedly **fast recovery** in all-round demand from consumers.
- This recovery was further fueled by **money pumped** by the US government to provide relief to consumers and those who lost their jobs and to stimulate demand.
- The **pace of economic recovery has been much faster than the supply chain recovery**, and this has worsened the **mismatch between demand and supply**, thus triggering a sustained price rise.

Effect on India:

- High inflation in the advanced economies, will likely force their central banks, to **abandon their loose monetary policy**.
- A tight money policy would imply higher interest rates.
- That will affect the Indian economy in three broad ways.
- One, **Indian firms** trying to **raise money** outside India will find it **costlier** to do so.
- Two, the Reserve Bank India (RBI) will have to **align its monetary policy** at home by raising interest rates domestically.

- Three, **reduction in carry trade**.
 - It basically means that one borrows in a country that has low interest rate and invests in a country with higher rates and the spread is the profit subject to currency fluctuations.
 - Foreign Portfolio Investors (FPIs) use this strategy to bring money from their country to invest in Indian stocks.
 - If the US' central bank raises rates to counter high inflation—and other central banks follow suit—the spread would shrink and could **impact the foreign flows** coming to India.

Inflation Trend in India:

- Retail inflation had frequently been above the comfort zone of the Reserve Bank of India (RBI) — between 2 per cent and 6 per cent — for an extended period since late 2019.
- The pandemic made matters worse because of supply constraints even when in India demand has not yet recovered to pre-Covid levels.
- The RBI has not lowered its benchmark interest rates since May 2020.
- That's because India's retail inflation has stayed worrying above or near the RBI's upper limit for the better part of the last two years.
- After the recommendation of **Urjit Patel Committee**, Consumer Price Index (combined) is used as nominal anchor for RBI's monetary policies, instead of Wholesale Price Index (WPI).
- CPI (combined) gives weightage to food that is consumed by masses;

hence it gives ground reality of the inflation.

INDIA INTERNATIONAL SCIENCE FESTIVAL, 2021, LAUNCHED

Union Ministry of Earth Sciences launched the 7th edition of the India International Science Festival (IISF) in New Delhi.

India International Science Festival (IISF):

- It is an **annual event** which intends to promote Creativity in Science, Technology and Innovation for Prosperous India.
- **Organising Agencies:** The Ministry of Earth Sciences, Ministry of S&T and Vijnana Bharati
- **Vijnana Bharati** which is a **science movement** with **swadeshi spirit** lead by eminent scientists of the country.
- **The nodal agency-** The National Centre for Polar and Ocean Research (NCPOR).
- It is an **autonomous Research and Development Institution.**
- **Established-** 1998.

IISF 2021

- **Theme of 2021-** Celebrating Creativity in Science, Technology and Innovation for Prosperous India.

- The programmes will be categorised under **five sections:**
- **Freedom Struggle:**
 - To celebrate the **role of the scientific community** in Indian independence.
 - To focus on the development of **scientific institutions and scientific movements.**
- **Ideas@75:**
 - To discuss **new science and technology ideas.**
 - To achieve sustainable development **goals and initiatives for digital India.**
- **Achievements@75:**
 - To showcase the **scientific achievements** of our country.
- **Actions@75:**
 - To chart an **action plan** for new India.
- **Resolves@75:**
 - To **come up with resolutions** towards achieving Atma Nirbhar Bharat.
 - To transform India into a **manufacturing hub of the world.**

THE SYDNEY DIALOGUE

Recently, the Prime Minister delivered the keynote at the inaugural Sydney Dialogue via video conferencing.

- He spoke on the theme of **India's technology evolution and revolution.**

Key Points

Highlights of the Address:

- The international order should ensure cryptocurrencies do not end up in the wrong hands.

- Citing the unregulated nature of the crypto market, recently, the PM called for taking progressive and forward-looking steps.
- India's space sector is open to private investment and the agriculture sector is reaping the benefits of the digital revolution.
- In 2020, the government opened Indian National Space Promotion and Authorization Centre (IN-SPACe) to provide a level playing field for private companies to use Indian space infrastructure.
- Highlighted the leaps in India's digital revolution that has redefined politics, economy and society.
- However, the digital age is raising new questions on sovereignty, governance, ethics, law, rights and security.

Five Important Transitions listed by India:

- One, the world's most extensive public information infrastructure being built in India.
- Over 1.3 billion Indians have a unique digital identity (Aadhaar), six hundred thousand villages will soon be connected with broadband and the world's most efficient payment infrastructure, the Unified Payments Interface (UPI).
- Two, use of digital technology for governance, inclusion, empowerment, connectivity, delivery of benefits and welfare.

- Examples: Pradhan Mantri Jan-Dhan Yojana (PMJDY), Common Services Centres (CSC) etc.
- Three, India has the world's third largest and fastest growing Startup Ecosystem.
- Four, India's industry and services sectors, even agriculture, are undergoing massive digital transformation.
- Example: Government e-Marketplace (GeM), agri-startups, etc.
- Five, there is a large effort to prepare India for the future.
- Investing in developing indigenous capabilities in telecom technology such as 5G and 6G.
- India is one of the leading nations in artificial intelligence and machine learning, especially in human-centred and ethical use of artificial intelligence.
- Developing strong capabilities in Cloud platforms and cloud computing.

Sydney Dialogue

- It is an initiative of the Australian Strategic Policy Institute.
- It is an annual summit of cyber and critical technologies to discuss the fallout of the digital domain on the law and order situation in the world.

Eastern Economic Forum:

- EEF was established by the decree of the President of the Russian Federation in the year 2015.
- It serves as a platform for the discussion of key issues in the

world economy, regional integration, and the development of new industrial and technological sectors, as well as of the global challenges facing Russia and other nations.

Future Investment Initiative:

- The Future Investment Initiative (FII) is widely described as “Davos

in the desert”. It is Saudi Arabia’s flagship investment conference.

- The informal name derives from the World Economic Forum’s annual meeting that is held in Davos, Switzerland, where world leaders discuss agendas for pressing international issues.

THE CHANGING CHILDHOOD PROJECT

Recently, the survey conducted by **The Changing Childhood Project** was recently launched.

The Changing Childhood Project

- It is a collaboration of UNICEF and Gallup.
- **Aim:** To better understand what it means to be a child in the 21st century.
- It is a **first-of-its-kind survey** to ask **multiple generations** for their views on the world and what it is like to be a child today.
- It surveyed more than 21,000 people in the 15-24 and 40 years and above age group in 21 countries in early 2021.

Survey findings from India:

- 71 % of older people believe that children will be **economically better off than their parents compared** to 66 % for younger children.
- 57 % of young people in India **use the internet daily** compared to 27 % of older people.
- 55 % of younger people in India have **heard of climate change** compared to 42 % of older people.

- The **younger generation is much more likely to blame companies** for climate change.
- Respondents in India have the second **biggest generation gap** in saying it is acceptable for 57 % of younger parents and 47 % of older parents to physically punish a child.
- India also shares the **second-highest share of young people** who believe it is ok for teachers to physically punish children, a practice which should normally be unacceptable.
- India is the **only country where the majority of young people and older people believe their country would be safer** if it worked more on its own.
- India also has **very low numbers of young and older people** who identify with being part of the world.
- India has the second-lowest percentage of young people among 21 countries who feel they **identify most with being a part of the world.**

- 73 % of young Indian respondents between 15-24 years of age believe that the **quality of education** has become better now than it was in the past.
- 65 % of young respondents from India believe that it is **very important for politicians to listen to children's voices**.

- 59 % of girls aged between 15 and 24 years are **more convinced than others that education plays a role in success**.
- 67 % of girls feel that **digital technology has helped children in education** compared to 59 % of boys.

CAIRN INDIA, HALLIBURTON JOIN TO EXPLORE SHALE IN INDIA

An Indian private-sector firm and US-based oil field services firm have entered into a partnership to begin shale exploration in Rajasthan.

Shale oil?

- Shale oil is a **high-quality crude oil** that lies between layers of shale rock.
- Shale Rock is a **fine-grained sedimentary rock** formed from mud.
- The rocks are **hydraulically fractured** to extract the oil.
- It is also known as **'Tight Oil'**.
- It is **the largest source of domestic oil** in the United States.

Formation of Shale oil:

- Shale oil are formed from **hydrocarbons that are trapped in shale rock** which can be extracted for refining.
- The oil is extracted via **horizontal drilling techniques and hydraulic fracturing**.
- It gives access to the reservoir rock.
- **High-pressure of water, sand, and chemicals are pumped** to fracture the shale and release the oil.

Advantages of Shale oil:

- There is flexibility in oil extraction.
- Oil can be stored in wells until oil prices rise.
- It increases productivity.
- It reduces oil and gas prices.

Disadvantages of Shale oil:

- It uses a lot of natural resources that gives negative impact to the environment.
- The extraction process of shale oil is much more capital and labor intensive.
- It may cause earthquakes.
- It also affects drinking water.

Shale oil can be classified into three broad groups:

- **Terrestrial** – Lipid rich organic matter
- **Lacustrine** – Organic matter from algae
- **Marine** –Organic matter derived from marine animals

Shale Oil and India:

- Exploration of shale gas and oil in India is done by **National Oil Companies (NOCs)**.

It has been initiated in 4 basins-

- Cambay basin
- Krishna & Godavari Basin

- Cauvery Basin

- Assam and Assam Arakan (A&AA) Basins

INDIAN OCEAN NAVAL SYMPOSIUM (IONS) – 2021 CONCLAVE OF CHIEFS 15 - 16 NOV 21, PARIS, FRANCE

The 7th edition of Indian Ocean Naval Symposium (IONS) Conclave of Chiefs is being hosted by French Navy at Paris.

Indian Ocean Naval Symposium (IONS)

- It is a voluntary series of **biennial meetings** between the littoral states of the Indian Ocean region.
- **Launched** in: 2008 with India as host.
- **Aim:** to increase maritime security cooperation.
 - To discuss regional maritime issues.
 - To promote friendly relationships among the member states.
- **The chairmanship and location of the Symposium rotates** between the various member states.

IONS Conclave of Chiefs:

- It is the **decision-making body** at the level of Chiefs of Navies.
- **Aim:** to facilitate a greater degree of maritime cooperation and understanding between the IONS nations.

Objective:

INDIA TO STORE CRUDE OIL IN US

India is exploring the possibility of hiring storage in the US to stock some oil that can be used in times of extreme price volatility or supply disruption.

- **To enable a common understanding of regional maritime issues.**
- **To facilitate generation of mutually-beneficial maritime security outcomes.**
- **Members:** The countries that touches or lie within Indian Ocean Regions.
 - **South Asian Littorals:** Bangladesh, India, Maldives, Pakistan, Seychelles, Sri Lanka and United Kingdom (British Indian Ocean Territory)
 - **West Asian Littorals:** Iran, Oman, Saudi Arabia and United Arab Emirates
 - **East African Littorals:** France (Reunion), Kenya, Mauritius, Mozambique, South Africa, and Tanzania.
 - **South East Asian and Australian Littorals:** Australia, Indonesia, Malaysia, Myanmar, Singapore, Thailand and Timor-Leste.

Observers:

- China, Germany, Italy, Japan, Madagascar, the Netherlands, Russia and Spain.

Highlights:

- US has **world's largest supply of emergency crude oil** (714 million

barrels of oil) in its **strategic petroleum reserve (SPR)**.

- Through the **Strategic Energy Partnership (SEP)**, the US and India collectively seek to **enhance energy security**.
- Strategic Energy Partnership (SEP), established in 2018, **recognizes the strategic importance of energy in the US-India bilateral relationship**.
- It has four primary pillars of cooperation — oil and gas, power and energy efficiency, renewable energy, and sustainable growth.
- **US-India Gas Task Force (GTF)** had identified three key themes that need to be addressed to expand natural gas use in India and trade with the United States:
 - natural gas pricing, markets and regulation
 - strengthening of gas infrastructure
 - stimulating natural gas demand growth

Strategic Petroleum Reserves (SPR)

- Strategic petroleum reserves (SPR) are **crude oil inventories** held by the government, as well as private industry.
- **Aim:** To safeguard the economy and help maintain national security during an energy crisis.
- Under the **International Energy Programme**, a member country of International Energy Agency (IEA) has an obligation to hold

emergency oil stocks equivalent to at least 90 days of net oil imports.

Strategic Petroleum Reserve in India

- The construction of the Strategic Crude Oil Storage facilities in India is being managed by **Indian Strategic Petroleum Reserves Limited (ISPRL)**.
- It was created in 1998 to resolve the economic crisis which happened due to the Gulf War in 1990.
- The crude oil storages are constructed in underground rock caverns and are located on the **East and West coast of India**.
- Crude oil from these caverns can be supplied to the Indian Refineries either through pipelines or through a combination of pipelines and coastal movement.
- ISPRL is a wholly owned subsidiary of **Oil Industry Development Board (OIDB) under the Ministry of Petroleum & Natural Gas**.
- It has established Strategic Petroleum Reserves (SPR) facilities with total capacity of 5.33 million Metric Tonnes (MMT) at 3 locations:
 - Vishakhapatnam
 - Mangaluru
 - Padur
- Government has also approved establishing two additional SPR facilities at (i) Chandikhol in Odisha and (ii) Padur in Karnataka.

INDIA, US AIM FOR SPECIFIC TRADE POLICY FORUM OUTCOME BY MID 2022

Recently, India and US held the 12th Ministerial-level meeting of the India-United States Trade Policy Forum (TPF) in New Delhi.

Highlights:

12th Trade Policy Forum

- The TPF **Working Groups on agriculture**, non-agriculture goods, services, investment and intellectual property will be **re-activated** in order to address issues of mutual concern on an ongoing basis.
- India and US agreed to **work** in relevant **multilateral trade bodies** including the World Trade Organization, the G20, and the Organisation for Economic Co-operation and Development (OECD).
- The Forum also agreed on the significance of negotiating a **Social Security Totalization Agreement** in the interest of workers from both sides, and pursuing further engagements for reaching such an agreement.
 - The totalisation agreement, being pursued for over a decade, would allow workers from both countries to move their retirement savings.

- The U.S. indicated an interest in **supplying ethanol to India** for its goal of 20% ethanol blending with petrol by 2025.

India US Trade Policy Forum:

- It is a premier forum to **resolve trade and investment** issues between the two countries.
- The forum has five focus groups:
 - Agriculture
 - Investment
 - Innovation and creativity (intellectual property rights)
 - Services
 - Tariff and non-tariff barriers.

Objectives:

- To facilitate **trade and investment flow** between Us and India.
- To **develop and implementing trade policies** through transparent procedures that comply with international obligations.
- To foster an **environment conducive to technological collaboration and innovation.**
- To **promote inclusive economic growth** and job creation in United States and India.

THE IMPORTANCE OF INDIA, MALDIVES AND SRI LANKA TRILATERAL EXERCISE 'DOSTI'

The 15th edition of exercise "Dosti" is underway in the Maldives

Exercise Dosti:

- It is a **biennial trilateral exercise** between the **coast guards** of participant countries.
- Aim: To **strengthen friendship, enhance mutual**

operational capabilities, exercise interoperability and build cooperation between the coast guards.

- **Participant Countries:** India, Sri Lanka and Maldives
- The Indian Coast Guard vessels, **ICGS Vajra** and **ICGS**

Apoorva, and the Sri Lanka Coast Guard's SLCGS Suraksha are in the Maldives for the exercise.

- It was **started in 1991** between the **Indian and the Maldives coast guards**.

- **Sri Lanka joined** the exercise for the first time **in 2012**.
- 2021 marks **30 years** since the first edition of the exercise.

GERMANY ANNOUNCES EURO 1.2 BN TO AID INDIA'S FIGHT AGAINST CLIMATE CHANGE

Recently, Germany has announced a new development commitment of over € 1.2 billion to support India's fight against climate change and to cooperate on clean energy.

- The Intergovernmental Panel on Climate Change (IPCC) released earlier this year found that both India and Germany will suffer more extreme events due to climate change.
- Both countries together account for nearly 9 % of global greenhouse gas.

India-Germany Relations

- Bilateral relations between India and Germany are founded on common democratic principles.
- **India was amongst the first countries to establish diplomatic ties with the Federal Republic of Germany after the Second World War.**
- India and Germany have a "**Strategic Partnership**" since 2001.
- **Inter-Governmental Consultations (IGC)** was set up in 2011 at the level of Head of Governments (German Chancellor and PM).

- **Aim:** To address existing and emerging challenges to international security, global economic stability and growth.
- IGC allows for a comprehensive review of Cooperation and identification of new areas of engagement.
- Germany is **India's largest trading partner** in Europe.
- Germany is also the **sixth most important trading partner** worldwide.
- The volume of trade between the two countries has increased rapidly, ever since India opened up its economy in 1991.
- **Development Cooperation:** Germany's development cooperation with India remains a major component of bilateral relations and it focuses on the following areas:
 - **energy and energy efficiency,**
 - **sustainable urban development** and environmental and resource protection.
 - It supports the **economic participation of women** and the

setting up of a practice-oriented (dual) vocational training system

- It provides **stimulus for innovative approaches**, e.g., in social policy or promoting start-ups.
- **Financial assistance** from Germany is mainly as soft loan, composite loans or grants routed through German Government's Development Bank.
- **German investments in India:** Germany is the 7th largest FDI source for India.
- There are more than 213 Indian companies operating in Germany, and are involved in Trading, manufacturing, R&D and innovation, and services.
- Indian companies have invested in Germany mainly through Mergers and Acquisitions (M&A).
- **Security Cooperation:** There are dialogue mechanisms on various aspects of security, including Joint Working Group on Counter Terrorism.
- **Institutional Cooperation Arrangements:** Several institutionalized arrangements exist between India and Germany to discuss bilateral and global issues of interest namely:
 - **Foreign Office Consultations, High Defence Committee,** Indo-German Energy Forum, Indo-German Environment Forum, S&T Committee, and Joint Working Groups in various fields, including skill development, automotive,

agriculture, coal, tourism, water and waste management.

- **Sister States:** Some States and Cities of India and Germany have entered into twinning arrangements.
- For example, Karnataka and Bavaria have Sister States arrangement since 2007. Mumbai and Stuttgart are sister cities since 1968.
- In January 2015, Maharashtra and Baden-Wurttemberg signed an MoU to establish a Sister State relationship.
- **Defence Cooperation:** India-Germany Defence Cooperation Agreement (2006) provides a framework for bilateral defence cooperation.
 - The **defence dialogue mechanisms include High Defence Committee** meetings at the level of Defence Secretaries.
 - Both sides had detailed discussion on defence cooperation during the visit of German Defence Minister to India in May 2015.
- **Economic & Commercial Relations:** Germany is India's largest trading partner in Europe and it facilitates in trade activities.
- A **Fast-Track System** for German companies has been operating in Department for Promotion of Industry and Internal Trade (DPIIT).
- India and Germany signed a Joint Statement to set up a Fast-Track system for Indian Companies in Germany.

- **Science & Technology:** Indo-German Science & Technology cooperation started with the signing of the **Intergovernmental S&T Cooperation Agreement** in 1971 and 1974.

- **Culture:** India and Germany have a long **tradition of academic and cultural exchange**.
 - Max Mueller was the first scholar of Indo-European languages to translate and publish the Upanishads and the Rigveda.

VENKAI AH NAIDU TO LEAD INDIAN DELEGATION AT ASEM SUMMIT

Indian delegation will be led by Vice President during the 13th Asia–Europe Meeting (ASEM) Summit.

Asia-Europe Meeting (ASEM):

- ASEM is an **intergovernmental process (political dialogue forum)**.
- **Established-** 1996
- **Aim-** To foster dialogue and cooperation between Asia and Europe.
- **Objective** - To address issues of common interest in a spirit of mutual respect and equal partnership.

Members:

It has 51 partner countries:

- 28 Member States of the European Union + **Norway and Switzerland**.
- **10 ASEAN countries:** Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.
- Australia, Bangladesh, China, India, Japan, Kazakhstan, Republic of Korea, Mongolia, New Zealand, Pakistan and Russia
- **2 institutional partners:** European Union and the ASEAN Secretariat.

Characteristics:

- **Informality**
 - An open forum for officials to discuss political, economic and socio-cultural.
- **Multi-Dimensionality**
 - Covering the full spectrum of relations.
 - To devote equal weight to political, economic and socio-cultural dimensions.
- **Equal Partnership**
 - Co-operation based on mutual respect and mutual benefit
- **High-Level & People-to-People**
 - A platform to increase focus on fostering engagements in all sectors.

13th Asia-Europe Meeting (ASEM) Summit:

- It is a **virtual biennial meeting**.
- **Members-** Members of European Union, ASEAN Member States, China, Japan, Korea and European Commission.
- **Aim-** to strengthen social, cultural and educational links between Asia and Europe.
- **Theme-** "Strengthening Multilateralism for Shared Growth".
- **Host-** Cambodia

- India participated in **7th ASEM summit 2008** for the first time.

INDIA, US REACH COMPROMISE ON DIGITAL TAX

Recently, India and the US have reached a compromise on 2% equalisation levy on e-commerce supply of services charged by the country.

Highlights:

India will continue to impose the levy by March 31, 2024, or till the implementation of Pillar 1 of the OECD agreement on taxing cross-border digital transactions.

Benefits:

- **US will terminate** the additional duties on goods of India that had been adopted in the DST Section 301 investigation.
- It proposed **25 per cent retaliatory tariffs** on 40 products including shrimps, wooden furniture, gold, silver and Jewellery items and basmati rice.
- Once the OECD agreement rolls out, the 2% equalisation levy will be withdrawn.

What is the Issue?

- In June 2021, US suspended retaliatory tariff imposition on six countries, including India, for a period up to 180 days.
- Aim: To provide time for negotiations at the OECD and G20 on international taxation.
- On October 8, 2021, India and US joined an agreement with 134 other members of the OECD/G20 Inclusive Framework on a two-pillar solution to address the tax

challenges arising from the digitalisation of the economy.

OECD Tax Agreement:

Pillar One – Re-allocation of taxing rights

- **It will ensure** a fairer distribution of profits and taxing rights among countries with respect to the largest Multinational Enterprises including digital companies.
- **Example:** Microsoft, Google, Facebook, and Netflix.
- It would **re-allocate taxing rights** over MNEs from their home countries to the markets where they have business activities and earn profits.
- The taxing rights on more than **USD 125 billion** of profit will be reallocated to market jurisdictions each year.

Pillar Two – Global anti-base erosion mechanism

- It seeks to put a floor on competition over **corporate income tax**, through the introduction of a global minimum tax rate that countries can use to protect their tax bases.
- The **global minimum tax** with a minimum rate of 15% - is estimated to generate around USD 150 billion annually.
- Additional benefits will arise from increased tax certainty for taxpayers and tax administrations.

What is Equalisation Levy?

- Equalisation Levy was introduced in India in 2016 at rate of 6%.
- **Aim:** Taxing the digital transactions accruing to foreign e-commerce companies from India.
- The services covered are:
 - **Online advertisement**
 - Any provision for digital advertising facility/ service for the purpose of online advertisement.
 - As per the amendments in Finance Act, 2020, non-resident e-commerce operators that are involved in supply of services are charged with 2% of levy from April 1, 2020.

Applicability:

The two conditions should be met liable to equalization levy:

- The payment should be made to a **non-resident** service provider.
- The annual payment made to service provider exceeds Rs. 1,00,000 in one financial year.

Consequences:

Delay in payment:

- Interest is charged at 1% for every month or part thereof is delayed.

Penalty for failure of payment

- **Equalisation Levy not deducted:** Penalty equal to the amount of levy failed to be deducted along with interest of the principal levy outstanding.
- **Equalisation Levy deducted but not deposited:** Penalty equal to INR 1,000/day subject to the maximum of the levy failed to be deducted.

Penalty for failure of filing statement of compliance

- INR 100/day for each day the **non-compliance** continues.

Prosecution

- In case of a false statement the person may be **subject to imprisonment** of a term of up to 3 years and a fine.

NEED TO REFORM UNSC: VENKAI AH NAIDU

The Vice President of India emphasized the need for reforms in the UN Security Council.

United Nations Security Council (UNSC):

- The United Nations Security Council is United Nation's **principal organ for peacekeeping and conflict management.**

- The council consists of **15-member group**- 5 permanent and **10** non-permanent.
 - Permanent Members: United States, United Kingdom, China, Russia and France.
 - Non-Permanent Members:
 - They **hold their seats** on a **rotating basis** by **geographic region.**
 - They are **elected by the United Nations General**

Assembly for two-year terms starting on 1 January, with **five replaced each year**.

Need for Reforms in UN Security Council:

Authoritative Powers:

- The **decisions** (known as resolutions) made by UNSC are **binding** on all member states.
- That means it has wide-ranging powers and can, if necessary, take actions. E.g. the imposition of sanctions, that encroach on state sovereignty.
- In order for other countries to respect and implement the decisions of the council, the Council needs to have the **necessary authority and legitimacy**.

Under- representation:

- The **Charter of the United Nations** also expressly **states** that countries that **make considerable contributions** to the UN **should be members** of the Security Council.
- However, only five (China, France, Russian Federation, United Kingdom, the United States) countries have veto power in UNSC.
- There is need to increase the number of permanent Council members beyond only 5 countries.

Geographically unbalanced distribution of seats:

- The Council's composition should be adapted to the new realities.
- The current composition of the Security Council **reflects the geopolitical situation of 1945**.
- Africa, Asia, Latin America and the Caribbean in particular do not have the representation on the Council that their current standing demands.
- The **Asia-Pacific** Group holds **54 Member States** in the UN, with more than half of the world's population.
 - Asia is currently **represented in the Council** by a number equivalent to only **one-fifth of the Member States** (China and two non-permanent members).
 - **Africa** also accounts for more than **one-fourth of the Member States**.
 - However, there is **no permanent seat** for Africa and only three non-permanent seats.

Shift in Power:

- In the **absence of Security Council** reform, there is a danger that decision-making processes could be **shifted to other forums**.

INDIA CONDEMNS RAISING BILATERAL ISSUES AT SHANGHAI COOPERATION ORGANISATION

Recently, the External Affairs Minister of India stated that Raising bilateral issues is counter-productive to the spirit of the Shanghai Cooperation Organisation.

Shanghai Cooperation Organization (SCO)

- **Founded on:** 15 June 2001
- **Founders:** China, Russia, Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan
- **Headquarters:** Beijing, China
- **Aim:**
 - To strengthen relations among member states
 - To promote cooperation in **political affairs, economics, and trade, scientific-technical, cultural, and educational spheres as well as in energy, transportation, tourism, and environmental protection.**
- **Members:** Total 8 Member States.
 - China
 - Kazakhstan
 - Kyrgyzstan
 - Russia
 - Tajikistan
 - Uzbekistan
 - **India**
 - Pakistan
- It is also known as the Shanghai Pact.
- It is a Eurasian political, economic, and security alliance.
- It is the world's largest regional organization in geographic scope and population.
 - It is covering three-fifths of the Eurasian continent, **40% of the world population**, and more than **20% of global GDP.**
- It is the successor to the Shanghai Five.
 - It was a mutual security agreement formed in 1996

between China, Kazakhstan, Kyrgyzstan, Russia, and Tajikistan.

- It is governed by the Heads of State Council (HSC)
 - HSC is a supreme decision-making body, which meets once a year.
- It has two permanent bodies:
 - **The Secretariat**
 - **The Regional Anti-Terrorist Structure (RATS)** – combats regional terrorism, separatism, and extremism.

Significance of SCO for India

- **It will promote India's Engagement with Central Asia**
 - The most visible contribution of the SCO is that at least once a year the leaders of the Central Asian countries will have to sit down with each other.
- **It will help in stabilizing the relationship with Pakistan**
 - The regular leadership meetings around the SCO mean that both Indian and Pakistani officials at a senior level will have to encounter each other at least once a year.
- **India's principal benefit from joining the SCO will be geopolitical**
 - It will help bring India closer to China by supporting the only multilateral security entity outside the United Nations.

Suggestions to improve India-SCO relations

- **Improving the relationship with Central Asia can be one of India's untapped opportunities**

- Indian soft power already has considerable influence in Central Asia, far more than China.
- **India should work on stabilizing the relations with China and Pakistan.**

- It will help India to grow at a higher rate and will maintain peace in regional areas.
- **India should initiate improving the Military cooperation with SCO Countries.**
- It is important to counter terrorism in the regional area.

CBI SPECIAL DIRECTOR SINHA ELECTED TO INTERPOL EXECUTIVE PANEL FOR ASIA

Recently, CBI Special Director was elected as a delegate for Asia on the executive committee of the Interpol.

INTERPOL

- Interpol is an **inter-governmental organization** that facilitates worldwide police cooperation and crime control.
- It was founded in 1923 as the **International Criminal Police Commission (ICPC)**
- **Headquarter: in Lyon, France**
- It is the world's **largest international police organization** with **195 member states**.
- It has **seven regional bureaus** worldwide and a **National Central Bureau in all**.
- It is run by the Secretary General. it is staffed by both police and civilians.
- In each country, an INTERPOL National Central Bureau (NCB) **provides the central point of contact for the General Secretariat and other NCBs**.
- An NCB is run by national police officials and usually sits in the

government ministry responsible for policing.

- The General Assembly is **governing body** and it brings all countries together once a year to take decisions.

Aims:

- To **ensure and promote mutual assistance** between all criminal police authorities in the spirit of the Universal Declaration of Human Rights.
- To **establish and develop all institutions** likely to contribute effectively to the prevention and suppression of ordinary law crimes.
- To help police in all of the member countries to work together to make the world a safer place.

Connecting system

- All the countries are connected via a **communications system called I-24/7**.
- Countries use this secure network to contact each other, and the General Secretariat.
- It also **allows the countries to access databases** and services in

real-time, from both central and remote locations.

- It also **coordinates networks of police and experts in different crime areas**, through working groups and at conferences to share experiences and ideas.

Interpol notice

- An Interpol notice is an **international alert** circulated by Interpol to **communicate information about crimes, criminals, and threats by police in a member state** their counterparts around the world.

Types of Notices

Red Notice:

- To **seek the location and arrest of a person** wanted by a judicial jurisdiction or an international tribunal with a view to his/her extradition.
- The legal basis for a Red Notice is an **arrest warrant or court order** issued by judicial authorities in a country.

Blue Notice:

- To **locate, identify or obtain information** on a person of interest in a criminal investigation.

Green Notice:

- To **warn about a person's criminal activities** if that person

is considered to be a possible threat to public safety.

Yellow Notice:

- To **locate a missing person or to identify a person** unable to identify himself/ herself.

Black Notice

- To **seek information on unidentified bodies.**

Orange Notice:

- To **warn of an event, a person, an object** or a process representing an imminent threat and danger to persons or property.
- **INTERPOL–United Nations Security Council Special Notice:** To inform INTERPOL's members that an individual or an entity is subject to UN sanctions.
- It was created in 2005 to provide better tools to help the Security Council carry out its mandate
- Its mandate includes the freezing of assets, travel bans and arms embargos aimed at individuals and entities associated with Al Qaeda and the Taliban.
- **Purple Notice:**
- To **provide information on modus operandi**, procedures, objects, devices or hiding places used by criminals.

DAC CLEARS AK-203 DEAL WITH RUSSIA

India inks deal with Russia to manufacture AK-203 rifles domestically.

- Rifles will be manufactured in India as part of a **joint venture (JV)** Indo-Russia Rifles Private Limited.

- The JV is established between the **Indian Ordnance Factory Board (OFB) and Rosoboron export**, the Russian state agency for military exports.



NEW ZEALAND PASSES CLIMATE CHANGE DISCLOSURE LAWS FOR FINANCIAL FIRMS IN WORLD FIRST

Recently, New Zealand has become the first country to pass laws requiring banks, insurers and investment managers to report the impacts of climate change on their business

- The new laws will require financial firms to explain how they would **manage climate-related risks** and opportunities, and the **disclosure requirements** will

be based on standards from New Zealand's independent accounting body the **External Reporting Board (XRB)**.

- Those standards will be based on the Task Force on Climate-related Financial Disclosures (TCFD), and the **disclosures** will become **mandatory** for financial years **beginning in 2023**.

G20 LEADERS COMMITTED TO THE GOAL OF LIMITING GLOBAL WARMING TO 1.5 DEGREES CELSIUS.

Highlights:

G20 leaders, at the meet in **Rome**, committed to:

- The goal of limiting global warming to 1.5 degrees Celsius.
- **Scale up finance** and promised to **mobilise \$100 billion annually through 2025**.
- **Stop financing overseas coal** immediately, commit to energy transition that meets timeframes aligned with the Paris Agreement.

India's Target against Climate Change:

- In its climate action plan submitted under the **Paris Agreement**, India had promised to reduce its emissions intensity, by **33 to 35** per cent by the year **2030** compared to **2005 levels**.
- India, at a climate meeting at UN General Assembly in New York in 2019, set up a target to take up its

installed capacity of renewable energy to **450 GW by 2030**.

- At that time, India's publicly stated target was **175 GW** by the year 2022.
- India does **not** plan to start **any new coal power plants** after 2022.

- As of 2021, India is already targeting **40 per cent electricity production** through **non-fossil fuel** sources by 2030.

Highlights of COP 26, Glasgow:

Apart from these, India has presented its 5 point roadmap at Conference of Parties 26 (COP 26), Glasgow, to combat climate change

SCO MEMBER STATES ADOPT PROTOCOL TO STRENGTHEN COOPERATION IN PREVENTING HUMAN TRAFFICKING

Shanghai Cooperation Organisation (SCO) adopted a protocol to strengthen cooperation in preventing and combating growing menace of human trafficking, especially women and children.

Highlights:

- The **Nineteenth** Meeting of Prosecutors General of the Shanghai Cooperation Organization (SCO) Member States was hosted by **India**.
- The next (20th) meeting will be held in the **Republic of Kazakhstan** in **2022**.

Salient Features of the protocol are:

- To **strengthen cooperation** in preventing and combating growing menace of human trafficking
- To continue **exchanging the national legislation** to combat the menace of human trafficking
- To **provide protection and assistance** in victims of trafficking within their competence.
- To develop cooperation between the educational (training) organizations (institutions) of the

SCO member states in the field of training and advanced training of prosecutors, whose competence include combating trafficking.

- To conduct **bilateral and multilateral activities** on combating the threat of human trafficking.

India's effort to combat human trafficking:

Constitutional and Legislative Measures:

- The Constitution of India, under Article 23 (1), prohibits trafficking in human beings or persons.
- **The Immoral Traffic (Prevention) Act, 1956 (ITPA)** is the premier legislation for prevention of trafficking for commercial sexual exploitation.
- **Criminal Law (amendment) Act 2013** provide for comprehensive measures to **counter the menace of human trafficking including trafficking of children for exploitation** in any form including physical exploitation or any form of sexual exploitation,

slavery, servitude, or the forced removal of organs.

- **Protection of Children from Sexual offences (POCSO) Act, 2012**, which has come into effect from 14th November, 2012 is a special law to **protect children from sexual abuse and exploitation**.
 - It provides precise definitions for different forms of sexual abuse, including penetrative and non-penetrative sexual assault, sexual harassment.
- There are other **specific legislations** enacted relating to **trafficking in women and children**
 - Prohibition of Child Marriage Act, 2006
 - Bonded Labour System (Abolition) Act, 1976
 - Child Labour (Prohibition and Regulation) Act, 1986
 - Transplantation of Human Organs Act, 1994
- **Sections 372 and 373** of IPC deal with selling and buying of girls for the purpose of prostitution.
- **State Governments** have also enacted specific legislations to deal with the issue. (e.g., The Punjab Prevention of Human Smuggling Act, 2012).

Administrative measures and interventions:

- **Anti-Trafficking Cell (ATC):**
 - Anti-Trafficking Nodal Cell was set up in the **Ministry of Home Affairs (MHA)** in 2006 to act as a focal point for

communicating various decisions and follow up on action taken by the State Governments to combat the crime of Human Trafficking.

International Conventions:

- India has ratified the **United Nations Convention on Transnational Organized Crime (UNTOC)**.
- India has ratified the **South Asian Association for Regional Cooperation (SAARC) Convention** on Preventing and Combating Trafficking in Women and Children for Prostitution.
- A Memorandum of Understanding (MoU) between **India and Bangladesh** on Bi-lateral Cooperation for Prevention of Human Trafficking in Women and Children, Rescue, Recovery, Repatriation and Re-integration of Victims of Trafficking was signed in June, 2015.

Shanghai Cooperation Organisation (SCO):

- SCO is an **intergovernmental** Eurasian political, economic, and security **alliance**.
- It is the **world's largest** regional organisation **in geographic scope and population**.
- The SCO is the **successor** to the **Shanghai Five**, a mutual security agreement formed in 1996 between China, Kazakhstan, Kyrgyzstan, Russia, and Tajikistan.

- The SCO is governed by the **Heads of State Council (HSC)**, its supreme decision-making body, which **meets once a year**.
- The **headquarters** is located in **Beijing, China**.
- The **main objectives** of SCO are to:
 - Strengthen relations among member states.
 - Promote cooperation in political affairs, economics and trade, scientific-technical, cultural, and educational spheres as well as in energy, transportation, tourism, and environmental protection.
 - Safeguard regional peace, security, and stability.
 - Create a democratic, equitable international political and economic order.

Way forward for India in SCO:

- The country's **start-up companies** should be

encouraged to lead the charge for creating new linkages within SCO region.

- As a leader in the field of **traditional medicines**, India should collaborate with interested SCO parties.
- India should encourage **cooperation in the micro, small and medium enterprises** sector in agriculture, energy, education, pharmaceuticals and information communication technology.
- Given the salience of **Buddhist connections in SCO countries**, priority should be accorded to tourism.
- A granular **dialogue on a trade and investment promotion programme** is essential through sectoral working groups of the SCO business council.

WHY IS THERE A POSSIBILITY OF A TRADE WAR BETWEEN NORTHERN IRELAND AND UK?

UK might trigger **Article 16 of the Northern Ireland Protocol**, popularly known as the **Irish Backstops**.

Genesis:

- The UK comprises Wales, Scotland, England and Northern Ireland. Out of these, **Northern Ireland** is the **only country**, which still **remains within the EU's single market system** for goods.
- EU's single market system means that Northern Ireland must follow

the rules of the EU's single market, resulting in checks on certain goods coming from England, Scotland and Wales into Northern Ireland.

Northern Ireland Protocol:

- The Northern Ireland Protocol was a part of the **European Union and United Kingdom's Brexit agreement**.
- It **prevents checks** on goods coming from Northern Ireland

(part of the UK) into the Republic of Ireland (part of the EU).

- Having the backstops means that there would be **no border between Northern Ireland and the Republic of Ireland.**
- It also means that goods cross to and from the country into the EU **without customs checks, tariffs and extra paperwork.**
- This has led to protests from unionists in Northern Ireland who say the protocol **weakens ties with the rest of the UK and has created shortages.**

Article 16 of the protocol?

- Article 16 is a mechanism that **allows** either party to **unilaterally take safeguard measures** in the event that the protocol leads to serious economic, societal or environmental difficulties that are liable to persist, or to diversion of trade.
- The measures are meant to be restricted in scope and duration to what is strictly necessary in order to remedy the situation.
- In other words, the measures are **not meant to disrupt** the functioning of the protocol or to suspend the protocol.
- If either the EU or the UK triggers the clause, the other party may take proportionate measures to remedy the imbalance.

What safeguarding measures can the UK take?

- UK has already unilaterally **introduced grace**

periods on customs checks for certain goods and the Protocol states any measures need to address a specific issue.

- UK could use **Article 16** to try and **suspend almost all of its obligations** related to trade under the Protocol.

What can the EU then do?

- As per the Protocol, the triggering of Article 16 is immediately followed by a month of negotiations between the **UK and the EU Joint Committee** before any safeguarding measures are introduced. Once these are introduced, they must be **reviewed every three months.**
- If EU decides that UK is using Article 16 improperly or is in breach of the Withdrawal Agreement, it could turn to the **dispute settlement mechanism.**
- If it found that it has breached it, then the EU could suspend parts of the Withdrawal Agreement and also the Trade and Cooperation Agreement, which would allow it to **impose tariffs** in some areas.
- The EU could however take some unilateral measures in the interim.
- This could include **withdrawing the data adequacy** granted to the UK which allows for personal data to flow between the two sides.
- It could decide to **suspend the Trade and Cooperation Agreement entirely.**

ETHIOPIA REBELS 'JOIN FORCES' AGAINST GOVT

Nine rebel groups battling Ethiopia's government announced an alliance called '**United Front of Ethiopian Federalist and Confederalist Forces**' to fight against the current government of Ethiopia in Tigray region.

What is Tigray Conflict?

Genesis:

- Since 1994, Ethiopia had a federal system in which different ethnic groups control the affairs of 10 regions.
- For example, Tigray region of Ethiopia was governed by Tigray People's Liberation Front (TPLF).
- TPLF governed Ethiopia from 1991, when a military regime was ousted from power.

The conflict:

- Ethiopia's federal government and Tigray regional forces regard each other as illegal when the new Prime Minister Ethiopia came to power in 2018.
- He liberalized politics, set up a new party, and removed Tigrayan government leaders accused of corruption and repression.
- The feud came in September 2021, when Tigray defied the central government to hold its own regional election.
- The conflict grew when the **central government** suspended funding for Tigray and cut ties with it.
- This led to a "**declaration of war**".

A RANKING OF COUNTRIES ON DRUG POLICIES AND IMPLEMENTATION

Recently, the **Global Drug Policy Index** was released by the **Harm Reduction Consortium**.

Highlights:

- Out of 30 countries ranked, **Norway has topped**, while **Mexico** was placed at the **bottom**.
- India was ranked at **18th** position.

Index:

- The Global Drug Policy Index is a unique tool that measures **national-level drug policies**.
- It provides each country with a score and ranking that shows how much their drug policies and their implementation **align with the**

UN principles of human rights, health and development.

- As such, the Index provides an essential accountability and evaluation mechanism in the field of drug policy.
- It is a **data-driven global analysis**.
- It is composed of **75 indicators** running across **five broad dimensions** of drug policy:
 - Criminal justice
 - Extreme responses
 - Health and harm reduction
 - Access to internationally controlled medicines
 - Development

- It is a project of the Harm Reduction Consortium, whose partners include:
 - The European Network of People Who Use Drugs
 - The Eurasian Harm Reduction Association (EHRA)

- The Eurasian Network of People who Use Drugs (ENPUD)
- The Global Drug Policy Observatory (GDPO) / Swansea University
- Harm Reduction International (HRI), the International Drug Policy Consortium (IDPC)

CHINA STRENGTHENING CONNECTIVITY IN CHUMBI VALLEY: EASTERN COMMAND CHIEF

China is building an alternative axis in the Chumbi valley, which is close to the Siliguri corridor.

Chumbi Valley:

- Chumbi Valley lies in **Yadong country in Tibetan region.**
- It is also known as **Dromo, Tromo or Chomo**
- It is the **trijunction of India, China and Bhutan.**
- The inhabitants of the valley are called **Promowa** and are of Tibetan descent.

Strategic Importance:

- Maintaining **national security** on border frontiers.
- Protecting the **Siliguri corridor** (also called 'Chicken's neck') which connects India to the north-eastern states.
- India has formally agreed to come to Bhutan's rescue in case of any aggression by foreign power under **Indo-Bhutan Friendship Treaty, 2007.**
- It is close to **Nathu-La pass** which is important trade point.

Siliguri Corridors (Chicken's neck):

- It is a **narrow stretch of land located in the West Bengal**, that connects India's north-eastern states to the rest of India.
- It **borders Nepal, Bangladesh and Kingdom of Bhutan.**
- The corridor **extends from the Darjeeling, Jalpaiguri and Terai areas of West Bengal towards the North East.**

Strategic importance:

- It is the **only bridge** between the eight north-eastern states of India and the rest of the country.
- The region is **important for trade**, commerce and tourism for West Bengal, Sikkim, Assam, Nepal, Bhutan and Bangladesh.
- The **corridor is the hub of a rail and road network** connecting West Bengal and the rest of India to the North East.
- It is also the hub of the railway network that connects to the strategic military formations along the **Line of Actual Control (LAC).**

WHAT LINKS OIL AND FOOD PRICES

The UN Food and Agriculture Organisation released data showing its world Food Price Index (FPI), the highest since July 2011.

Linkage between Oil and Food Prices:

- Petroleum and Agri-commodity prices move in tandem because of the **bio-fuels link**.
- When crude prices rise, **blending ethanol** from sugarcane and corn (maize) with petrol or diverting palm and soyabean oil for biodiesel production becomes much more attractive.
- **Cotton**, likewise, turns relatively affordable vis-à-vis petrochemicals-based synthetic fibres.
- **Corn** is primarily an animal feed, its diversion to ethanol leads to substitution by other grains, including wheat, for livestock use. That, then, pushes up prices of food grains as well.

- In case of **sugar**, mills step up the proportion of cane crushed for fermenting into alcohol.
- Apart from bio fuels, **large price increases** also tend to rub off on other farm produce through creation of **positive sentiment**.
- The positive sentiment is created by 2 factors:
 - **Receding pandemic cases** and rising vaccination rates.
 - The **flood of liquidity unleashed** by the us federal reserve and other global central banks.
- All this money, combined with the policy-induced ultra-low global interest rates, has found its way into stock markets, start-up investments and also commodities.
- And since restoration of supply chains hasn't kept pace with the demand recovery, the overall result has been **inflation**.

GLOBAL FUEL ECONOMY INITIATIVE 2021

The International Energy Agency's (IEA) released an update on Global Fuel Economy Initiative (GFEI) recently.

Highlights:

- To halve fuel consumption of new light-duty vehicles, fuel consumption should fall 4.3 % per year on average from 2019 to 2030.
- The average rated fuel consumption fell by only 0.9 per cent between 2017 and 2019.

- This is smaller than the 1.8 per cent annual average reduction between 2010 and 2015.
- The three **major car markets:** China, the European Union, and the United States, accounted for 60 per cent of global sales of light-duty vehicles in 2019.
- This totalled 90 million, down seven per cent from 2017.

Factors responsible for improvement between 2017 and 2019.

- **Stagnating** fuel economy standards in the US and the EU up to 2019.
- The rising market share of SUVs, which can use almost one-third more fuel than a medium-sized car.
- **The rising cost** of squeezing out further efficiency gains from mature technologies.
- The slow adoption of electric cars to compensate for larger vehicles.

Emissions from vehicles:

ICE- Cars

- For combustion engine cars, most emissions occur at their tailpipe.
- Less than 20 per cent of overall **emissions** are related to the production of their fuels.

Electric Vehicles

- **Battery electric vehicles** had the lowest emissions in 2019, followed by plug-in hybrids and hydrogen fuel cell electric vehicles.
- For battery electric and fuel cell electric vehicles, all the emissions are incurred in producing and delivering the electricity or hydrogen on which they run.
- **Hybrid vehicles** have the lowest emissions among vehicles with internal combustion engines using

gasoline, diesel or compressed natural gas.

Global Fuel Economy Initiative:

- GFEI is a partnership between 6 organisations that promote research, and action **to improve fuel economy worldwide and zero emission technologies.**
- The GFEI was first established in 2009.
- **Aim:** To ensure that the world's vehicle fleet is as clean and efficient as possible in response to global concerns about clean air and climate change.
- **Headquarters:** London, UK.

Objectives:

- Accelerating the **rapid transition** to the most efficient, zero emission vehicles globally – saving money, energy and tackling climate change.
- **Improving average fuel economy** of light duty vehicles by 2030 for new vehicles.
- **Expanded its focus** to include Heavy Duty Vehicles, with the aim of a 35 per cent improvement by 2035 and 80 per cent by 2050.
- **Decarbonizing** the electricity grid to meet emissions targets for the global vehicle fleet.

GLOBAL FOREST RESOURCES ASSESSMENTS

The Food and Agriculture Organization (FAO) unveiled Global Forest Resources Assessment (FRA) 2020 Remote Sensing Survey, recently.

Highlights of the Survey:

- 420 million hectares of forest has been lost since 1990.
- However, most of the **deforestation** was in the tropical biomes during 2000-2018.
- 90 % of deforestation worldwide was due to **agricultural expansion.**

- Percentage of global forests converted for other purposes:
 - 52.3 % has been converted to cropland
 - 37.5 % was lost to livestock grazing
 - 5.6 % converted for urban and infrastructure development
 - 4.6 % to other causes.

Important Deforestation Drivers:

- **Agriculture** is the main driver of deforestation in all regions except Europe where urban and infrastructure development have a higher impact.
- **Conversion to cropland** dominates forest loss in Africa and Asia, with

over 75 per cent of the forest area lost converted to cropland.

- Deforestation has been successfully reduced in South America and Asia.
 - **Tropical rainforests** in these regions recorded the highest deforestation rates of all biomes.

Top countries with Forest area:

More than half of the world's forests is in only five countries

- Russian Federation,
- Brazil
- Canada
- The United States of America
- China.

PAKISTAN REFUSES USE OF ITS AIRSPACE FOR SRINAGAR-SHARJAH FLIGHT: FOREIGN OFFICE

Pakistan denied permission to use its airspace for the flight between Srinagar and Sharjah operated by Go First Airline.

Freedom of Air?

Genesis:

- In the **Chicago Convention 1944**, the signatories decided to set rules to act as fundamental building blocks to international commercial aviation.
- As a part of these rules, '**freedoms of air**' were decided.
- These freedoms or rights allow airlines of a particular country the privilege to use or land in another country's airspace.

Types:

First Freedom of the Air

- The **right or privilege**, in respect of scheduled international air services, granted by one State to another State or States to fly

across its territory without landing.

Second Freedom of the Air

- The right or privilege, granted by one State to another State or States to land in its territory for non-traffic purposes.

Third Freedom of The Air

- The right or privilege, in respect of scheduled international air services, granted by one State to another State to put down, in the territory of the first State, traffic coming from the home State of the carrier.

Fourth Freedom of The Air

- The right or privilege, granted by one State to another, to take on, in the territory of the first State, traffic destined for the home State of the carrier.

Fifth Freedom of The Air

- The right granted by one State to another to put down and to take on, in the territory of the first State, traffic coming from or destined to a third State.

Sixth Freedom of The Air

- The right or privilege, in respect of scheduled international air services, of transporting, via the home State of the carrier, traffic moving between two other States.

International Civil Aviation Organization:

- ICAO is an intergovernmental specialized agency associated with the United Nations (UN).
- Established in 1947 by the **Convention on International Civil Aviation** (1944).
- **Aim:** To developing safe and efficient international air transport for peaceful purposes and ensuring a reasonable opportunity for every state to operate international airlines.
- **Headquarters:** Montreal, Canada.

ICAO Membership:

- An **Assembly of delegates** from all member countries that meets every three years.

- **A Council of representatives** from 33 member states, elected by and responsible to the Assembly.

- **An Air Navigation Commission** appointed by the Council for addressing technical matters.

- Various **standing committees**, like Committee on Joint Support of Air Navigation Services and a Finance Committee.

Functions of ICAO:

- Establishing and **reviewing international technical standards** for aircraft operation and design.
- **Perform** crash investigation, meteorology, ground facilities for air transport, and-rescue missions.
- **Promoting** regional and international agreements aimed at liberalizing aviation markets.
- To establish **legal standards** to ensure that the growth of aviation does not compromise safety.
- Encourages the development of international aviation law.

GLOBAL EMISSIONS OF CO₂ FROM TRANSPORT: CARS, BUSES ACCOUNT FOR LARGEST SHARE; AIRLINES A TENTH

Recently, six large automobile makers and 31 countries pledged to work towards ending the sale of new petrol and diesel vehicles by 2040.

Highlights:

- The **automobile companies** that made the commitment accounted

for approximately a quarter of global sales in 2019.

- These automakers include the **American companies** Ford and General Motors, Mercedes-Benz of Germany, and Volvo of Sweden.

- India, the **fourth-largest** auto market in the world joined the coalition, including the United Kingdom, Canada, Netherlands, Norway, Poland, and Sweden.

Travel Emissions around the Globe:

- The entire **transport sector** accounted for a little more than a fifth of total CO2 emissions.
- As of 2018, road travel — including both **passenger and freight vehicles** accounted for almost three-quarters of the world's transport emissions.
- **Road transport** accounted for 15% of total global CO2 emissions.
- **Passenger vehicles** like cars and buses accounted for the larger part of road travel emissions, and 45.1% of total CO2 emissions from transport.

- **Aviation and shipping** were small contributors to global transport emissions — 11.6% and 10.6% respectively.
- The contribution of rail travel was **negligible**.

Per Capita CO₂ Emissions:

- As per the **Global Carbon Project**, with the end of the pandemic induced slowdown, emissions were expected to rise by 4.9%.
- The Global Carbon Project is a Global Research Project of Future Earth and a research partner of the **World Climate Research Programme**.
 - It works with the **international science community** to support actions to slow down the increase of greenhouse gases in the atmosphere.

PAK DEPLOYS ADDITIONAL TROOPS TO PROTECT CHINESE CPEC WORKERS AMID RISING DISCONTENT AMONG LOCALS

The China Pakistan Economic Corridor (CPEC) is getting increasingly unmanageable with local Pakistanis unhappy with the Chinese soldiers and civilians working on the project.

China Pakistan Economic Corridor (CPEC):

- CPEC is a **flagship** of the China's **Belt and Road Initiative (BRI)**.
- It is a collection of **infrastructure projects** throughout Pakistan.
- CPEC runs through the **entire length of Pakistan** – through Pakistan-occupied Kashmir (PoK)

and the southern state of Balochistan.

- It **reduces the distance** for Chinese goods bound for the US, Europe, Africa and the entire western world by a substantial 2,000 miles and vice versa by providing an alternate to the 'Strait of Malacca' route, through which most Chinese trade currently takes place.
- CPEC is intended to rapidly modernize Pakistani infrastructure and strengthen its economy by the **construction of modern transportation networks**,

numerous energy projects and special economic zones (SEZs).

- With a USD 11 billion investment in rail and road infrastructure and USD 33 billion in energy and power generation projects, the project is largely **financed by Chinese state-owned institutions.**

Options for India:

Why India should Join CPEC?

- Considering India's **membership in Asian Investment Infrastructure Bank (AIIB)**, which may also ultimately fund some CPEC projects, and its involvement in **Bangladesh China India Myanmar (BCIM)** corridor to link Kolkata and Kunming in China via Bangladesh and Myanmar, there is a possibility that India might consider participating in CPEC corridor.
- India can **join CPEC** in order to gain overland **access to Afghanistan and Central Asia from Pakistan**, as the main purpose of CPEC would not be fulfilled without India's participation.
- **Revival of silk road** near India – China border and connecting it to BRI can help develop Kashmir as the nucleus of intra-regional trade and energy cooperation between South and Central Asia.

Against CPEC:

- India shares a great deal of trust deficit with China and Pakistan and has a history of conflict with both the countries. CPEC can be a disguised political disturbance with a high-level strategic content. It brings with it many concerns and threats.

India's Concerns:

Sovereignty:

- The CPEC corridor is considered to be the alternative economic road link for the Kashmir Valley lying on the Indian side of the border.
- A **well-connected Gilgit-Baltistan that attracts industrial development** and foreign investment will further consolidate the region's perception as internationally recognised Pakistani territory, **diminishing India's claim over the disputed territory of Kashmir.**

Chinese Control Over Trade Via Sea Route:

- CPEC will put China in a position to offer a **shorter and more economical** trade route to most North and Latin American enterprises.
- This will give China the power to **dictate** the terms by which the **international movement of goods** will take place between the Atlantic and the Pacific oceans.
- **Gwadar port** places China in close proximity to the Iran-controlled **Strait of Hormuz channel**, which supplies 35% of the world's oil requirements.
- Gwadar is located on the shores of the Arabian Sea, in Balochistan Province of Pakistan.
- Strait of Hormuz has been often used as a strategic weapon of self-defence by Iran, through a threat to choke international oil supplies.
- This means that the world will look to **China to intermediate** in the face of any future **confrontation between Iran and Israel** or the possible **threat of a seizure** of the canal.

- India, with over 60% of its oil supplies passing through the Strait, will be no exception.

Chinese String of Pearls:

- China has been increasing its presence in the **Indian Ocean** with the String of Pearls ambition.
- The String of Pearls is a geopolitical hypothesis proposed by US in 2004.
- It refers to the network of Chinese military and commercial facilities, which extend from the Chinese mainland to Port Sudan in the Horn of Africa.
- This includes Chittagong port (Bangladesh), Hambantota port (Sri Lanka), Port Sudan (Sudan), Maldives, Somalia and Seychelles.

Emergence of Pakistan as an Outsourcing Destination:

- Development of commercial towns adjoining the corridor and better rail and road connectivity, Pakistan can emerge as a key destination for **contract-manufacturing-**

outsourcing for the Western economies.

- This is more probable at a time when India is becoming costlier and Bangladesh has performed poorly on quality and regulatory standards.
- With the supply of raw material from China becoming easier, **Pakistan** will be suitably placed to become a **regional market leader** in these sectors – mainly **at the cost of Indian export volumes.**

China's Dominance over Trade leadership:

- With US' exit from Trans Pacific Partnership, Britain's exit from European Union and weakened North American Free Trade Agreement (NAFTA), can aid to China's global leadership in trade.
- This can make a globally accepted and integrated China stronger at the United Nation further **harming India's aspiration** to acquire a **permanent seat at the UN Security Council.**

APEC LEADERS MEETING TO CHART PATH FORWARD FROM PANDEMIC

Recently, New Zealand hosted the first meeting of this year's Asia-Pacific Economic Cooperation (APEC) forum, which culminates in a leader's meeting.

Asia-Pacific Economic Cooperation (APEC)

- It is a regional economic forum **established in 1989** to leverage the growing **interdependence of the Asia-Pacific.**
- **Aim:** To create greater prosperity for the people of the region by

promoting balanced, inclusive, sustainable, innovative and secure growth and by accelerating regional economic integration.

- **Headquarters:** Queenstown, Singapore
- **Members:** Australia; Brunei Darussalam; Canada; Chile; People's Republic of China; Hong Kong, China; Indonesia; Japan; Republic of Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; The Philippines;

The Russian Federation; Singapore; Chinese Taipei; Thailand; United States of America; Vietnam.

- **India is NOT a member of APEC.**
- **Working and Functions:**
 - APEC cooperative process is predominantly concerned with trade and economic issues, with members engaging with one another as economic entities.
 - It ensures that goods, services, investments, and people move easily across borders.
 - Members facilitate this trade through faster customs procedures at borders;
 - It deals in aligning regulations and standards across the region.
- **Benefits of the Forum:**

- APEC works to help all residents of the Asia-Pacific participate in the growing economy.
- APEC projects provide digital skills training for rural communities and help indigenous women export their products abroad.
- APEC members also implement initiatives to increase energy efficiency and promote sustainable management of forest and marine resources.
- The forum adapts to allow members to deal with important new challenges such as disaster resilience, planning for pandemics, and addressing terrorism.

PAKISTAN'S NAVY INDUCTS CHINESE-BUILT FRIGATE

Recently, The Pakistan Navy's first Type 054A/P Frigate, **PNS TUGHRIL**, was commissioned at the Hudong Zhonghua Shipyard in China.

- PNS TUGHRIL is the first of four frigates of **Type 054 A/P** being built for the Pakistan Navy.

- It is named after "**Tugrul the First**," one of the founders of the Seljuk Empire, which governed modern-day Iran, Iraq, Syria, and Turkey.

UNHCR MID-YEAR TRENDS 2021

Recently, Mid-Year Trends report was released by United Nations High Commissioner for Refugees.

Mid Year Trends 2021

- **Published by:** United Nations High Commissioner for Refugees

- **Aim:** To monitor the humanitarian plight of the displaced refugees.

Highlights:

- Trend of rising forced displacement continued into 2021, with global numbers exceeding 84 million, an

increase from 82.4 million at the end of 2020.

- In the first half of 2021, 126,700 refugees returned to 23 countries of origin from 41 countries of asylum.
- More than **4.3 million new displacements** were reported by 18 countries.
- In the first half of 2021, millions more people were forced to flee their homes due to armed conflicts, **generalized violence or human rights violations**.
- Much of the new internal displacement was in Africa:
 - Africa accounted for **80 percent** of the most neglected displacement crises across the globe.
- The Democratic Republic of the Congo (1.3 million), Ethiopia (1.2 million), Central African Republic

(202,500), South Sudan (170,400), Nigeria (164,600), Mozambique and Burkina Faso.

- Internal and cross-border mobility in the East and Horn of Africa contributed to around 6.5 million **internally displaced persons** (IDP) and 3.5 million refugees and asylum seekers in 2020 alone.
- By mid-2021, due to conflict and violence, the number of internally displaced persons had risen to nearly **50.9 million**.
- Intensifying violence led to significant new displacements in **Afghanistan, the Democratic Republic of the Congo, Ethiopia, Mozambique, Myanmar, South Sudan and countries in the Sahel region**, among other locations.

RUSSIA, BELARUS HOLD DRILLS NEAR POLAND

Belarusian and Russian paratroopers staged joint drills near the Polish and Lithuanian borders.

Belarus European Union Border crisis:

- The **Belarus-European Union border crisis** is a migrant crisis consisting of an **influx of migrants**, to Lithuania, Latvia, and Poland via those countries' borders with Belarus.
- The crisis was triggered by the severe **deterioration in Belarus-European Union relations**.

Causes of deterioration of relations:

2020 Belarusian presidential election:

- The current president of Belarus, who had been in power for the last 25 years, cracked down on protests erupting throughout the country, and

forced the leader of opposition, into exile in Lithuania while jailing other opposition leaders.

- This prompted the EU to take coercive action against his regime, applying increasingly **restrictive measures** starting in October 2020.

Flight incident

- A flight was **forced down by a Belarusian fighter jet** so that the Belarusian regime could **arrest two dissident journalist passengers**.
- In response, EU banned Belarusian air carriers from EU airports and airspace.

Belarus' Reaction:

- To retaliate against the sanctions from European Union, **Belarus**

started to influx migrants from middle eastern countries into countries which share its borders.

- The main aim behind this move is to **create a deliberate humanitarian crisis** on European Union's frontier.
- Thousands of people are stuck in limbo between two nations that won't accept them.
- Belarus **lured** the migrants by **easing its immigration policies** and convinced them to move into Poland.

Poland's Perspective:

- **Poland**, where the border crisis has been most acute, is already on the **outs with EU leadership** over democracy issues, and immigration has long proved a particularly thorny issue for EU
- During the 2015 refugee crisis, Poland was one of the most strident critics of the EU's migration policy.

- **EU charged Polish** government to **pressure judges** and **bring them under political control.**

- In October, the EU levied a 1 million euro per day fine against Poland for violating EU rules, and Poland has also enacted increasingly harsh restrictions against LGBTQ citizens and the media.

- Poland is now **relying on EU sanctions** and **calling upon Northern Atlantic Treaty Organization (NATO)** to deal with the issue.

Reactions from Other Countries:

- **Turkey banned Syrian, Yemeni and Iraqi** citizens from flights to Poland.
- **Iraq and Dubai**, have limited or **cancelled their flights to Belarus** in order to stem the flow of people into the country.

TOBACCO USE FALLING: WHO URGES COUNTRIES TO INVEST IN HELPING MORE PEOPLE TO QUIT TOBACCO

Recently, World Health Organization (WHO) released the fourth WHO global tobacco trends report.

Highlights:

- Number of people using tobacco globally **decreased** and is expected to decrease more by 2025.
- There are 1.30 billion tobacco users globally, compared to 1.32 billion in 2015.
- This number is expected to drop to 1.27 billion by 2025.
- In 2020, **22.3%** of the global population used tobacco, 36.7% of all men and 7.8% of the world's women.

- **Trend in South East Asia:** It has the **highest rates of tobacco use** (432 million users or 29% of its population).

- However, this is also the region where **tobacco use is declining fastest.**

- One of the most effective tools for reducing tobacco use was taxation.
- However, the illegal tobacco trade has undermined the taxation policies.
- **Illegal tobacco trade** is a threat to public health as it increases access to often cheaper tobacco products.

- **Illicit Trade in Tobacco Products (ITP)** came into force on September 25, 2018.
- It is the first legally binding instrument adopted under the **Framework Convention on Tobacco Control (FCTC)** and aims to be a co-ordinated international response to the problem of illicit tobacco trade.

Tobacco

- Tobacco, common name of the plant *Nicotiana tabacum*, is a cured leaf that is used, for smoking, snuffing, and extraction of nicotine.
- It is one of the most **economically significant agricultural crops** in the world.
- About 15 states in India grow tobacco, significantly influencing the economy and prosperity of the farming community.
- The production and processing costs of tobacco are also quite low in India, thus making the Indian tobacco price-competitive and value for money.
- It is a **drought tolerant, hardy and short duration crop** which can be grown on soils where other crops cannot be cultivated profitably.
- Tobacco cultivation in India was **introduced by Portuguese in 1605**.
- **Major producers:** Andhra Pradesh, Gujarat, Karnataka, Uttar Pradesh and Bihar.

- Gujarat accounts for 45 % of the area (0.13 M ha) and 30 per cent of production (0.16 M t).
- Productivity is also highest (1700 kg ha⁻¹) in Gujarat followed by AP.
- India stands second in tobacco production and exports in the world.
- Unique feature of tobacco production in India is that varied styles of **Flue-cured Virginia (FCV)** and different types of **non-FCV tobacco** are produced under diverse agro-ecological situations spread all over the country.
- **Climate:** Though tobacco is **tropical in origin**, it is **grown throughout the world**.
- In India, tobacco is grown when the mean temperature is 20° to 27°C.
- When grown as rainfed crop, it requires at least about **500 mm** of well distributed rainfall during crop growing season.
- It is **not usually grown where rainfall exceeds 1200 mm** during the season.
- **Soil:** Generally, tobacco nurseries are grown on **sandy or sandy loam soil**.
- The cigarette-tobacco growing areas of Andhra Pradesh are an exception in that the crop is grown on a **heavy black soil**.
- Raising of nurseries on heavy black soils is hazardous due to poor internal drainage caused by high clay co

Tobacco prevalence in India

- According to the **Global Adult Tobacco Survey (GATS)** conducted in 2016–17, **the overall prevalence of smoking tobacco use is 10.38% and smokeless tobacco use is 21.38% in India.**
- The **most prevalent form of tobacco use in India is smokeless tobacco** and commonly used products are khaini, gutkha, betel quid with tobacco and zarda.
- Tobacco use is **a major risk factor for many chronic diseases, including cancer, lung disease, cardiovascular disease and stroke.**
- It is one of the major causes of death and disease in India and accounts for nearly 1.35 million deaths every year.
- India is the **second largest consumer and producer of tobacco.**

Government Initiatives

- Government of India enacted **comprehensive tobacco control legislation** (COTPA, 2003).
- India was among the first few countries to ratify WHO

the **Framework Convention on Tobacco Control (WHO FCTC) in 2004.**

- FCTC enlists key strategies for reduction in demand and reduction in supply of tobacco.
- The **National Tobacco Control Programme** was piloted during the 11th Five Year Plan which is under implementation in 42 districts of 21 states in the country.
- The **Global Adult Tobacco Survey (GATS)** was also undertaken as part of NTCP
- It was the first ever dedicated household survey to study the prevalence of tobacco use among adults, exposure to second hand smoke, cessation and other tobacco related indicators in the country.
- India has actively **contributed to drafting of guidelines as a member of the Inter Government Negotiating Body (INB)** to curb the illicit trade of tobacco products.

US SLAMS RUSSIA FOR 'IRRESPONSIBLE' SPACE MISSILE TEST

The United States has denounced Russia for conducting a dangerous and irresponsible missile strike.

Space Debris:

- It is also called **space junk.**
- **It is a piece of machinery** left by humans in space.

- They are the **artificial material that is orbiting Earth** but is no longer functional.
- The material can be as **large as a discarded rocket stage** or as small as a **microscopic chip.**

How it is formed?

- Space junk results from **collisions or anti-satellite tests** in orbit.
- When two satellites collide, they **smash apart** into thousands of new pieces, creating new debris.

How does space Debris get into space?

- While the objects are launched from earth **they remain in orbit** until it re-enters the atmosphere.
- After a few years **they burn up** so they don't reach the ground.

Threats posed by space debris:

- **Other satellites in orbit:**
 - The rising population of space debris increases the potential **danger to all space vehicles.**
 - **Satellites have to move out of the way** of all this incoming space junk to make sure they don't get hit and potentially damaged or destroyed.
 - **Earth orbit could even become impassable** if the risk of collision grows too high.
- **Uncrewed spacecraft:**
 - Even small impacts can produce a cloud of plasma which is **an electrical risk** to the panels.
- **Crewed spacecraft:**
 - Occasional **avoidance manoeuvres** or longer-term space

debris can be a danger to crewed spacecraft.

- **Growing risk of the onset of the Kessler Syndrome:**

- The Kessler syndrome is proposed by NASA scientist Donald J. Kessler in 1978.
- It is a theoretical scenario in which the density of objects in low Earth orbit (LEO) is high enough that collisions between objects could cause a cascade effect.
- Each collision generates space debris, increasing further collisions.

Efforts and Initiatives to tackle space debris:

- The British satellite **RemoveDEBRIS**, launched in 2018 tested two technologies for removing space debris:
 - To capture with a net and capture with a harpoon.
 - to slow down the satellite so that it could reenter the atmosphere, but the sail failed to deploy.
- UN Office for Outer Space Affairs has **issued guidelines** to mitigate the debris in space.
- ISRO launched 'Project NETRA' in 2019.
 - It is an early warning system in space to detect debris and other hazards to Indian satellites.

EUROPE LACKS NATURAL GAS. IS IT RUSSIA'S FAULT?

Europe is facing natural gas crisis, affecting utility bills, burdening ordinary people, and weighing on the economic recovery from the coronavirus pandemic.

Highlights:

- **Supply shortages** and political tensions have continued to rattle

energy markets, keeping prices high.

- Russian pipeline under the Baltic Sea: **Nord Stream 2**, could help increase supplies after its approval.

Factors behind the Gas Crisis:

- Europe imports natural gas. **Russia** supplies more than 40% of those imports.
- **A cold winter** that drained gas reserves, which are used to generate electrical power, did not replenished in summer.
- **Hot weather** drained more gas than usual through demand for air conditioning.
- **Limited supplies** of liquid natural gas were delivered more in Asia.
- Europe for years has pushed for day-to-day spot pricing, instead of long-term contracts.

Impact of Europe's gas Shortage:

- **Increase in natural gas prices** will be reflected in home and business charges for electricity and gas.
- **Increasing energy costs will act** as a drag on the pandemic recovery as higher energy bills will take money away from consumer spending.
- Europe's market conditions would affect US, by increasing the **gas prices**.

What is natural gas?

- **Natural gas** is a naturally occurring hydrocarbon gas mixture consisting of methane and other higher alkanes.

- It is formed when layers of **decomposing plant and animal matter** are exposed to heat and pressure under the surface of the Earth over millions of years.
- It is **colorless and odorless**.

Uses of Natural Gas:

Natural gas offer advantages over other energy sources such as:

- Fewer impurities
- Combustion results in less pollution
- Produces less carbon dioxide
- Making fertilizer for ethanol
- Generating power for homes and businesses
- Transportation on land and sea

Nord Stream Project:

- **Nord Stream** is an export gas pipeline from Russia to Europe across the Baltic Sea.
- The project was launched In April 2010
- **Annual capacity of two strings:** 55 billion cubic meters of gas.
- **Length:** 1,224 kilometers..
- The pipeline ensures high reliability of Russian gas supplies

Nord Stream 2:

- **Nord Stream 2** is a new export gas pipeline from Russia to Europe
- In 2021, the construction of Nord Stream 2 was completed.
- This is particularly important when Europe sees a decline in domestic gas production and an increasing demand for imported gas.

- The total capacity of Nord Stream 2 is 55 billion cubic meters of gas per year.

REMITTANCE FLOWS REGISTER ROBUST 7.3 PERCENT GROWTH IN 2021

Recently, world bank published data on global remittances.

Highlights:

- **U.S. was the largest source country** for remittances in 2020, followed by the United Arab Emirates, Saudi Arabia, and Switzerland.
- As a share of **gross domestic product**, the biggest remittance recipients are Tonga, Lebanon, the Kyrgyz Republic, Tajikistan.
- Remittances to **low- and middle-income countries** reached \$589 billion in 2021.
- **Remittance flows** from migrants complemented government cash-transfer programs to support families suffering from economic hardships during the Covid-19 crisis.
- **Cost of sending money** across international borders averaged 6.4% in the first quarter of 2021.
- **Remittance costs:** South Asia has the **lowest average costs** of any world region at 4.6 %.

India related data

- **India had received** over \$ 83 billion in remittances in 2020.
 - India is followed by China, Mexico, the Philippines, and Egypt.
- In India, **remittances** are projected to grow three per cent in 2022 to \$ 89.6 billion

What is a Remittance?

- **Remittance** is derived from the word 'remit' which means 'to send back'.
- **It refers to money** that is sent or transferred to another party, usually overseas.
- It can be sent via a wire transfer, electronic payment system, mail, draft, or cheque.
- They can be used for any type of payment including **invoices for business purposes** or other obligations like personal transfers.

Why remittances are on the rise?

- **Migration** among people who choose to live abroad for jobs or studies is increasing.
 - Therefore, many remittances are made by people who want to send money back home.
- **Businesses** have increasingly relied on the internet as it makes collaborating with suppliers, employees, and clients easier.
 - This has resulted in overseas remittances paying for business invoices.

Remittances to India

- Under the **Foreign Exchange Management Act (FEMA)** of 1999, **Non-Resident Indians (NRIs) and Persons of Indian Origin (PIOs)** can open and maintain three types of accounts

- Non-Resident Ordinary Rupee Account (NRO)
- Non-Resident (External) Rupee Account (NRE)
- Foreign Currency Non-Resident (Bank) Account (FCNR).
- NRO Accounts are not repatriable except for all current income.

Impact of Remittance in Indian Economy

- **At the macro level**, remittances contribute to maintaining stable foreign reserves.
- Remittances help Indian Rupee hold its value against the US dollar and forms a significant part of the GDP.
- **On a micro level**, remittances have shown a positive impact on healthcare, entrepreneurship, education, and overall economic development of the recipient families.

Inward Remittance

- **Inward remittance** refers to the money sent by Indian expats residing abroad to their near ones in India.

Outward Remittance

- **Outward remittances** refer to money sent overseas by residents of India for specific purposes.
- Authorized dealers and **banks** in India like SBI, PNB, Bank of Baroda, Axis Bank, ICICI Bank, etc. offer these services.

Key Fact

- Under the RBI's Liberalized Remittance Scheme, resident individuals are allowed to remit up to USD 250,000 per financial year.
- This could be under various categories involving current account transactions including going overseas on employment, studies overseas, emigration, and medical treatment.

RUSSIA SUCCESSFULLY TESTS SHIP-BASED ZIRCON HYPERSONIC CRUISE MISSILE IN MOSCOW.

Zircon Hypersonic missile

- It is a manoeuvring **anti-ship hypersonic cruise** missile developed in Russia.
- It's a two-stage missile that uses solid fuel and a scramjet motor.

Strategic Implications:

- Unmatchable speed- Zircon had reached a speed of Mach 8 during a test. This makes the Zircon world's fastest missile.
- Plasma cloud- Rays of radio frequencies get absorbed and

makes the missile invisible to radars.

Hypersonic missile?

- It is a missile that are fast, low-flying, and highly manoeuvrable.
- It travels at speeds of Mach 5 i.e., **five times faster than the speed of sound.**

Types of hypersonic missiles:

Hypersonic cruise missile-

- It reaches the target with the help of a high-speed jet engine.
- It is non-ballistic missile.

- Ballistic Missiles uses gravitational forces to reach its target.

Hypersonic glide missile-

- It is a missile that is launched from a rocket before gliding to a target.

- It surfs on the atmosphere between 40-100km in altitude and reaches its destination by leveraging aerodynamic forces.

EL SALVADOR PLANS TO BUILD WORLD'S FIRST BITCOIN CITY: NAYIB BUKELE

El Salvador intends to issue the world's first sovereign Bitcoin bonds and build Bitcoin City, which will be free of income, property and capital gains taxes.

- The fully ecological city **would get geothermal power from a volcano.**
- Half of the bond funds of the so-called "**volcano bond**" will be

converted to Bitcoin and the other half will be used for infrastructure and Bitcoin mining powered by geothermal energy.

- Volcano bond is the bond which will enable the disaster relief agency to get the financial aid quickly to those who are suffering because of the eruption.

GLOBAL STATE OF DEMOCRACY REPORT 2021

The International **Institute for Democracy and Electoral Assistance (IDEA)** released Global State of Democracy Report, 2021 recently.

Highlights:

- The number of countries moving towards **authoritarianism** in 2020 was higher than that of countries going towards democracy.
- **20 countries** moved in the direction of authoritarianism, seven moved towards democracy.
- Several democratization processes have been challenged in 2020 and 2021.
- **Armenia's conflict** with its authoritarian Azerbaijan, in Nagorno-Karabakh, and a

military rebellion in 2021 strain democratization process.

- In Ethiopia, the June 2021 elections were held amid increasing conflict in the **Tigray region.**
- **In Afghanistan,** the departure of the US military allowed the Taliban to quickly take over the country.

Authoritarianism?

- **Authoritarianism** is a form of government characterized by the rejection of political plurality, use of a strong central power to preserve the political status quo, and reductions in the rule of law, separation of powers, and democratic voting.

Features:

- Authoritarian rulers mostly use force and coercion to command **political uniformity** and obedience.
- **Civil liberties** enjoy a low priority.
- **Governmental control** over judiciary and mass media is justified in the interest of public good.
- The rulers use **bureaucracy** and police as the instruments of their control over the people.
- **Ideological principles** like racialism or fundamentalism provide some basis for the exercise of state power over the people.
- The individual and social life is largely controlled by the state by the government of the state which is formed by one party or group.

Democracies suffering from Democratic Erosion:

- **Democratic erosion** refers to a loss in democratic quality, as observed through a statistically significant decline on at least one aspect of democracy.
- In 2020, 43 per cent of democracies had suffered declines in the previous 5 years.
 - The countries that have declined the most are: Turkey, Nicaragua, Serbia, Poland, and Brazil.

Democratic Backsliding:

- The number of **democratically backsliding countries** has increased in the last decade.

- Since many democratically backsliding countries are large, they represent more than 30 per cent of the world's population.
- **70 per cent of the global population** now live either in non-democratic regimes or in democratically backsliding countries.
- The percentage of the world's population living in high-performing democracies is only 9 per cent.

Backsliding Countries:

- **Brazil** was the democracy with the largest number of declining attributes in 2020.
- **India** is the backsliding democracy with the most democratic violations during the pandemic.
- Violations include:
 - **Harassment**, arrests, and prosecution of human rights defenders.
 - The government or its policies; excessive use of force in the enforcement of Covid-19 regulations.
- **The Philippines** has deepened its democratic backsliding through increased militarization of the pandemic response and a crackdown on free media.

Reasons for the Democratic Decline:

- **The rise of illiberal and populist parties** in government in the last decade is a key factor in democratic decline.
- **Democratic backsliding** is linked to increasing levels of societal and

political polarization and low levels of support for democracy.

- **Economic crises** are tied to declining support for democracy and democratic backsliding.
- The struggle to **balance freedom of expression** with public safety, as well as the scourge of disinformation, lead to a democratic decline.

Challenges:

- The number of countries moving in an authoritarian direction outnumbered those going in a democratic direction.
- **Electoral integrity** is increasingly being questioned, even in established democracies
 - The 2020 US presidential election had spillover effects, including in Brazil, Mexico, Myanmar, and Peru.
- Democratically elected governments are increasingly **adopting authoritarian tactics**.
- **Authoritarianism** is deepening in non-democratic regimes.
 - The pandemic has thus had a damaging effect on non-democratic countries, closing their reduced civic space.
- The uneven global distribution of **Covid-19 vaccines**, undermine

the uptake of vaccination programmes and risk prolonging the health crisis on basic freedoms.

Road Ahead:

- **Government institutions**, political parties, and media should reform democratic institutions, processes, relationships, and behaviors.
 - They should update practices in established democracies, and protect electoral integrity, fundamental freedoms, and rights.
- Government institutions, with civil society, should come up with recrafting **social contracts**.
- They should prevent rising authoritarianism and democratic backsliding by
 - **Investing in democracy education** at all levels of schooling,
 - Buttressing the pillars of democracy that ensure accountability,
 - Learning from other countries' experiences infighting disinformation, and strengthening democratic guardrails.

PROLONGED CLOSURE OF SCHOOLS DUE TO COVID POSES THREAT TO GENDER EQUALITY: UNSECO

Recently, a new study by UNESCO has pointed out that prolonged closure of schools across the globe poses threat to gender equality.

Highlights:

- **Girls' time** to learn was constrained by increased **household chores**.

- **Boys'** participation in learning was limited by **income-generating activities**.
- **Girls** faced **difficulties** in engaging in **digital remote learning modalities** in many contexts because of:
 - Limited access to internet-enabled devices
 - Lack of digital skills
 - Cultural norms restricting their use of technological devices.

Recommendations:

- Provide a range of remote learning options including **low-tech and no-tech solutions** spearhead.
- Support efforts to reach the most **at-risk learners design**.
- Develop **gender-responsive educational resources** and tools.
- Provide **appropriate teacher support** and **training** use formative assessments to track learning outcomes.

Consequences of School Closures:

Interrupted learning:

- Schooling provides essential learning and when schools close, children and youth are **deprived opportunities for growth and development**.
- The disadvantages are disproportionate for **under-privileged learners** who tend to have fewer educational opportunities beyond school.

Poor nutrition:

- When schools close, **nutrition is compromised**.
- Many children and youth rely on free or discounted meals provided

at schools for food and healthy nutrition.

Confusion and stress for teachers:

- When schools close, especially unexpectedly and for unknown durations, **teachers** become **unsure of their obligations** and how to maintain connections with students to support learning.
- School closures lead to **furloughs** or separations for teachers.

Parents unprepared for distance and home schooling:

- Parents are often asked to facilitate the learning of children at home and can struggle to perform this task.
- This is especially true for parents with **limited education and resources**.

Gaps in childcare:

- In the absence of alternative options, working parents often leave children alone when schools close and this can lead to **risky behaviours**, including **increased influence of peer pressure** and **substance abuse**.

High economic costs:

- **Working parents** are more likely to **miss work** when schools close in order to take care of their children.
- This results in **wage loss** and tend to **negatively impact productivity**.

Unintended strain on health-care systems:

- Health-care workers with children cannot easily attend work because of **childcare obligations** that

result from school closures. This means that many medical professionals are not at the facilities where they are most needed during a health crisis.

Increased pressure on schools and school systems that remain open:

- Localized school closures place burdens on schools as governments and parents alike redirect children to schools that remain open.

Rise in dropout rates:

- It is a challenge to ensure children and youth return and stay in school when schools reopen after closures.
- This is especially true of protracted closures and when economic shocks place pressure on children to work and generate income for financially distressed families.

Increased exposure to violence and exploitation:

- When schools shut down, **early marriages** increase, more children are **recruited into militias, sexual exploitation of girls and young women rises,**

teenage pregnancies become more common, and child labour grows.

Social isolation:

- Schools are hubs of social activity and human interaction. When schools close, many children and youth miss out of on **social contact** that is essential to learning and development.

Challenges measuring and validating learning:

- **Calendared assessments, notably high-stakes examinations** that determine admission or advancement to new education levels and institutions, are **thrown into disarray** when schools close.
- Strategies to **postpone, skip or administer examinations** at a distance **raise serious concerns** about fairness, especially when access to learning becomes variable.
- Disruptions to assessments results in stress for students and their families and can trigger disengagement.

NEW UN WOMEN DATA CONFIRMS VIOLENCE AGAINST WOMEN HAS WORSENERD DUE TO THE COVID-19 PANDEMIC

UN released impact report of the Spotlight Initiative, the world's largest targeted effort to end all forms of violence against women and girls.

Spotlight Initiative:

- It is a joint **United Nations (UN)** and **European Union (EU)** program.

- Under the initiative, targeted and large-scale investments are deployed in Africa, Asia, the Caribbean, Latin America, and the Pacific.

Aim:

- To **empower, promote, and protect the rights of women and girls** worldwide ending all forms

of violence against women and girls by 2030.

Preventing crimes against women:

- The Government of India had set up a dedicated **non-lapsable fund called 'Nirbhaya Fund'** for implementation of initiatives aimed at enhancing the safety and security for women in the country.
- The Government has launched the **National Cyber Crime Reporting Portal** to enable public to report incidents pertaining to all types of cybercrimes, with a special focus on cyber-crimes against women and children.
- The **Criminal Law (Amendment), Act 2013** was enacted for effective deterrence against sexual offences.
 - It prescribed even **more stringent penal provisions including death penalty** for rape of a girl below the age of 12 years.
 - The Act also inter-alia mandates **completion of investigation and trials within 2 months each.**
- **Emergency Response Support System** provides a pan-India, single, internationally recognized number (112) based system for all emergencies, with computer aided dispatch of field resources to the location of distress.
- Using technology to aid smart policing and safety management, **Safe City Projects** have been sanctioned in

first Phase in 8 cities (Ahmedabad, Bengaluru, Chennai, Delhi, Hyderabad, Kolkata, Lucknow and Mumbai).

- The Ministry of Home Affairs (MHA) has launched a **cyber-crime portal** for citizens to report obscene content.
- MHA has launched the **'National Database on Sexual Offenders' (NDSO)** to facilitate investigation and tracking of sexual offenders across the country by law enforcement agencies.
- In order to facilitate States/UTs, MHA launched an online analytic tool for police called **'Investigation Tracking System for Sexual Offences'**.
 - It is used to monitor and track time-bound investigation in sexual assault cases in accordance with the Criminal Law (Amendment) Act 2018.
- **One Stop Centre (OSC)** scheme is being implemented across the country.
 - It is exclusively designed to provide integrated services such as medical aid, police assistance, legal counselling/ court case management, counselling and temporary shelter to women affected by violence under one roof.
- As per available information, 728 OSCs have been approved by Government of India, 595 OSCs are operational in the country.

WHAT IS THE 'MATOSINHOS MANIFESTO', MEANT TO ACCELERATE THE USE OF SPACE IN EUROPE?

Recently, the European Space Agency (ESA) council has approved a manifesto to accelerate the use of space in Europe.

What is Matosinhos Manifesto?

- **Matosinhos Manifesto** is the resolution adopted unanimously by the 22 member states of the ESA.
- **Aim:** To **tackle the urgent and unprecedented societal, economic and security challenges** faced by Europe and its citizens.
- It lays down a vision for the continent in terms of **maintaining and expanding its activities in space.**
- It outlines three **urgent initiatives** called **Accelerators and two mission proposals:**
 - The **initiatives** involve measures to tackle climate change, respond to natural disasters, and to protect spacecraft from orbital debris and space weather.

First Initiative:

- The first initiative involves **improving the ability of Earth-observing satellites**, to provide higher-quality data that can be used to tackle the climate crisis.
- **Aim:**
 - To better understand the current state of Earth by focusing on **space for a green future.**

- To **develop scenarios and solutions for sustainable life** on this planet.
- To contribute effectively to **achieving climate neutrality.**
- The document proposes the **creation of a “digital twin of earth”**
 - Digital twin is a simulated replica that can be used for modelling and in order to **predict events such as floods, fires, or droughts years in advance.**
 - It also helps in eliminating worldwide greenhouse emissions by 2050.

Second Initiative:

- The second accelerator is called **“Rapid and Resilient Crisis Response”.**
- **Aim: To support governments to act decisively on crises facing Europe, from flooding and storms to wildfires.**
- It calls for more **intensive use of space-collected data** — such as imagery from satellites — in order to deal with natural disasters.
- Applications could range from monitoring to the coordination of rapid response units.

Third initiative

- The third accelerator is **“Protection of Space Assets”**
- Aim: To **safeguard ESA astronauts and assets from interference by space debris and space weather.**

The **mission proposals** are as follows:

- The main goal of this mission would be to look for signs of alien life throughout our Solar System.
- The **two missions** aim to **establish the ESA's own system to launch astronauts into space and to probe Jupiter's frozen moon Enceladus.**
- The first calls for Europe to **establish its own mechanism to launch astronauts into space.**

- The second **envisioning sending an ESA probe to one of the moons of Jupiter or Saturn to return samples to Earth.**

European Space Agency (ESA):

- ESA is an **intergovernmental organisation** that was formed in 1975.
- **Aim:** To develop Europe's space capabilities.
- The organisation has 22 member states.

OVER 87,000 UN PEACEKEEPERS FACE GREATER THREATS FROM COMPLEX CONFLICTS

More than 87,000 personnel in UN peacekeeping missions are confronting greater threats driven by an increasing number of complex factors.

United Nations Peacekeeping Missions:

- **Peacekeeping by the United Nations is a joint effort between the Department of Peace Operations and the Department of Operational Support of the UN.**
- It is a unique **instrument to help countries torn by conflict** to create the conditions for lasting peace.
- Peacekeeping forces are **contributed by member states on a voluntary basis.**
- UN peacekeepers are often referred to as **Blue Berets or Blue Helmets** because of their light blue berets or helmets.

Structure:

United Nations peacekeeping mission has **three power centres.**

- The **Special Representative of the Secretary-General**, the official leader of the mission.
- He/ She is responsible for all political and diplomatic activity, overseeing relations with both the parties to the peace treaty and the UN member-states in general.
- The **Force Commander**
- He/ She is responsible for the military forces deployed.
- **Chief Administrative Officer**
- He/ She oversees supplies and logistics, and coordinates the procurement of any supplies needed.

Objectives:

- **To protect** civilians, actively prevent conflict, **reduce violence**, strengthen security and **empower national**

authorities to assume these responsibilities.

- It requires a **coherent security and peacebuilding strategy** that supports the political strategy.
- To help host countries to become more resilient to conflict, laying the groundwork to sustain long-term peace, including by addressing root causes of conflict.

Financing:

- The financial resources of UN Peacekeeping operations are the collective **responsibility of UN Member States.**

Issues of United Nations

Peacekeeping:

Political Issues

- Consent of host country, political stability of the post-conflict

situation, political will of the host country and substantial financial and logistical support from the UN office

Military Issues:

- The UN **weakness of integrated planning mechanisms, antiquated procurement procedures, a semi-permanent funding crisis** and a **shortage of personnel** and specialist units and technologies, logistic and transport deficiencies

Humanitarian

Issues:

- **Lack of Cooperation** within the peacekeeping mission.
- **Military capture** of humanitarian assistance.

US WARNS EUROPEAN ALLIES OF POSSIBLE RUSSIAN INVASION AS TROOPS MASS NEAR UKRAINE

Recently, the U.S. has shared intelligence including maps with European allies about the possible Russian invasion near Ukraine.

Russia - Ukraine war

- It is an ongoing and protracted conflict between Russia and Ukraine that began in February 2014.

Reason for Conflict:

- The war has centered on the status of the Ukrainian regions of Crimea and Donbas.

Historical Background

- **1991:** Ukrainian parliament declares independence from

USSR following an attempted coup in Moscow.

- **2013:** Ukraine's cabinet abandons an agreement on closer trade ties with EU, instead of seeking closer co-operation with Russia, **leads to** Protests gathering pace, as 100,000 people attend a demonstration in Kiev.
- **2014:** Parliament passes restrictive anti-protest laws as clashes turn deadly.
- Russia's parliament approves President request to use force in Ukraine to protect Russian interests.

- President of the Russian Federation signs a bill to **absorb Crimea into the Russian Federation.**
- Pro-Russian separatists have fought Ukrainian forces in two eastern regions of Ukraine but a fragile ceasefire has been agreed upon by both sides.
- **2015**
 - Russia has redeployed some of its elite units from Ukraine to Syria to support Syrian President Bashar al-Assad.
 - Russian Federation President admitted that Russian military intelligence officers were operating in Ukraine.

- **2019**
 - 7% of Ukraine's territory is under occupation.

Challenges in the peace process

- **Russia violates the Minsk agreements on a regular basis.**
 - The Minsk Agreements are a basis for a political resolution of the conflict in Donbas.
- **Constant inflow of Russian troops and weaponry is the main obstacle to peace in Donbas.**
 - Russia continues to supply weapons, ammunition and fuel to the occupied territory through the uncontrolled section of the Ukrainian-Russian state border.

GLOBAL NUTRITION REPORT - 2021

The Global Nutrition Report 2021 has been released recently.

Global Nutrition Report:

- The **Global Nutrition Report** was initiated during the first Nutrition for Growth Initiative Summit (N4G) in 2013.
- **Aim:** To inspire governments, civil society, and private stakeholders to act to end malnutrition in all its forms.
- The report is produced each year to cast a light on where progress has been made and identify major challenges.
- It plays an important role of **helping stakeholders** to account on the commitments they have made towards tackling malnutrition.

Highlights of the Report:

- 149.2 million children under 5 years of age are **stunted**, 45.4 million are wasted and 38.9 million are **overweight**.
- **Over 40% of all men** and women are now overweight or obese.
- **Anaemia** levels are worsening in 161 countries.
- In the Africa region, no country is on course to meet diet-related **Non-Communicable Diseases** targets.
- Only 105 countries are on track to meet the target for tackling **childhood overweight**.
 - Over a quarter of countries are on track to meet stunting and wasting targets.

Poor Diet and Malnutrition:

- **Lower-income countries** continue to have the lowest intakes health-promoting foods.
- **Higher-income countries** have the highest intakes of foods with high health and environmental impacts, including processed meat and dairy.
 - These countries have the highest levels of overweight and obesity.

Financial costs of addressing poor Diets and Malnutrition:

- **Additional financing** required to meet nutrition targets has grown significantly, due to the impacts of Covid-19.
- A cost of US\$10.8 billion would be required annually between 2022 and 2030 to meet **global nutrition targets** on stunting, wasting, maternal anaemia.
- Around US\$39–50 billion needed annually to meet both nutrition-specific and nutrition-sensitive needs.

Data related to India:

- India has made **no progress on anaemia and childhood wasting**.
- Over half of Indian women in the age group 15-49 years are anaemic.
- Over 17 % of Indian children under 5 years of age are affected.
- India is among 23 countries that have made no progress on reducing childhood wasting.
- **Wasting** refers to children whose weight is low-for-their height.

- 6.2 per cent of adult women and 3.5 per cent of adult men are living with **obesity** in the country.

India's Targets:

- India is meeting 7 of the 13 **global nutrition targets**.
 - These include sodium intake, raised blood pressure obesity and diabetes.
- It is among 53 countries to meet the **target for stunting**, but over 34 per cent of children under 5 years of age are still affected.
- The country is among 105 countries to meet the target for **childhood overweight** and among 53 countries to meet the target for exclusive breast feeding.
 - **58 per cent of infants** in the age group 0-5 months are breastfed in India.

Challenges:

- **No country** is on track to achieve the target on reducing salt intake or to halt the rise in adult obesity.
- **No global targets** are set to address micronutrient deficiencies.
- There is no specific target that captures **malnutrition** among children and adolescents.
- 155 million people are pushed into extreme poverty globally, as a result of the pandemic.
- **Global food demand** is creating (35%) of all greenhouse emissions and using substantial number of environmental resources.

- No region is on track to meet the set of **Sustainable Development Goals** aimed at limiting the health and environmental burdens related to diets and food system.

Suggestions:

- **More financing in tackling nutrition related problems** is required.
 - Traditional forms of financing for nutrition like external and domestic, must be sustained and increased.
- **Policy initiatives** are urgently needed to transform food systems.

- **Global nutrition monitoring** must expand to key targets for improving diets and health that go beyond micronutrient deficiencies, hunger, and excess weight.
- Better **granular data** is needed to understand the current state of nutrition, and ensure that impact can be measured and monitored.
- **Stakeholders** should focus more on nutrition action that supports equitable, healthy, and sustainable diets for all.

PHILIPPINES SET TO RESUME RESUPPLY MISSION TO SOUTH CHINA SEA

The Philippines started military resupply mission for the country's troops stationed on Ayungin Shoal in the South China Sea.

South China Sea (SCS):

- The South China Sea is a **marginal sea** of the **Western Pacific Ocean**.
- It is bounded in the **north** by the shores of **South China**, in the **west** by the **Indochinese Peninsula**, in the **east** by the **islands of Taiwan and north-western Philippines** and in the **south** by **Borneo and eastern Sumatra islands**.
- It is connected with the;
 - East China Sea via the **Taiwan Strait**
 - Philippine Sea via the **Luzon Strait**
 - Sulu Sea via the straits around Palawan

- Strait of Malacca via the Strait of Singapore

Significance of South China Sea:

- South China Sea has an extensive array of **geo-political, economic and military significance**.
- It hosts shipping routes, fish stock, hydrocarbon reserves, and rich biodiversity.
 - **One-third** of the **world's maritime shipping** passes through it, carrying over US\$3 trillion in trade each year.
 - **Huge oil and natural gas reserves** lie beneath its seabed.
 - It also contains **lucrative fisheries**, which are crucial for the food security of millions in Southeast Asia.

Features of SCS:

- The South China Sea contains over 250 small **islands, atolls, cays, shoals, reefs and**

sandbars many of which are naturally underwater at high tide while some are permanently submerged.

- It has **three archipelagos**, namely, the **Spratly Islands, Paracel islands, and Pratas islands** along with **Macclesfield's Bank** and **Scarborough Shoal**.

India's stance on South China Sea:

- **India**, while not a South China Sea littoral state, is invested in the **maintenance of the rules-based order** and freedom of navigation in these sea lanes of communication.
- It intends to move away from its historical balanced approach towards China and the SCS disputes, and play a more **proactive role**, guided by its **Act East policy**.
- India engages with the region through **regular naval deployments**, visits and exercises in these waters, through;

- Established and growing strategic-military partnerships with the littoral states
- Involvement in oil exploitation in these waters
- Diplomatic discussions.

India's Stakes in South China Sea:

- India uses the SCS waterway for **trade** worth nearly US\$200 billion every year.
- Nearly **55 percent of India's trade** with the Indo-Pacific region pass through these waters.
- India itself signed an **agreement with Vietnam** in October 2011 to expand and promote **oil exploration** in the South China Sea.
 - While China has always objected to India's oil exploration activities in the Vietnamese waters in the SCS, India reaffirmed its intent to pursue such activities.
- For India, its economic vitality rests on assured **supply of energy and safe and secure trading** routes in the region, including the Straits of Malacca.

CHINESE FIRMS EYE AFGHANISTAN'S LITHIUM

Recently, Chinese companies have started on-site inspections in Afghanistan to detect lithium deposits.

Lithium

- Lithium is a chemical element with the symbol Li and atomic number 3.
- It is a soft, **silvery-white alkali metal**.
- It is highly reactive and flammable and must be **stored in a vacuum**.

- It is soft enough to be cut with a knife.
- It is abundant and present in the Earth's crust in 65 parts per million.

Uses of Lithium:

- To treat and prevent episodes of mania
- In the manufacturing of rechargeable batteries for mobile

phones, digital cameras, and laptops.

- To create the **hydrogen isotope tritium** through the bombardment of neutrons.

Properties of Lithium

- It is the lightest of the metals, with a density approximately half that of water.
- It has the highest specific heat of any solid element.
- It reacts with water, but not as vigorously as does sodium.
- Lithium is **corrosive** and requires special handling.
- It is **extremely flammable**.
- It is the only alkali metal that reacts with nitrogen.

Lithium rich Geographical Locations

Top 5 largest lithium reserve countries:

- **Bolivia:** 21 million tonnes of Deposit.
- **Argentina:** 17 million Tonnes of Deposit.

- **United States:** 6.8 million tonnes of Deposit.
- **Australia:** 6.3 million tonnes of Deposit.
- **China:** 4.5 million tonnes of Deposit.

India

- **Karnataka:** 1,600 tonnes of Deposit
- It was **India's first ever lithium reserves**, which was found in Jan. 2021.

Suggestion for the Indian Government

- India must **build strategic relationships with lithium-rich countries** like Bolivia and Argentina.
- India should acquire **lithium mines** or take an equity stake in some of the existing lithium miners to ensure a smooth supply.
- India should promote research and development in **solid-state batteries and hydrogen cells**.

INTERNATIONAL DAY FOR THE ELIMINATION OF VIOLENCE AGAINST WOMEN

November 25 is designated by the UN as International Day for the Elimination of Violence Against Women, to fight against gender-based violence.

Highlights:

- Women's rights activists have recognised 25 November as the day to fight against the violence against women **to respect the Mirabai sisters:**
- They were the **three Dominican Republic political activists**, brutally killed in 1960.

- The day also marks the launch of the UNiTE to End Violence against Women **campaign**.

- It was established in 2008.
- **Aim: To prevent and eliminate violence against women** and girls around the world, calling for global action to increase awareness and promote advocacy.

Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)

- It is an **international legal instrument** that requires

countries to eliminate discrimination against women and girls in all areas and promotes women's and girls' equal rights.

- It was established by the **United Nations General Assembly** in **1979**.
- CEDAW is often described as the **international bill of rights for women**.
- It consists of a **preamble and 30 articles**.
- It defines what constitutes discrimination against women and sets up an agenda for national action to end such discrimination.
- The Committee is composed of **23 experts** nominated by their governments and elected by the States parties.
- The members are selected as "individuals of high moral standing and competence in the field covered by the Convention".
- It is one of the **key international agreements that guides the work of UN Women** in achieving gender equality and empowering all women and girls.

Functions of CEDAW:

- To **incorporate the principle of equality** of men and women in their legal system, abolish all discriminatory laws and adopt appropriate ones prohibiting discrimination against women;
- To **establish tribunals and other public institutions** to ensure the effective protection of women against discrimination;

- To **ensure elimination of all acts of discrimination** against women by persons, organizations or enterprises.
- It **ensures women's participation in political and public life** including the right to vote and to stand for election.
- It **affirms the reproductive rights of women and targets culture and tradition** as influential forces shaping gender roles and family relations

Initiatives by the Indian Government

The **Ministry of Women and Child Development (MWCD)** and the **Ministry of Home Affairs (MHA)** have undertaken a number of measures for enhancing safety of women in the country.

Criminal Law (Amendment) Act, 2013.

- The Act was enacted for effective deterrence against sexual offences.
- The **Criminal Law (Amendment) Act, 2018**, was enacted to prescribe stringent penal provisions including death penalty for rape of a girl below the age of 12 years.
- The Act also inter-alia mandates completion of investigation and trials within 2 months each.

Emergency Response Support System

- It provides a pan-India, single, **internationally recognized number (112)**-based system for all emergencies.
- It aids speedy redressal mechanism with the computer-aided dispatch of field resources to the location of distress.

Smart Policing and Safety Management

- Safe City Projects have been sanctioned in the **first Phase in 8 cities** (Ahmedabad, Bengaluru, Chennai, Delhi, Hyderabad, Kolkata, Lucknow and Mumbai).
- The Ministry of Home Affairs has launched a **cybercrime portal for citizens** to report obscene content.
- It has also launched **National Database on Sexual Offenders (NDSO)**
- **Aim:** To facilitate investigation and tracking of sexual offenders across the country by law enforcement agencies.
- MHA launched an **online analytic tool for police** called **Investigation Tracking System for Sexual Offences**, to facilitate States and Union Territories.

- **Aim:** To monitor and track time-bound investigation in sexual assault cases in accordance with the Criminal Law (Amendment) Act 2018.
- **One Stop Centre (OSC) Scheme** has been implemented across the country.
- It is exclusively designed to provide **integrated services such as medical aid, police assistance, legal counselling/ court case management, psycho-social counselling and temporary shelter to women** affected by violence under one roof.
- 728 OSCs have been approved by the Government of India, 595 OSCs are operational in the country.
- Steps have been taken to **strengthen DNA analysis units** in Central and State Forensic Science Laboratories.

'END APEDA'S SUPERVISION OF AGENCIES CERTIFYING ORGANIC PRODUCTS EXPORT'

Alliance for Organic Integrity (AOI) suggested the European Committee on Organic Production to withdraw its approval for the Agricultural and Processed Food Products Export Development Authority (APEDA) to supervise organic products exports certifying bodies (CBs) recently.

- The EU Committee on Organic Production derecognised five CBs, for their failure to meet the norms for **ethylene oxide (ETO)** present

in organic consignments imported into EU.

APEDA:

- APEDA is a government organisation established in 1985.
- It provides financial assistance, guidelines towards the development of scheduled products.
- The products specified under the **APEDA ACT** are called schedule products and exporters

of such products are required to register under APEDA.

- **Aim:** To promote schedule products export.

Functions:

- Promotion of **export-oriented production** and development of the Scheduled products.
- Setting the standards and specifications for the scheduled products.
- **Registration of exporters** of the scheduled products on payment of required fees.

- **Improving packaging** and marketing of the Scheduled products.
- Inspection of products for the purpose of ensuring the quality of such products.
- **Development of industries** relating to the scheduled products and undertaking surveys, feasibility studies etc.
- **Collection of statistics** from the owners of establishments and publication of such statistics.

GRADUATION OF BANGLADESH, LAO PEOPLE'S DEMOCRATIC REPUBLIC AND NEPAL FROM THE LDC CATEGORY

The UN General Assembly has adopted a resolution to graduate three nations from Least Developed Countries.

- The countries that got clearance for graduation are Bangladesh, Nepal and the Lao People's Democratic Republic.

Least Developed Countries (LDCs):

- They are **low-income countries** confronting severe structural impediments to sustainable development.
- They are highly **vulnerable to economic and environmental shocks**.

- They have low levels of human assets.
- There are currently **46 countries** on the list of LDCs.
- **Africa-33, Asia- 9, Caribbean- 1, Pacific- 3**

LDC Identification Criteria & Indicators

- The UN Committee for Development Policy **review the list of LDCs every three years**.
- They make recommendations on **graduation and inclusion**.
- **Criteria-** Income, Human Assets, Economic and Environmental Vulnerability

FBI DECLARES 'HAVANA SYNDROME' A 'TOP PRIORITY'

Recently, FBI called Havana Syndrome a top priority as around 200 U.S. diplomats, officials and family members overseas have suffered from the series of anomalous health incidents.

Havana syndrome

- It is a **set of medical signs and symptoms reported by US and Canadian embassy staff** first in Havana, Cuba in the late 2016.

- Cases have been reported in other countries like Germany, Austria and India.
- Those reported are having **symptoms** like:
 - Loud sounds and pain in ears
 - Tinnitus, hearing loss
 - Intense pressure or vibration inside head
- Difficulty with memory or concentration, Impaired balance
- Visual disturbances, nausea and unsteady gait, loss of balance, vertigo/dizziness
- Headache
- Impaired concentration and Memory loss
- Insomnia and Depression

Speculations on the cause of disease:

- Possible role of **Russian military intelligence behind this syndrome.**
- **Sonic weapons** might have cause **Havana syndrome**

- Sonic weapons use extremely high-power sound waves to disrupt the eardrums of a person and cause severe pain or disorientation.
- Such symptoms could be **unintended consequence of an energy device to collect data from smartphones or laptops.**
- Symptoms could be caused by a directed, pulsed radio frequency (RF) energy device — a form of energy that includes microwaves.

Legislation:

- The American Senate took action by passing the **bipartisan Helping American Victims Afflicted by Neurological Attacks (HAVANA) Act.**
- The act provides additional financial and medical resources for American officials suffering with symptoms.



CENTRE LIKELY TO MAKE FRESH ATTEMPT TO REACH CONSENSUS WITH STATES FOR AN ALL-INDIA JUDICIAL SERVICE

Centre is likely to place the proposal on the agenda in a meeting of law ministers to discuss judicial infrastructure in the lower judiciary.

All India Judicial Services (AIJS):

- AIJS was first proposed through the **14th report of the Law Commission in 1958.**

- The provision of AIJS was included in **Article 312** of the Constitution through the **42nd Amendment in 1976**.
 - At present, various **high courts** and **State service commissions** hold exams to **recruit judicial officers**.

Need of AIJS:

Huge vacancy of judges and postponement in hiring

- Large vacancies and a huge load of pending cases in lower judiciary are primarily due to inordinate delay in holding regular exams by states.

Lack of correct, excellent judicial officials

- Increase in pendency of cases, impair quality of judgments and competence of the higher judiciary as well.

Lack of price range with nation governments

- State judicial offerings aren't appealing to "talent" because of low salaries, rewards, and reimbursement from state governments.

Timely recruitment

- AIJS will allow a large number of judges to fill those vacancies in the lower judiciary through a trial across India. Applicants could be posted in states where more judges are needed to be selected through AIJS.

Better efficiency of the courts

- The processing and the problem of the delay of cases would be eliminated with the timely hiring

of judges for the lower judiciary in the district courts and subordinate courts through AIJS.

Improvement in the efficiency of judicial administration

- AIJS would attract the best talents in the country and therefore could maintain high standards of judicial administration.

No more nepotism

- The issue of corruption, nepotism, etc. that we notice in almost every selection process from now on, may decline. AIJS will lead to the appointment of quality judges, who have experience and have studied all types of cases, and public faith in the judiciary will be restored.

Promote national integration

- AIJS will lead to the appointment of the best talents from other states in states with scarce resources.

Representation of the marginalized section

- By following the reserve system in recruitment, underrepresented communities are represented in the judiciary.

Benefits of AIJS:

Responsibility and transparency

- A career in judicial service will make the judiciary more **responsible, professional, and equitable**.

It infuses objectivity in hiring

- The open competition would provide **objectivity** in the hiring process of the judiciary by

reducing the discretion of the selection panel.

Securing the best talent

- AIJS will ensure a **transparent and efficient recruitment** method to attract the best talent in the Indian legal profession.
- The prospects for promotion to the superior courts, for the lower judiciary, at an early age would also increase, as they currently join at a much later age than Bar Association judges.

Uniformity throughout the country

- The quality of adjudication and administration of justice would achieve **uniformity** throughout the country by eliminating differences at the state level in laws, practices, and standards.

Check case handling

- The streamlined and objective recruitment process would ensure a regular flow of good quality judicial officers for vacant positions, reducing the handling of cases.

Representative character

- AIJS will improve the representative character of the judiciary by hiring trained officials from underprivileged sectors of society, especially women and SC / ST.

Overall efficiency

- A well-organized judicial service can attract talent from our law schools and young and well-informed judicial officers at the additional district judge level will make a difference. As ADJs and

district judges, they can help the court system move faster and more efficiently.

Criticism for AIJS:

Does not address key issues:

- The main reason for the vacancies in judiciary is:
 - The Bar Council of India has **mismanaged legal education**.
 - No effort has gone into improving the standard of legal education across the country.
- An AIJS addresses neither the problem of **disproportionately low pay** nor the **lack of career advancement**.

Age Bracket and Experience:

- The first issue is regarding the age bracket and the prior experience that the exam seeks under its qualification criteria.
 - The requirement for 7-years of experience would defeat the purpose of the legislators which was more participation from graduating students.

Language Barriers:

- India is a diverse county with diverse languages and judicial services need to deal in regional languages. Hence pan India, can cause a language barrier for selected candidates.

Threat to Federalism:

- Some High courts are of the opinion that their independence and the power to appoint judges in the lower and subordinate courts will be jeopardized with AIJS.

Other Problems:

- A “national exam” risks **shutting out** those from **less privileged backgrounds** from being able to enter the judicial services.
- It may also end up **not taking** into account **local laws,**

practices and customs which vary widely across States, vastly **increasing the costs of training for judges** selected through the mechanism.

CENSUS OF INDUS RIVER DOLPHIN BEGAN IN PUNJAB

The central government will soon conduct the census of the Indus river dolphin, to **collect data on the spatial and temporal distribution** pattern of species and population status.

Indus river dolphin (Platanista gangetica)

- They are **one of the only four river dolphin species** in the world that spend all of their lives in **freshwater**.
- Other three are: Chinese river dolphin, Ganges River dolphin, and Amazon River dolphin.
- **Habitat:** Found in the lower parts of the Indus River in Pakistan and in River Beas, a tributary of the Indus River in Punjab, India.
- It is also known as the **bhulans**.
- It has been named the state aquatic animal of Punjab as well as national mammal of Pakistan.

- Their typical diet consists of a variety of **fish, clams, and shrimp**.
- Breeding typically begins between the ages of 6 – 10 when they reach sexual maturity.

Physical Features

- The flippers and tail are large but thin and the dorsal fin appears as a small hump on its back that is triangular.
- The eyes are very small and largely useless they are considered blind and are only able to detect the color and intensity of light.

Conservation Status:

- **IUCN:** Endangered
- **Wild Protection Act, 1972:** Schedule I

NATIONAL UNITY DAY: AS INDIA PAYS TRIBUTES TO SARDAR PATEL

Recently, India celebrated October 31 as **National Unity Day** to pay tributes to veteran freedom fighter Sardar Vallabhbhai Patel.

Sardar Vallabhbhai Patel

- He was the **first Deputy Prime Minister** and **Home Minister of India**.

- Commonly called **Iron Man of India**, Sardar Vallabhbhai Patel was a lawyer by profession and was lovingly given the title of Sardar, meaning leader or chief.
- Sardar Vallabhbhai Patel advocated Swaraj or self-rule and organized peasants in Gujarat

in **non-violent civil disobedience** against the British.

- He is credited for the political integration of over 500 princely states into the independent Indian Union.
- Sardar Patel went to England to further study law after having put his elder brother through a university in England as well. He aced the **Barrister-at-Law examination**.
- Sardar Vallabhbhai Patel worked extensively for the rights of minorities and women, and against untouchability and caste discrimination.
- He came back to India and started his practice in Ahmedabad. He was offered a job for the British government on multiple occasions but turned them all down.

Indian Freedom Struggle:

- **1918:** He led a No Tax Campaign that urged the farmers not to pay taxes after the British insisted on tax after the floods in Kaira, Gujarat.
- **1928:** He successfully led the **Bardoli** campaign and earned the title **Sardar**.
- He was deeply influenced by Gandhi's ideology and principles and actively supported the Non-Cooperation Movement launched by Gandhi.
- **1930:** He was among the leaders imprisoned for participating in the Salt Satyagraha initiated by Mahatma Gandhi.

- **1931:** He was elected as the President of Indian National Congress in its Karachi session.
- **1936:** He voiced his annoyance at Jawaharlal Nehru openly when the Nehru adopted socialism. Patel was also wary of Netaji Subhash Chandra Bose.
- **1942:** In the Quit India Movement, Patel continued his support to Gandhi when several leaders criticized Gandhi.

After Independence:

- **1947:** He was a leading member of the Constituent Assembly of India and Dr. B. R. Ambedkar was appointed on his recommendation.
 - After independence, he was crucial for integration of over 500 princely states into the Indian Union.
 - His efforts towards the consolidation of India earned him the title 'Iron Man of India'.
- **1948:** He launched 'Operation Polo' to integrate Hyderabad after the Nizam of Hyderabad entertained false hopes of either joining Pakistan or remaining independent.
- He was the key force in establishing the Indian Administrative Service and the Indian Police Service.

Key facts

- **Civil Services Day** is celebrated on **April 21** to mark Sardar Patel's address to the probationers at **All-India Administrative Service**

Training School in Delhi on this day in 1947.

- Rashtriya Ekta Diwas is being celebrated since 2014.

PUNJAB POLICE TO DEDICATE GURU NANAK'S 550TH BIRTH ANNIVERSARY TO PEDESTRIAN SAFETY

Punjab Police's ADGP (Additional Director General of Police) proposed that the birth anniversary of Sikhism founder Guru Nanak Dev to be declared as '**World Pedestrian Day**'.

Highlights:

- **Aim:** To spread awareness on road safety for Pedestrians.
- It will bring major changes in pedestrian safety and highlight the government's commitment towards "**Right to walk**" or pedestrian rights, contributing towards sustainable development goals.

Right on Pedestrians:

- In India there is no central level legislation or policy governing or enforcing the rights of pedestrians.
- The new Motor Vehicles Act and few other legislations have some provisions but do not talk exclusively about the rights of pedestrians.

For Example:

- The Indian Penal Code (IPC) enforces strict punishment in cases of rash or negligent driving under section 279.
- **Section 304** talks about causing death due to negligence.
- **Section 336** talks about endangering someone else's life or personal safety.

- **Sections 7 to 38 and 112** talks about speed limits and various licensing requirements needed to ensure lawful driving on the roads.

The "**right to walk**" concept can only be found in the Rules of **Road Regulation 1989:**

- **Rule 8:** The duty of the driver to slow down when approaching a pedestrian crossing.
- **Rule 11:** Not to drive on footpath or cycle lane.
- **Rule 15:** No parking on footpath or pedestrian lane.
- It also talks about giving priority in "**right of way**" to pedestrians.

Guru Nanak Dev:

- **Guru Nanak Dev** was born on 15th April 1469. He was the founder of Sikhism.
- He became the **first Sikh Guru** and his spiritual teachings laid the foundation on which Sikhism was formed.
- Guru Nanak did not support **monasticism** and asked his followers to lead the life of honest householder.
- In his youth, he **criticized the politically oppressive policies of the Mughal regime** and the socially oppressive practices of casteism of the **orthodox Brahmanical Hindu religion**.

- His teachings were immortalized in the form of 974 hymns, which came to be known as '**Guru Granth Sahib**,' the holy text of Sikhism.

Early life:

- Since from childhood his interest towards divine subjects developed.
- He advocated "**There is no Hindu and no Musalman.**" It marked beginning of his teachings which culminate in the form of a new religion.
- Later he came to be known as **Guru Nanak** as he travelled far and wide to spread his teachings.
- He founded Sikhism, one of the youngest religions, through his teachings.
- The religion emphasizes on the importance of leading a **spiritual life** without embracing monasticism.
- It teaches its followers to escape the clutches of ordinary human traits, such as lust, rage, greed, attachment, and conceit (known as the '**Five Thieves**').
- It also advocates justice and equality and urges its followers to serve mankind.

Teachings:

- He stated every human being can attain **spiritual perfection** which will ultimately lead them to God.

- He emphasized that **God has created many worlds and created life.**
- He urged them to lead a **spiritual life** by serving others and leading an honest life without indulging in fraud.
- He gave three pillars of Sikhism: 'Naam Japo, Kirat Karo and Vand Chhako' which contains the essence of all his teachings.

Contributions to Humanity:

- He emphasized on the importance of **equality of mankind.**
- He condemned **slavery** and racial discrimination and termed everyone as equal.
- He contributed towards women empowerment in India.
 - He appealed to his followers to respect women and to treat them as their equal.
 - Without women there would be no creation on earth.
- **Guru Nanak** came up with a religion that supports the lifestyle of an average householder.
- He also taught his followers, the methods to **attain salvation** while leading a normal life within the society.
- He stressed on the importance of leading life with one's family members.

PM MODI PAYS TRIBUTES ON THEVAR JAYANTHI

Recently, the Prime Minister of India has recalled the rich contributions of

Pasumpon Muthuramalinga Thevar on Thevar Jayanthi.

Pasumpon Muthuramalinga Thevar

- **Born:** 30 October 1908, Ramanathapuram
- He was a politician and a **patriarch of Thevar community** in the state of Tamil Nadu, India.
- He is **seen as a deity** among the Mukulathor community, which is a cluster community comprising the **Kallar, Maravar and Ahambadiar**.
- Thevar was not against the Hindu religion. He had an idea to strengthen the Hindu religion based on spirituality.
 - However, he did not accept the traditional Hinduism because that supported **'Varnashrama'**.
- Thevar **mobilised resistance** to it, touring villages in the affected areas and leading protest rallies for the rights of the individuals registered under it.
- He is one of the founding members of the **All India Forward Bloc (AIFB)**.
 - He was elected three times to the **national Parliamentary Constituency of AIFB**.
- **Died:** 30 October 1963, Tirumangalam

Historical Influence

- He belonged to those Netaji followers which refused to believe that its leader died in an air crash in Taihoku in August 1945.
- During his career, he supported **Subhas Chandra Bose** for getting elected as President of the Indian National Congress in 1939. He mobilized all south India votes for Bose.
- He ran a magazine, called **'Netaji'**.

Social influence

- Thevar **protested Criminal Tribes Act (CTA)** by mobilising the people and launching protests. He was instrumental in getting the act repealed after continuous efforts in 1946.
 - Criminal Tribes Act (CTA) was enacted by the British in 1920, against the **Mukulathor** community.
- He supported the **"Temple Entry Movement"** which removed restrictions prohibiting Dalits from entering Hindu temples. Thevar supported this reform and in 1939, he helped the activist A. Vaidyanatha Iyer take Dalits to **Meenakshi Temple in Madurai**.

GRASSROOTS INNOVATOR PRESERVING TRADITIONAL METHOD OF MAKING ETIKOPPAKA TOYS

Grassroots innovator from Andhra Pradesh is preserving the traditional method of making Etikoppaka toys.

Etikoppaka Toys:

- It is **traditional method of making wooden toys** using non-toxic paints and natural dyes.
- **Toys are made in** Etikoppaka village on the banks of **Varaha**

River in Vishakhapatnam district of Andhra Pradesh.

- Etikoppaka Toys have obtained their **Geographical Indication (GI)** tag in Andhra Pradesh.
- **Features:**
 - The toys are made with **lacquer colour**.
 - The toys are also called as **lacquer toys** because of application of lacquer coating.
 - They are traditionally known as **Etikoppaka toys or Etikoppaka Bommalu**.
 - The toys are made out of **wood** and are coloured

with natural dyes derived from **seeds, lacquer, bark, roots and leaves**.

- The art of toy making is also known as **Turned wood Lacquer craft**.
- **Methodology:**
 - A colourless resinous **secretion of numerous insects** is used.
 - The already prepared **vegetable dyes** are further mixed to the lac, during the process of oxidation.
 - After this process, the end product obtained is **rich and coloured lacquer**.

CENTRE EXTENDS AYUSHMAN CAPF HEALTHCARE SCHEME PAN-INDIA; TO BENEFIT 35 LAKH PERSONNEL

Recently, Central government has extended the '**Ayushman CAPF**' healthcare scheme benefits of the central health insurance programme to the personnel of all **Central Armed Police Forces (CAPFs)** pan-India in a phased manner.

Ayushmaan CAPF Scheme

- **Aim:** To provide cashless and paperless medical treatment at empanelled hospitals.
- It will provide cashless healthcare services to serving CAPF personnel and their dependents through **Ayushman Bharat PM-JAY IT platform**.

Benefits:

- The scheme will benefit 35 lakh CAPF personnel.

- It is committed to ensure healthcare facilities of CAPF personnel & their families.
- The scheme will switch from the paper-based manual process of availing healthcare benefits to a paperless service.

Central Armed Police Forces (CAPF)

- It refers to uniform nomenclature of five Central Armed Police Forces of the Union of India under the authority of the Ministry of Home Affairs.
- **Aim:** To defend the national interest mainly against the internal threats.
- **Classification: Border Security Force (BSF), Central Reserve Police Force (CRPF), Central**

Industrial Security
Force (CISF), Indo-Tibetan

Border Police (ITBP) and
 the **Sashastra Seema Bal (SSB)**.

IREDA LAUNCHES 'WHISTLE BLOWER' PORTAL

Indian Renewable Energy Development Agency (IREDA) recently launched a **'Whistle-blower Portal'**, as a part of 'Vigilance Awareness Week 2021, recently.

- Whistle-blower portal is a part of a IREDA's **"zero tolerance"** of corruption.
- Through this portal, IREDA employees can **raise concerns** related to fraud, corruption, abuse of power etc.

DRDO, IAF CONDUCT 2 FLIGHT TESTS OF SMART ANTI-AIRFIELD WEAPON WITHIN A WEEK

The Defence Research & Development Organisation (DRDO) and Indian Air Force (IAF) have carried out two successful flight tests of indigenously-developed **Smart Anti-Airfield Weapon (SAAW)**.

Highlights:

- An **electro-optical seeker-based flight** test of this class of bomb was conducted for the first time in India.
- The configuration of the system is equipped with **Imaging Infra-Red (IIR) Seeker** technology **enhancing the precision strike** capability of the weapon.

SAAW:

- The SAAW is India's **first fully indigenous long-range precision guided anti-airfield weapon**,
- It is designed and developed wholly by the **DRDO's Research Centre Imarat (RCI) Hyderabad**,

in collaboration with the Indian Air Force (IAF).

- It is a **lightweight high precision guided bomb** designed to destroy ground targets, such as runways, bunkers, aircraft hangars and other reinforced structures.
- It has **deep penetration capabilities**, carries a high explosive warhead, Penetration Cum Blast (PCB) warhead for use against heavily fortified bunkers and concrete structures.
- It has a **standoff range of 100 kilometres**, which enables users to strike targets, such as enemy airfields, at a safe distance without putting pilots and aircraft in jeopardy.
- It is equipped with **advanced guidance, navigation algorithms and software performing**.

GOA MARITIME CONCLAVE – 2021

The 3rd edition of Goa Maritime Conclave (GMC) 2021 was recently held at Naval War College, Goa.

- **Aim:** to harness the collective wisdom of practitioners of maritime security and the academia towards garnering outcome oriented maritime thought.
- **Theme:** Maritime Security and Emerging Non-Traditional

Threats: A Case for Proactive Role for IOR Navies.

- GMC is **Indian Navy's outreach initiative**.
- GMC aims to bring **regional stakeholders together** and **discuss on collaborative implementation strategies for this region**.

102-YR-OLD JAJPUR TEACHER GETS PADMA SHRI

A teacher **Nanda Kishore Prusti**, aged 102 years from Chatasali has been awarded Padma Shri.

- Chatasalis are **schools in rural areas** run by educated persons to **provide basic education** to children.

- They are **not government-recognised** but some students study in these institutions till fourth grade.
- It is one of many traditional practices prevalent in **Odisha**.

PM MODI UNVEILS ADI GURU SHANKARACHARYA STATUE AT KEDARNATH

A 12- foot statue of **Adi Shankaracharya** has been unveiled at Kedarnath, Uttarakhand.

Adi Shankaracharya:

- Adi Shankara was an **Indian philosopher** and **theologian** whose works had a strong impact on the doctrine of **Advaita Vedanta**.

Genesis:

- Adi Shankara is said to have been born in **Kaladi village on the bank of the Periyar**, the largest river in Kerala.
- His parents, the Brahmin couple Siva Guru and Arya Antharjanam.
- He left home very early in search of learning and to become a sanyasin.

Notable Works:

- He founded **four monasteries**, in Sringeri, Dwarka, Puri, and Joshimath which are believed to have helped in the historical development, revival and propagation of Advaita Vedanta.
- Adi Shankara is generally identified as the author of **116 works**.
- Among them the celebrated commentaries (bhashyas) on 10 Upanishads, the Brahmasutra and the Gita, and poetic works including **Vivekachudamani, Maneesha Panchakam, and Saundaryalahiri**.
- It has also been claimed that Adi Shankara composed texts like **Shankarasmrithi**, which

seeks to establish the social supremacy of Nambuthiri Brahmins.

Advaita Vedanta:

- Advaita Vedanta articulates a **philosophical position** of radical nondualism, a revisionary worldview which it derives from the ancient Upanishadic texts.
- According to this, the Upanishads reveal a fundamental principle of

nonduality termed '**brahman**', which is the reality of all things.

- Advaitins understand brahman as transcending individuality and empirical plurality.
- They seek to establish that the essential core of one's self is brahman.
- They believe Brahman is **pure non-intentional consciousness**.

NAVY ESPIONAGE CASE: CBI FILES CHARGE SHEET AGAINST 4 ACCUSED; RS 2 CRORES SEIZED

Recently, The Central Bureau of Investigation (CBI) filed two chargesheets against naval officers, for sharing details of the ongoing modernization project of India's Kilo Class submarines.

Submarines in India:

- India has 15 conventional **diesel-electric submarines**, classified as SSKs, and one nuclear ballistic submarine, classified as SSBN.
 - The Navy's hull classification symbols for ballistic missile submarines are SSB and SSBN.
 - **SSBN:** SS denotes submarine (or submersible ship), the B denotes ballistic missile, and the N denotes that the submarine is nuclear powered.
 - **SSK:** SS indicated that the vessel was a submarine, and the **K** suffix that it was a hunter-killer.

All these submarines are of 3 types:

- **Shishumar class vessels:**
 - India has 4 such vessels.

- They were bought and then built in India in collaboration with the Germans starting 1980s.

- **Kilo class diesel-electric submarines (Sindhughosh class):**

- India has 8 such sub-marines.
- They were bought from Russia between 1984 and 2000.

- **Kalvari Class:**

- India has 3 Kalvari Class submarines (Kalvari, Khanderi and Karanj) in service and two such submaines is under-construction (Vela and Vagir).
- INS Kalvari is the first of the six Scorpene class submarines built under Project 75.
- They are built at India's Mazagon Dock in partnership with France's Naval Group.

- **Arihant Class**

- INS Arihant is a nuclear-powered ballistic missile submarine (SSBN), built indigenously.

- A second SSBN, **INS Arighat**, an upgraded version of Arihant, is likely to be commissioned within the next few months.

Nuclear Submarines:

- India is among six nations that have **SSNs**, alongside the US, UK, Russia, France, and China.
- India got its first SSN in 1987 from the Soviet Navy, which was decommissioned in 1991.

PADMA AWARDEES - 2020

The President of India, presented three Padma Vibhushan, eight Padma Bhushan and sixty-one Padma Shri Awards 2020, at Rashtrapati Bhavan, recently.

Padma Awards:

- The Padma Awards are one of the **highest civilian honors** of India announced annually on the eve of **Republic Day**.
- The Padma Awards are conferred on the recommendations made by the **Padma Awards Committee**, which is constituted by the **Prime Minister every year**.
- The nomination process is **open to the public**. Even self-nomination can be made.

Significance:

- Padma Awards were first instituted in the year 1954.
- **Padma awards** have been given every year except 1978 and 1979 and 1993 to 1997.
- The award is given in three categories

- In 2012, India got another Russian SSN on a ten-year lease, called INS Chakra 2, which has been returned to Russia.
- India is taking two SSNs on lease from **Russia**, the first of them is expected to be delivered by 2025.
- India is building at least two larger **SSBNs** that will have bigger missiles, called **S4 and S4*** projects. The SSBNs are expected to be commissioned before 2030.

- **Padma Vibhushan** for exceptional and distinguished service
- **Padma Bhushan** for distinguished service of a high order
- **Padma Shri** for distinguished service.

Padma Awards?

- The awards seek to **recognise achievement** "in all fields of activities or disciplines where an element of public service is involved".
- The awards are conferred by **the President**, usually in the month of March/April.

Criteria for Receiving the Award:

- **Any citizen** of India irrespective of race, occupation, position, or sex is eligible for these awards.
- **Government servants**, including those working with PSUs, are not eligible for these awards although an exception has been made for doctors and scientists.

- Awardees can be chosen from any field like the arts, social work, public affairs, science and engineering, trade and industry, medicine, literature, and sport, etc.
- The total number of Padma awards to be conferred each year is limited to 120.

What is included as a part of Padma Awards?

- The awards come with **no cash prize**.

- **The recipients** get a certificate signed by the President and a medallion.
- The winners are given a small replica of the **medallion**, “which they can wear during any ceremonial/state functions.
- The **names of the awardees** are published in the Gazette of India on the day of the presentation ceremony.
- The award does not represent a title that can be used as a suffix or prefix to the awardees’ name.

ARUNACHAL TO SHOWCASE ‘HEROIC VILLAGE’ NEAR THE CHINA BORDER

Arunachal Pradesh is planning to serve one of its most patriotic destinations on the 75th year of Independence, Kaho, a village on the China border.

Kaho Village:

- Kaho is a small village on the banks of **Lohit River** on the India-China LAC in Anjaw district of Arunachal Pradesh.
- The village has an Indian Army check-post.
- As per constitution of India, Kaho village is **administrated by**

Sarpanch, who is elected representative of village.

- There is a **monastery** for the local Buddhist population.

Meyor Community of Kaho:

- Kaho is inhabited by the **Meyor community** who are Buddhists by faith.
- According to the 2011 census, it has a total population of 65 residents and a literacy rate of 64.15 percent.

‘ONAKE OBAVVA JAYANTI’ ON NOV. 11

The Karnataka government has decided to celebrate ‘Onake Obavva Jayanti’ on 11th November throughout the state.

Onake Obavva:

- **Onake Obavva** was a **woman warrior** who fought the forces of **Hyder Ali** single-handedly with a pestle in Chitradurga in the **18th century**.

- Hyder Ali (1722-1782) was the Muslim ruler of Mysore princely state. He was the the father of Tipu Sultan.
- She is celebrated along with other women warriors of Karnataka state like **Abbakka Rani, Keladi Chennamma and Kittur Chennamma**.
- She died fighting the troops of **Hyder Ali**, when he invaded the Chitra

- Durga Fort, which was ruled by Madakari Nayaka in the 18th century.
- **Chitra Durga Fort**, is situated in Chitra Durga, northwest of Bengaluru.

Key fact

- In 2018, the Chitradurga police started '**Obavva Pade**', which is a squad of women police constables to protect and educate women in the district.

INDIAN NAVY RECEIVES THE FOURTH SUBMARINE OF THE PROJECT - 75, (YARD 11878); TO BE COMMISSIONED AS INS VELA

The fourth submarine of the Project-75 (Yard 11878), launched in 2019, was recently delivered to the Indian Navy.

- **Project - 75** includes construction of six submarines of Scorpene design.
 1. INS Kalvari, commissioned in 2017
 2. INS Khnaderi in 2019
 3. INS Karanj 2021

4. INS Vela in 2019
 5. INS Vagir (under trial)
 6. INS Vagsheer (under construction)
- The submarines are being constructed at Mazagon Dock Shipbuilders Limited (MDL) Mumbai, under collaboration with M/s Naval Group, France.

INDIA LAUNCHES e-AMRIT PORTAL ON EVs AT COP26.

India launched the 'E-Amrit' web portal on electric vehicles (EVs) at the ongoing COP26 Summit in Glasgow.

- E-Amrit is a **one-stop destination for all information on electric vehicles such as** purchase, investment opportunities, policies, subsidies etc.
- The portal has been developed and hosted by **NITI Aayog** under a collaborative knowledge exchange program with the UK government.

- As part of the **UK-India Joint Roadmap 2030**, signed by the Prime Ministers of the two countries.
- **Developed and hosted by:** NITI Aayog under a knowledge exchange program with the UK government as part of the **UK-India Joint Roadmap 2030**.
- **Aim:** to complement initiatives of the government on raising awareness on EVs and sensitizing consumers on the benefits of switching to electric vehicles.

PM MODI PAYS TRIBUTE TO MAULANA ABUL KALAM AZAD AND ACHARYA KRIPLANI ON THEIR BIRTH ANNIVERSARIES

Recently on **Acharya Kripalani** and **Maulana Abul Kalam Azad** Jayanti, the Prime Minister lauded them for their great vision for our nation.

Acharya Kripalani

- **Jivatram Bhagwandas Kripalani** popularly known as **Acharya Kripalani**, was an

Indian politician, noted particularly for holding **the presidency of the Indian National Congress**.

- **Born:** Hyderabad in Sindh (Pakistan) on 11 November 1888.
- **Died:** Ahmedabad in Gujrat (India) on 19 March 1982.
- **Education**
 - He completed his education at **Fergusson College** in Pune.

Pre-Independence

- He met **Mahatma Gandhi** during **the Champaran Satyagrah in 1917**.
- He earned **the moniker 'Acharya'** around 1922 when he was teaching at the Gujarat Vidyapith, founded by the Mahatma a couple of years before.
- He joined the **All India Congress Committee** and became its **general secretary** in 1928.
- He was well-known as a **Gandhian and a socialist**.
- Kripalani was also well-known for his work in the field of **education, environment, and other social movements**.
- He opposed **Nehru's policies**, which he thought were against Gandhian values, and later opposed **Indira's policies** too.

Post-Independence

- In 1972-73, he and other socialist leaders led movements across the country urging people to lead **nonviolent protests against Indira's government**.
- In 1975, when an Emergency was declared, he was among the **first political leaders to be arrested**.

- In his autobiography **My Times published after his death in 1982**, he criticized the entire Congress leadership, except **Mahatma Gandhi for Partition**.

Maulana Abul Kalam Azad

- He was an **Indian independence activist, Islamic theologian, writer, and senior leader** of the **Indian National Congress**.
- **Born:** Mecca in Hejaz (Ottoman Empire) on 11 November 1888.
 - Since 2008, November 11 is celebrated as the **National Education Day** in India to mark his birth anniversary.
- **Died:** Delhi on 22 February 1958.
- **Education**
 - Azad was home-schooled and self-taught.
 - Azad has mastered several languages including Arabic, Bengali, Hindustani, Persian, and English.
- **Work:**
 - He joined Al Nadwa, the Islamic theological journal of the Nadwatu l-Ulama.
 - He worked as editor of Vakil, a newspaper from Amritsar.
 - He also worked for **Hindu-Muslim** unity through the **Al-Hilal** newspaper.

Pre-Independence

- Azad became the leader of the **Khilafat Movement**, during which he came into close contact with the Indian leader Mahatma Gandhi.
- He became an enthusiastic supporter of Gandhi's ideas of **non-**

violent civil disobedience and worked to organize the **non-co-operation movement** in protest of the **1919 Rowlatt Acts**.

- In 1923, he became the youngest person to serve as the **President of the Indian National Congress**.
- He was one of the main organizers of the **Dharasana Satyagraha** in 1931.
- He **served as Congress president from 1940 to 1945**, during which the Quit India rebellion was launched.
- Azad was elected as a member of the foundation committee to establish Jamia Millia Islamia at Aligarh in U. P. without taking help from the British colonial government.

Post-Independence:

He became the **First Minister of Education** in the **Independent Indian government**.

Contributions:

- He was instrumental in developing the **education system** of Independent India.
- He set up important boards/commissions:
 - University Grants commission
 - All India Council for Technical education
 - Kharagpur Institute of higher education
 - University education commission
 - Secondary education commission

CABINET APPROVES DECLARATION OF 15TH NOVEMBER AS JANJATIYA GAURAV DIVAS

The Union Cabinet has recently approved declaration of **Janjatiya Gaurav Divas** to commemorate the brave **tribal freedom fighters** as part of the year-long celebrations of 75 years of India's Independence on the birth anniversary of Birsa Munda.

Birsa Munda:

- Birsa Munda was a **young freedom fighter and a tribal leader**.
- He was born and raised in the tribal belt around **Bihar and Jharkhand**.
- He belonged to the **Munda tribe in the Chhotanagpur Plateau area**.

- He received his early education at Salga under the guidance of his teacher **Jaipal Nag**.
- Birsa **converted to Christianity** in order to join the German Mission school.
- He is also known as '**Dharti Abba**' or '**Father of Earth**'.

Birsait:

- Birsa founded a new religion called **Birsait**.
- The religion believed in **One God** and encouraged them to revert to their original religious beliefs.
- People started referring to him as an economical **religion healer, a miracle -worker and preacher**.

Birsa Munda Revolt (1895-1901):

- Birsa started a movement called '**Ulgulan**' or '**The Great Tumult**'.

Cause of the revolt

- **Main cause of the revolt: Exploitation of tribal peoples through the zamindari system, by Dikus** (i.e., landlords, traders, merchants and government officers).
- Earlier, the Mundas practiced **Khuntkatti System** where the whole clan jointly owned the land fit for cultivation.
- However, over the course of 19th century, the non-tribal people started to settle in the land of Munda and became jagirdars and zamindars.
- Under the Zamindari system, the tribals **had to pay rent to the landlords** (Dikus).

- Failure to do pay the rent resulted in their eviction from land and they were forced to work as **landless labourers**.

- The mundas held the dikus **responsible for their miseries** and therefore developed hatred against the dikus.
- When the movement took a **violent turn**, the police arrested Birsa Munda in February, 1900.
- He died in Ranchi jail in 1900 at a young age of **25**.

Consequence of the revolt:

- In 1908, the British enacted the **Chota Nagpur Tenancy Act 1908**, which restricted the sale of Adivasi land to non-Adivasis people.

'SEED MOTHER' HONOURED - TRIBAL FARMER RAHIBAI POPERE RECEIVES PADMA SHRI FOR HER CONTRIBUTION IN AGRICULTURE

Recently **Rahibai Popere**, from Ahmednagar, Maharashtra received Padma Shri for **saving hundreds of landraces** at the village level.

What are Landraces?

- **Landraces** are defined as dynamic populations of a **cultivated plant** with a distinct identity, genetically diverse, locally adapted, and associated with farmers' practices of seed selection.
- These local ecotypes show variable phenology and low to **moderate edible yield** but are highly nutritious.

- Ecotype is a distinct form or race of a plant or animal species occupying a particular habitat.
- These are as opposed to commercially grown crops, which are developed by **selective breeding** (hybrids) to express a certain trait over others.
- With hybrid rice and wheat, selective breeding has allowed to develop varieties that have **higher yield** or other desirable traits.

Features:

- Landraces are **genotypes** used for crop breeding due to high potential to adapt specific

environmental conditions and large source of genetic variability

- They are used as **sources of genetic variability** in the search for genes for tolerance or resistance to biotic and abiotic factors in agriculture.
- The genetic diversity across landraces is the most important part of maize biodiversity.

Importance:

- Landraces played a fundamental role in **crop improvement** and agricultural production.
- They have been subject to genetic modification through abiotic, biotic, and human interactions.
- Earlier, **crop landraces** were the principal focus for agricultural production.

Challenges pertaining to Landraces:

- **Crop improvement** through selection and breeding over several decades has narrowed the genetic base of most crops.
- **Biodiversity** allows a natural mechanism for crops to develop traits to face challenging situations.
 - Given the large-scale human interference in crop selection, is lost in most commercially crops.
- **Traditional knowledge** about how seeds are to be saved, is vanishing.
- **Kalbhat**, a unique landrace of scented rice had almost vanished

from cultivators' fields as hybrid variants became popular.

- It has better climate resilience than popularly grown rice.

Conservation of Landraces:

- **Bharatiya Agro Industries Foundation** (BAIF) has initiated a community-led programme to preserve landraces.
- The project was started in 2008.
- **Aim:** To identify available germplasm and through community participation, create seed banks.
- It is implemented in 94 villages in Maharashtra and in Uttarakhand and Gujarat.
- The programme has documented 595 accessions of different crops and developed **five seed banks** for edible crops.

Recent Evolution in Landraces:

Availability of vast amounts of energy and global food distribution systems, have transformed landraces into new types

- **Generalized**, universally embraced, commercial cultivars of homogeneous materials are managed by breeding corporations.
- **Cultivars** as landraces, include unselected varieties that have continued to evolve on farm, are indorsed from genetically improved varieties with which they have been crossed.

CENTRE AGREES TO GRANT PERMANENT COMMISSION TO 11 WOMEN ARMY OFFICERS

The Central government agreed to grant permanent commission (PC) to **11 women Army officers** who meet the eligibility criteria.

Permanent Commission:

- A Permanent Commission means **a career in the army till retirement.**
- It is a **compulsorily serve for 20 years** (if one has to avail pension), and then up to **the age of superannuation.**
- An officer who joined with Permanent Commission has **no option to switch over to Short Service Commission.**

Short Service Commission

- A Short Service Commission means a career in the Armed forces as a **Commissioned Officer for 10 or 14 years.**
- After the **end of 10 years**, one can **opt for Permanent Commission** or **opt-out** or have the **option of 4 years extension.**
- They can resign at any time during this period of 4 yrs extension.
- No entitlement for facilities like Ex-Servicemen Contributory Health Scheme, pension etc.

Supreme court order

In February 2020, supreme court ruled that:

- Women officers of the Air Force and Army on SSC who had sought permanent commission but were not granted that status, would be entitled to **Permanent Commission.**
- Women officers who had not reached the age of superannuation for permanently commissioned officers would be **reinstated with all consequential benefits.**
- Government passed an order for **the grant of Permanent Commission to SSC women officers** in eight streams of the Army.
- After implementation of the judgement, a woman can **rise to the rank of Colonel** and above based on merit.
- It has also **removed the restriction of women officers** only being allowed to serve in staff appointments.
- Women officers will be **eligible to tenant all the command appointments** which would open avenues for further promotions to higher ranks for them.

CENTRE URGED NOT TO CLEAR PROJECTS PLANNED IN VIOLATION OF WATER TRIBUNAL AWARDS

The Karnataka Government has urged the Centre not to approve the proposal of Tamil Nadu for taking up **Cauvery-Vaigai-Gundar** link project.

Highlights:

- Tamil Nadu has been going ahead with the **Cauvery-Vaigai-Gundar link project**, though the shares of co-basin states have not been decided which is inadmissible in law.
- **Karnataka Government** stated

- Neither Telangana nor the **Apex Council** has a right to take up Lift Irrigation Projects, to draw large quantity of surplus water from the foreshore of Srisailem reservoir on the Krishna River.

Godavari Cauvery Interlinking Project:

- The project envisages the diversion of **247 thousand million** cubic feet of unutilized water in the Indravati sub-basin of the **Godavari basin** to meet the requirements between the Godavari and the Cauvery rivers.
- Water will be diverted from **Godavari River** to Nagarjuna Sagar dam (through lifting) and further south to meet the demands of Krishna, Pennar and Cauvery basins.
- The link comprises three components namely
 - **The Godavari** (Inchampalli/Janampet) – Krishna (Nagarjunasagar)
 - **The Krishna** (Nagarjunasagar) – Pennar (Somasila)
 - **The Pennar** (Somasila)–Cauvery.

Benefits of the project:

- It will provide **irrigation facilities** to 3.45 to 5.04 lakh hectares in Nellore, Krishna, Guntur, and Chittoor districts of Andhra Pradesh.
- **The backwaters** will be carried through Krishna and Pennar using steel pipes instead of developing canals route.
- The **wastage of water** from canals through vaporisation could be prevented and overall cost will be reduced.

What is the Issue?

- Telangana has constructed of **Rajiv Gandhi Sangama Banda barrage**.
- Karnataka opposed the project
 - If remaining water is allowed to be utilized by the downstream states it will affect its claims for an equitable share in 2050.
- It has urged for removal of **interstate difference** in renewable energy tariff for creating level playing field.

What is Interlinking of Rivers?

- The interlinking of river project aims to **connect Indian rivers** through reservoirs and canals.

Interlinking River project in India

- It is managed under the **National Water Development Authority of India** (NWDA), Ministry of Water Resources.
- This project is divided into three parts:
 - **North Himalayan** River link constituents
 - **Southern Peninsular** Component starting from 2005
 - **Interstate interlinking** of rivers.

Merits of Interlinking of Rivers

- Solve the problem of **drought and flood**
- Support **Hydropower Development**
- Support water Supply for Drinking and Industry
- Allows navigation for inland water transport
- Does dry Weather Flow Augmentation
- Large scale **afforestation**

- **Employment** opportunities for landless farmers in rural area.

Demerits of interlinking of river:

- **Opposition to Interlink:** Several NGOs are strongly against the inter-link as this project can result in environmental degradation, loss of aquatic eco-system and possible change in the climate etc.
- **Change in Constitution:** Water is a state subject. Implementation of the project will need constitutional amendment. Most of the donor states, even though surplus, will be reluctant to share with its resources free of cost with other states.
- **Resistance of People in the East and North-East:** Most of the surplus water

lies in the east and North-East states where people are economically backward mainly due to lack of investment.

- People may resist inter-basin transfer of their water resources free of cost to the beneficiary states unless the Govt. of India bring their economic condition at par with other developed states of the country.
- **Poor Performance of Many Exiting Projects:** Due to the utter mismanagements in several water sector schemes, it will be very difficult to earn people's confidence and convince the people for implementing a massive programme like national water grid.

CENTRE BRINGS ORDINANCES TO EXTEND TENURE OF ED, CBI DIRECTORS UP TO 5 YEARS

The Government of India brings Ordinance to extend the tenure of Enforcement Directorate (ED) and Central Bureau of Investigation (CBI) Directors up to 5 years.

Highlights:

- The President of India recently **promulgated two Ordinances.**
- **The Central Vigilance Commission (Amendment) Ordinance, 2021**
- **The Delhi Special Police Establishment (Amendment) Ordinance, 2021**
- Objective: **to extend the tenures of the Director, Enforcement Directorate (ED) and the Director, Central Bureau of Investigation (CBI), up to five years.**
- Earlier it was **two years' tenure.**

- As per the ordinance, CBI and the ED director will have a fixed tenure of **two years** as prescribed in their respective statutes already.
- However, they can be **given an extension each year till total of 5 years**, given the satisfaction of the appointment authority each year.

Appointment of Enforcement Directorate (ED)

- A committee of the **Central Vigilance Commissioner (Chairperson), the Home Secretary, the Secretary (Personnel), and the Secretary (Revenue)** is responsible for the appointment of Enforcement Directorate (ED).

Appointment of CBI director:

- He is appointed on the recommendation of the **Prime Minister as Chairperson, the Leader of Opposition in the Lok Sabha and the Chief Justice of India** or Judge of the Supreme Court (SC)
- Tenure: **Section 4B of the Delhi Special Police Establishment Act,**

- **1946 (DSPE Act)** concerns the tenure of the CBI Director.
- **Section 4B (2) puts a bar on the transfer of the CBI director** without the previous consent of the committee that is responsible for his appointment.
- The Directors conduct the prosecution of cases **under the Lokpal and Lokayuktas Act, 2013.**

CAG REPORT LAYS BARE KERALA'S LACK OF PREPAREDNESS DURING FLOODS

Recently, a report from Comptroller and Auditor General showed that Kerala has not yet enacted legislation on flood plain zoning.

Flood Plain:

- A floodplain is an **area** of land **adjacent to a river** which stretches **from the banks of its channel to the base of the enclosing valley walls.**
- It experiences **flooding** during periods of high discharge.
- The soils usually consist of **clays, silts, sands,** and **gravels** deposited during floods.
- Floods carry **nutrient-rich silt and sediment,** and distribute it across a wide area.
- Some floodplains are mostly **fine-grained silt,** while others are **sandy.**
- There are **two** major processes involved in the natural development of floodplains: erosion and aggradation.
- The **erosion** of a floodplain describes the process in which earth is worn away by the movement of a floodway.

- **Aggradation** (or alluviation) of a floodplain describes the process in which earthen material increases as the floodway deposits sediment.
- Floodplains can support particularly **rich ecosystems,** both in **quantity and diversity.**
- These are usually very **fertile agricultural areas.** They are **flat** and often have **relatively few boulders** or other large obstacles that may prevent farming.
- Flood plains contain geological features such as:
 - **Oxbow lakes**
 - An oxbow lake is a **crescent-shaped lake** that results from the meandering course of a river along a floodplain.
 - **Point bars**
 - Point bars consist of **alluvium** that has been swept or rolled into place by secondary water flow at the bottom of the river.
 - **Natural levees**
 - Natural levees form when a river periodically floods its bank and deposits **coarse alluvium such as**

gravel onto the banks in progressively higher stages when the river spreads and slows down its flow.

Flood Plain Zones:

Aim:

- **Demarcate zones** or areas likely to be affected by floods of different magnitudes or frequencies, and specify the types of permissible developments in these zones.
- Flood plains can minimize the damage from floods.

Policy framework for floodplains:

- The Ministry of Water Resources in 1975 had issued a draft **Model Bill on floodplains** and asked the states to frame legislation as Land and flood management is a state subject.
- The **National Disaster Management Authority (NDMA) in 2008** also issued guidelines for states for floodplain zoning as an important non-structural measure to mitigate floods.
- Both the central policies were insufficient as they were only suggestive and non-binding.
- **Manipur** was among the first to frame the Manipur Flood Zoning Act in 1978.
- **Uttarakhand** came up with the Uttarakhand Flood Plain Zoning Act 2012.
- The **Maharashtra government** also created norms to regulate and talked about prohibitory zones in floodplains of its rivers.

Challenges:

- Formation of strict floodplain zoning laws could involve **displacing the**

people and their settlements in floodplains.

- It will **necessitate compensating** those displaced, their rehabilitation and enabling alternate sources of livelihood.
- **Political stakes** could be another reason that might prevent states to take stern steps in this regard.

National Water Policy 2012:

- The **first National Water Policy** was adopted in **September, 1987**. It was reviewed and updated in 2002 and later in 2012.
- **Objective:**
 - To assess the existing situation and to propose a framework for a plan of action with a unified national perspective.
- **Salient features:**
 - Emphasis on the need for a **national water framework law**, comprehensive legislation for optimum development of inter-State rivers and river valleys.
 - **Water** be treated as **economic good** so as to promote its conservation and efficient use.
 - **Adaptation strategies** in view of climate change for designing and management of water resources structures and review of acceptability criteria has been emphasized.
 - **Incentivization** of recycle and re-use.

Other Government Schemes for Water Conservation:

- Ministry of Jal Shakti has taken up a nationwide campaign **Jal Shakti Abhiyan - Catch the Rain**.

- Atal Bhujal Yojana (Atal Jal).
- Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).
- Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).
- Watershed Development Management.
- Atal Mission for Rejuvenation and Urban Transforming (AMRUT).

- Unified Building Bye Laws (UBBL).
- Model Building Bye Laws (MBBL), 2016.
- Urban and Regional Development Plan Formulation & Implementation (URDPFI) Guidelines, 2014.

CYBERCRIME WENT UP BY 500% DURING PANDEMIC: CHIEF OF DEFENCE STAFF

Recently, the **Chief of Defence Staff (CDS)** has stressed the need for a national framework to thwart cyber-attacks that have been on the rise in the country.

Cyber Laws in India

- Cyber laws are contained in the **Information Technology Act, 2000 ("IT Act")** which came into force on October 17, 2000.
- The main purpose of the Act is to provide legal recognition to electronic commerce and to facilitate the filing of electronic records with the Government.

Government initiatives to prevent cybercrime in India

The government has taken measures to strengthen the cyber security setup in the country which, inter-alia, include the following:

- **CERT (Computer Emergency Response Teams)** issues alerts and advisories regarding the latest cyber threats/vulnerabilities and countermeasures to protect computers and networks on regular basis.

- The government has issued guidelines for **Chief Information Security Officers (CISOs)** regarding their key roles and responsibilities for securing applications/ infrastructure and compliance.
- The government has impaneled security auditing organizations to support and audit the implementation of Information Security Best Practices.
- The government has formulated a **Cyber Crisis Management Plan (CCMP)** for countering cyber-attacks for implementation by all Ministries, Departments of Central Government, State Governments, and their organizations and critical sectors.
- The government is operating the Cyber Swachhhta Kendra (**Botnet Cleaning and Malware Analysis Centre**). The center is providing detection of malicious programs and free tools to remove the same.
- The government has set up the **National Cyber Coordination Centre (NCCC)** to generate necessary

situational awareness of existing and potential cyber security threats.

NATIONAL ACHIEVEMENT SURVEY 2021 CONDUCTED SUCCESSFULLY ACROSS NATION

Recently, The **National Achievement Survey 2021**, was successfully conducted across all 36 states and UTs of the country.

Survey:

- National Achievement Survey (NAS) is a nationally representative large-scale survey of students' learning.
- It is a process of gathering information to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences.
- **Undertaken by:** The Ministry of Education
- **Conducted by:** CBSE in collaboration with the respective states/union territories.
- **Ambit of Survey:**
 - NAS 2021 is set to cover the entire spectrum of schools.
 - It includes Government Schools of Central Government as well as State Government, Government Aided Schools, and Private schools across India.
 - It is expected that NAS 2021 will cover around 1.23 lakh schools and 38 lakh students across **733 districts of 36 states and Union Territories.**
- **Phases of NAS:**
 - Instrument development
 - Sampling design
 - The actual administration of the test

• **Significance**

- It gives a system-level reflection on the effectiveness of school education.
- It will help to guide education policy, planning, and implementation at national, state, district, and classroom levels for improving the learning levels of children and bringing about qualitative improvements.

• **Components of the Test:**

- NAS 2021 will be conducted in Language, Mathematics, and Environmental Science for Classes III and V.
- Language, Mathematics, Science and Social Science for Class VIII
- Language, Mathematics, Science, Social Science, and English for Class X.
- It will be conducted in 22 mediums of instruction including Assamese, Bengali, Gujarati, Hindi, English, Tamil, Kannada, Malayalam, Manipuri, Urdu, Marathi, Bodo, Mizo, Odia, Punjabi, Telugu, Garo, Khasi, Nepali, Konkani, Lepcha and Bhutia.

• **Benefits of Survey:**

- This survey will help in assessing the learning interruptions and new learnings during the COVID-19 pandemic.
- Its findings would help diagnose learning gaps of students and determine interventions required in

education policies, teaching practices, and learning.

GOVERNMENT CONSIDERS REOPENING KARTARPUR CORRIDOR

The Ministry of External Affairs and the Ministry of Home Affairs is considering reopening the Kartarpur Sahib Gurudwara corridor to Pakistan.

Kartarpur Corridor:

- The Kartarpur Corridor is a **visa-free border crossing and corridor**.
- It connects the **Darbar Sahib Gurdwara** in Narowal district of **Pakistan** with the **Dera Baba Nanak shrine** in Gurdaspur district of **India**.
- The Corridor allows devotees from India to visit the gurdwara in Kartarpur, on the Pakistani side without a visa.
- **Only Indians resident or overseas citizens** can travel by corridor.
- However, Pakistani Sikhs cannot go to Dera Baba Nanak on the Indian side without first obtaining an Indian visa or unless they work there.
- The length of the corridor is about **4 km**.

- It was first proposed by **Atal Bihari Vajpayee** and **Nawaz Sharif**.
- It is situated on the **banks of river Ravi**.
- The corridor was built in 2019 on the **550th birth anniversary** celebrations of **Guru Nanak Dev**.

Guru Nanak Dev:

- Guru Nanak was born in **Dera Baba Nanak** and spent the last 17 years of his life in Kartarpur Sahib.
- He is the **founder of Sikhism**.
- He is the **first of the 10 Sikh Gurus**.
- He advocated the '**Nirguna**' form of bhakti.
- The stories of his life were collected in anthologies called **the Janam-sakhis**.
- Guru Arjan compiled Baba Guru Nanak's hymns called **Gurbani**.
- Guru Nanak Dev Ji took the last breath in **Kartarpur Sahib Gurudwara**.

'NEW ERA OF UP': PM MODI INAUGURATES 341KM LONG PURVANCHAL EXPRESSWAY

Prime Minister of India will inaugurate **Purvanchal Expressway** in Uttar Pradesh.

- This will be the **longest operational expressway** of India.
- It connects Lucknow and Ghazipur district.
- It is developed by the Uttar Pradesh Expressways Industrial Development Authority (UPEIDA).

- It has a 3.2 km long airstrip at Sultanpur district for emergency landing of aircrafts.

Significance:

- The eastern region of Uttar Pradesh would also be connected to the national capital of Delhi through the Agra-Lucknow and Yamuna Expressways.

GOVT ALLOWS POST-MORTEM AFTER SUNSET IN HOSPITALS WITH PROPER INFRASTRUCTURE

Ministry of Health and Family Welfare has decided that post-mortem procedures can now be carried out at night.

Highlights:

- Before this procedure, autopsies were **performed before sunset**, and only procedures that received **special permission by the law enforcement agencies** could be carried out at night.

Significance:

- It will enable the **faster release of bodies** to harvest organs for transplant surgeries.
- It will promote **ease of living** by **reducing burden** imposed due to compliance to government processes.

Organ Donation in India:

- Organ donation in India is regulated by the **Transplantation of Human Organs and Tissues Act, 1994**.
- The act aims to control the **removal, storage, and transplantation of organs** and prevents any commercial dealings
- The law allows both **deceased and living donors** to donate their organs.
- It also **identifies brain death** as a **form of death**.
- The **National Organ and Tissue Transplant Organisation (NOTTO)** functions as the **apex**

body for activities of relating to **procurement, allotment and distribution of organs** in the country.

- Organ donation rates in India sit at **0.01** percent.
- **Croatia** has the highest organ donation rate 36.5 percent.

Causes for low organ donation rates in India:

- Lack of awareness
- Spiritual belief of life after death
- General negative attitudes towards organ donation.

Steps taken by government to promote organ donation:

- In 2019, the Government of India implemented the **National Organ Transplant Programme** with a budget of ₹149.5 crore for promoting deceased organ donation.

Ethical concerns on organ donations:

- The ethical basis of donation is in **consent**.
- The donor may be **ill informed** about the procedure and the consequences or maybe **forced** to give his/her consent in return of financial gains.
- The use of living **donors as volunteers**, including minors, have become a concern.
- It has also led to the **practice of organ sale** by entrepreneurs for **financial gains** in some parts the world through **exploitation of**

the poor, for the **benefit of the wealthy**.

- In many cases, organ allocation was done on the basis of **social, financial or political status instead of the medical**

criteria and on the need of the patient.

- The ethics of using tissues and organs from fetuses have been a matter of enormous discussion.
- Collection and sale of fetal tissue by corporations is known to occur.

WHAT IS THE SIGNIFICANCE OF NATIONAL PRESS DAY 2021?

National Press Day is observed on **November 16th** every year to acknowledge and honour the Press Council of India.

Significance:

- The day marks the presence of an **independent and responsible press** in India.
- **The media** is known as the fourth pillar of democracy.
- This day symbolizes freedom of the press and its responsibilities towards society.
- The **Press Council of India** started functioning on this day.

Press Council of India:

- PCI was established under Press Council Act of 1978.
- It is the highest body to maintain the standards of the **Print Media** in India.
- It serves as the regulator that discharges professional standards for print media in India.

- **Aim:** To preserve the freedom, regulate and enhance the standards of the press in India.

Functions:

- It keeps a check on newspapers that can maintain their independence.
- Set up a **code of conduct** for the journalists to maintain high professional standards.
- **To foster** technical and other research areas concerning news.
- **Ensuring** high standards of news for public.
- It promotes responsibility among citizens.

Freedom of press

- Freedom of press is **not specifically mentioned in article 19(1) (a)** of the Constitution.
- **Romesh Thappar v. State of Madras (1950):** SC observed that freedom of the press lay at the foundation of all democratic organisations.

NMDC CELEBRATES ITS 64TH FOUNDATION DAY

National Mineral Development Corporation (NMDC), under Ministry of Steel celebrated its 64th Formation Day at its Head office - Hyderabad.

National Mineral Development Corporation (NMDC):

- It is a **government owned mineral producer**.

- It works under the administrative control of **Ministry of Steel**.
- **Head Office** - Hyderabad
- It is involved in the exploration of iron ore, copper, rock phosphate, limestone, dolomite, gypsum, bentonite, magnesite, diamond, tin, tungsten, graphite.
- **Aim:**
 - To emerge as a **global Environment friendly Mining Organization** and also as a quality Steel producer with a positive thrust on Social Development
- **Mission:**
 - To maintain its leadership as **the largest iron ore producer** in India
 - **Expanding business** by acquiring and operating various mineral assets
 - **Rendering optimum satisfaction** to all its stake holders

Objectives

- To expand the operations in the areas of **Mining and Mineral Processing**.
- To **achieve international standards** in per capita productivity, value addition and cost effectiveness.
- To increase the **iron ore production capacity to 67** (Million Tonne Per Annum) MTPA by FY 2025.
- Achieve growth by:
 - Expansion of existing mines
 - Operating new mines fully owned by NMDC or in Joint Venture
 - To maintain environment protection.
 - To conserve mineral resources through scientific mining.
 - To maintain high level of customer satisfaction.

CHANDRAGUPTA MAURYA, FOUNDER OF MAURYAN EMPIRE HAD DEFEATED ALEXANDER OF MACEDON

As per Chief Minister of Uttar Pradesh, Chandragupta Maurya, founder of Mauryan empire had defeated Alexander of Macedon yet it is the latter whom historians have chosen to call "great".

Who was Alexander?

- Alexander the Great, also known as Alexander III was born in 356 BCE, in Macedonia.
- He became the king of Macedonia (336–323 BCE) by defeating Persian empire.
- He carried Macedonian arms to India, and laid the foundations for

the Hellenistic world of territorial kingdoms.

'Greatness' in Perspective:

- Alexander was referred to as "**great**" by early historians like other conquerors and prominent rulers.
- Famous examples are
 - Roman emperor Constantine
 - The Persians Cyrus and Darius
 - Herod, king of Judea
 - Catherine and Peter of Russia
 - Frederick of Prussia.
- In Indian history, 'great' has been used for the emperors **Ashoka**,

Rajaraja and Rajendra Chola, and Akbar.

Why Alexander is called 'Great'?

- Alexander came to be called 'great' because of his **military conquests**.
- Before he turned 30 years of age, he had established the **largest empire in the world**.
- It stretched across modern western and central Asia all the way from Greece to India's northwestern frontier.
- Consequently, **Genghis Khan** (1162-1227) stamped his authority over a bigger swathe of Asia and Europe,
- Conquerors like Ashoka, Akbar, and Aurangzeb built their own large empires.
- **The Chola emperors** Rajaraja I (985-1014) and Rajendra I (1014-1044) built formidable navies that conquered Maldives, Sri Lanka, and countries of Southeast Asia.

Chandragupta Maurya:

- Chandragupta Maurya was the founder of the Maurya Empire in ancient India.
- He built one of the largest empires on the Indian subcontinent.
- His political mentor and chief adviser was **Chanakya**, also known as Kautilya.
- Chanakya wrote **'Arthashastra'**, the Indian treatise on political science, statecraft, military strategy, and economy.

Contributions of Chandragupta Maurya:

- The Mauryan Empire was unified under him, expanding to most of South Asia.
- Pataliputra was the imperial capital of the empire.
- He laid the foundation of centralized administration and tax-collection.
- **Trade and agriculture** were reformed and regulated with Standardisation of weights and measures; and provisions were made for the army.

Chandragupta and Alexander:

- As per historians, Chandragupta's rise to power stretched from 324 BC to 313 BC.
- He ascended the throne in 321 BC.
- Chandragupta may have been in communication with **Alexander** during the latter's Indian campaign.
- Sandrocottus advised Alexander to advance beyond the River Beas and attack the Nanda empire.
- Sandrocottus at the time of Seleucus Nicator, ruled over the powerful nation of the Gangaridae and Prasii on the banks of the Ganges.
- It is believed that Chandragupta Maurya was aware about the victory of Alexander, as he rose to power soon after Alexander's invasion.

Chandragupta's Ambition:

- Once he had established his authority over the plains of the Ganga, he moved **north-west** to

occupy the power vacuum left by the retreat of Alexander's army.

- In Seleucid-Mauryan War, he defeated the Greek **Seleucus Nicator**, the successor to Alexander, in 305 BC at the Indus River.
- As a result of the **Seleucid-Mauryan War**, a peace treaty was

signed in Greece offered a Macedonian princess for marriage to Chandragupta, and several territories of north-west region.

- There was also cultural contact between the Mauryans and the Greeks.

TELANGANA'S POCHAMPALLY SELECTED IS ONE OF THE BEST TOURISM VILLAGES

Recently, the Pochampally Village in Telangana has been selected as one of the best Tourism Villages by the United Nations World Tourism Organisation (UNWTO).

- The Best Tourism Villages by UNWTO Pilot initiative aims to **award those villages which are outstanding examples of rural destinations and showcase good practices in line with its specified nine evaluation areas.**

Pochampally:

- **Pochampally** is a town in Nalgonda district of Telangana.
- It is often referred to as the **Silk City of India** for the exquisite sarees that are woven through a unique style called Ikat.
- **Pochampally Ikat** received a **Geographical Indicator (GI Status)** in 2004.
- Pochampally is also known as **Bhoodan Pochampally** to commemorate the Bhoodan Movement that was launched by Acharya Vinobha Bhave from this village on April 18th, 1951.

United Nations World Tourism Organization (UNWTO)

- The **World Tourism Organization (UNWTO)** is the **United Nations agency** responsible for the **promotion of responsible, sustainable and universally accessible tourism.**
- **Headquarters:** Madrid, Spain.
- **Aim:**
 - To stimulate economic growth and job creation,
 - To provide incentives
 - To protect the environment and cultural heritage of the place
 - To promote peace, prosperity, and respect for rights.
 - To support villages to enhance their rural tourism potential through training
- The **governing body** of the UNWTO is the **Executive Council.**
 - It is responsible for ensuring that the Organisation carries out the work and adheres to its budget.

- India is a member of the Executive council of UNWTO continuously for the last 19 years.

Ikat

- Ikat is a **method for colouring fabric in patterns by resist dyeing**.
- Ikat is a Malaysian, Indonesian word which means "**Tie and Dye**".
- Ikat is believed to have its origin in South East Asia, South America and West Africa.
- It's an **ancient art** that was derived from the Malay word, 'Mengikat' which means to tie.
- It involves the process of **wrapping (or tying) and dyeing** sections of bundled yarn to a predetermined colour pattern before they are woven.
- The dye penetrates into exposed sections while the wrapped section remains undyed.
- This pattern formed by the yarn in this process is woven into fabric.
- It is often only two colours: the **colour of the yarn** and the **colour of the dye**.
- A **characteristic feature** of ikat textiles is an apparent "**blurriness**" to the design.
- The blurriness is a result of the extreme difficulty the weaver has lining up the dyed yarns so that the pattern comes out perfectly in the finished cloth.
- **Types of Ikat:**
- **Warp Ikat**, where only the warp threads are bound.

- **Weft Ikat**, where only the weft threads are bound.
- **Compound Ikat**, where both the warp and weft threads are bound, but their designs are independent of each other.
- **Double Ikat**, where both the warp and weft threads are bound, but their designs work together to create the overall pattern.
- Ikat has been termed as '**Poetry of the Loom**', due to its complex pattern
- In ancient times, ikat was a **symbol of wealth**.
- Japan has mastered the technique of Indigo ikat that no one has been able to imitate so far.

Bhoodan Movement

- The **Bhoodan movement (Land Gift movement)**, also known as the **Bloodless Revolution**, was a voluntary land reform movement in India.
- It was initiated by **Gandhian Vinoba Bhave** in **1951** at Pochampally village.
- Aim: to persuade wealthy landowners to voluntarily give a percentage of their land to landless people.
- **Ideology:** Bhave was influenced by **Mahatma Gandhi's Sarvodaya movement and Gram Swarajya**.
- **Objectives:**
- To **bring about a social order** based on equality of

opportunities by ensuring balanced economic distribution.

- **Decentralisation of economic holdings and powers** by assuring that everybody should have a right on land and property.
- Later, the movement took shape of a law called the **Bhoodan Act**.
- The government took the charge of distributing land from the land bank.
- The movement later transformed into **Gramdan (village in gift) movement**.
- Under this movement, whole or a **major part of a village land was donated by not less than 75 per cent of the residents for equal distribution among all village residents**.
- Tribal areas were major participants in the Gramdan movement.
- Both the movements died eventually but left behind the land bank.

Vinoba Bhave

- Vinoba Bhave was **one of the great spiritual leaders and reformers** of modern India.
- **Birth:** in Raigad, Maharashtra in 1895.
- He is considered a National Teacher of India and the **spiritual successor of Mahatma Gandhi**.

- He was an **eminent philosopher** and was called **Acharya**.

- He was chosen by Gandhi in 1940 as the **first Satyagrahi**, to offer non-violent resistance to the British regime.

Contributions

- He was more Interested in **land reform** than in politics.
- He founded the land-gift movement called the Bhoodan Movement in 1951.
- He travelled thousands of miles by foot accepting donations of land for redistribution to the landless.
- By 1969, the Bhoodan had collected over 4 million acres (1.6 million hectares) of land for redistribution.
- The Gita was been translated into Marathi language by him with the name as Geetai means Mother Geeta.
- As a result of a fast, he secured the government's promise to enforce the **law prohibiting the killing of cows (animals sacred to Hinduism) throughout India in 1979**.

Recognition

- **1958:** Became the **first person to receive the international Ramon Magsaysay Award** for Community Leadership.
- **1983:** Awarded Bharat Ratna Posthumously.

GREEN PUSH: GENCOS CAN SELL RENEWABLE POWER TO DISCOMS UNDER THERMAL DEALS

Thermal power generation companies will be able to supply renewable energy with distribution companies (Discoms).

Highlights:

- Under the revised guidelines:
 - Thermal generation companies can **set up renewable energy generation** capacity either by themselves (or) through developers by open bids and supply power to consumers under existing Power Purchase Agreements (PPAs).
 - Any **savings** to thermal power plants from lower cost of power generation through renewable energy would be **shared with procurers**, such as distribution companies on a **50:50 basis**.

Significance:

- This will **enable the replacement of fossil fuel**-based energy by renewable energy.
- It will **boost the installed capacity of renewable energy** to 500 GW (Giga Watts) by 2030 in line with commitments made by India at the Conference of Parties COP26 climate change conference.
- The allotted profit due to use of cheaper and renewable energy source can help **Discoms to come out of their financial crunch**.
- It will **reduce** the country's **dependence on**

coal and thereby reduce the import cost.

- It can fulfil Discoms' Renewable Purchase Obligations (RPOs).

Power Purchase Agreement:

- It is a contract between two parties, one which generates electricity (the seller) and one which purchases electricity (the buyer).
- The PPA **defines all** of the **commercial terms** for the sale of electricity between the two parties, including when the project will begin commercial operation, schedule for delivery of electricity, penalties for under delivery, payment terms, and termination.
- It is the principal agreement that defines the **revenue and credit quality** of a generating project and is thus a key instrument of project finance.

Renewable Purchase Obligations (RPOs):

- Renewable Purchase Obligation (RPO) **mandates** that all electricity distribution licensees should **purchase or produce a minimum** specified quantity of their **requirements** from **Renewable Energy Sources**.
- This is as per the **Indian Electricity Act, 2003**.

PM MODI TO ADDRESS 1ST AUDIT DIWAS ON NOVEMBER 16

Recently, Audit Diwas is being celebrated to mark the historic origin of the

institution of Comptroller and Auditor General of India (**CAG**).

Comptroller and Auditor General of India

- He is the **Constitutional Authority in India**, established under **Article 148** of the Constitution of India.
- CAG is also the **statutory auditor** of Government-owned corporations.
- **Reports to:** President of India
- **Term length:** 6 yrs or up to 65 yrs of age

Duties of the CAG

As per the various provisions, the duties of the CAG include the audit of:

- Receipts and expenditure from the **Consolidated Fund of India** and of the **State and Union Territory** having a legislative assembly.
- Trading, manufacturing, profit and loss accounts and balance sheets, and other subsidiary accounts kept in any **Government department**; Accounts of stores and stock kept in Government offices or departments.
- Government companies as per the provisions of the **Companies Act, 2013**.
- Corporations established by or under laws made by Parliament following the provisions of the respective legislation.
- Authorities and bodies are substantially financed from the Consolidated Funds of the Union and State Governments. Anybody or authority even though not

substantially financed from the Consolidated Fund, the audit of which may be entrusted to the CAG.

- Grants and loans are given by Government to bodies and authorities for specific purposes.
- Entrusted audits e.g. those of **Panchayati Raj Institutions** and **Urban Local Bodies** under **Technical Guidance & Support (TGS)**.
- He audits the accounts of any other authority when requested by the President or Governor. For example, the audit of local bodies.
- He submits his audit reports relating to the accounts of the Centre to the President, who shall, in turn, place them before both the Houses of Parliament

Role of CAG:

- The role of CAG is to uphold the Constitution of India and the laws of Parliament in the field of **financial administration**.
- The CAG has more freedom concerning the audit of expenditure than concerning the audit of receipts, stores, and stock.
- The CAG has to ascertain whether money shown in the accounts as having been disbursed was legally available for and applicable to the service or the purpose to which they have been applied or charged and whether the expenditure conforms to the authority that governs it.

SABZ BURJ RESTORED TO ITS MUGHAL-ERA GLORY

Recently, **Sabz Burj** has been restored using traditional materials and building-craft techniques favored by 16th Century craftsmen.

Highlights:

- The tomb is of immense significance due to the ceiling on its **double-dome structure** painted in **pure gold and lapis**.
- It is thought to be the **earliest surviving painted ceiling for any monument** in India.
- Conservationists believe that the painting on the ceiling that has **floral motifs** predates similar work that was seen in **miniature paintings and textiles from the Mughal era**.

Timurid architectural style

- The term Timurid architectural refers to the architectural style during the **Timurid Empire**.
- Timurid Empire (1370-1507) was a **Persianate Turco-Mongol empire**.
- The empire was founded by Timur who established the empire between 1370 and his death in 1405.

- It is the **pinnacle of Islamic art in Central Asia**.
- Timurid architecture started with the sanctuary of Ahmed Yasawi (a Turkic poet and Sufi) in present-day Kazakhstan and culminated in Timur's mausoleum Gur-e Amir in Samarkand.
- Spectacular and stately edifices erected by Timur and his successors in Samarkand and Herat helped to disseminate the influence of the Ilkhanid school of art in India.
 - It thus gave rise to the Mughal (or Mongol) school of architecture.
- The Architecture of the Timurid Empire is **highly decorated with geometric patterns and Islamic Calligraphy**.
- Timurid architecture drew on and developed **many Seljuq traditions**.
 - The Seljuk Empire was a high medieval Turko-Persian Sunni Muslim empire.
- The major building projects contain some sort of **Monumental Entrance**.
 - A massive facade and archway at the main doorway of a building.

FOUNDATION STONE LAID FOR RS 331 CRORE HERITAGE CORRIDOR PROJECT IN ODISHA'S PURI

Odisha Chief Minister is expected to lay the foundation stone of the **Puri heritage corridor**.

Puri heritage corridor project:

- **Aim:** To transform the abode of lord Jagannath into an international place of heritage.
- The project will be undertaken under Augmentation of Basic Amenities & Development of

Heritage & Architecture at Puri (**ABADHA**) scheme.

Jagannath Temple:

- It is a **Hindu temple** dedicated to Jagannath (a form of Hindu lord Vishnu).
- **Location:** Puri in Odisha
- Odisha is known as **the land of Lord Jagannath**.
- The temple was built in the **12th Century AD** by the ruler of Ganga dynasty, **king Anantavarman Chodaganga Deva**.
- It is believed that construction of the temple was completed by Anangabhimadeva III.
- The idol of Jagannatha is **made of wood**.
- It is one of the **Char Dham (4 Holiest places) pilgrimage sites** in India.
- The other three are: Dwarika, Badrinath and Rameshwar
- The temple is famous for **annual Ratha Yatra**
- The three principal deities are **pulled on huge chariot**.

Architectural feats of the temple:

- The main temple of Jagannath is constructed in **Kalinga/Oriya architecture**.
- It is a distinct **sub-style of Nagara architectural style**.

- The temple complex is enclosed within **two concentric walls**:
 - The Kuruma Bheda (Inner wall)
 - The Meghnad Pachira (Wall)
- Main entrance is through the **Eastern front** of the temple with three other entrances.
- The temple is constructed in such a way that **no shadow of the temple falls on the ground** at any time of the day.
- **The Nilachakra-**
 - The Blue wheel perched on top of the temple is made of eight metals or asta dhatu.
- **Patitapabana-**
 - The flag flows in the opposite direction of the wind and is changed every day at sunset.
- **The Mahaprasad-**
 - The offering to the Lord is prepared on fire lit by wood charcoal
 - The rice with some vegetables and cereals are put in earthen pots and placed on the fire one on top of the other.
 - The pot on the top cooks first.
- **The Aruna stambha-**
 - The 33 ft monolith structure pillar in front of the main entrance of the temple was originally located at the Sun Temple, Konark.

GURU NANAK JAYANTI 2021: WHEN IS GURPURAB?

Recently, the birth anniversary of the first of the ten Sikh gurus, Guru Nanak Dev Ji was observed.

Guru Nanak

- **Born:** 15 April 1469 in Delhi Sultanate.

- He was the **founder of Sikhism and is the first of the ten Sikh Gurus**.
- His birth is celebrated worldwide as **Guru Nanak**

Gurpurab on Katak Pooranmashi.

- Nanak is said to have travelled far and wide across Asia teaching people the message of **Ik Onkar (one God)**.
- He believes that God dwells in every one of his creations and constitutes the eternal Truth.
- Nanak's words are registered in the form of **974 poetic hymns, or shabda**, in the holy text of Sikhism, the Guru Granth Sahib.
- Guru Nanak was born to Hindu parents though he believed that he was neither Hindu nor Muslim.
- At the age of 18, Guru Nanak married Mata Sulakkhani. He had two sons, Sri Chand and Lakshmi Chand.

Teaching: His teaching majorly involved three things:

- **Vand Chakko**
 - Vand Chakko involves sharing with others and helping the ones in need.
- **Kirat Karo**
 - Kirat Karo involves making a living honestly without exploiting anyone and without any fraud.
- **Naam Japna**
 - It involves meditating on the name of God and controlling our evils
- Guru Nanak traveled the World intending to spread the holy message.

- He traveled to Mecca, Tibet, Kashmir, Bengal, Manipur, Rome, etc. on foot with his Muslim companion **Bhai Mardana**.
- He is also considered holy by **Punjabi Hindus and Sahajdhari Sindhis** across the Indian subcontinent. Among Muslims, he is considered to be a **Sufi**.
- He initiated **inter-faith dialogue in 16th century** and had conversations with most of the religious denominations of his times.
- **Died:** 22 September 1539 in Kartarpur.

Sikhism

- It is a religion that originated in the Punjab region of the Indian subcontinent around the end of the **15th century CE**.
- Sikhism is one of the youngest of the major religions and the world's fifth-largest organized religion.
- The five cardinal vices according to Sikhism include **lust, greed, anger, worldly attachment, and pride**.
- Sikhism teaches that **men and women of every race and religion are equals**.
- The **khanda** is the **universal symbol of the Sikh faith**.
- It is a **double-edged sword** with two daggers. The daggers represent spiritual and worldly powers bound by God.

- Sikhs often wear a steel bracelet called a **kara**, which is meant to remind them of the unity of God.
- In the Sikh faith, followers are taught that they **should**

perform selfless service and charitable work. This is referred to as **Tan (physical service), Man (mental service), and Dhan (material service).**

TRIBUTE TO RANI LAKSHMIBAI ON HER BIRTH ANNIVERSARY

Recently, Prime Minister paid tribute to India's **iconic freedom fighter**, the Queen of Jhansi, Rani Lakshmibai, to commemorate her birth anniversary.

Rani Lakshmibai

- **Rani Lakshmibai, the Queen of Jhansi,** was popularly known as the '**Jhansi Ki Rani**'.
- She was **born into a Maratha Brahman household, with the maiden name Manikarnika.**
- She learnt how to wield a sword and **took training in archery, shooting and the ancient gymnastics artform Mallakhamba.**
- She became proficient in **horse riding and fencing** under the **guidance of Nana Saheb and Tatya Tope.**
- She was married to **Maharaja Gangadhar Rao Newalkar** of Jhansi, who died later due to ill-health.
- The king adopted a son before his death, according to the Hindu tradition.
- The British, **under doctrine of lapse policy,** ordered the merger of Jhansi into the British Empire and assured the queen of pension.

- They did not recognise the adopted son as the legal heir to the throne.
- Rani Laxmibai did not agree to this contract in any way and **refused to cede Jhansi to the British.**
- She was a **prominent figure in the 1857 Rebellion,** which began on May 10, 1857.
- She became an icon for the Indian liberation movement against the British Raj for the entire country.
- She **organised her troops and assumed the charge of the rebels in the Bundelkhand** region, when the mutiny broke out in 1857.
- She, along with **Tantia Tope and Nana Sahib went on the mount a successful assault on the fortress of Gwalior in Madhya Pradesh.**
- She died fighting in the **battle of Kotah-ki Sarai,** on June 17, 1858
- Her tomb is situated in Gwalior's Phool Bagh area.
- Martyr's Day is observed in Jhansi, on November 19, the birth anniversary of Rani Lakshmibai, **to commemorate**

the lives lost in the 1857 Rebellion.

- She is an icon for **women's empowerment**.
 - Rani Laxmi Bai is known as the woman who changed the course of history through her courage, honour, and patriotism.

Doctrine of Lapse

- **Lord Dalhousie** introduced a new policy of Doctrine of Lapse.
 - He was the **Governor-General of India from 1848 to 1856**.
- According to this policy, if the king did not have any natural born heir, then the kingdom would lapse to the British or would be administered and occupied by the British.

- **Eight Indian states were annexed** under this policy which included **Satara, Jhansi and Nagpur**.

- Under the Doctrine of Lapse,
 - The **adopted son of Rani of Jhansi was denied the throne**.
 - The British denied pension to Nana Sahib, with the death of his foster father.
- The doctrine was **one of the major political causes for the break out of the Revolt of 1857**.
- Elements of the doctrine of lapse continued to be applied by the post-independence Indian government to derecognize individual princely families until 1971.

PM NARENDRA MODI SAYS SORRY, ANNOUNCES REPEAL OF THREE FARM LAWS

Prime Minister announced the repeal of the three contentious farm laws

The **three controversial Farm Acts** are as follows:

1. Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020:

- It seeks to **give freedom to farmers to sell their produce outside the notified Agricultural Produce Market Committee (APMC) market yards (mandis)**.
- **Aim:** To **facilitate remunerative prices** through competitive alternative trading channels.
 - Farmers will not be charged any cess or levy for sale of their produce under this Act.

Significance:

- This act will **open more choices for farmers, reduce marketing costs, and help them get better prices**.
- It will also help farmers of regions with surplus produce to **get better prices** and consumers in areas with shortages at lower prices.

2. Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Act, 2020:

- **Aim:**
 - To **transfer the risk of market unpredictability from farmers to sponsors**.

- To boost farmer income by reducing the cost of marketing.
- To give farmers access to modern tech and better inputs.

Significance

- Give farmers the **right to enter into a contract with agribusiness firms**, processors, wholesalers, exporters, or large retailers.
- It **created a legal framework for contract farming**.
- **Contract farming**: The farmers could enter into a direct agreement with a buyer before sowing season to sell their produce at pre-determined prices.

3. The Essential Commodities (Amendment) Act, 2020:

- The law seeks to **remove commodities like cereals, pulses, oilseeds, onion, and potatoes from the list of essential commodities**.
- To do away with the imposition of stock holding limits on such items except under 'extraordinary circumstances' like war, famine, extraordinary price rise and natural calamity.
- **Significance: attract private investment into the farm sector** as well as bringing price stability.

Criticism of three farm laws:

- **States will lose revenue** as they will not be able to collect 'mandi fees' if farmers sell their produce outside registered Agricultural

Produce Market Committee (APMC) markets.

- It decreases the involvement of middle men.
- It may eventually **lead to the end of the minimum support price (MSP)** based procurement system
- It would **lead to corporatisation of agriculture** as:
 - Big private companies, exporters, wholesalers, and processors may get an edge.
 - Powerful investors would bind farmers to unfavourable contracts with liability clauses.
 - It will weaken the negotiating power of farmers.
- It may **lead to exploitation by private companies**.
 - Big companies will have the freedom to stock commodities and they will become dictators to the poor farmers.

What is Repeal in Law?

- **Repealing a law** is one of the ways to nullify a law.
- A law is reversed in the **Parliament** when there is no need for a law to exist.
- Legislation can have a **sunset clause**, a particular date after which they cease to exist.
 - **For example**, the anti-terror legislation Terrorist and Disruptive Activities (Prevention) Act 1987, had a sunset clause, and was allowed to lapse in 1995.
- For laws that do not have a sunset clause, **Parliament** has to pass another legislation to repeal the law.

Constitutional Provision:

- **Article 245** of the Constitution gives power to the parliament to make laws applicable throughout the country and state legislatures the power to make laws for the state.
- Parliament draws its power to **repeal a law** from the same provision.
- **A law can be repealed** either in its entirety, or to the extent that it is in contravention of other laws.

Process for repealing a law:

Laws can be repealed in two ways:

1. Ordinance

- In case an ordinance is used, it would need to be replaced by a law passed by Parliament within six months.
- If the ordinance lapses because it is not approved by Parliament, the repealed law can be revived.

2. Legislation

- The government can bring legislation to repeal the farm laws.
- It should be passed by both Houses of Parliament, and receive the President's assent before it comes into effect.
- All three farm laws can be repealed through a single legislation.

SWACHH SURVEKSHAN 2021 RESULTS: TOP HIGHLIGHTS OF THE ANNUAL CLEANLINESS SURVEY

Recently, results of Swachh Survekshan Abhyaan 2021 were launched.

Swachh Survekshan Survey

- Swachh Survekshan is a ranking exercise taken up by the Government of India to assess rural and urban areas for their levels of cleanliness.
- **Aim:**
 - To focus on ensuring complete access to sanitation facilities for all.
 - To encourage large scale citizen participation and create awareness amongst all sections of society about the importance of Cleanliness of city.
 - To foster a spirit of healthy competition among towns and cities to improve their service

delivery to citizens, towards creating cleaner cities and towns.

- **Organised by:**
 - **In Urban areas:** Ministry of Urban Development
 - **In Rural areas:** Ministry of Drinking Water and Sanitation
- **Implementation Partner:** The Quality Council of India.
- **Total cities participated in the survey:** 4,320
- **Areas of Evaluation:**

Rankings are allocated based on a city's performance in the following areas:

- Areas of waste collection and sweeping
- The processing and disposal of municipal solid waste (MSW)
- Construction of toilets and the prevalence of open defecation

- Work that has been done to create awareness and behavioral change around cleanliness and sanitation, and capacity building.
- A new category of awards titled '**Prerak DAUUR Samman**' was introduced which has a total of five additional sub-categories which are:
 - Divya (platinum),
 - Anupam (Gold),
 - Ujjawal (Silver),
 - Udit (Bronze), and
 - aaRohi (Aspiring).

Highlights of the survey

- Top 3 cities **with a population of over 10 lakhs**: 1. Indore (Cleanest city for the fifth consecutive year) 2. Surat and 3. Vijaywada
- Chhattisgarh has been awarded as the 'Cleanest State' of India for the 3rd consecutive year in the '**more than 100 Urban Local Bodies**' category.
- Jharkhand won the 'Cleanest State' of India for the second time in the '**less than 100 Urban Local Bodies**' category.
- **Karnataka** emerged as the '**Fastest Mover State**' in the '**more than 100 Urban Local Bodies**'.
- **Mizoram** emerged as the 'Fastest Mover State' in the '**less than 100 Urban Local Bodies**'.

Improvements

- 6 States and 6 UTs have shown overall improvement.
- Nearly 1,800 additional Urban Local Bodies (ULBs) have started

extending welfare benefits to their sanitation workers.

- More than 1,500 additional ULBs have notified ban on the use, sale, and storage of non-biodegradable plastic bags; in total, more than 3,000 ULBs have notified this ban.
- All Northeast states have shown significant improvement in their citizens' feedback.

Swachh Bharat Mission-Urban

- Swachh Bharat Mission is a massive mass movement that seeks to create a Clean India.
- **Aim:**
 - To make the cities garbage-free.
 - To sewage and safety management, making cities water-secure, and ensuring that dirty nullahs don't merge into rivers.
 - To cover 1.04 crore households, provide 2.5 lakh community toilets, 2.6 lakh public toilets, and a solid waste management facility in each town.

Organized by: The Ministry of Urban Development and The Ministry of Drinking Water and Sanitation.

Benefits of the Mission:

- Community toilets will be built in residential areas where it is difficult to construct individual household toilets.
- Public toilets will also be constructed in designated locations such as tourist places, markets, bus stations, railway stations, etc.
- The program will be implemented over five years in 4,401 towns.

- The Mission will focus on the following factors:
 - Source segregation of solid waste
 - Utilizing the principles of 3Rs (Reduce, Reuse, Recycle)
 - Scientific processing of all types of municipal solid waste
 - Remediation of legacy dumpsites for effective solid waste management.

The Outcome of the mission:

The following outcomes are expected to be achieved:

- All statutory towns will become ODF+ certified.
- All statutory towns with less than 1 lakh population will become ODF++ certified,
- 50% of all statutory towns with less than 1 lakh population will become Water+ certified
- All statutory towns will be at least 3-star Garbage Free rated as per MoHUA's Star Rating Protocol for Garbage Free cities
- Bio-remediation of all legacy dumpsites.

WORLD FISHERIES DAY CELEBRATED IN BHUBANESWAR

Recently, Union Minister for Fisheries, Animal Husbandry and the Dairying has celebrated the world fisheries day in Bhubneshwar.

Status of Fisheries in India:

- Presently India is **the second-largest** fish producing and **second-largest** aquaculture nation in the world after China.
- The total fish production is registered at 12.61 million metric tonnes.
- Fisheries is an important sector in India's Economy.
- Fisheries contribute to 1.07% of the total GDP of India.
- According to the **National Fisheries Development Board**, the **Fisheries Industry** generates export earnings of Rs 334.41 billion.
- It employs millions of people and contributes to the food security of the country.

- With a coastline of over 8,000 km, an **Exclusive Economic Zone (EEZ)** of over 2 million sq km, and with extensive freshwater resources, fisheries play a vital role.
- **Marine Fisheries** contribute to food security and provide direct employment to over 1.5 mn fisher people besides others indirectly dependent on the sector.

Fisheries in India

- Indian marine fish resources show rich species diversity with about 1,570 species of finfish and about 1,000 species of shellfish

Major forms of fisheries in India are as follows:

- **Marine Fisheries:** 40 % of the total annual production of fish and being confined to coastal waters in the west from Kachchh, Malabar coast to Coromandal coast in the east

- **Freshwater or Inland Fishery:** 60 % of the country's total fish production comes from inland fisheries.
- **Estuarine Fisheries:** It is confined to estuaries areas of the Ganga, Mahanadi, Godavari, Krishna, Cauvery, Narmada, and Tapi.
- It is also in the brackish water lakes of Chilka and Pulicat, and the backwaters of Kerala. Prawn is an important variety.
- **Pearl Fisheries:** Areas are usually on the ridges or rocks or dead corals forming extensive pearl banks at a depth of 18-22 m.

Government schemes for the promotion of fisheries:

Development of Inland Fisheries and Aquaculture

Aim of the Scheme:

- Promote fish farming
- Enhance fish production from the Inland sector
- Increase fish seeds and quality seeds in the country
- Develop hatcheries and brood banks across all the agro-climatic regions of the country
- Generate employment opportunities
- Diversify aquaculture practices
- Provide sustenance to fish farmers

Funds For the Scheme

- Total assistance of Rs.135 Crores to cover all the inland fishery resources.
- The expenses of the developmental activities are shared between the Central and the State Government with the ratio of **75:25**.

Components of the Scheme

- Development of Freshwater Aquaculture
- Development of Brackishwater Aquaculture
- Development of Waterlogged Areas
- Coldwater Fisheries and Aquaculture
- Productive Utilisation of Inland Saline Soil Aquaculture
- Integrated Development of Inland Capture Resources
- **National Scheme of Welfare of Fishermen**

Aim of the Scheme:

- To provide financial assistance to fishers for construction of house, community hall for recreation and common working place and installation of tube-wells for drinking water

Component of the Scheme

- Development of Model Fishermen Villages.
- Group Accident Insurance for Active Fishermen and
- Saving-cum-Relief

ASSAM RANKS 3RD IN IPF'S SMART POLICING INDEX, ANDHRA FIRST AND TELANGANA AT SECOND SPOT

Recently, by IPF Smart Policing Index 2021 was launched.

Index

- **Aim:** To assess the performance of various states on PM's Smart Policing initiative.
- **Survey conducted by:** Indian Police Foundation
- **Area of Evaluation:**
- The survey questionnaire is composed of 10 queries, which included six indices of:
 - **Competence-Based Indicators:** Dealing with issues such as police sensitivity, accessibility, responsiveness, and technology adoption.
 - **Value-Based indicators:** It deals with the integrity of the police
 - **Index of Trust:** It deals with the trust of common people in the police.

Highlights of the Index:

- The **national average of satisfaction** with the police is at **69%**.

- In overall policing, **Bihar scored the worst with 5.74**
- In overall policing, **Uttar Pradesh scored 5.81**
- **Top Rankers of the Survey:** Andhra Pradesh, Telangana, Assam, Kerala and Sikkim.
- **Bottom Rankers of Survey:** Bihar, Uttar Pradesh, Chhattisgarh, Jharkhand and Punjab.

Smart Policing:

- Smart policing is an idea attempt to assess the performance of various states on **PM's Smart Policing initiative**.

SMART policing envisaged systemic changes to transform the police to be:

- **S:** Strict and Sensitive
- **M:** Modern and Mobile
- **A:** Alert and Accountable
- **R:** Reliable and Responsive
- **T:** Tech-savvy and Trained.

'OPERATION MOLTEN METAL': DRI SEIZES 85.5 KG GOLD, ARRESTS 4 FOREIGN NATIONALS

- Recently Operation Molten Metal was conducted by **Directorate of Revenue Intelligence (DRI)**.
- It is an **intelligence operation mission** in which several Indian

and foreign nationals were identified indulging in **smuggling gold into India** from Hong Kong.

PRESIDENT OF INDIA PRESENTS GALLANTRY AWARDS FOR THE YEAR 2021

The President of India presented Gallantry Awards and Distinguished Service Decorations at the **Defence Investiture Ceremony-I** held at Rashtrapati Bhavan recently.

Gallantry awards?

- **Gallantry Awards** have been instituted by the Government of India.
- **Aim:** To honour the **acts of bravery and sacrifice of the Armed Forces personnel**, other

lawfully constituted Forces, and civilians.

- The awards are announced **twice in a year** - first on the Republic Day and then on the Independence Day.

Types of Gallantry Awards:

1. Wartime Gallantry Awards:

Param Vir Chakra

- A top military decoration awarded for the highest degree of bravery and self-sacrifice in the battlefield.
- This wartime gallantry decoration is only awarded to military personnel.



Maha Vir Chakra

- It is the second highest military decoration awarded for acts of conspicuous gallantry in the presence of the enemy on land, at sea or in the air.



Vir Chakra

- It is the third highest Wartime gallantry award presented for acts of bravery in the battlefield.



2. Peacetime Gallantry Awards:

Ashoka Chakra

- A highest peacetime military award for acts of bravery and self-sacrifice away from the battlefield.
- This decoration may be awarded either to military or civilian personnel.



Kirti Chakra

- It is the second highest peacetime military decoration awarded for acts of valor, courage, or self-sacrifice away from the battlefield.



Shaurya Chakra

- This is third highest for the act of valor, courage away from the battlefield.



3. Distinguished Service & Gallantry Medals:

Sarvottam Yudh Seva Medal

- **Wartime Distinguished Service Medal** awarded for distinguished service of the most exceptional order during war/conflict/hostilities.
- It is awarded to all ranks of Indian armed forces including those of Territorial Army Units, Auxiliary Reserve forces and members involved in nursing services.



Uttam Yudh Seva Medal

- A second highest medal for Wartime Distinguished Service after Sarvottam Yudh Seva Medal.



Yudh Seva Medal

- Third highest military decorations medal for distinguished service during wartime.
- It is awarded for a high degree of distinguished service in an operational context.



4. Peacetime Service & Gallantry Medals

Param Vishisht Seva Medal

- A military award in recognition to peace-time service of the most exceptional order.
- It is awarded to all ranks of Indian armed forces.



Ati Vishisht Seva Medal

- It is the second highest peacetime distinguished service medal.



Vishisht Seva Medal

It is the third highest peacetime distinguished service medal awarded for distinguished service of an exceptional order.



Defence Investiture Ceremony:

- Gallantry awards along with some other Defence Distinguished Service awards are conferred to the awardees by the President at the Defence Investiture Ceremony every year at the Rashtrapati Bhawan.
- However, the Param Vir Chakra and the Ashoka Chakra are conferred by the President to the awardees on the Republic Day Parade at the Rajpath.

RAILWAYS TO LAUNCH AROUND 190 THEME-BASED TRAINS TO SHOWCASE INDIA'S CULTURE AND HERITAGE

Recently, the Railway announced the launch of around 190 theme-based trains called Bharat Gaurav trains, which can be run by private players.

Bharat Gaurav scheme:

- Aim: To boost tourism by connecting these train services to the cultural and religious spots initially.

Key features

- Bharat Gaurav trains will be run by both the **private sector and the IRCTC** in theme-based circuits.
- The service providers can be an **individual, company, society, trust, or a joint venture.**
- **Private players can** lease such trains them from the railways.

- The tour operators have the **freedom to fix the rates.**
- **Service provider will offer all-inclusive package to tourists,** including rail travel, hotel

accommodation, sightseeing arrangement etc.

- **Customer support units** for hand holding the service provider.

ATAL INNOVATION MISSION AND VIGYAN PRASAR ANNOUNCE COLLABORATION BETWEEN ATAL TINKERING LABS AND ENGAGE WITH SCIENCE

Recently, Atal Innovation Mission (AIM), announced a collaboration with Vigyan Prasar, to drive synergies between the Atal Tinkering Labs (ATL) and Engage with Science (EWS).

Engage with Science program

- **Engage With Science** is a part of the India Science OTT channel project.
- **Aim:** To publicise and popularize STEM video content on India Science.
- India **Science** is an Internet-based **science Over-The-Top (OTT) TV channel.**
- It is an initiative of the **Department of Science and Technology (DST).**
- **Implemented and managed by** Vigyan Prasar (VP).

Significance

- It will help **foster the culture of STEM innovation.**
- It will serve as a platform where young minds are exposed to experiential learning with the focus on invention and collaborative problem-solving to maximize impact.
- The collaboration plays a vital role in **reviving and updating education practices to keep up**

with the technological advances.

Atal Innovation Mission (AIM)

- The **Atal Innovation Mission (AIM)** is a flagship initiative set up by the **NITI Aayog in 2016** to promote innovation and entrepreneurship in the country.

The two core functions include:

- **Entrepreneurship promotion through Self-Employment and Talent Utilization**
- Here, innovators would be supported and mentored to become successful entrepreneurs.
- **Innovation promotion:** To provide a platform where innovative ideas are generated.

Objectives:

- To **create scientific temper and cultivate the spirit of curiosity and innovation among young minds.**
- To **develop new programmes and policies** for fostering innovation in different sectors of the economy.
- To **provide platforms and collaboration opportunities for different stakeholders**

- To create an **umbrella structure to oversee the innovation & entrepreneurship ecosystem of the country.**

Atal Tinkering Labs (ATL)

- **Atal Tinkering Laboratories (ATLs) are established by Atal Innovation Mission** with the vision to **'Cultivate one Million children in India as Neoteric Innovators'**
- **Aim:**
 - To foster curiosity, creativity, and imagination in young minds by inculcating skills such as design mindset, computational thinking, adaptive learning, physical computing etc.
- ATL provide a **workspace** where young minds **give shape to their ideas and learn skills through hands on do-it-yourself mode.**
- Young children get a chance to work with tools and equipment to understand the concepts of STEM (Science, Technology, Engineering and Math).
- They will be provided with equipment on – science, electronics, robotics, open-source microcontroller boards, sensors and 3D printers and computers.
- It will foster inventiveness in children.
- They can **conduct different activities** ranging from regional and national level competitions, exhibitions, workshops on problem solving, designing and fabrication of products, lecture series etc. at periodic intervals.

ATL Objectives

- To **create workspaces** where young minds can learn innovation skills, sculpt ideas through hands-on activities, work and learn in a flexible environment.
- **To empower our youth with the 21 century skills of creativity, innovation, critical thinking, design thinking, social and cross-cultural collaboration, ethical leadership and so on.**
- **To help build innovative solutions for India's unique problems** and thereby support India's efforts to grow as a knowledge economy.

Vigyan Prasar (VP)

- **Vigyan Prasar (VP)** is an **autonomous organization under the Department of Science and Technology (DST), Government of India.**
- Aim: To **serve India's science popularization agenda.**

objectives are:

- To **undertake, aid, promote, guide, and coordinate efforts in popularisation of science**
 - It involves **inculcation of scientific temper among the people** and to increase the knowledge about science among all segments of the society.
- **To provide and promote effective linkages** on a continuing basis among various scientific institutions.
- To **undertake development of materials – audio, visual, audio-**

visual and printed methods and modes of communication.

- To **organise research work, courses, workshops, seminars, symposia, training programs, fairs, exhibitions, film shows, popular discussions, street plays, quizzes, song dance-dramas etc.**

Initiatives of Vigyan Prasar:

- Vigyan Prasar's (VP) programme **Science on Television** is one of the popular initiatives.
- The objective is to bring out video science programmes on different aspects of science and technology in different Indian languages to demystify science and inculcate

scientific temper and kindle involvement.

- **Science & Technology through radio is another of the flagship programs of VP.**
- **The Gender and Technology Communication Program** has been established.
- **Objective:** To empower women through Science & Technology communication, through resource material for women of all age groups.
- It is also engaged in the **popularization of Astronomy at national level** through various means.

MINISTRY PROPOSES TAX SOPS FOR SYNGAS TECH; 15% METHANOL BLENDING WITH PETROL

The Union coal ministry has proposed 15% methanol-blending target with petrol to encourage investments in the sector.

Highlights:

- **It proposes tax waivers** to incentivise coal gasification, leading to eco-friendly usage of the fuel available in the country.
- Rs 20,000 crore will be invested in **coal gasification projects** by 2030 to utilise 100 million tonnes of coal.
- **Coal miners** will pay taxes to the Central, state, and local governments and levies including royalties.
- Rs 400/tonne **GST compensation cess** and contribution to district mineral funds, contribute to more

than 50% of the base price of the fuel.

What is Coal Gasification?

- **Coal gasification** is the process of converting coal into synthesis gas which is a mixture of hydrogen (H₂), carbon monoxide (CO) and carbon dioxide (CO₂).
- **The syngas** can be used in a variety of applications such as the production of electricity and making chemical products such as fertilisers.

Need for Coal Gasification in India:

- **Methanol** is more economically competitive than ethanol when it comes to blending with gasoline.
- Blending of 15% methanol in gasoline will bring

down **greenhouse gas emissions** by 20%.

- **Domestic production** of methanol from coal will help in import substitution and ensure steady supplies at a less volatile price.
- Almost 90% of domestic methanol requirement is met through imports.

India has declared three quantitative climate change goals:

- Reduction in emissions intensity of **Gross Domestic Product** (GDP) by 33 to 35 percent by 2030.
- Achieving about 40 percent cumulative electric power installed capacity from **non-fossil fuel-based energy resources** by 2030.
- Creating an additional **carbon sink** of 2.5 to 3 billion tonnes of carbon dioxide through additional trees & forest cover by 2030.

Coal Gasification Projects in India:

Talcher Fertiliser Plant

- It is a joint Venture Company comprising of Rastriya Chemicals and Fertilizers, Fertilizer Corporation of India, **Gas Authority of India Limited** and Coal India Limited.
- It was established in 2016
- **Aim:** To set up a Surface Coal Gasification based integrated

fertilizer using high ash coal with pet coke.

- **Coal blended with pet-coke** will be gasified to produce syngas up to 25%.

Dankuni Coal to Methanol Plant

- Coal India Limited is setting up a 1.5 MT coal-based methanol plant in **Dankuni**.

Strategy towards Coal Gasification:

National Coal Gasification Mission

- Ministry of Coal has decided to set up National Coal Gasification Mission.
- **Aim:** To fulfill the vision of achieving 100 MT coal gasification by 2030.

Key Features:

- **Mapping of gasification** potential of coalfields specially in North east
- Development of suitable business model for setting up of various projects
- **Marketing strategy** for end products
- Policy support with a view to encourage Aatmanirbhar Bharat Scheme
- Coordination with various stake holding Ministries
- **Providing quantifiable targets** to various companies and monitoring the implementation of activities.

CENTRE RECONSTITUTES COMMITTEE FOR DISPOSAL OF ENEMY PROPERTIES

Recently, the government has reconstituted a high-level committee for the disposal of enemy properties.

Enemy Property

- These are the properties that have been left behind by those who migrated and took up citizenship of **Pakistan and China**.
- Under the Defence of India Rules framed under **The Defence of India Act, 1962**
 - The Government of India took over the properties and companies of those who took Pakistani and Chinese nationality.
- Total Enemy properties marked by Indian Government:
 - A total of 12,485 enemy properties were left behind by those who took up Pakistani citizenship.
 - 126 enemy properties were left behind by those who took up Chinese citizenship.

How did India deal with Enemy Property?

- **The Enemy Property Act was enacted in 1968.**
- Aim: To provide for the continuous vesting of enemy property in the Custodian of Enemy Property for India.
- **The Enemy Property (Amendment and Validation)**

Act, 2017, provided that enemy property shall continue to vest in the Custodian

- If the enemy or enemy subject or enemy firm ceases to be an enemy due to death
 - **The amendments denied legal heirs any right over enemy property**
- The main aim was to negate the effect of a court judgment in this regard.
 - **States with the highest enemy properties**
 - The highest number of enemy properties were found in **Uttar Pradesh: 6,255**
 - The second highest properties are found in **West Bengal: 4,088**
 - The third highest state is **Delhi: 658**
 - **The Tashkent Declaration of January 10, 1966, included a clause that says that**
 - India and Pakistan would discuss the return of the property and assets taken over by either side in connection with the conflict.
 - The Government of Pakistan disposed of all enemy properties in their country in the year 1971.

UNION JAL SHAKTI MINISTER LAUNCHES RIVER CITIES ALLIANCE

Recently, Union Minister for Jal Shakti has launched the River Cities Alliance.

River Cities Alliance

- **Aim:**
 - To provide the member cities with a platform to discuss and

exchange information on aspects that are vital for sustainable management of urban rivers.

- To work towards adopting and localizing national policies and instruments with key river-

related directions, prepare their Urban River Management Plans.

- **Governing Body:**
 - Ministry of Jal Shakti and Ministry of Housing and Urban Affairs
- **Theme of Alliance:**
 - The Alliance will focus on three broad themes are **Networking, Capacity Building, and Technical Support.**
- **Cities that re part of Alliance:** Kanpur, Prayagraj, Dehradun, Haridwar, Rishikesh, Srinagar, Begusarai, Bhagalpur, Munger, Patna, Berhampore, Hooghly-Chinsurah, Howrah, Jangipur, Maheshtala,

Rajmahal, Sahibganj, Ayodhya, Bijnor, Farrukhabad, Mathura-Vrindavan, Mirzapur, Varanasi, Aurangabad, Chennai, Bhubaneswar, Hyderabad, Pune, Udaipur, and Vijayawada.

- **Significance of the Alliance**
 - It will make sure that cities should be responsible for rejuvenating their rivers.
 - It will look after the **National Mission for Clean Ganga (NMCG)** and **National Institute for Urban Affairs (NIUA).**
 - It will enable cities to learn from each other's successes and failures as well as connect people with the rivers.

FSSAI RELEASES DRAFT REGULATIONS FOR GM FOODS

Recently, Food Safety and Standards Authority of India (FSSAI) has released a draft regulation that **bans the selling of any food products derived from genetically modified** organisms.

Highlights of Draft regulations:

- **Banned in infant food**
 - GM shall not be used as an ingredient in infant food products.
- **Labeling norms**
 - Proposes labeling norms for food products that contain one percent or more than one percent of GMO content.
 - Specifies norms that labs will need to adhere for testing GM foods.
- **Ambit of regulations:** Food products that may have been made using food ingredients or processing aid derived from GMOs.

Food Safety and Standards Authority of India (FSSAI)

- **Founded:** August 2011
- The FSSAI has been established under the **Food Safety and Standards Act, 2006.**
- FSSAI is **autonomous** statutory body that is a consolidating **statute related to food safety and regulation in India.**
- **Headquarters:** New Delhi
- **Aim:**
 - To frame science-based standards for articles of food.
 - To regulate their manufacture, storage, distribution, sale, and import.
 - To ensure the availability of safe and wholesome food for human consumption

- **Responsibility:**

- FSSAI is responsible for protecting and promoting public health through the regulation and supervision of food safety.

Research and Quality Assurance:

FSSAI Research and Development division is responsible for research with the following objectives:

- Generate new knowledge that would help in continuously **updating and upgrading food safety standards** that are compatible with international organizations.
- Carry out evidence-based studies for improving or **building Rules and regulations.**

Genetically modified (GM) foods:

- It is also known as **genetically engineered foods or bioengineered foods.**
- These foods are produced from organisms that have had changes introduced into their DNA using the methods of genetic engineering.

- It allows for the introduction of new traits as well as greater control over traits when compared to previous methods, such as **selective breeding and mutation breeding.**

- **Harmful effects of GM Foods:**

- **Toxicity**

- Each genetic insertion creates the added possibility that formerly nontoxic elements in the food could become toxic.

- **Allergic Reactions**

- The genetic engineering of food creates two separate and serious health risks involving allergenicity.

- **Antibiotic Resistance**

- They make disease-causing bacteria resistant to current antibiotics, resulting in a significant increase in the spread of infections and diseases in the human population.

- **Loss of Nutrition**

- The genetic engineering of foods could result in “undesirable alteration in the level of nutrients” of such foods.



POWER MINISTRY PROPOSES AMENDMENTS IN EC ACT TO BOOST RENEWABLE ENERGY CONSUMPTION

The Ministry of Power has proposed amendments to **Energy Conservation Act, 2001**.

Objectives:

- To **enhance demand for renewable energy** at the end-use sectors such as **industry, buildings, transport etc.**
- To **incentivise efforts** on using clean energy sources by means of **carbon saving certificate**.
- The amendments are aimed at promoting consumption of renewable energy.
- The focus is to empower institutions to contribute for Paris commitments and fully implement Nationally Determined Contributions (NDCs) in a timely manner.

Amendments

- Defining **minimum share of renewable energy** in the **overall consumption** by the industrial units or any establishment.
- Expanding the scope of act to include larger residential

buildings, with an aim to promote sustainable Habitat.

Significance:

- It would **facilitate development of carbon market** in India and prescribe minimum consumption of renewable energy either as direct consumption or indirect use through grid.
 - This will help in reduction of fossil fuel-based energy consumption and carbon emission to the atmosphere.
- It will boost the **adoption of clean technologies** in various sectors of economy.
- It will promote the use of **green Hydrogen** as an alternate to the existing fossil fuels used by the industries.
- The additional incentives in the form of **carbon credits** against deployment of clean technologies will result in private sector involvement in climate actions.

India's potential:

- India is committed to an ambitious **Nationally Determined Contributions (NDCs)** of reducing emission intensity by **33-35% in 2030** against the **levels of 2005**.
- India is committed to **achieve more than 40 percent** cumulative electric power installed capacity from **non-fossil-fuel energy resources** by **2030**.
- By adopting energy efficiency measures, India holds a potential to **reduce about 550 Mt CO₂** by **2030**.

Energy Conservation Act, 2001

Objectives:

- To give **policy on which it works and suggestions** to national power conservation activities.
- Suggest the stakeholders how to make **policies and programs** on efficient use of power.
- Setting up a way and procedures to check the measurements and monitor **Bureau of Energy Efficiency (BEE)** improvements.
- Influence multilateral, respective, and private division backing to execute the Energy Conservation Act.
- Show **BEE** conveyance frameworks through public and private organizations.
- To advertise the phenomenon of energy efficiency and conservation in the country.

Salient features of Energy Conservation Act, 2001

This act gives the power to the central government and in some cases, the state also gets the power to:

- Fix the energy usage standards for specific appliances and equipment.
- Give direction that there should be a mandatory display of labels specific equipment and appliances.
- Stop the building, import, and sale of the items which are not to the standards.
- Inform energy concentrated businesses, different foundations, and business structures as assigned customers
- Set up and recommend **energy utilization standards** and **guidelines** for assigned buyers
- Prescribe or make changes in Energy Conservation Building Codes (ECBC) to local conditions for energy conservation and efficient use of energy in a new commercial building with a contract load of 500 kW.
- Make and provide **Central and State Energy Conservation Fund**.

Key functions:

- Assists in developing policies with the objective of reducing the energy intensity of the Indian economy.
- Coordinates with consumers and other organization to identify and utilize the existing resources in performing the functions assigned to it under the EC Act.

- To show the delivery mechanisms of energy efficiency, by a public and private partnership.
- To set up a framework and procedures to monitor, verify and measure the efficient use of electricity in individual sectors as well as at the national stage.

Bureau of Energy Efficiency

- BEE is a **statutory body** under the **Ministry of Power**.
- It was set up on 1st March 2002 **under the provisions of the Energy Conservation Act, 2001**.
- It aims to **decrease the usage of power and energy intensity** in the economy by creating approaches and methodologies with a push on self-guideline and market standards.
- This will be accomplished with **dynamic cooperation** bringing about a quickened and continued reception of vitality effectiveness in all segments of the economy.

- The bureau would be liable for initiating the improvement of **vitality proficiency** of the economy through different **administrative and limited time instruments**.

Objectives:

- To suppose leadership and give policy system and guide to national energy efficiency and conservation programs and efforts
- To direct the stakeholders about the policies and programs on using energy efficiently
- To set up a framework and procedures to monitor, verify and measure the efficient use of electricity in individual sectors as well as at the national stage
- To show the delivery mechanisms of energy efficiency, by a public and private partnership
- To manage, implement, and plan energy conservation policies as given in the Energy Conservation Act.

MDL DELIVERS FIRST SHIP OF PROJECT 15B CLASS DESTROYER TO INDIAN NAVY

Recently, MAZAGON Dock Shipbuilders Limited (MDL) has delivered the first ship of the Project 15B Class Destroyer Visakhapatnam to the Indian Navy.

- The Project 15B ships are a follow-on of the **Kolkata-class destroyers (Project 15A)**.
- They are also known as the **Visakhapatnam-class destroyers**.

- The ships are designed by the **'Directorate of Naval Design'**.
- Project 15B features overall indigenous content of nearly **75%**.
- It is built with **DMR-249A grade steel** developed by the Defence Metallurgical Research Laboratory (DMRL) under the Defence Research and Development Organisation (DRDO).

- Under this project, the Indian Navy will receive a total of four of the Visakhapatnam class of destroyers, the deal for which was signed in January 2011.
- The 4 warships have been named after major Indian cities, namely **Visakhapatnam, Imphal, Surat and Mormugao.**
- With a full load displacement of 7,400t, each 15B ship features

advanced technology and is designed to cruise at a maximum speed of 30k.

- They are equipped with indigenous weapons, including **BEL's medium-range surface-to-air missiles, BrahMos surface-to-surface missiles**, and indigenous torpedo tube launchers and anti-submarine indigenous rocket launchers.

TUSHIL: P1135.6 FRIGATE LAUNCHED IN MOSCOW; INDIAN NAVY TO COMMISSION THEM SOON

The 7th Indian Navy Frigate of P1135.6 class, known as Tushil, was recently launched at Yantar Shipyard, Kaliningrad, Russia.

Highlights:

- The ship was formally named as **'Tushil'**, meaning **Protector Shield.**
- The **Talwar-class frigates or Project 11356** are a class of **stealth guided missile frigates designed** and built by Russia for the Indian Navy.
- Based on an **Inter-Governmental Agreement (IGA)** between India and Russia, the two ships of Project 1135.6 will be manufactured in Russia and two in India at M/s Goa Shipyard Limited (GSL).

Features:

- The construction of these ships is based on Indian **Navy's requirements** to meet the spectrum of naval warfare in all three dimensions of Air, Surface, and Sub-surface.
- Indian, Russian Weapons and Sensors are equipped to operate in **Littoral and Blue waters**, both as a single unit and as consort in a naval task force.
- They feature **"stealth technology"** in terms of low radar and under water noise signatures.
- These ships are equipped with Indian supplied equipment like
 - **Surface to Surface Missiles,** Sonar system, Surface Surveillance Radar.
 - **Communication Suite** along with Russian Surface to Air Missiles and gun mounts.

GOVERNMENT OF INDIA ISSUED DRAFT MEDIATION BILL FOR PUBLIC CONSULTATION.

Draft Mediation Bill

Objective:

- To promote, encourage, and facilitate **mediation**,
- To **resolve disputes, commercial** and otherwise.
- To bring **standalone law on Mediation** on domestic and international mediation issues, as India is a **signatory to the Singapore Convention on Mediation**.
- To **include the international practice** of using the terms 'conciliation' and 'mediation' interchangeably.

Features:

- The Bill proposes **pre-litigation mediation**.
 - It also safeguards the interest of the litigants to approach the competent adjudicatory forums/courts for urgent relief.
- Mediation Settlement Agreement could be **registered with State/District/Taluk Legal Authorities within 90 days** to ensure maintenance of authenticated records of the settlement so arrived.
- It provides for the **establishment of the Mediation Council of India**.
- It also provides for **community mediation**.
- The successful outcome of mediation in the form of a **Mediation Settlement**

Agreement (MSA) has been made enforceable by law.

- The mediation process protects the **confidentiality of the mediation** process and provides for immunity in certain cases against its disclosure.

Alternative Dispute Resolution (ADR)?

- ADR involves **the settling of legal disputers without having recourse to the courts**, to traditional adversarial litigation.
- It can take a number of forms-
 - **Arbitration**
 - **Mediation**

Arbitration:

- It is a way to **resolve disputes outside the judiciary courts**.
- **Types of Arbitration:**
 - Institutional Arbitration
 - Ad-hoc Arbitration
 - Statutory Arbitration
 - Contractual Arbitration

Conciliation:

- It is an **alternative dispute resolution method** in which an expert is appointed to resolve a dispute by convincing the parties to agree upon an agreement.
- It is regulated by **Arbitration and Conciliation Act, 1996**.

Mediation:

- Mediation refers to a process of settling disputes by **independent and impartial third party** who **assists the parties to reach a common outcome**.
- It is regulated by **Code of Civil Procedure Act, 1908**.

HARYANA GOVT'S 75% JOB RESERVATION TO COME INTO FORCE FROM 15 JAN

Recently, Haryana government issued a notification saying that **Haryana State Employment of Local Candidates Act, 2020** will come into effect from January 15, 2022.

Key features of the Act:

- Provides **75 % reservation for local youth** in private sector jobs.
- Covers private companies, societies, trusts and partnership firms and any person who employs 10 or more persons for manufacturing, carrying on business or rendering any service in Haryana.
- Reduced the upper limit of gross monthly salary to **Rs 30,000 a month**.
 - It is **mandatory** for employers to register all such employees, who draw gross monthly salary of not more than Rs 30,000 per month”.

Arguments in favour of Quotas:

- The government of Madhya Pradesh is mulling a law to ensure that **70% jobs in the private sector** go to local youths.
- In 2018, Gujarat government stated, it would bring a law to make it mandatory for manufacturing and service sector entrepreneurs to **hire 80% of their workforce** from the state.

Reasons behind the demand for reservation:

- **The agrarian sector** is under tremendous stress across the country, and young people are

desperate to move out of the sector. Thus, there is a serious dearth of jobs in private and government sector.

- **Discrimination** is one of the reasons for under-representation of Dalits and Muslims in the corporate sector. Thus, providing local jobs to these population might overcome their under-representation.
- **Weakness in the employment situation:** the unemployment rate had shot up to more than 30 percent in April, with 122 million people losing their jobs.
- The hardest hit were migrant workers in cities, who are employed in construction, restaurants, malls, courier services etc.
- There is **inherent xenophobia**, which is a fear or hatred of foreign people. This is not unique to India or Indian States, but is universal.
 - For example, in the Brexit vote, Britons thought that foreigners were taking away local jobs, and hence voted to secede from the European Union.

Arguments against Quotas:

- Allowing people to buy seats via **capitation fee** is a kind of an anti-reservation move, one that grants privileges to those who have money.

- Allowing capitation fee to enrich private institutes seldom **causes outrage**.
- India must ensure all its citizens opportunity in all spaces; giving preference and quotas for socially and educationally deprived sections in the private space.
- With the number of jobs generated in the state sector shrinking

steadily, for the promise of quotas in the Constitution may be inevitable to extend it to the private sector.

- **less than** one percent (only .69 per cent) of jobs in the country for educated citizens are covered by reservations.

GUJARAT ONCE AGAIN TOPS LOGISTICS EFFICIENCY INDEX OF STATES

The Logistics Ease Across Different States 2021 Index was recently published by **Ministry of Commerce & Industry**. This is the **third edition of Index**.

Logistic Ease Across Different States (LEADS) index:

- **Launched:** 2018
- **Developed by:** the Commerce and Industry Ministry.
- **Aim:** To promote **goods trade**.
- **Objective:** To encourage states for providing policy in order to **improve their logistics-related infrastructure**.
- **LEADS is based on eight parameters:**

- Infrastructure,
- Services,
- Timeliness,
- Track and trace,
- Competitiveness of pricing,
- Safety of cargo,
- Operating environment and
- Regulatory process.

Highlights of the index

- **Gujarat, Haryana and Punjab** were emerged as best performing states with respect to mobility of goods and efficiency of logistics chain.

CCPA RECOMMENDS WINTER SESSION OF PARLIAMENT FROM NOV 29 TO DEC 23

The Cabinet Committee on Parliament Affairs (CCPA) recommended that the Winter Session of Parliament be held from November 29 to December 23.

Sessions Of Parliament:

- A session of Parliament is **the period spanning between the first sitting of a House and its**

prorogation (or dissolution in the case of the Lok Sabha).

- The Indian Parliament consists of two houses called **the Lok Sabha and the Rajya Sabha**.
- The time between the Prorogation and reassembly is called **“Recess”**.

- The summoning of Parliament is specified in **Article 85 of the Constitution**.
- It is based on a provision of the Government of India Act, 1935.
- The **maximum time gap between two sessions of the parliament is 6 months**.
 - This means that the parliament must meet **twice a year**.
- India **does not have a fixed parliamentary calendar**. But by **convention**, Parliament meets for three sessions in a year.
- The decision to convene the parliament is taken by the **Cabinet Committee on Parliamentary Affairs**.
 - The decision of the Committee is then **formalised by the President and MPs (members of parliaments) are summoned in the name of the President**.
There are **three sessions** in a year:
 1. The Budget Session (February to May);
 2. The Monsoon Session (July to September);
 3. The Winter Session (November to December).

The Budget Session:

- It is considered to be a highly **crucial** session of the Parliament.

- It is held from **February to May** every year.
 - It is the **longest session**.
- The session starts with the **President's Address** to both Houses.
- The budget session is generally **split into two periods** with a gap of one month between them.
- During this period:
 - **Budget is presented** on the last working day of the month of February by **finance minister**.
 - Budget comes before Parliament for its deliberation, voting and approval.
 - The departmentally related standing committees consider the **Demands for Grants of ministries/departments** and report on the same to the Houses of Parliament.

Monsoon Session:

- It is held from **July to September** every year.
- In this session, **matters of public interest** are discussed.

Winter Session:

- It is the **shortest session** of all.
- It takes place in **mid-November to mid-December** every year.

CENTRE AMENDS LEGAL METROLOGY (PACKAGED COMMODITIES) RULES 2011

The Union Ministry of Consumer Affairs has amended the Legal Metrology (Packaged Commodities) Rules, 2011.

Key features of the rules

- **Declaration of maximum retail price (MRP)** on pre packed

commodities in Indian currency inclusive of all taxes and date of manufacture are mandatory.

- Provisions of declarations of MRP has been **simplified**.
 - Earlier such declarations could be denoted as 'N' or 'U' only.
 - Now, the quantities can be expressed in terms of the number/unit/piece which represents the quantity in the package.
- New amendment will be applicable from **April 2022**.

Benefits:

- To safeguard interest of consumers.
- Easier comparison of the prices of the commodities at the time of purchase.
- Reduces the compliance burden for manufacturer.

Legal Metrology (Packaged Commodities) Rules, 2011:

- Legal Metrology is the application of **legal requirements** to measurements and measuring instruments.
- **Objective-** To ensure public guarantee from the point of view of security and accuracy of the weighments and measurements.
- It is framed to regulate the **pre-packaged commodities**.
- It is prescribed under the **Legal Metrology Act, 2009**

Function:

- Contribution to the economy of the country by increasing the revenue in various sectors.
- Reducing the revenue losses in the coal, mines, industries, petroleum, railways.
- Reduction of the loss and wastage in the infrastructure sector.

GENERAL CONSENT FOR THE CBI: THE LAW, AND POLITICAL REASONS FOR ITS DENIAL

The Supreme Court has weighed in on the phenomenon of state governments withdrawing their consent for Central Bureau of Investigation (CBI) to investigate.

General Consent?

- **A consent is given by states to help the CBI in seamless investigation** of cases of corruption against central government employees in their states.
- If state government do not give the general consent, **the CBI would have to apply to the state government** in every case, and before taking even small actions.

Genesis:

- The **CBI** is governed by the **Delhi Special Police Establishment Act (DPSEA)**.
 - This act makes the CBI a **special wing of Delhi Police** and thus its **original jurisdiction is limited to Delhi**.
 - For other matters, the CBI **needs consent of the state government** in whose territorial jurisdiction the CBI has to conduct an investigation.
- Section 6 of the DPSE Act authorises the **central government to direct**

CBI to probe a case within the jurisdiction of any state on the recommendation of state government.

- The **Supreme Court and High Courts can order CBI to investigate** such a crime anywhere in the country without the consent of the state.

What happens when general consent is withdrawn by states?

- When a general consent is withdrawn, **CBI needs to seek case-wise consent for investigation from the concerned state government.**
- The CBI will **not be able to register any fresh case** without the consent of the state government.

- If specific consent is not granted, **the CBI officials will not have the power of police personnel** when they enter that state.

Role of CBI after withdrawal:

- CBI can use **High Court's order** if it is struck down by the Supreme Court.
- It has the option to **get a warrant from a local court** in the state and conduct the search.
- **Section 166 of the Criminal Procedure Code (CrPC)** can be used.
 - It allows a police officer of one jurisdiction to ask an officer of another to carry out a search on their behalf.
- **Consent does not apply** in cases where someone has been **caught red-handed taking a bribe.**

CABINET GIVES NOD TO RESTORE MPLADS

The Union Cabinet has approved the restoration and continuation of Member of Parliament Local Area Development Scheme (MPLADS) up to Financial Year 2025-26

Member of Parliament Local Area Development Scheme (MPLADS):

- It is a **Central Sector Scheme** fully funded by Government of India.
- **Launched-** 1993-94
- **Objective-** to enable MPs to recommend development works.
- **Motto-** One MP-One Idea
- The scheme was suspended for **two financial years** (2020-21 and 2021-22).

Features:

- Annual MPLADS fund entitlement/MP constituency: **Rs. ₹2 crore** (instead of earlier approved ₹5 crore annually).
- MPs are to recommend every year, **works costing at least 15 % of the MPLADS entitlement for the year** for areas inhabited by SC population and 7.5 % for areas inhabited by ST population.
- A ceiling of **Rs. 75 lakhs** for building assets by trusts and societies in order to encourage trusts for the betterment of tribal people.
- **MPLAD can be converged in individual/stand-alone projects** of other Central and State Government schemes.

Power and responsibility of district authority:

- They can **examine** eligibility of works, sanction funds, select implementing agencies, prioritise works, supervise overall execution etc.
- They are **mandated to inspect at least 10% of the projects** under implementation in a district.

Funds:

- Funds are released in the form of **grants in-aid directly to the district authorities.**
- They are **non-lapsable.**

- Funds can be **merged with other schemes** such as MGNREGA and Khelo India

Implementation Strategy and Targets:

- The process with recommending works to **the Nodal District Authority.**

Impact:

- MPLADS will restart the **community developmental projects.**
- It will restart **fulfilling the aspirations and developmental requirements** of the local community and creation of durable assets.
- It will also help in **reviving the local economy.**

JAIRAM RAMESH MOVES PRIVILEGE MOTION AGAINST CULTURE MINISTER KISHAN REDDY

Congress chief whip moved a privilege motion against the Union Minister of Culture for wilfully disregarding the provisions of law passed by Parliament.

Privilege Motion:

- All **Members of Parliament (MPs)** enjoy rights and immunities, **individually and collectively**, so that they can discharge their duties and functions effectively.
- Any instance when these rights and immunities are **disregarded** by any member of Lok Sabha or Rajya Sabha is an offence, called **'breach of privilege'**, which is **punishable under the Laws of Parliament.**

Who can move the motion?

- **Any member** from **either house** can move a notice in the form of a motion against the member who he/she thinks is guilty of the breach of privilege.
- **Both** Houses of the Parliament reserve the right to **punish any action of contempt** (not necessarily breach of privilege) which is against its authority and dignity, as per the laws.

What are the rules governing Privilege Motion?

- The rules governing the privilege are mentioned in the **Rule No 222** in Chapter 20 of the **Lok Sabha Rule Book** and **Rule 187** in Chapter 16 of the **Rajya Sabha rulebook.**

- The rules explain that any member of the House may, with the consent of the Speaker or the Chairperson, raise a question involving an incident that he or she considers a breach of privilege either of a member or of the House or of a committee.
- The notice has to be about a recent incident and should need the intervention of the House.
 - These notices have to be submitted before 10 am to the Speaker or the Chairperson of the House.

What is the role of the Lok Sabha Speaker and Rajya Sabha Chairperson?

- The speaker of Lok Sabha and the Chairperson of Rajya Sabha are the **first level of scrutiny** of a privilege motion in the two Houses of Parliament.
- They can **either take a decision** on the privilege motion or can also **refer it to the privileges committee** of Parliament.
- Once the Speaker or the House Chairperson gives consent under Rule 222, the concerned member is allowed to explain himself or herself.

What is the Privileges Committee?

- The chairperson of the house nominates a committee of privileges consisting of **15 members** of parliament as per respective party strengths, **in Lok Sabha** and **10 members in the Rajya Sabha**.

- The **deputy chairperson** heads the committee of privileges.
- The report prepared by the committee is submitted to the House for its consideration.
- The chairperson may also allow a half-hour debate on the report by the committee before passing orders or directing that the report be tabled before the House and thereafter a resolution is passed.

Parliamentary Privileges:

Constitutional Provisions:

Some of the constitutional provisions of privileges given to a Member of Parliament are:

- **Freedom of speech in Parliament**
 - The immunity granted to members under **article 105(2)**, covers anything said in Parliament even though it does not strictly pertain to the business before the House
- **Immunity** to a member **from any proceedings in any court** in respect of **anything said or any vote given** by him in Parliament or any committee.
- Immunity to a person from proceedings in any court in respect of the publication of any report, paper, votes or proceedings under the authority of either house of the government.
- No officer or Member of Parliament empowered to regulate procedure or the conduct of business or to maintain order in Parliament can be subject to a

court's jurisdiction in respect of exercise by him of those powers.

- No person can be liable to any civil or criminal proceedings in any court for publication in a newspaper of a substantially true report of any proceedings of either House of Parliament unless the publication is proved to have been made with malice.

Statutory provisions:

- Apart from the privileges as specified in the Constitution, **the Code of Civil Procedure**, provides for **freedom from arrest and detention** of members **under civil process** during the **continuance of the meeting of the House** or of a committee and **forty days before its commencement and forty days after its conclusion.**

THE CABINET COMMITTEE ON ECONOMIC AFFAIRS HAS APPROVED RESERVATION NORMS FOR MANDATORY USE OF JUTE IN PACKAGING FOR THE JUTE YEAR 2021 -22.

Highlights:

- The Mandatory packaging norms approved for Jute Year 2021-22 provide for 100% reservation of the food grains and 20% of sugar to be compulsorily packed in jute bags.

Significance:

- The reservation norms would **protect the interest of domestic production** of raw jute and jute packaging material in India, thereby, making India self-reliant in consonance with Atmanirbhar Bharat.
- By bringing into effect the provision of Jute Packaging Materials Act, the Government will provide relief to thousands of workers employed in jute mills and ancillary units as well as support the livelihood of jute-based farm families.
- It will help **protect environment** because jute is natural, bio-degradable,

renewable and reusable fibre and hence fulfils all sustainability parameters.

Government Initiatives to promote Jute:

Jute Packaging Materials Act (JPM), 1987:

- Under the act, Government specifies the commodities and the extent to which they are mandatorily required to be packed in Jute Packaging Materials.
- On an average, the annual Government support to jute industry on this account amounts to Rs.5500 crores.

Incentive Scheme for Acquisition of Plants and Machinery (ISAPM):

Objective:

- To **facilitate modernization** in existing and new jute mills and up-gradation of technology in existing jute mills.
- To provide assistance to a large number of entrepreneurs to manufacture **value added**

biodegradable Jute Diversified Products (JDP) as well as for modernization of technology.

Jute - Improved Cultivation and Retting Exercises (ICARE)

Objective:

- To support the **small and marginal jute growers** with adequate **pre and post harvesting operations** so that they can grow good quality jute & receive higher price for their produce.
- Make the growers **aware** about the **latest technologies** in the country.
- Under the scheme, the government is disseminating **improved agronomic practices** such as
 - Line sowing using seed drills
 - Nail weeders
 - Distribution of certified seeds
 - Providing microbial assisted retting

Jute Smart:

- It is an **e-Governance Initiative** for **procurement of B-Twill Sacking**.
- B-Twill Supply Management & Requisition Tool, in short, JUTE-SMART is a **web-based application**.
- **B. Twill Jute Sack** commonly known as **jute sacking bags**, are mainly used to pack rice, wheat, sugar, coffee bean, cocoa bean, peeper, shelled nuts and other grain products.

Objective:

- To provide an **integrated platform** for all the **stakeholders** to **allow easy**

access to information, more transparency and ease of doing business for the jute sector.

- To **facilitate end to end transactions** relating to procurement of B-Twill sacking.

Scholarship Scheme for Girl Children of Workers of Jute Mills/MSME JDP Units

Objective:

- To provide **financial incentive to the girl children** of the workers of the Jute Mills/MSMEs, upon passing out Secondary and Higher Secondary examinations to encourage them to acquire the minimum required education for making them employable.

Jute Corporation of India Limited (JCI)

The Jute Corporation of India Limited (JCI) was formed in 1971 as a price support agency.

Objective:

- **Procurement of raw jute** without any quantitative limit from the growers **at the minimum Support price (MSP)** based on the recommendations made by Commission for Agricultural Cost & Prices (CACP).

Import Measures:

The government has imposed **Anti-Dumping Duty** on imports of jute from Bangladesh and Nepal to protect the Indian farmers and mill workers.

Jute:

- Jute is a **long, soft, shiny bast fiber** that can be spun into coarse, strong threads.

- It is one of the most affordable natural fibers composed primarily of the plant materials **cellulose and lignin**.
- **India** is the world's largest producer of jute.

Cultivation condition:

- Requires **Plain alluvial soil and standing water**.
- **Soft water** is necessary for jute production.
- Tropical lowland areas with **humidity of 60% to 90%**.
- It is a **rain-fed crop** with little need for fertilizer or pesticides

DGCA LAUNCHES eGCA FOR AUTOMATION OF PROCESSES, FUNCTIONS

Union Minister of Civil Aviation recently launched eGCA (e-Governance in Directorate General of Civil Aviation).

Highlights:

- **Aim: Automation of the processes and functions** of Directorate General of Civil Aviation (DGCA).
- **Objectives:**
 - To provide a **strong base for IT infrastructure** and service delivery framework.
 - The e-platform provides an **end-to-end solution** including various software applications, connectivity with all the regional offices.
 - It is a 'portal' for **dissemination of information** and for providing online and speedy service delivery in a secure environment.
 - The project would **enhance the efficiency** of the various services provided by the DGCA.

Directorate General of Civil Aviation:

- It is the regulatory body in the field of Civil Aviation.

- It deals with **safety issues**.
- It was formed under the **Aircraft (Amendment) Bill, 2020**
- **Headquarters**- New Delhi
- **Aim:** to promote **safe and efficient Air Transportation** through regulation and proactive safety oversight system
- **Function:**
 - It is responsible for **regulation of air transport services**.
 - It also **co-ordinates** all regulatory functions with **International Civil Aviation Organisation**.
 - It **investigates aviation accidents and incidents**.
 - **Licensing** of pilots, aircraft maintenance engineers and flight engineers, and conducting examinations and checks for that purpose.
 - **Registration** of civil aircraft.
 - **Approving training programs**.
 - **Certification** of airports.
 - Keeping a check on **aircraft noise and engine emissions**.

CUSTODIAL AND LOCKUP DEATHS IN INDIA

According to National Human Rights Commission, a total of 1,067 people died in custody in the first five months of 2021.

Custodial Deaths:

- Custodial deaths are events of the demise of persons who are detained by police during pretrial or after conviction. Custodial deaths can be broadly classified into three types –
 - Death in police custody
 - Death in judicial custody

- Death in custody of army or paramilitary force.
- Besides death, **rape and torture** are two other forms of custodial violence.
- It can also be due to **natural causes** like illness or may also happen due to **suicide, infighting among prisoners** but in many instances, it is police brutality and torture that is the reason behind the death.

Difference between police custody and Judicial custody

Police Custody	Judicial Custody
The accused stays in the lock-up of a police station or at least in the physical custody of the investigating agency probing the concerned matter.	The accused is lodged in jail and is under the custody of a magistrate.
Can be extended for a maximum period of 15 days .	Judicial custody can be extended to a maximum period of 90 days for offences punishable with more than 10 years of imprisonment, and 60 days for all other offences.
Soon after the arrest, an accused can be kept in police custody for up to 24 hours . Beyond that, the magistrate decides whether he/she should stay in police custody or be remanded to judicial custody .	

Causes of Custodial Deaths:

Incompetence of State and Judicial Facilities:

- They **fail** to provide **proper healthcare and security** to the prisoners.

Improper Security:

- A lot of attacks happen inside the prison **between inmates** which often prove to be fatal.

Police Brutality:

- In order to achieve quick or forced confession, the police **resorts to torture**. This leads to **fatal injuries** or suicide in some cases.

Psychological Stress:

- There are **no adequate provisions** for inmates and under-trials seeking **psychiatric help** and this affects their mental health greatly.
- A person under custody loses most of his rights including the right of free movement and the right to choose their preferred medical care. This adds to their mental agony.

Overcrowding:

- Large number of prisoners confined in a single jail due to lack of infrastructure, results in **depletion of resources like food and water**, eventually causing malnutrition and natural death.

Safeguards against Custodial Deaths:

Constitutional Provisions:

- **Article 20(1)** provides that, no person shall be convicted of any offence except for violation of law in force.
- **Article 20(2)** states that no person shall be prosecuted and punished for the same offence more than once.
- **Article 21** (Right to Life and Personal Liberty) does not expressly say anything against custodial torture but its ambit is quite extensive. This right states that no person shall be deprived of life or personal liberty except according to the procedure established by law.
- **Article 22(2)** provides the arrested person with the opportunity of a quick trial. Any

arrested person has to be produced before the nearest magistrate within a period of twenty-four hours

Indian Evidence Act:

- **Section 24** makes all confessions made under inducement, threat, or promise as inadmissible. The section gives the accused the right not to make any confession against his will
- **Sections 25 and 26** of the Indian Evidence Act, 1872 provide safeguards to the accused on the same lines.
 - Section 25 states that no confession made to a police officer can be used to prove any offence against him.
 - Section 26 makes all confessions made during custody inadmissible unless made in the immediate presence of a Magistrate.

Criminal Procedure Code (CrPC):

- **Section 49** of the Code of Criminal Procedure, 1973 is also a safeguard against custodial excesses. It states that an arrested person shall not be subjected to more restraint than is necessary to prevent his escape.
- **Section 163** of the Code of Criminal Procedure, 1973 prohibits the investigating officers from making any inducement, threat or promise.
- **Section 164(4)** of the Code of Criminal Procedure, 1973 provides for recording and signature of confessions in proper

manner and endorsement of the confession by a magistrate to the effect that it has been made voluntarily.

Indian Penal Code (IPC):

- **Section 348** of Indian Penal Code, 1860, among others, lays down provisions relating to wrongful confinement and prohibits such confinement for extorting any confession or information for detecting any offence or misconduct.
 - Such wrongful confinement has been made a punishable offence with imprisonment up to three years is also liable for fine.
- **Section 376** have been amended to specifically address rape in custody by insertion of Section 376(2) in the Criminal Law (Amendment) Act, 1983.

International safeguards:

- This right against self-incrimination is in tune with **Article 14(3) (g) of the International Covenant on Civil and Political Rights** which calls on the member states to ensure that the accused is not compelled to testify against himself or to confess guilt.

Judicial Interventions:

- **Joginder Kumar v. State of UP (1994):** Supreme court ordered that no arrest can be made on mere allegation or suspicion.
 - It said that information of arrest and location of detention has to be given to friends or relatives and the entrusted magistrate shall ensure that these directives are being followed.
- In **Nilabati Behera v. State of Orissa**, paved way for structured formulation to grant **compensation** on cases of custodial death.
- In **Shyamsunder Trivedi v. State of MP**, the Supreme Court ordered for insertion of Section 114-B into the Indian Evidence Act 1872, to ensure that if the injury was caused during the custody, the court would presume that the police officer having custody of the person is responsible.
 - Thus, it reverses the burden of proof.
 - This recommendation was made by the Law Commission twice (in its 113th & 152nd report) but is yet to be made a law though the bill was introduced in 2017.

OVER 55% DONATIONS TO REGIONAL PARTIES FROM 'UNKNOWN' SOURCES: ADR REPORT

25 regional parties collected 55.50% of their total income from unknown sources in the 2019-20 fiscal, according to an

Association for Democratic Reforms (ADR) report.

After the introduction of Electoral bond scheme 2018, there has been an increase

in the income of political parties from unknown sources.

Association for Democratic Reforms (ADR);

- The Association for Democratic Reforms (ADR) is an **Indian non-partisan, non-governmental organization** which works in the area of electoral and political reforms.
- It strives to **bring transparency and accountability in Indian politics** and reduce the influence of money and muscle power in elections.

Electoral Bond Scheme:

- It is an instrument of political funding aimed at **increasing transparency in the process.**
- It is a **debt instrument.**

Under the scheme:

- The donor can donate any amount of money, via cheque or digitally, **without revealing** his identity.
- There is **no upper limit** for a company to donate fund via electoral bond.
- The definition of foreign companies has been tweaked under the Foreign Contribution Regulation Act, 2010 (FCRA), to enable them to donate via electoral bonds.

The anonymity provided to the donor has increased the funding available to the political parties from unknown sources.

Suggestions to stop political funding from unknown sources:

- **Full details** of all donors should be **made available** for public

scrutiny **under the Right To Information.**

- Any party which does not submit its IT returns on or before the due date, their income should **not be tax-exempted** and **defaulting parties should be derecognized.**
- The principle of **anonymity** of the bond donor enshrined in the Electoral Bond Scheme, 2018 must be done away with as it **infringes the citizen's fundamental 'Right to Know'** by withholding crucial information regarding electoral funding
- All political parties which receive donations through Electoral Bonds should **declare** the total amount **in their Contributions Reports** the total amount.
- The procedures and reporting **framework** for the above must be **standardized** to ensure that a true picture of the financial position of the political parties is revealed to the general public.
- The ECI/Central Board for Direct Taxes/Comptroller and Auditor General or any **other relevant institution** should be entrusted with the responsibility to **oversee** that there is **no discrepancy** between the value of Electoral Bonds redeemed and the value of donations received through Electoral Bonds.
- All Political parties must provide all information on their finances under the **Right to Information Act.** This will only strengthen

political parties, elections and democracy.

WHAT IS THE PUNJAB LAND PRESERVATION ACT OF 1900, AND HOW WAS IT TWEAKED?

Recently, Environmentalists feel that the provisions of the PLPA (Punjab Land Preservation Act) by the government have exposed thousands of acres landfalling on the hills and foothills of Aravallis.

Punjab Land Preservation Act (PLPA) of 1900

- It was enacted by the then government of Punjab in 1900.
- It provided for the **conservation of subsoil water and/or prevention of erosion** in areas found to be subject to erosion or likely to become liable to erosion.

Objections raised by Opposition:

- The original law provided for the conservation of subsoil water and/or prevention of erosion in areas found to be subject to erosion or likely to become liable to erosion.
- As per **Section 3** of the original act, the government has powers to bring any area 'subject to erosion or likely to become liable to erosion under the

ambit of the PLPA through a notification.

- But, a new section- Section 3A, has been inserted into the Bill to exclude certain areas from the ambit of the Act.

Concerns

- Under its provisions, the **PLPA** won't apply to 'the lands included in the final development plans.
 - Any other town improvement plans or schemes published under the provisions of many laws like the Haryana Municipal Corporation Act, 1994, the Gurugram Metropolitan Development Authority Act, 2017.
- Environmentalists feel that the latest move by the government has exposed thousands of acres landfalling on the hills and foothills of Aravallis.
 - It covers over **26,000 acres** in Gurgaon and Faridabad districts, to mining and real estate development.
- Due to the provisions of the PLPA, the constructions were not allowed on the hills and foothills of the Aravallis.

SC COLLEGIUM RECOMMENDS TRANSFER OF MADRAS HC CHIEF JUSTICE TO MEGHALAYA

The Supreme Court collegium headed by Chief Justice of India had recommended the transfer of Chief Justice of Madras High court.

Power To Transfer High Court Judges: History:

- The power to transfer high court judge was **not present** in the **Government of India Act, 1935** or the **first Draft of the Constitution**.
- It was **proposed by the Constituent Assembly's Drafting Committee** at

the **final revision stage**, and it was embodied as **Article 222** in the Constitution of India.

Under Article 222:

- The **President** may, **after consultation with the Chief Justice of India, transfer** a Judge from one High Court to any other High court.
- It **does not** mention the grounds or the procedure by way of which such power is to be exercised.

Collegium System?

- It is the system of appointment and transfer of judges that has evolved **through judgments of the Supreme Court**, and **not by an Act of Parliament** or by a provision of the Constitution.
- The Supreme Court collegium is **headed by the Chief Justice of India (CJI)** and comprises **four other senior most judges** of the court.
- A High Court collegium is led by its Chief Justice and four other senior most judges of that court.
- **Names recommended** for appointment by a High Court collegium **reaches the government only after approval by the CJI and the Supreme Court collegium.**
- The government's role is limited to getting an inquiry conducted by the Intelligence Bureau (IB) if a lawyer is to be elevated as a judge in a High Court or the Supreme Court.
- It can also raise objections and seek clarifications regarding the collegium's choices, but if the collegium **reiterates** the same

names, **the government is bound**, under Constitution Bench judgments, to appoint them as judges.

How did the collegium system evolve?

- The collegium came into being through interpretations of pertinent constitutional provisions by the Supreme Court in the **Judges Cases.**

First judges case (1981):

- The Supreme court held that the proposal for **appointment** to a High Court can emanate from any of the constitutional functionaries mentioned in **Article 217** and not necessarily from the Chief Justice of the High Court.
- The Constitution Bench also held that the term "**consultation**" used in Articles 124 and 217 **was not concurrence** – meaning that although the President will consult these functionaries, his decision was **not bound** to be in concurrence with all of them.
- The judgment tilted the **balance of power** in appointments of judges of High Courts **in favor of the executive.**

Second judges case (1993):

- **A nine-judge Constitution Bench** overruled the decision in First Judge Case and devised a specific procedure called '**Collegium System**' for the appointment and transfer of judges in the higher judiciary.
- The majority verdict in the Second Judges Case accorded **primacy to the CJI** in matters of appointment and transfers

- It ruled that the term “consultation” would not diminish the primary role of the CJI in judicial appointments.
- The **recommendation should be made by the CJI** in consultation with his **two seniormost colleagues**, and that such recommendation should **normally be given effect** to by the executive.

Third judges case (1998):

- This opinion laid down that the **recommendation** should be made **by the CJI** and his **four seniormost colleagues, instead of two**.
- It also held that Supreme Court judges who hailed from the High Court for which the proposed name came, should also be consulted.
- Even if two judges gave an adverse opinion, the CJI should not send the recommendation to the government.

Criticism:

- The collegium system is **opaque** and **does not provide any basis** for appointment and transfer of judges.

Role of Executive:

- By amending the Constitution, via 99th Amendment Act, **National Judicial Appointments Commission (NJAC)** was formed.
- It included **Chief Justice of India** as the Chairperson, **two other senior judges of the Supreme Court, the Union Minister of Law and Justice** and **two eminent persons**.
- But it was **quashed down by the Supreme Court** as it tilted the balance of power in appointment of judges towards the executive and threatened the independence of the judiciary thereby harming the Basic Structure of the Constitution.

ONLY 1032 DOUBTFUL CASES FROM NRC REFERRED FOR FURTHER ACTION

Over a thousand doubtful cases in the final draft of the National Register of Citizens (NRC), Assam have been referred further for necessary action.

National Register of Citizens:

- The National Register of Citizens (NRC) is an exercise by the Indian government **to recognise and expel illegal immigrants** from Bangladesh and recognize the Indian citizens in Assam.
- It is **pursuant** to the **Citizenship Act, 1955** read with the Foreigners Act, 1946.
- The government implemented the NRC in the north-eastern state of **Assam**, bordering Bangladesh.

- Assam is the **only state** to have an NRC, **first prepared in 1951** and finally updated in 2019.
- **UN World Migration Report 2020** has identified border between Assam and Bangladesh as one of the most **vulnerable migrant corridors** in Asia, given the historical fluidity of its boundaries.
- The exercise is a culmination of **Assam Accord of 1985** signed between the **Centre** and the **All Assam Students' Union (AASU)**.
- The categorization of citizenship status considers every resident of Assam **guilty until proven innocent**.

Genesis:

- **1971:** Bangladesh gained independence from Pakistan. The liberation war led to a massive influx of migrants to India until 1983.
- **1983:** Parliament enacted the **Illegal Migrants (Determination by Tribunal) Act (IMDT Act)** which laid down the procedure to detect illegal immigrants from Bangladesh and expel them from Assam.
 - This Act was applicable to only Assam, while the Foreigners Act, 1946 was applicable to all other states.
- **1985:** Assam Movement against illegal immigration led to the historic Assam Accord of 1985.
- **2005:** IMDT Act made it difficult to deport illegal immigrants. Hence, it was held unconstitutional by the Supreme Court in **Sarbananda Sonowal case** in 2005.
 - In the Sonowal case, the court considered classification based on geographical considerations to be a violation of the right to equality under Article 14.
- **2007:** This was eventually replaced with the **Foreigners (Tribunals of Assam) Order, 2006**, which again was struck down in 2007.

Remedies after exclusion:

- Each rejected person under NRC, can approach the **Foreign Tribunals (FTs)** within **120 days** of receiving the rejection slips.
- The decision of FT can be **further challenged in High Court** and then in the **Supreme Court**.

Foreign Tribunals:

- Foreigners' Tribunals are **quasi-judicial bodies** established as per the **Foreigners' Tribunal Order, 1964 and the Foreigners' Act, 1946**.
- **Powers of Tribunal**
 - The Tribunal shall have the powers of a **civil court** while trying a suit under the Code of Civil Procedure, 1908.
 - The Tribunal can **summon and ask** for the **attendance of any person** and examine him/her on oath.
 - It can ask anyone to produce the **required documents**.
 - It can **commission examining any witness**, as and when required.

Effects of NRC:

- **Article 326** of the Constitution states that **voting rights** are available only to **citizens**.
 - Those excluded from the list shall be categorised as **'D' (doubtful) voters**.
- The evidentiary value of proof of citizenship is tilted highly in **favour of patrilineal documents**, therefore women who trace their identity **matrilineally are invariably excluded**.
- **Women are arbitrarily left out** of the list due to trivial reasons such as typographical errors.
- **Children are left out** of the list even after their parents' inclusion.
- As the **onus of proof is on the citizen**, people are forced to sell their small land and cattle holdings to fund themselves to gather the report and submit to the far-reaching government centers.

Assam Accords of 1985:

- The agreement between the Centre and All Assam Students Union (AASU) is called the Assam Accord.
- Under Assam Accord of 1985, **foreigners** who had **entered Assam before March 25, 1971** were to be **given citizenship**.
- It was signed on the Independence Day in 1985.
- In the 15 clauses of the Assam Accord, **the key focus areas** were:

- Foreigners issue
- Economic development
- Restricting acquisition of immovable property by foreigners
- Prevention encroachment of government lands
- Registration of births and deaths
- **Objective:**
- To ensure protection of political, social, economic and cultural identity of the local people.

GIRIRAJ SINGH LAUNCHES UNIQUE LAND PARCEL IDENTIFICATION NUMBERS, SAYS IT'S AADHAAR OF LANDS

Ministry of Rural Development and Panchayati Raj inaugurated '**Bhumi Samvaad**' – A National Workshop on Digital India Land Record Modernisation Programme (DILRMP) at India Habitat Centre recently.

- The ministry also launched **National Generic Document Registration System (NGDRS)** portal and Dashboard.

Unique Land Parcel Identification Numbers:

- ULPIN is a **14-digit Alpha-Numeric Unique ID** for each land parcel.
- It is like the **Aadhaar Number** of land parcels.
- In this, a unique ID based on Geo-coordinates of the parcels is

generated and assigned to the plots.

- It will share the computerized **digital land record data** among different States/Sectors and provides a uniform system of assigning a unique ID to the land parcel across the country.

Significance

- The system will help in **reducing land disputes** in the country.
- It will **enhance the service deliveries** to the citizens.
- Information from ULPIN will function as inputs to the schemes of the other sectors like Agriculture, Finance Disaster Management etc.

WHAT IS DIGITAL INDIA LAND RECORD MODERNISATION PROGRAMME?

- **Digital India Land Records Modernization Programme (DILRMP)** was

established in 2008 by Government of India.

Objectives:

- To usher in a system of updated land records, automated and automatic mutation.
- Integration between **textual and spatial records**, inter-connectivity between revenue and registration.
- To replace the present deeds registration.

Components of the Scheme:

- Computerization of land record
- Survey/re-survey
- Computerization of Registration.

Benefits to Citizens:

- **Real-time land ownership** records will be available to the citizen.
- **Property owners** will have free access to their records without any compromise regarding confidentiality of the information.
- **Free accessibility** to the records will reduce interface between the citizen and the Government functionaries, thereby reducing rent seeking.
- **Public-private partnership** (PPP) mode of service delivery will reduce citizen interface with Govt.
- **Abolition of stamp papers**, payment of stamp duty and registration fees through banks, etc. will reduce interface with the Registration machinery.

- With use of IT inter linkages; the time for obtaining Rate of Return will be reduced.

National Generic Document Registration System:

- NGDRS is a project initiated by the Government of India.
- It is a common, application developed for **registration departments** across the country.

Objectives:

- To act as **One Nation One Software** for **registration of properties and document** across the country.
- Citizen empowerment by enabling property valuation and online document submission.
- **A single platform** of all the stakeholders in registration process.

Features:

- Facility for online document entry for citizens.
- Role based access to citizens and department users.
- **E KYC - UID** based authentication with the help of biometric at the time of admission.
- Linking with land records system.
- Storage of copy of registered documents using scanning technology.
- Unicode based local language support.

ALL INDIA PRESIDING OFFICERS' CONFERENCE: PM, LOK SABHA SPEAKER EXPRESS CONCERN OVER PARLIAMENT PROCEEDINGS

Prime Minister Shri Narendra Modi will address the inaugural session of 82nd All

India Presiding Officers' Conference on 17 November, 2021.

- 2021 marks as the centennial year for the All India Presiding Officers' Conference.
- AIPOC is the **apex body of the Legislatures in India.**
- **First Conference** was held in **Shimla in 1921.**

- It focuses on the need for **coordination between all three wings of the state**, viz. Legislature, Executive and Judiciary.

TAMIL NADU SPEAKER FAVOURS TIME FRAME TO DECIDE ON BILLS

Recently, Tamil Nadu Assembly Speaker questioned why the President does not provide reasons for withholding assent and returning a Bill passed by the State Assembly.

Veto power of the President

- A **bill** passed by the Parliament can **become an act only if it receives the assent of the President.**
- **Article 111** of the Constitution empowers the president to have the following powers, when a bill is presented in the parliament:
 - He may **give his assent** to the bill,
 - He may **withhold his assent** to the bill,
 - He may **return the bill (if it is not a Money bill)** for reconsideration of the Parliament.
- The object of conferring this power on the President is two-fold:
 - to prevent hasty and ill-considered legislation by the Parliament;
 - to prevent a legislation which may be unconstitutional.

Types of veto

- **Absolute Veto:** It refers to the power of the President to **withhold his assent** to a bill passed by the Parliament. The present can exercise this veto in two cases:

- if it is a private members' bills
- when the new cabinet advises the President not to give his assent to such bills
- **Qualified veto:**
 - which can be overridden by the legislature with a higher majority.
 - There is no qualified veto possessed by the American President not Indian President
- **Suspensive Veto:** The President exercises this veto when he returns a bill for reconsideration of the Parliament.
 - The President does not possess this veto in the case of money bills.
 - It can be over ridden by the legislature with an ordinary majority.
- **Pocket Veto:** The power of the President not to take any action (either positive or negative) on the bill is known as the pocket veto.
 - The President can exercise this veto power as the **Constitution does not prescribe any time-limit** within which he has to take the decision with respect to a bill presented to him for his assent

Presidential Veto over State Legislation

- A bill passed by a state legislature can become an act only if it receives the assent of the governor or the President
- **Article 200** of the Constitution empowers the Governor of a state **to reserve the bill for the consideration of the President**
- When a bill is reserved by the governor for the consideration of

the President, the President has three alternatives (Under **Article 201 of the Constitution**):

- He may give his assent to the bill,
- He may withhold his assent to the bill,
- He may direct the governor to return the bill (if it is not a money bill) for the reconsideration of the state legislature.

ANDHRA PRADESH HIGH COURT STARTS HEARING CHALLENGE TO 'THREE-CAPITALS' LAW

The Andhra Pradesh High Court has started hearing of writ petitions, challenging the A. P. Decentralization, Inclusive Development of All Regions Act 2020 and Andhra Pradesh Capital Region Development (Repeal) Act 2020.

- The petition was filed by the Amaravati Pari Rakshana Samithi against the proposed three capitals.
- As per **Chief Justice** of the Andhra Pradesh High court, no State had come up with a proper definition of Judicial Capital in the past.

What were the Arguments put forward?

- The power to make the capital is of parliament under **Article 3 and 4 of the Constitution.**

Article 3 of the constitution says:

Formation of new States and alteration of areas, boundaries, or names of existing States, Parliament may by law

- Form a new State by separation of territory from any State or by uniting two or more States
- Increase the area of any State

- Diminish the area of any State
- Alter the boundaries of any State
- Alter the name of any State

Article 4 states that:

- Laws made under Articles 2 and 3 to provide for the amendment of the First and the Fourth Schedules and supplemental, incidental, and consequential matters.

Provisions in the 2014 Act regarding the Capital of Andhra Pradesh.

Section 5 (2) of the 2014 Act

- It says after the expiry of 10 years, Hyderabad shall be the capital of the State of Telangana and there shall be a new capital for the State of Andhra Pradesh.

Section 6 of the 2014 Act

- The **Central Government** shall constitute an expert committee to study alternatives regarding the new capital for Andhra Pradesh and make appropriate recommendations.

Section 94 (3) of the Act

- The Central Government shall provide financial support for the creation of new capital

including; **Raj Bhawan, High Court**, Government Secretariat, Legislative Assembly, Legislative Council, etc.

What is Decentralisation Act?

- The **AP Decentralisation and Inclusive Development of All Regions Act, 2020** is meant to have three seats of governance, Legislative, Executive and Judicial Capitals.
- It intends to develop Amaravati, Visakhapatnam, and Kurnool as the legislative, executive, and judicial capitals respectively.

Why three capitals?

- The Andhra Pradesh government wanted to decentralize the administration by having three capitals.
- The government believes that it will lead to development of the **north coastal districts**, the coastal stretch from West Godavari to Nellore and backward Rayalaseema.

The proposed seats of authority:

- The existing **State Legislature Complex** will remain in Guntur district and the region will be called Legislative Capital.
- The **Chief Minister's Office (CMO)** and offices of all HoDs will be shifted from Amaravati to the Executive Capital (Visakhapatnam).
- The principal seat of the **AP High Court** in Guntur is to be moved to Kurnool which will be the Judicial Capital.

Controversy and legal Battle:

- **The Acts were challenged** in the High Court by farmers.
- **The farmers** are opposing the proposed three capitals having given their multi-crop lands for the construction of the greenfield capital city.
- Around 33,000 families of Amravati had given up their land for **capital development**, they have no sustainable means of livelihood.

INDIA STANDS AT 82 IN GLOBAL BRIBERY RISK RANKINGS, DIPS BY FIVE SPOTS

Recently, Bribery Risk Matrix (TRACE Matrix) was released by TRACE.

- Trace is an anti-bribery standard setting organisation.

Report:

- The report measures business bribery risk in 194 countries, territories, and autonomous and semi-autonomous regions

- This score is based on **four factors**:
 - Business interactions with the government
 - Anti-bribery deterrence and enforcement
 - Government and civil service transparency

- Capacity for civil society oversight which includes the role of the media.

Highlights of the report

- India stood at 82nd position with a score of 44 out of 100.
- Norway, Sweden and New Zealand topped the rankings while North Korea, Turkmenistan and Eritrea were ranked the poorest.

Bribery in India:

Causes:

- Slow and complicated bureaucratic process.
- **Unclear** regulatory frameworks.
- **Desire to pay lower taxes** than those demanded by the state.
- **Opaque process** and paperwork on the part of the government.

Impact:

- Loss of credibility
- Sector which is perceived as highly corrupt may lose ground when it comes to fair valuation of its business.

Economic losses

- Inadequacies in institutional efficiency could affect growth indirectly by **lowering the private marginal product** of capital and **investment rate**.
- **Bureaucratic inefficiency** also affects growth directly through misallocation of investments in the economy.
- Corruption results in **lower economic growth** for a given level of income.

Provisions to combat bribery:

Prevention of Money Laundering Act, 2002

- Aims to prevent instances of money laundering and prohibits use of the 'proceeds of crime' in India.

The Companies Act, 2013 (Companies Act)

- It provides for corporate governance and prevention of corruption and fraud in the corporate sector.

The Indian Penal Code, 1860

- It sets out provisions which can be interpreted to cover bribery and fraud matters, including offences relating to criminal breach of trust and cheating.

The Foreign Contribution (Regulation) Act, 2010

- It regulates the acceptance and use of foreign contributions and hospitality by individuals and corporations.

The Lokpal and Lokayuktas Act, 2013

- It provides for an establishment of an ombudsman for the central and state governments (Lokpal and Lokayuktas, respectively).
- These bodies are required to act independently from the government and have been empowered to investigate allegations of corruption against public servants, which include the prime minister and other ministers.

NO CONSENSUS ON LIMITING SPEAKER'S POWERS

At a recent All-India Presiding Officers' Conference (AIPOC), members of AIPOC failed to reach a consensus on whether the Speaker's powers under the anti-defection law should be limited.

Speaker's power

- Conducts the **business in-house** and **decides whether a bill is a money bill or not.**
- Maintain **discipline and decorum** in the house and can punish a member for unruly behaviour by suspending them.
- Permits the **moving of various kinds of motions** and **resolutions** such as a motion of no confidence, the motion of adjournment, the motion of censure, and calling attention notice as per the rules.
- **Decides on the agenda to be taken up for discussion** during the meeting.
- Presides over the **joint sitting of both houses of the Parliament of India.**
- He is **answerable to the House.**

Speaker's power concerning Anti-Defection Law

- This provision mandates the Chairman or the Speaker of the respective legislative house to be the ultimate decision-making authority in case of any disqualification that arises.
- The Chairman or the Speaker of the House takes the **decision to disqualify a member under 10th schedule.**
- If a complaint is received with respect to the defection of the

Chairman or Speaker, a member of the House elected by that House shall take the decision.

- **Kihoto Hollohan case (1992):** The decision of the Speaker with respect to defections is subject to judicial review.

Anti-Defection Law

- The **Tenth Schedule of the constitution**, also known as Anti-defection law, was inserted in the **Constitution in 1985 by 52nd Amendment Act.**
- It lays down the process by which legislators may be **disqualified on grounds of defection** by the Presiding Officer of a legislature based on a petition by any other member of the House.
- A legislator is deemed to have defected if he:
 - Voluntarily gives up the membership of his party
 - Disobeys the directives of the party leadership on a vote
 - Abstaining or voting against the party whip on any issue

Exceptions:

- When a party merge with or into another party, neither the members who decide to merge, nor the ones who stay with the original party will face disqualification.
 - **At least two-thirds of its legislators** in favour of the merger allows the party to merge with another party.
- If a member, after being elected as the presiding officer of the House, voluntarily gives up the membership of his party or re-

joins it after he ceases to hold that office.

ALLAHABAD HIGH COURT ASKS GOVT TO CONSIDER UNIFORM CIVIL CODE ACROSS INDIA

Recently, the Allahabad High Court has asked the Central government to consider setting up a panel for implementing the mandate of Article 44, to protect the interfaith couples.

- Article 44 states that "state shall endeavour to secure for the citizens a Uniform Civil Code (UCC) throughout the territory of India".

Uniform Civil Code (UCC)

- The **Uniform Civil Code (UCC)** calls for the **formulation of one law** applicable to all religious communities in matters such as marriage, divorce, inheritance, adoption.
- The code comes under **Article 44** of the Constitution, which lays down that **the state shall endeavour to secure a Uniform Civil Code for the citizens throughout the territory of India.**
- The **objective of Article 44** of the Directive Principles in the Indian Constitution was **to address the discrimination against vulnerable groups** and harmonise diverse cultural groups across the country.
- **Goa is the only state in India having Uniform Civil Code:**
- This was introduced by **Portuguese in 1870 as Goa family law.**

- After the liberation of Goa this law was retained and became **special marriage act in 1954.**
- This marriage acts provides a civil marriage of two person of different sex irrespective of their religion.

Need of UCC

- **To ensure that each citizen gets equal treatment** before the law with regard to his/her personal laws.
- **To simplify the laws** that are segregated at present on the basis of religious beliefs like the Hindu code bill, Shariat law, and others.
- In India, there are various laws such as the **Hindu Marriage Act, Hindu Succession Act, Indian Christian Marriages Act, Parsi Marriage and Divorce Act.** In addition, there is the **Muslim personal laws**, which are based on their religious texts.
- The code will simplify the complex laws around marriage ceremonies, inheritance, succession, adoptions making them one for all.
- For **the purpose of equality and equal justice**, and **to avoid misuse personal laws**
- It promotes **secularism.**
- It gives more **rights to women.**

Advantages

- The **personal laws lack uniformity.**
- For example, Section 2 (2) of the Hindu Marriage Act (HMA), excludes the applicability of the law to the Scheduled Tribes, sections 5 (5) & 7 state that customary practices will override the provisions of law.
- Over lapping provision of law will get avoided
- There **are multiple laws** on the same subject.
- For example, Sikhs and Arya Samajis are covered by Hindu Marriage Act (HMA), but there are two distinct laws dealing with their marriages.
- All people will get **equal status and there would be no discrimination.**
- Simplify Indian legal system.
- **Burden on judiciary would decrease.**
- Uniform Civil Code will **help to solve the case quickly and speedy justice will be provided.**

Challenges

- UCC can be **weaponized to further isolate minority communities and religions.**
- Issues of marriage, divorce succession are civil in nature

- So, many rural and tribal communities may not follow it and continue with their own tribal and customary practices.
- Law commission report has stated that only reformatations in personal laws are required, as Uniform civil code may seclude women and the vulnerable section.
- Formal courts are **expensive, does not deliver speedy justice and is time-consuming as well.**
- Article 25 envisages the freedom to practice, profess, and propagate one's religion.
- By enforcing a singular law applicable to all citizens, this fundamental right is violated.
- **Article 26** envisages freedom to manage religious affairs.
- It is contradicting as UCC does not allow judiciary or parliament to interfere in their religious matter.
- Enactment of uniform civil code can lead to **laws being promulgated** which would inevitably **favour the majority religion.**
- Thus, it is **contradicting article 14** of the constitution which envisages right to equality.
- It is difficult to enact a uniform code in a country like India which is diverse in many fields

NEW MODEL CONCESSION AGREEMENT - 2021 FOR PUBLIC-PRIVATE-PARTNERSHIP (PPP) PROJECTS AT MAJOR PORTS

Recently the Union Ministry revised model concession agreement 2021 for public private partnership projects at major ports.

- The new MCA will be applicable to all the **future PPP projects** at major ports.

- **It will include projects** which are already approved by the government but are still under bidding stage.
- It will **bring more developers**, investors and lenders and other stakeholders in the Ports sector and catalyze the investment in the sector.
- There are more than 80 public private partnership (PPP) projects in the sector with investment of over Rs 56,000 crores.

Revised MCA:

- **Provision of change in cargo** has been introduced for the first time.
- Due to external factors, traffic for a particular commodity has dropped during the concession period.
 - It will provide the flexibility to undertake change in cargo in such situation and reduces risk for the concessionaire.
- Provision has been made for **providing flexibility** to the concessionaires to fix their tariff based on market conditions
 - It will allow level playing field for the private terminals at major ports to compete with private ports for cargo.
- **To reduce risk** to the lenders provision of compensation for concessionaire's event of default before Commercial Operations Date (COD) has been added.

Model Concession Agreement?

- **MCA is a legal contract** that forms the basis of public private

partnership (PPP) projects in India.

- It **lays down the terms and conditions** for executing a road project till a private firm operates.
- It states the policy and regulatory framework for implementation of a PPP project.
- MCA addresses all issues related to a PPP framework like
 - Mitigation and unbundling of risks
 - Allocation of risks and returns
 - Symmetry of obligations between the principal parties
 - Precision and predictability of costs & obligations
 - Reduction of transaction costs and termination.
- The model is available for various sectors like National Highways, State Highways, Urban Rail Transit System and Ports.

Public Private Partnership:

- **Public-private partnerships** involve collaboration between a government agency and a private-sector company to finance, and operate projects, like public transportation networks, parks, and convention centers.
- It often involves **concessions of tax**, protection from liability, partial ownership rights over nominally public services and property to private sector, for-profit entities.

Merits:

- **Ensure necessary investments** into public sector and effective public resources management.
- Ensure higher quality and timely provision of public services.
- A private entity is granted the opportunity to obtain a long-term remuneration.
- **Private sector expertise** and experience are utilized in PPP projects implementation.
- PPP project risks allocation enables to reduce the risk management expenditures.

Demerits:

- **Infrastructure** or services delivered could be more expensive
- The service procurement procedure is longer and more costly in comparison with traditional public procurement.
- The **project agreements are long-term**, and inflexible because of impossibility to envisage events that could influence the future activity.

PM CALLS FOR CONSTITUTION OF HIGH-POWER POLICE TECH MISSION FOR GRASSROOT POLICING

The Prime Minister urged for constituting a High-Power Police Technology Mission, at 56th DGPs/IGPs conference in Lucknow, to adopt future technologies for grassroots policing requirements.

Suggestions on Police Reforms:

1. Boosting capacity and infrastructure:

- Boosting infrastructure and capacity of the police forces includes
- Increase in the number of police personnel in the country
- Improvement in **recruitment**
- Training and service conditions including upgradation and improving the infrastructure.

2. Legislative Reforms:

The legislative changes include

- **Enactment** of the organized Crimes Act,
- A single police act for the country.

- Moving Police to the Concurrent List
 - At present the police administration comes under the state list.
- Measures regarding **registration of crimes**
- Commissionerate system for large areas
- **Changes in criminal procedure** and evidence systems.

3. Administrative Reforms:

There is an urgent need for administrative reforms as well.

- **Separation of investigation** from law and order
- Specialized wings for Social and Cyber Crimes
- Setting up authorities as directed by the Supreme Court

- **Strengthening state machinery** and linking prosecution with police.
- To tackle routine challenges faced by the police, **highly qualified youths** should be promoted by government to be involved to look for technological solutions through hackathons.

4. Technological Scaling:

Technological reforms include

- **Modernization** of the control room

- Fast tracking the Crime and Criminal Tracking Network System (CCTNS)
 - **CCTNS** is a project under the government of India for creating a comprehensive and integrated system for effective policing through e-Governance.
- **Development** of a National Intelligence Grid (NATGRID)
 - **NATGRID** is a secure database for information on terrorists, economic crimes, and similar incidents to help bolster India's capabilities.

SUSTAINABLE DEVELOPMENT PLAN IN COAL MINING

Recently, the Ministry of Coal has moved forward with a comprehensive Sustainable Development Plan in coal mining, to achieve the commitments made at COP26.

Highlights:

- At the recent COP26, India made a commitment to reduce the total projected carbon emissions by one billion tonnes from now onwards till 2030.
- Emphasis is to **put a major thrust on Sustainable Development in coal mining, taking care of its environmental and social impact.**

Steps taken by government for the promotion of sustainable coal development

- **Sustainable Development Cell (SDC)** in the Ministry of Coal has been established to **advise, mentor and plan**

action to minimise the adverse impact of mining.

- **Bio-Reclamation of mined-out land** has already been taken up on a big scale by all coal companies through a **massive tree plantation drive.**
 - **Aim:** To cover more than 12000 hectares of land for plantation which will help in decreasing the carbon content.
 - Monitoring of such efforts is being done through remote sensing.
- **First Mile Connectivity (FMC)** is another major initiative by coal companies to **minimise environmental pollution.**
 - In this process, **coal is being transported through a conveyor belt** from Coal Handling Plants to Silo for loading.
 - The process reduces **pollution as it eliminates the movement of coal through the road.**

- **Surface Coal Gasification Projects** have been planned for Syn Gas production to be used either for production of Methanol/Ethanol, Urea or Petrochemicals.
- The **use of dry fuel as green coal will result in lesser carbon footprint and environmental pollution.**
- **Syngas, or synthesis gas**, is a fuel gas mixture consisting primarily of hydrogen, carbon monoxide, and very often some carbon dioxide
- Coal & Lignite companies have planned to install an additional 5560 MW of renewable capacity with an investment of over Rs. 15000 Crores.
- **The use of LNG to substitute diesel consumption** in mining and coal transport equipment has also been planned on a massive scale.
- Another initiative is **gainful utilisation of Mine Water for irrigation** and providing treated water for drinking to the rural populations in and around the

command area of mining subsidiaries.

- **Eco-Parks** in the mining area are under different stages of development in all the subsidiaries
- **Eco-Mine Tourism Circuit** is going to start shortly in different coal companies to showcase efforts made by coal companies in environmental protection.
- **Bamboo plantation** along coal transport roads and on the edges of mines will help in minimising dust pollution.
- **Extraction of sand from the Over Burden (OB) dump for use in construction** for sustainable development.
- This will help in the availability of cheaper sand to masses for house and other construction.
- It will also minimise the land required for Over Burden dump in future projects.
- Sand produced through a large Sand Processing Plant is being used for low-cost housing schemes under Pradhan Mantri AavasYojana (PMAY).

ATTACK ON JUDGE: INDEPENDENCE OF JUDICIARY IN JEOPARDY, SAYS PATNA HIGH COURT

Recently, **Additional District and Sessions Judge** of sub-divisional court in Madhubani was attacked by two policemen inside chamber.

Judicial Independence

- In democratic set up, the judiciary is an impartial body that resolves disputes within the boundaries

laid down by a Written Constitution.

- Independence of the judiciary is **one of the basic structures of the Indian Constitution** and has also been recognised as a human right by international conventions.

Necessity for independence of judiciary:

- It is envisaged as the organ for protecting the rights of the citizens, guaranteed under the Constitution.
- For the **maintenance of the rule of law and fair judicial administration**, an independent judiciary is of utmost importance.
- **Independence of judiciary** is necessary so that **judge of the supreme court can function without fear or favor**.
- The judiciary should remain independent to remain **fully insulated from any external interference**.

Independence of judges refers to as:

- Functional or decisional independence means the independence of judges to arrive at their decisions without submitting to any inside or outside pressure.
- Personal independence means the judges are not dependent on the government in any way in which might influence them in reaching the decision in particular cases.
- Collective independence means institutional administrative and financial independence of the judiciary as a whole.

- Internal independence means independence of judges from the judicial superiors and colleagues.
 - It refers to, independence of a judge or judicial officer from any kind of order, indication, or pressure from his judicial superiors and colleagues in deciding cases.

Provisions given by the Indian constitution to ensure the independence of the judiciary.

- **Article 124**
 - It deals with the appointment of Judges to the Supreme Court.
- **Article 217**
 - It is regarding the appointment of Judges to High Courts.
- **Articles 124 to 147 in Chapter IV of Part V**
 - Deal with the establishment and constitution of the Supreme Court, the appointment of judges and their powers rights, jurisdiction, and service conditions.
- **Article 214 to 231 in Chapter V of Part VI**
 - Deals with the constitution of High Court, the jurisdiction, the appointment and conditions of the office of a Judge of a High Court, his powers, rights, service conditions, including transfer from one High Court

WHAT IS PESA ACT, AND POLITICS BEHIND ITS IMPLEMENTATION IN CHHATTISGARH

The Chhattisgarh Government has formulated draft rules under PESA Act, 1996, as Chhattisgarh Panchayat

Provisions (Extension of the Scheduled) Rules, 2021.

Issue?

- **Tribals in Chhattisgarh** have been demanding the enactment of PESA rules for some time, it would provide more power over their resources.
- With respect to **mineral resources** in the state, PESA rules would embolden the gram sabha's decisions over that of the central and state governments.

PESA rules are important?

- It enables the residents of scheduled areas to strengthen their **village-level bodies** by transferring power from the government to the Gram Sabha.
- The Act thus enables **Gram Sabha** to maintain safety over their rights against external or internal conflicts.

What Topics will be Covered?

- The laws, once formed, will give gram sabha the power on the minerals being excavated from their areas.
- The gram sabha will have to be kept informed by any agencies working in their village.
- **It has the power** to approve or stop the work being done within the village limits.
- It w the power over **management of resources** over water, forest, and land.
- It would have the power to monitor and prohibit the manufacturing, transport, sale, and consumption of intoxicants within their village limits.
- It has a duty to **maintain peace** and resolve conflicts

arising in the village, while protecting tribal customs and traditions.

What is PESA Act?

- The Panchayat (Extension of the Scheduled Areas) Act, 1996 was enacted by the government of India.
- **Aim:** To ensure self-governance through gram Sabha for people living in scheduled areas.
 - Scheduled areas are identified by the Fifth Schedule of the Constitution of India.

Fifth Schedule of the Constitution:

- **The Fifth Schedule** designates tribal majority areas in ten tribal minority states within peninsular India including, Andhra Pradesh, Telangana, Gujarat, Jharkhand, Chhattisgarh, Himachal Pradesh, Madhya Pradesh, Maharashtra, Odisha, and Rajasthan.
- **It designates tribal majority areas** in north-eastern states, including Assam, Meghalaya, Mizoram, and Tripura.
- Of these, Meghalaya and Mizoram are tribal-majority states.

Objectives of PESA Act:

- **To legally recognize** the right of tribal communities, residents of the scheduled areas.
- To safeguard and preserve the traditions and **customs of tribal communities.**
- To **empowers Gram Sabha** to play a key role in approving

development plans and controlling all social sectors.

- **To enable the Panchayats** at appropriate levels for implementing a system of self-governance with respect to issues like customary resources, forest produce, minerals, etc.

Features of PESA Act:

1. Powers exclusive to Gram Sabha:

- Every village shall have its own Gram Sabha.
- A village shall consist of one or more habitations comprising a community and managing its affairs in accordance with traditions and customs.

2. Gram Sabha is "competent" to safeguard and preserve:

- Traditions and customs of the people, and their cultural identity
- Community resources
- Customary mode of dispute resolution.

3. Gram Sabha has mandatory executive functions:

- To approve plans, programmes, and projects for social and economic development.
- **Identify persons as beneficiaries** under the poverty alleviation.

- Issue a certificate of utilisation of funds by the Panchayat for the plans, programmes, and projects.

4. Powers exclusive to Gram Sabha/Panchayat at appropriate level:

- **Right to mandatory** consultation in land acquisition, resettlement, and rehabilitation of displaced persons.
- Panchayat is entrusted with planning and management of minor water bodies.
- **Mandatory recommendations by Gram Sabha** or Panchayat to grant of prospecting licenses, mining leases, concessions for minerals.

5. Powers endowed to Gram Sabha and Panchayat at appropriate level:

- Regulate sale/consumption of intoxicants
- Ownership of minor forest produce
- Prevent land alienation and restore alienated land
- Manage village markets
- Control over money lending to STs
- Control over institutions and functionaries in social sector.

DATA PROTECTION BILL: CONGRESS MPs FILE DISSENT NOTES OVER JPC REPORT

Joint Committee of Parliament (JCP) on the Personal Data Protection (PDP) Bill, 2019 has submitted its report in the Parliament.

- It has retained the controversial exemption

clause that allows the Government to keep any of its agencies outside the purview of the law with minor changes.

Highlights:

- The committee discussed one of the Controversial provision in the Bill, **Clause 35**.
- Clause 35 deals with conditions under which **the government can access personal data without consent**.
- Clause 35 in the name of “**public order**”, ‘**sovereignty**’, “**friendly relations with foreign states**” and “**security of the state**” allows any agency under the Union Government exemption from all or any provisions of the law.
- It also **allowed any agency under the Union Government exemption** from all or any provisions of the law in the interest of purposes such as national security.
- The members had argued that “public order” should be removed as a ground for exemption.
- They had also pressed for “judicial or parliamentary oversight” for granting such exemptions.
- They asserted that here should be an order in writing with reasons for exempting a certain agency from the ambit of the Bill
- They also said that only partial exemption should be given to the agency if needed.
- However, the report noted that **this clause was for “certain legitimate purposes” and thus it was retained**.
- It also said that the exemptions are guaranteed under **Article 19**

of the Constitution and the Puttaswamy judgment.

Recommendations of the committee:

- It recommended the **need to balance the concerns regarding national security, liberty and privacy of an individual**.
- It also reiterated that this exclusive power of the government should be used only under exceptional circumstances.
- It said **no social media platform should be allowed to operate unless the parent company handling the technology sets up an office in India**
- It should also set up a **statutory media regulatory authority**, for the regulation of the contents on all such platforms.
- It recommended **development of an alternative indigenous financial system for cross-border payments** on the lines of INSTEX (European Union).
- The Instrument in Support of Trade Exchanges (INSTEX) is a European special-purpose vehicle (SPV) established in 2019.
- Its mission is to facilitate non-USD and non-SWIFT transactions with Iran to avoid breaking U.S. sanctions.
- It recommended the **Central Government to prepare and pronounce an extensive policy on data localisation**, in consultation with all the sectoral regulators.
- It also mentions that the government should make

efforts **to establish a mechanism for the formal certification process for all digital and IoT devices** that will ensure the integrity of all such devices with respect to data security.

Concerns

- The Bill **creates two parallel universes** — one for the private sector where it would apply with full rigour and one for the Government where it is riddled with exemption, carve outs and escape clauses.
- It leads to differential treatment of the same law.
- Bill **does not provide adequate safeguards to protect the right to privacy and gives an overboard exemption to the Government.**
- Clause 35 is open to misuse since it gives unqualified powers to the Government.
- The Bill **pays little attention to “harms arising from surveillance and effort to establish a modern surveillance framework”**
- Bill **has no provision to keep a check on collection of data by hardware manufacturers.**

Alternatives suggested by the committee

- The committee suggested the **setting up of an indigenous architecture**, which can be an **alternative to the internationally accepted SWIFT payment system.**
- A **mechanism may be devised under which social media**

platforms will be held responsible for the content from unverified accounts.

- It has called for a mechanism in which **social media companies can be treated as publishers in some circumstances.**
- Treating a social media company such as Facebook or Twitter as a publisher will **make it liable under laws pertaining to illegal speech.**

Personal Data Protection Bill, 2019

- The **Joint Committee of Parliament (JCP)** was set up in 2019, to take up the personal data protection bill, commonly called as **privacy bill.**
- It meant **to give a legal shape to the Right to Privacy.**
- **Aim:** To protect individual rights by regulating the collection, movement, and processing of data that is personal, or which can identify the individual.

Key features of Personal Data Protection Bill, 2019

- The Bill trifurcates personal data:
- **All personal data** - data from which an individual can be identified.
- **Sensitive personal data** - financial, health, sexual orientation, biometric, genetic, transgender status, caste, religious belief, and more.
- It mandates that sensitive personal data should be stored only in India.
- It can be processed abroad only under certain conditions including

approval of a Data Protection Agency (DPA).

- **Critical personal data** - The government at any time can deem something critical such as military or national security data.
- Mandates **fiduciaries to give the government any nonpersonal data when demanded.**
- Calls for the **creation of an independent regulator Data Protection Agency (DPA)**, which will oversee assessments and audits.

- Each company will have a Data Protection Officer (DPO) who will liaison with the DPA for grievance redressal, recording maintenance etc.
- **Only offence punishable with imprisonment:** Re-identification and processing of de-identified personal without consent
- The government **can exempt any of its agencies from any or all provisions of the Act**, for processing of personal data in certain cases such as in interest of security of state.

MYSURU DECLARATION IS AIMED AT RECOGNISING CITIZEN CENTRIC SERVICES AS THE “HEART OF GOVERNANCE”

Mysuru Declaration on Service Delivery by participants from 16 Panchayats was recently signed.

- Under the declaration, the participants states resolved to roll out the **Common Minimum Service** delivery by Panchayats across the country from **April 1, 2022.**

Objectives:

- To recognize **Citizen Centric Services as the “Heart of Governance”.**

- **Increase the availability of Citizen Services** at the **grassroots levels** in a timely and efficient manner, commencing with offering of the basic, statutory and/ or essential services at the Gram Panchayat level from 1st April, 2022.
- Implement the **highest standards of professional integrity** and accountability towards timely delivery of Public Services.

CENTRE PROPOSES ALLOWING EXPLORATORY DRILLING FOR OIL, NATURAL GAS IN INTER-TIDAL AREAS OF CRZ

Recently, the Union Ministry of Petroleum has issued a draft notification to amend the Coastal Regulation Zone.

Highlights:

- A draft notification has been issued regarding CRZ and ICRZ amendment.

- To allow **exploratory drilling for oil and natural gas** in coastal regulation zones (CRZ).
- To include **gas-based power plant** within the Island Coastal Regulation Zone (ICRZ) area.

- To allow **small infrastructure projects**,
- **The removal of sand bars** by traditional communities.
- **Aim-** to reduce dependence on diesel generator sets.

Coastal Regulation Zones (CRZ):

- The CRZ have been declared by the Ministry of Environment, Forest and Climate change **under Section 3 of the Environment Protection Act 1986.**
- The land between the **Low Tide Line and the High Tide line** are called Coastal Regulation Zones (CRZ).
- Coastal Stretches of creeks, bays, seas, rivers and backwaters affected by the tidal actions of up to **500 metres** from the High Tide Line comes under the zone.
- **Development of buildings, tourism infrastructure in the CRZs** is regulated by the Government of India.
- **High Tide Line:**
 - The line on the land up to which the **highest water line reaches during the spring tide.**
- **Low Tide Line:**
 - The line on the land up to which the **lowest water line reaches during the spring tide.**
- **Spring tides:**
 - **When the sun, the moon and the earth are in a straight line**, the height of the tide will be higher.
 - They occur **twice a month**, one on full moon period and another during new moon period.

Importance of CRZ

- **To conserve and protect coastal stretches.**
- To **ensure livelihood security** to the fishing & local communities living in the coastal areas.
- To promote **development in a sustainable manner.**
- To keep a **check on natural hazards and rising sea levels.**

Types of Coastal Regulation Zones

- **CRZ-1:**
 - These are **ecologically sensitive areas.**
 - It includes national parks/marine parks, sanctuaries, reserve forests, wildlife habitats, mangroves and corals/coral reefs.
 - **Areas** are situated between **the high and low tide lines.**
- **CRZ-2:**
 - The **areas** that **have already developed till the shoreline.**
 - **Construction** of unauthorised structures is **prohibited** in this zone.
- **CRZ-3:**
 - **Rural and urban localities** that are relatively undisturbed.
 - **Specific activities related to agriculture or public facilities** are allowed.
 - Legally designated **urban areas** that are not substantially built-up.
- **CRZ-4:**
 - It includes the **coastal stretches** in Lakshadweep, the Andaman and Nicobar Islands.

- It resides in the **aquatic region** up to the territorial limits.
- **Fishing and other allied services** are permitted.

- Releasing **solid waste** is prohibited.

CABINET APPROVES EXTENSION OF PRADHAN MANTRI GARIB KALYAN ANNA YOJANA (PMGKAY)

Recently, Union Cabinet has approved extension of 2 schemes: Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY-Phase V) for 4 months and National Apprenticeship Training Scheme.

Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)

- **Launched by:** Department of Food and Public Distribution under the Ministry of Consumer Affairs, Food and Public Distribution in March 2020.
- **Aim:** To feed the poorest citizens of India by providing grain through the Public Distribution System, to all the priority households.
- **Eligibility:**
 - Families belonging to the Below Poverty Line **Antyodaya Anna Yojana (AAY)** and **Priority Households (PHH)** categories will be eligible for the scheme.
 - PHH is to be identified by State Governments/Union Territory Administrations as per criteria evolved by them.
 - AAY families are to be identified by States/UTs as per the criteria prescribed by the Central Government.
 - Households headed by widows or terminally ill persons or disabled persons or persons aged 60 years or

more with no assured means of subsistence or societal support.

- Widows or terminally ill persons or disabled persons or persons aged 60 years or more or single women.
- All primitive **tribal households**.
- All eligible Below Poverty Line families of **HIV-positive persons**.
- Landless agriculture laborers, **marginal farmers, rural artisans/craftsmen**.
- **Benefits of the Scheme:**
 - It provides 5 kg of rice or wheat per person.
 - 1 kg of dal/Channa to each family holding a ration card per month.
 - The scale of this welfare scheme makes it the **largest food security program** in the world.

National Apprenticeship Training Scheme

- It is a **one-year program** equipping technically qualified youth with practical knowledge and skills required in their field of work.
- **Conducted by:** Ministry of Skill Development and Entrepreneurship.

Aim:

- To increase the engagement of apprentices from the present 2.3 lakh to 50 lakh.
- To give technical qualifications to the youth of the country.
- To promote apprenticeship training.

Benefits:

- There are **126 subject** fields for graduate/diploma students for which training is provided.
- The Apprentices are imparted training by the organizations at their place of work.
- During the period of apprenticeship, the apprentices are paid a stipend amount, **50% of which is reimbursable** to the employer from the **Government of India**.
- At the end of the training period, the apprentices are issued a Certificate of Proficiency by the Government of India.
- It can be registered at all employment exchanges across India as valid employment experience.
- The apprentices are placed for training at Central, State, and Private

organizations which have excellent training facilities.

Eligibility Criteria:

- Applicants must be pursuing a **higher education degree** or diploma in a technological field.
- The **minimum age** for the apprenticeship is **16 years**.
- Applicants should not be a beneficiary of any other skill development program of the government.
- The applicant should not be a self-employed person.
- Also, he/she should not be involved in a business or profession that yields them a taxable income.
- National Apprenticeship Promotion Scheme should not be active in any government service.
- The applicant should not be an existing professional in any field.

‘DEATH PUTS END TO REPENTANCE’: HC COMMUTES DEATH PENALTY OF 3 CONVICTS TO LIFE IN SHAKTI MILLS GANGRAPE CASE

Recently, the Bombay High Court commuted death penalty given to three men found guilty of gangraping a photojournalist in the abandoned Shakti Mills in central Mumbai.

What is Capital Punishment?

- **Capital Punishment** is also known as a death penalty.
- It is the **execution of an offender** sentenced to death after conviction of a criminal offence by a court of law.

Death Penalty Crimes in India:

Aggravated murder

- It is punishable by death in accordance with **Section 302** of the Indian Penal Code, 1860

Terrorism-related offences not resulting in death

- Use of any special category of explosive that could endanger life or cause serious damage to property is punishable by death penalty.

Rape not resulting in death

- A person who inflicts injury in a sexual assault which results in death, may be punished under the **Criminal Law Act, 2013**.

- **Gang rapes** are punishable with death penalties.

Kidnapping not resulting in death

- According to **Section 364-A** of Indian Penal Code, 1860, kidnapping not resulting in death is an offence punishable by death.

Drug trafficking

- If a person convicted of an attempt to commit any drug trafficking offences, or financing of narcotic and psychotropic substances, he or she can be sentenced to death.

Treason

- The **death penalty** is given to any person who is waging or trying to wage war against the government and helping the defence forces to commit a mutiny.

Military offences not resulting in death

- **Abetment of assault**, mutiny of a defence personnel from his duty is punishable by death if committed by a member of the Army or Navy or Air Force.

Offenders excluded from Capital Punishment:

1. Minor

- A minor who is under the **age of 18** at the time of committing a crime is not executed.

2. Pregnant Women

- **Clemency** must be granted to a pregnant woman sentenced to death.

3. Intellectually Disabled

- A person while committing a crime who is **mentally ill** or unable to understand the nature of the act then the person can be held liable

under the law and can be punished with the death penalty.

Constitutional Laws in India:

Article 21 of the Constitution

- It guarantees the **right to life** and personal freedom to all, including the right to live with human dignity.

The constitutional principle can be stated as:

- Only in **rare cases**, the death penalty should be used.
- Only on special grounds, the death penalty can be sentenced and should be treated as exceptional punishment.
- In the light of individual circumstances, the sentence should be **individualized**.
- The death penalty shall be confirmed by the High Court.
 - Under **Article 136** of the Constitution and under Section 379 of the C.R.P.C there is a right to appeal to the Supreme Court.
- The accused may pray for forgiveness, commutation, etc. of sentence **under Sections 433 and 434** of the C.R.P.C. and to the President or the Governors under **Articles 72 and 161**.
- In accordance with **Articles 21 and 22**, the accused has the right to a prompt and fair trial.
 - The accused is not entitled to be tortured under Article 21 and 22.
- Under **Articles 21 and 19**, the accused has freedom of speech and expression under custody.

Arguments in favour of Death Penalty:

- **Every guilty person** should be punished and the punishment shall be proportional to the crime that he/she has committed.
- This argument supports the concept of justice.
- Since society aims to **reduce heinous crimes**, the strongest punishment shall be awarded and death penalty is suitable for it.
- **Offenders** must be killed to prevent them from committing a crime again.
- It is considered as good to kill a man who is dangerous to the community and execution can be treated as a remedy to safeguard the interest of the society.
- **There is no proof** that death penalty has taken lives of innocent people hence, it should not be considered as discriminatory in nature.

Arguments against Death Penalty:

- People presume that even the offenders in their worst case

should not be deprived of their right to life.

- It is the **obligation of the State** to protect the society and punish the wrongdoers but it should be done in a least harmful way.
- The death penalty leads to **execution of innocent people** because of the deficiency in the system of justice.
- People believe that death penalty based on retribution to provide justice is morally wrong and is just an emerged form of vengeance.
- They argue that **capital punishment** is against it as sentencing life imprisonment to an offender can cause an endless pain to the offender.
- **Death penalty** only leads to brutalization of the society as well as the state's relation with its citizens.
- The current society does not endure torture and death penalty is not the solution to deal with dreadful crimes.

SIX MLAs APPOINTED ADVISERS TO RAJASTHAN CM ASHOK GEHLOT

The appointment of six MLAs as advisers to the Chief Minister, has caught the attention of the Governor, under suspicion of office of profit.

Office of Profit:

- An office of profit means a **position** that brings to the person holding it some **financial gain, or advantage, or benefit**.
- It may be an office or place of profit if it carries some

remuneration, financial advantage, benefit etc.

Origin:

- The origin of this term can be found in the **English Act of Settlement, 1701**.
- Under this law, no person who has an office or place of profit under the King, or receives a pension from the Crown, shall be capable of serving as a member of the House of Commons.

Objective:

- To present **no conflict** between the duties and interests of an elected member.
- To **enforce a basic feature** of the Constitution- the principle of **separation of power** between the legislature and the executive.

Constitutional Provisions in India:

Article 102 (1)(a) and Article 191 (1)(a):

- It **bans** any Member of Parliament or Member of Legislative Assembly from holding an office that would give its occupant the opportunity to gain a financial advantage or benefit.
- It refers to a post under central/state government which yields salaries, perks and other benefits.
- Under the **Representation of People Act** too, holding an office of profit is **grounds for disqualification**.

What constitutes an 'office of profit'?

- The law **does not** clearly **define** what constitutes an **office of profit** but the **definition has evolved** over the years with interpretations made in various **court judgments**.
- **In 1964, the Supreme Court ruled** that the test for determining whether a person holds an office of profit is the **test of appointment**.
- Several factors are considered in this determination including factors such as whether;
 - The government is the **appointing authority**
 - The government has the **power to terminate** the appointment
 - The government determines the remuneration
 - The **power** that comes with the position.
 - The **source of remuneration** is justified

ATTORNEY GENERAL PUSHES FOR NATIONAL COURTS OF APPEAL TO RELIEVE PRESSURE ON SC

Recently, the Attorney General of India appealed for the revival of an 11-year-old proposal to set up National Courts of Appeal in four regions of the country.

Attorney-General for India

- **Appointer:** President of India on the advice of the Union Cabinet.
- **Constitutional Provision for Appointment:** Article 76(1) of the Constitution
- **Term length:** As Per the President's discretion

- The Attorney General for India is the Indian government's **chief legal advisor** and is its **principal Advocate before the Supreme Court of India**.

Qualification:

- They must be a person qualified to be appointed as a Judge of the Supreme Court.
- They must have been a judge of some high court for five years or an advocate of some high court for ten

years or an eminent jurist in the opinion of the President.

Powers:

- He has the **right of audience in all Courts** in India as well as the right to participate in the proceedings of the Parliament, though not to vote.
- They **represent the Government of India** in any reference made by the President to the Supreme Court under Article 143 of the Constitution.
 - However, he **does not have any executive authority.**

Duties:

- He appears on behalf of the Government of India in all cases (including suits, appeals, and other proceedings) in the Supreme Court in which the Government of India is concerned.
- They perform other legal duties assigned to them by the President.

What is the National Courts of Appeal?

- National Court of Appeal is being advocated as an **intermediate forum between the Supreme**

Court and the various high courts of India.

- The Supreme Court of India serves both as the final court of appeals and the final interpreter of the Constitution.
- It is a **final court of justice** in dealing with appeals from the decisions of the High Courts and tribunals within their region in civil, criminal, labor and revenue matters.
- It is proposed to have regional benches in Chennai, Mumbai, and Kolkata.
- The setting up of a National Court of Appeals would require an amendment in **Article 130 of the Constitution of India.**
- **Need of National Court of Appeal (NCA):**
 - It will allow Supreme Court to function as a Constitutional court to deal with matters of national importance, fundamental rights, and issues involving a substantial question of law.



SCIENCE & TECHNOLOGY

SCIENTISTS FIND A MINERAL SEEN IN THE DEPTHS OF THE EARTH IN A METEORITE

As per the findings of a study by IIT Kharagpur, researchers could help us understand the formation and evolution of the Earth.

Highlights:

- Researchers studied a **meteorite** that fell near the town of Katol in Nagpur, Maharashtra on in 2012.
- Meteorite shows presence of mineral **bridgmanite**, which is the most abundant mineral in the interior of the Earth, within Katol **L6 Chondrite meteorite**.
- This finding adds evidence to the Moon-forming giant impact hypothesis.

Significance:

- The discovery of natural bridgmanite could help scientists better understand how **materials are shaped** and formed deep in the Earth.
- It could provide new insight into how substances are transformed by collisions between small objects in the solar system.

Bridgmanite:

- Formerly known as **silicate perovskite** $(Mg,Fe)SiO_3$, the mineral was named bridgmanite to honor Percy Bridgman, an American physicist who won the Nobel Prize in 1946.
- It can be found from the **bottom of the transition zone of the**

Earth's mantle down to the planet's core-mantle boundary at depths between 670 and 2,900 kilometers.

- **Bridgmanite** is formed due to intense heat and pressure, as is found inside the Earth, which causes its atoms to arrange in a unique pattern.
- It was identified and studied in a **meteorite** that collided with the Earth 135 years ago.

Giant Impact Hypothesis?

- The giant impact hypothesis is also known as the **Theia Impact or Big Splash**.
- It suggests that the moon was formed when an object known as Theia collided with early Earth.

Formation:

- After collision, vaporized parts of the planet's crust went into the space.
- **Gravity bound** the ejected particles together, creating a moon that is the largest in the solar system in relation to its host planet.
- The material that formed it came from the crust, while leaving the planet's rocky core untouched.
- As the material drew together around Theia's core, it would have centered near **Earth's ecliptic plane**, which is the moon orbits today.

WHAT A NEW STUDY HAS FOUND ON HPV VACCINE, WHICH PROTECTS AGAINST CERVICAL CANCER

As per new research, the human papillomavirus (HPV) vaccine reduced the risk of developing the cancer by 62 per cent in women between the ages of 14 and 16.

Highlights:

- **HPV vaccination** reduced the risk of cervical cancer by 34 % in UK women, who were aged 16-18 years when they were given the vaccine.
- The vaccine **prevented** around 450 cervical cancers and 17,200 cases of precancerous conditions since 2006.

Cervical Cancer?

- **Cervical cancer** occurs in the cells of the cervix, the lower part of the uterus.
- Various strains of **the human papillomavirus (HPV)**, causes most cervical cancer.
- The virus survives for years, leading to causes of cervical cells to become cancer cells.

Causes of Cervical Cancer:

- Cervical Cancer begins with unusual changes in the tissue.
- Most cases are linked to infection with HPV.
- Different types of HPV can cause skin warts, genital warts, and other skin disorders.

Symptoms:

- **Bleeding** between periods or after menopause.
- Pelvic pain, kidney failure, weight loss, lack of appetite and fatigue.

Human Papillomavirus Infection:

- HPV infection is a **viral infection** that commonly causes

skin or mucous membrane growths (warts).

- There are **more than 100 varieties** of human papillomavirus (HPV).
- Some types of HPV infection cause warts, and some can cause different types of cancer.
- Types of **genital HPV can** cause cancer of the lower part of the uterus that connects to the (cervix). including cancers of vulva and back of the throat (oropharyngeal).

Types of HPV Vaccine:

- **9-valent HPV vaccine** (Gardasil 9, 9vHPV).
- Quadrivalent HPV vaccine (Gardasil, 4vHPV).
- Bivalent HPV vaccine (Cervarix, 2vHPV).
- All three vaccines protect against HPV types 16 and 18 that cause most HPV cancers.

Cervical cancer incidence in India:

- Globally **27 per cent** of total cervical cancer cases are from India.
- About 77 percent cases are caused by HPV 16 and 18.
- In India, **bivalent and quadrivalent HPV vaccines** were licensed in 2008 and a non-valent vaccine was licensed in 2018.
- The **Indian Academy of Pediatrics Committee on Immunization (IAPCOI)** recommends HPV vaccines should be given in two-dose regimen, six months apart for girls below the age of 14 years.

- Those who are 15 and older, the vaccine is given in a **three-dose** regimen.

THE BHARAT BIOTECH BBV152 COVAXIN VACCINE AGAINST COVID-19

The World Health Organization (WHO) recently granted emergency use listing (EUL) to Bharat Biotech's Covid-19 vaccine Covaxin.

Highlights:

- It will allow for a larger recognition of Covaxin by other countries to allow Indian travelers who have taken the dose to qualify for exemptions that countries offer to those vaccinated.

Covaxin:

- **Bharat Biotech** has developed COVAXIN, in collaboration with the Indian Council of Medical Research (ICMR) - National Institute of Virology (NIV).
- It is India 1st vaccine candidate for COVID-19.
- Covaxin was approved for emergency use in India.
- Around 10% of the 1.07 billion doses so far in the country are of Covaxin.
- Covaxin is an inactivated vaccine, which is developed by inactivating (killing) the live microorganisms that cause the disease.

Emergency Use Listing?

- The **emergency use listing** (EUL) procedure assesses the suitability of novel health products during public health emergencies.

- **Aim:** To make medicines, vaccines, and diagnostics available as rapidly as possible to address the emergency while adhering to stringent criteria of safety, efficacy, and quality.
- The assessment weighs the threat posed by the emergency as well as the benefit that would accrue from the use of the product against any potential risks.

Criteria for EUL:

- The EUL pathway involves a rigorous assessment of late **phase II and phase III clinical trial** data, as well as additional data on safety, efficacy, quality, and a risk management plan.
- The company producing the vaccine must **generate data** to enable full licensure and WHO prequalification of the vaccine.
- The WHO **prequalification process** will assess additional clinical data generated from vaccine trials and deployment on a rolling basis
 - To ensure the vaccine meets the necessary standards of quality, safety, and efficacy for broader availability.

DEPARTMENT OF ANIMAL HUSBANDRY AND DAIRYING TO ORGANISE A STAKEHOLDER FORUM ON 'INDUSTRY AND ONE HEALTH' TO MARK THE SIXTH INTERNATIONAL ONE HEALTH DAY

The Department of Animal Husbandry and Dairying, organized a Stakeholder Forum on the theme 'Industry and One Health' to celebrate the 6th International One Health Day (3 November).

- The day aims to highlight **interdisciplinary and transdisciplinary engagements** as well as **multisectoral collaboration** as aspects crucial to the implementation of the One Health concept.

One Health:

- One Health is a **collaborative, multisectoral, and transdisciplinary approach** — working at the **local, regional, national, and global levels**.
- The goal is to achieve **optimal health outcomes** recognizing the interconnection between **people, animals, plants, and their shared environment**.
- The areas of work include food safety, the control of zoonoses (diseases that can spread between animals and humans, such as flu, rabies and Rift Valley Fever), and combatting antibiotic resistance (when bacteria change after being exposed to antibiotics and become more difficult to treat).

Why do we need a One Health approach?

- With **increased connection** between animals and humans, Humans face threats

of **zoonotic disease** outbreaks that can have a devastating impact on the society and economy.

- Efforts by just one sector cannot prevent or eliminate the problem as animals and humans share the eco systems they live in and share many of the microbes.
 - For instance, rabies in humans is effectively prevented only by targeting the animal source of the virus (for example, by vaccinating dogs).
 - Information on influenza viruses circulating in animals is crucial to the selection of viruses for human vaccines for potential influenza pandemics.
- The One Health framework will help in **prediction, early detection, prevention, tracking and control** of public health challenges and emergencies and mitigate endemic zoonotic infections and outbreaks.

India and One Health:

- The Government of India set up a **National Expert Group** on '**One Health**' as a multi-sectoral, transdisciplinary, collaborative group in May 2019.
- The establishment of a **National Institution for One Health** as part of the **PM Ayushman scheme** is a step forward in accelerating efforts.

Efforts needed to achieve One Health:

- **Experts** in different sectors, such as public health, animal health, plant health and the environment, **should join forces** to support One Health approaches.
 - To effectively detect, respond to, and prevent outbreaks of zoonoses and food safety problems, epidemiological data and laboratory **information should be shared across sectors.**
 - Government officials, researchers and workers across sectors at the local, national, regional and global levels should **implement joint responses** to health threats.
- Drug-resistant microbes can be transmitted between animals and humans through direct contact between animals and humans or through contaminated food, so to effectively contain it, a **well-coordinated approach in humans and in animals** is required.
 - India's Prime Minister Atmanirbhar Swasth Bharat Yojana (PM-ASBY) should use One Health as a foundational principle in fighting against COVID-19 pandemic.

SOUTH ASIAN GENE 'LZTFL1' DOUBLES THE RESPIRATORY FAILURES IN COVID PATIENTS

LZTFL1 is identified as the gene responsible for doubling the risk of respiratory failures from COVID-19.

- **Leucine zipper transcription factor like 1**, also known as LZTFL1, is a ubiquitously expressed **protein** which **localize s to the cytoplasm** and in

humans is encoded by the **LZTFL1 gene.**

- **Function:** This protein **regulates protein trafficking** to the **ciliary membrane** through interaction with the Bardet-Biedl syndrome (BBS) complex of proteins.

17 SCIENTISTS AWARDED SWARNAJAYANTI FELLOWSHIPS FOR INNOVATIVE RESEARCH IDEAS

Recently, 17 scientists from across India awarded Swarnajayanti Fellowships.

- Swarnajayanti Fellowship scheme was instituted by **Government of India** to commemorate **India's fiftieth year of Independence.**
- Under the scheme, the awardees are facilitated by the **Department of Science & Technology (DST)**, with support for all the

requirements for performing the research including a **fellowship** of Rs. 25,000/- per month for **five years.**

- DST supports the awardees by giving them a research grant of 5 lakh Rupees for 5 years.
- The prize is divided into **six disciplines**, namely:
 - Chemical Sciences

- Earth and Atmospheric Sciences
- Engineering Sciences

- Mathematical Sciences
- Life Science
- Physical Sciences

70 DEMOISELLE CRANES FOUND DEAD, NEWCASTLE DISEASE SUSPECTED

Around 70 demoiselle cranes, popularly known as Kurjan in western Rajasthan, have been found dead.

Demoiselle Cranes:

- The Demoiselle crane is a species of crane.
- They are found in central Euro-Siberia, ranging from the Black Sea to Mongolia and North Eastern China.
- These cranes are **migratory birds**.
- Birds from western Eurasia will spend the winter in Africa while the birds from Asia, Mongolia and China will spend the winter in the Indian subcontinent.

Features:

- It is the **smallest species** out of 15 crane species.
- It has a **loud trumpeting call**, higher-pitched than the common crane.
- It has a **dancing display**, more balletic than the common crane, with less leaping.

Habitat:

- Demoiselle cranes are primarily **wetland species**.
- They like to breed in **marshy areas**, closer to the water, but are fine with wintering in arid areas like the Thar and Rann of Kutch, so long as water is a short flight away.

Status;

- **IUCN** (International Union for Conservation of Nature): **Least Concern**
- **CITES** (Convention on International Trade in Endangered Species of Wild Fauna and Flora): **Appendix II**

Newcastle disease:

- Newcastle disease is a **highly contagious disease** of birds.
- It is caused by a **para-myxo virus**.
- It infects the **lungs and intestine** of the infected birds.
- The disease is transmitted through infected birds' **droppings and secretions** from the nose, mouth and eyes and **direct contact** between healthy birds and the bodily discharges of infected birds.
- The **virus can survive for several weeks** in a warm and humid environment on birds' feathers, manure, and other materials.
- Birds affected by this disease are **fowls, turkeys, geese, ducks, pheasants**, partridges, guinea fowl and other wild and captive birds.
- **Humans aren't normally affected**, but people in direct contact with infected birds may develop a very short-term eye infection.

- **Vaccination:** The vaccine contains the **LaSota strain** of

Newcastle disease virus and applies to **chickens only**.

ISSI SAANEQ: NEW DINOSAUR SPECIES, WHICH ROAMED GREENLAND 214 MN YEARS AGO

A new dinosaur species, named Issi saaneq, has been discovered that lived on Greenland.

Features:

- It is a two-legged dinosaur **that** lived in **Greenland**.
- It lived during the **Late Triassic Period (between 237 Ma 201.3 million years ago)**.
- It was a **medium-sized, long-necked herbivore** and a **predecessor of the sauropods**.
 - **Sauropods-** The largest land animal.

- The name of the new dinosaur pays tribute to Greenland's Inuit language and means "coldbone".
- It has **similarities** with **dinosaurs found in Brazil**, such as the Macrocollum and Unaysaurus, which are 15 million years older.
- The new findings are the first evidence of a **distinct Greenlandic dinosaur species as this species differs from other Sauropodomorphs**.

NASA TO LAUNCH FIRST MISSION TO TEST ASTEROID DEFLECTION

NASA will launch the its first planetary defence test mission named the Double Asteroid Redirection Test (DART).

DART (Double Asteroid Redirection Test) Mission

- **Launched by:** NASA (National Aeronautics and Space Administration)
- **Aim: To test the newly developed technology that would allow a spacecraft to crash into an asteroid and change its course.**
- **Rocket Used for the Mission:** SpaceX Falcon 9 rocket
- **Target Asteroid:** Small moonlet called **Dimorphos**.

- The target of the spacecraft is an asteroid called **Dimorphos**. (repeated sentence)
- It is about **160-metre** in diameter and the spacecraft is expected to collide when it is **11 million kilometres** away from Earth.
- Dimorphos orbits a larger asteroid named **Didymos**, which has a diameter of **780 metres**.
- The asteroid and the moonlet do not pose any threat to Earth.
- The spacecraft will navigate to the moonlet and intentionally collide with it at a speed of about **6.6 kilometres per second** or **24,000 kilometres per hour**.

- The collision is expected to take place between **September 26 and October 1, 2022**.
- In this mission, the spacecraft will be destroyed.
- The timing for the DART impact is when the Didymos system is closest to the Earth. So the telescopes can make the most precise measurement possible.

Instruments on DART:

- **NEXT- C:** It will utilize NASA Evolutionary Xenon Thruster – Commercial (NEXT-C) solar electric propulsion system as its

primary in-space propulsion system.

- **Didymos Reconnaissance and Asteroid Camera for Optical Navigation (DRACO):** It is a high-resolution imager to study the impact site and surface of Dimorphos.
- **LICIACube (Light Italian CubeSat for Imaging of Asteroids):** it is a small satellite or **CubeSat** named to capture images of the impact and the impact crater formed as a result of the collision.

13 STUDENTS OF VETERINARY COLLEGE IN KERALA'S WAYANAD TEST POSITIVE FOR NOROVIRUS

Recently college students of Kerala tested positive for the Norovirus infection.

Norovirus:

- It is a **contagious disease** originally called the Norwalk virus.
- First outbreak reported in **Ohio**.
- Commonly known as **Winter Vomiting Bug**.
- **They are** group of viruses that cause **gastroenteritis**.
- It is a leading cause of **foodborne disease**.

Symptoms:

- Diarrhoea
- Vomiting
- Nausea

- Stomach pain
- inflammation of the stomach or intestines

Transmission:

- Having **direct contact** with an infected person
- Can transmit through contaminated food, water and surfaces.
- Norovirus is resistant to many disinfectants and heat **up to 60°C**.
 - **Steaming food or chlorinating water** does not kill the virus.

Treatment:

- Currently, there is **no specific treatment for norovirus**.
- Almost all people recover completely without any long-term problems.

100 YEARS OF INSULIN

Recently, a research report found that there have been a surge in Type 2 diabetes among children.

Finding of Report:

- **Children with sub-optimal growth in the womb** carry high levels of risk for diabetes.
- India has an estimated **8.7 per cent diabetic population** in the age group 20-70.
- Almost **1 in 10 children** are pre-diabetic.
- **77.6 % of those below 30** were either overweight or obese.

Diabetes:

- Diabetes is a **chronic disease**.
- It occurs either when the pancreas does not **produce enough insulin** or when the body **cannot effectively use the insulin it produces**.
- **Insulin is a hormone** that regulates blood sugar.

Types:

- **Type I diabetes:**
 - Also known as **juvenile diabetes**,
 - This type occurs when the **body fails to produce insulin**.
 - The **body attacks and destroys insulin-producing cells** in the pancreas
 - People with type I diabetes are **insulin-dependent**, which means they must take artificial insulin daily to stay alive.
- **Type 2 diabetes:**

- The body's cells **don't allow insulin to work**.
- The body's **cells have become resistant to insulin**.
- **Gestational diabetes:**
 - This type occurs in **women during pregnancy** when the body can become less sensitive to insulin.
 - Gestational diabetes does not occur in all women and usually **resolves after giving birth**.

Risk Factors for prediabetes:

- Being **overweight**
- A **family history** of diabetes
- Having a **high-density cholesterol** level
- A history of **high blood pressure**
- A history of **polycystic ovary syndrome (PCOS)**

Causes:

- Rapid urbanisation,
- Sedentary lifestyle,
- Unhealthy diet,
- Tobacco use,
- Increasing life expectancy.

Symptoms of diabetes:

- Increased thirst.
- Fatigue
- Blurred vision.
- Numbness or tingling in the hands or feet.
- Slow-healing sores or cuts.
- weight loss.
- Frequent urination.
- Dry mouth.

OCTOCOPTERED: BENGALURU SEES ITS FIRST COVID VACCINE DELIVERY USING A DRONE

National Aerospace Laboratories (NAL) has developed indigenous, medium class

Beyond Visual Line of Sight (BVLOS) multi-copter UAV recently.

Highlights:

- The **Octacopter** will be used for aerial delivery of Covid-19 vaccines in remote areas of Karnataka.

Features:

- The UAV is made from light weight **carbon fiber** structure for ease of transportation.
- It has autonomous guidance through MEMS based digital Autopilot.

- It can carry a payload of 15 kg. It can fly at an altitude of 500 m.
- It is integrated with Powerful computer and latest generation sensors for versatile applications like
 - Agricultural **pesticide spraying**
 - Crop monitoring, mining survey
 - Magnetic **geo survey mapping** etc.

INDIA LAUNCHES 41ST SCIENTIFIC EXPEDITION TO ANTARCTICA. ALL YOU NEED TO KNOW

India has successfully launched the 41st scientific expedition to Antarctica.

Highlights:

- 23 scientists and support staff reached the Indian Antarctic station, Maitri.
- Four more batches will reach Antarctica by air and chartered ice-class vessel MV Vasiliy Golovnin by mid-January 2022.

Programs of the Expedition:

The 41st expedition has two major programmes

- **Geological exploration** of the Amery ice shelf at the Bharati station.
 - This will help, explore the link between India and Antarctica in the past.
- **Reconnaissance surveys** and preparatory work for the drilling of 500 metres of ice core near Maitri.
 - It will improve the understanding of the **Antarctic climate**, westerly winds, sea-ice, and greenhouse gases for the last 10,000 years.

Significance:

- It will replenish the annual supplies of food, fuel, and spares for operations and maintenance of life

support systems at Maitri and Bharati.

About Antarctica:

- Antarctica is Earth's **southernmost continent**.
- It contains the geographic South Pole situated in the Antarctic region of the Southern Hemisphere.
- It is the **fifth-largest continent** with more than 14 million square kilometers.
- Temperatures are consistently below zero throughout the year.

Facts on Antarctica:

- The **Dry Valleys** in Antarctica are the driest places on earth.
- The **Antarctic Ice Sheet** is the single biggest mass of ice in the world and sometimes be up to four miles thick.
- The continent contains about 90 percent of the **planet's freshwater** ice and 70 percent of the total fresh water on earth.
- It holds one of the world's biggest mountain ranges - **the Gamburtsev Mountains**, which stretch out more than 1200 kilometers.

- **The Grand Canyon** is biggest natural rift, on the trench of Antarctica
- Because of the earth's tilt, the sun does not rise in Antarctica, it remains dark throughout the entire winter season.

Indian Arctic Program?

- The **Indian Antarctic Program** is a multi-institutional program under National Centre for Polar and Ocean Research, and Ministry of Earth Sciences, India.
- It was initiated in 1981 with the first Indian expedition to Antarctica.

Research Stations:

In 1981 India initiated Southern Ocean expeditions under the environmental protocol of the **Antarctic Treaty** (1959). It has built three permanent research base stations in Antarctica.

1. Dakshin Gangotri

- It was built in 1983.
- it was excavated and used as supply base and transit camp.
- Dakshin Gangotri was decommissioned in the year 1990.

2. Maitri

- Maitri, was put up in 1989 and has been conducting experiments in geology, geography, and medicine.
- It accomplished the mission of geomorphologic mapping of Schirmacher Oasis.

3. Bharati

- Located beside Larsmann Hill Bharati was established in 2015.
- It will collect evidence of continental breakup to reveal the 120-million-year-old ancient history of the Indian subcontinent.

ANTIBIOTIC CONSUMPTION RATES UP 46% IN LAST TWO DECADES

According to the study conducted by Global Research on Antimicrobial Resistance (GRAM) Project, global antibiotic consumption rates have increased by 46% in last two decades.

Highlights:

- The study was conducted by **Global Research on Antimicrobial Resistance (GRAM)**
- The study provides a comparative analysis of total antibiotic consumption rates in humans globally, expressed in the WHO metric of defined daily doses (DDD) per 1,000 population per day.

- GRAM is the **flagship project of the Oxford Global Burden of Disease (GBD) Group**.
- **Aim:** To provide robust, comprehensive and timely evidence of the burden of antimicrobial resistance (AMR) globally.

Antimicrobial Resistance (AMR)

- Antimicrobial resistance (AMR) is **the ability of microorganisms to persist or grow in the presence of drugs designed to inhibit or kill them**.
- The drugs, called **antimicrobials**, are used to treat infectious diseases caused by microorganisms such as bacteria,

fungi, viruses and protozoan parasites.

- **AMR occurs when bacteria, viruses, fungi and parasites change over time** and no longer respond to medicines making infections harder to treat and increasing the risk of disease spread, severe illness and death.
- Microorganisms that develop antimicrobial resistance are sometimes referred to as **“superbugs”**.
- As a result, the **medicines become ineffective** and infections persist in the body, **increasing the risk of spread** to others.
- AMR is a **global health and development threat**.
- It requires urgent multisectoral action in order to achieve the Sustainable Development Goals (SDGs).

Challenges

- **Lack of clean water and sanitation** and inadequate infection prevention and control promotes the spread of microbes, some of which can be resistant to antimicrobial treatment.
- **Injudicious use of antimicrobials and inadequate treatment of waste waters** are important drivers of AMR in India.
- The major sources are the **pharmaceutical waste waters and hospital effluents** that are released into the nearby water bodies without adequate treatment.

- **Lack of awareness about infectious diseases** in the general masses and **inaccessibility to healthcare**
- **Self-prescription of antimicrobial agents** without any professional knowledge regarding the dose and duration of treatment
- **Misuse and overuse of antimicrobials** are the main drivers in the development of drug-resistant pathogens.
- The **use of antimicrobial agents as pesticides and insecticides in the agriculture industry**.

Indian Scenario

- **India has been referred to as the AMR capital of the world**, still fighting against diseases which has become drug-resistant.
- India has one of the **highest rates of resistance to antimicrobial agents** used both in humans and food animals.
- Factors such as poverty, illiteracy, overcrowding and malnutrition further compound the situation.
- The **infectious disease burden in India is among the highest in the world**.
- In the fight against AMR in India, it is important to realize the contribution by all the following four spheres: **humans, animals, food and environment**.
- This review incorporates all the spheres of **One Health concept** from the Indian perspective.
- It highlights the importance of inter-dependence of human,

animal and environmental parameters for the containment of AMR.

GIVE THRUST TO INDIGENOUS REGIONAL NAVIGATION SATELLITE SYSTEM, NAVIC FOR GLOBAL USE

Vice President suggested ISRO to expand the coverage and ensure signal availability of the indigenously-developed regional navigation satellite system, **NavIC**

Indian Regional Navigation Satellite System (IRNSS): NavIC

- It is a **regional satellite navigation system**.
- In 2016, IRNSS was renamed as NAVIC (Navigation within Indian Constellation).
- **Developed by:** Indian Space Research Organization (ISRO).
- **Aim:**
 - To meet the user requirements of the **positioning, navigation and timing** services based on the indigenous system.
 - To provide accurate **position information service to users in India as well as the region extending up to 1500 km from its boundary**, which is its primary service area.
- **Need:** The system was developed partly because **access to foreign government-controlled global navigation satellite systems is not guaranteed in hostile situations**.
- A messaging interface embedded in the NavIC system, allows the command center to send warnings to a specific geographic area.

- The IRNSS will provide basically **two types of services**:
 - **Standard Positioning Service (SPS)** for civilian, research & commercial use.
 - **Restricted Service (RS)** for defense.
- IRNSS is a component of the **World-Wide Radio Navigation System** (WWRNS) for operation in the Indian Ocean Region by the Maritime Safety Committee (MSC) of International Maritime Organization (IMO).
- ISRO has built a total of nine satellites in the IRNSS series, of which eight are currently in orbit
 - **Three of these satellites are in geostationary orbit (GEO)** while
 - The remaining four are in **geosynchronous orbits (GSO)** that maintain an inclination of 29° to the equatorial plane.
- **Applications** of IRNSS are as follows:
 - Terrestrial, Aerial and Marine Navigation
 - Disaster Management
 - Vehicle tracking and fleet management
 - Integration with mobile phones
 - Precise Timing
 - Mapping and Geodetic data capture

- Terrestrial navigation aid for hikers and travellers
- Visual and voice navigation for drivers

GPS Aided GEO Augmented Navigation (GAGAN):

- This is a **Satellite Based Augmentation System (SBAS)** implemented jointly with Airport Authority of India (AAI), to

meet the civil aviation requirements.

- The **main objectives** of GAGAN are:
 - To provide Satellite-based Navigation services with accuracy and integrity required for civil aviation applications
 - To provide better Air Traffic Management over Indian Airspace.

CONDITIONS IN YOUNG BLACK HOLES CAN FORGE HEAVY ELEMENTS LIKE GOLD, SILVER

According to the Royal Astronomical Society, black holes and their characteristics are capable of forging heavier elements like gold and silver.

Highlights:

- **Heavier elements** can be produced in extreme environments, like black hole when a high emission of neutrinos causes the production of neutrons on a massive scale, after converting it from protons.
- **Neutrinos** is a neutral subatomic particle with a mass close to zero which rarely reacts with normal matter.

Cosmic collusion:

- Astronomers found in 2017 that **cosmic collisions** could indeed forge heavy elements such as gold, silver, and platinum.
- **Gravitational waves** and electromagnetic radiation resulting from a neutron star were powerful enough to produce heavier elements.
- **Black holes** have a hot and dense disk around them. It is this hot

and dense disk where the conversion of protons to neutrons occurs.

- The black hole swallow massive amounts of **gas and dust** and synthesizes it into a heavy element.

Black Hole:

- **A black hole** is a place in space where gravity pulls so much that even light cannot get out.
 - Thus, it is not possible to see black holes.
- The gravity is strong because matter has been squeezed into a tiny space.

How Big Are Black Holes?

- The **smallest black holes** are as small as just one atom. These black holes are very tiny but have the mass of a large mountain.
- Another kind of black hole is called "**stellar**." Its mass can be up to 20 times more than the mass of the sun.
 - There may be many stellar mass black holes in Earth's galaxy.

- The largest black holes are called "**supermassive.**" These black holes have masses that are more than 1 million suns together.

How Do Black Holes Form?

- **Primordial black holes** have formed in the early universe, soon after the big bang.
- **The Big Bang theory** is the cosmological model explaining the existence of the universe from the earliest known periods through its subsequent large-scale evolution.

- **Stellar black holes** form when the center of a very massive star collapses in upon itself.
- This collapse causes an exploding star, that blasts part of the star into space.
- **Supermassive black holes** formed at the time as the galaxy they are in.
- The size of the supermassive black hole is related to the size and mass of the galaxy it is in.

RESEARCHERS DEVELOP COMPOUND FOR AUTISM TREATMENT

- Indian researchers develop better therapeutics that uses **6BIO** to treat **autism spectrum disorder** (ASD).
- 6BIO is a compound that can provide a better method to treat ASD.
- 6-bromoindirubin-3'-oxime (6BIO), a hemi-synthetic derivative

of indirubins is found in **edible molluscs** and **plants**.

- 6BIO can help children with ASD learn and **recall, be social, and alleviate other symptoms such as seizures or sleep issues**.
- It can **restore** the information processing in the pre-clinical mouse model.

PRIME MINISTER TO FORMALLY HANDOVER DRDO DESIGNED AND DEVELOPED ADVANCED ELECTRONIC WARFARE SUITE 'SHAKTI' FOR INDIAN NAVAL SHIPS TO CHIEF OF NAVAL STAFF

Prime Minister will handover Warfare Suite 'Shakti' to Chief of Naval Staff.

Shakti:

- It is an **Advanced Electronic Warfare (EW)** System for Capital Warships of the Indian Navy.
- It has been designed and developed by **Defence Electronics Research Laboratory (DLRL)** Hyderabad, a laboratory of Defence Research and Development Organisation (DRDO).

Features:

- The system has been integrated with the wideband **Electronic Support Measures (ESM)** and **Electronic Counter Measure (ECM)** for the defence of Indian Navy Ships against missile attacks.
- The ESM of the system helps in finding **accurate direction** and **interception** of modern radars.

- The system has a built-in **radar fingerprinting** and **data recording replay feature** for post-mission analysis.

Significance:

- It will be used for the **interception, detection, classification, identification and jamming** of conventional and modern Radars.

- It will provide an **electronic layer of defence** against modern radars and anti-ship missiles to ensure electronic dominance and survivability in the maritime battlefield.
- This system will replace the earlier generation EW Systems of the Indian Navy.

HOW INDIA'S LUNAR ORBITER CHANDRAYAAN-2 AVOIDED COLLISION WITH NASA'S LRO

Recently, Chandrayaan-2 of the Indian Space Research Organization (ISRO) performed a Collision avoidance manoeuvre (CAM) to mitigate the risk of passing very close to NASA's Lunar Reconnaissance Orbiter (LRO).

Collision avoidance manoeuvre?

- **Collision avoidance manoeuvre (CAM)** is performed to **mitigate the collision risk of satellites in orbit** with other spacecraft or with space debris.
- The manoeuvre was to **ensure a sufficiently large radial separation** at the next closest conjunction between the spacecraft.

Chandrayaan-2 mission

- Chandrayaan-2 mission is **India's second mission to moon.**
- **Aim:** To study all the areas of Moon combining the exosphere, the surface as well as the sub-surface of the moon in a single mission.
- The scientific **goals** of the orbiter are:
 - To study lunar topography, mineralogy, elementa

l abundance, the lunar exosphere, and signatures of hydroxyl and water ice.

- To **study the water ice in the** south polar region and thickness of the lunar regolith on the surface.
- To **map the lunar surface** and help to prepare 3D maps of it.
- It was designed such that it can **distinguish between hydroxyl and water molecules, using sensitive instruments.**

Main components:

- **Launcher:** The **GSLV Mk-III** which is capable of **launching 4-ton class of satellites to the Geosynchronous Transfer Orbit (GTO).**
- **GSLV Mk-III**, the three-stage vehicle is India's most powerful launcher.
- **Lander (named Vikram):** Orbiter will observe the lunar surface and relay communication between Earth and Vikram.
- It was designed to execute **India's first soft landing on the lunar surface.**

- It was named Vikram after Dr Vikram A Sarabhai, the Father of the Indian Space Programme.
- It was **designed to function for one lunar day**, which is equivalent to about 14 Earth days.
- **However, the lander crashed when it deviated from its intended trajectory while attempting to land in September 2019.**
- **Pragyan Rover** was a 6-wheeled, **AI-powered** vehicle.
 - A rover is a planetary surface exploration device designed to move across the solid surface on a planet or other planetary mass celestial bodies.

Lunar Reconnaissance Orbiter (LRO)

- It is a NASA robotic spacecraft currently orbiting the Moon in an eccentric polar mapping orbit.

- It studies the Moon by **mapping the surface and composition** to help scientists figure out the chain of events that created the Moon.
- Its mission duration **was planned for one year**, but has been extended numerous times after review by NASA.

Project NETRA

- **NETwork** for space object **TRacking** and **Analysis** (NETRA) project was launched by ISRO in 2019.
- It is an **early warning system in space to detect debris** and other hazards to Indian satellites.
- It will give India its own capability in **space situational awareness** (SSA).
 - Space Situational Awareness (SSA) is the science of tracking objects that are in orbit and also predicting when they would be at a given point in time.

INDIGENOUSLY DEVELOPED MISSILE DESTROYER PACKED WITH STATE-OF-THE-ART WEAPONS & SENSORS WITH MODERN SURVEILLANCE RADARS

INS Visakhapatnam, a P15B stealth guided missile destroyer, was commissioned into the Indian Navy recently.

Key Features:

- Has **Surface-to-Surface** missile and Surface-to-Air missiles as well as **surveillance radar**
- The **anti-submarine warfare capabilities** are provided by the indigenously developed rocket

launchers, torpedo launchers and ASW helicopters.

- The ship is equipped to fight under **Nuclear, Biological and Chemical** (NBC) warfare conditions.
- The remaining three ships of Vishakhapatnam class; **Mormugao, Imphal and Surat** are scheduled to be commissioned from 2022 to 2024.

ON CV RAMAN'S 51ST DEATH ANNIVERSARY, LEADERS PAY TRIBUTE TO LEGENDARY PHYSICIST

November 21 marks the 51st death anniversary of Nobel Prize-winning physicist, Sir Chandrasekhara Venkata Raman.

CV Raman

- **Sir Chandrasekhara Venkata Raman**, more popularly known as **CV Raman** was born in Tamil Nadu's Tiruchirappalli on November 7, 1888.
- His initial research work as a student was in the **field of optics and acoustic**.
- In 1928, Raman discovered that **when light traverses a transparent material, the deflected light changes its wavelength and frequency**.
 - It was because some of the incoming photons' energy was transferred to a molecule, giving it a higher level of energy.
 - The phenomenon of exchange of energy and a change in light's direction was named as the Raman effect.
 - The phenomenon is **used to analyse different types of material**.
- It also led to the **discovery of Raman spectroscopy** as it is based on the Raman effect.
 - He won Nobel prize in 1930 for Discovery of '**Raman Effect**'.
 - He was the **first Asian recipient of the Nobel Prize** in the field of science.
- He also employed a **monochromatic light from a mercury arc lamp which penetrated transparent material**

and was allowed to fall on a spectrograph to record its spectrum.

- Raman detected the lines on the spectrum, as they were later called '**Raman lines**'.

Experiments and works:

- He experimented on **diffraction of light by acoustic and ultrasonic and hypersonic frequencies**.
- He **published papers on the effects produced by X-rays on infrared vibrations** in crystals when exposed to ordinary light.
- Areas of interests were optics of **colloids, electrical and magnetic anisotropy**, and the **physiology of human vision**.

Accomplishments:

- C V Raman **founded the Indian Journal of Physics** in 1926.
- He **sponsored the establishment of the Indian Academy of Sciences** and has served as President since its inception.
- He was **elected a Fellow of the Royal Society in 1924** and was knighted in 1929.
- In 1948, the physicist established and endowed the **Raman Institute of Research**, of which he became the director.
- Raman was also named as the **first National Professor by the new government of India in 1947**.
- National Science Day is celebrated on 28 February each year in India to mark the discovery of Raman scattering.

225 HECTARE MAHA LAND HANDED OVER FOR FIRST LIGO PROJECT IN INDIA

Recently, the central government had approved the **LIGO-India** mega science proposal for research on gravitational waves.

LIGO project

- LIGO stands for **Laser Interferometer Gravitational-Wave Observatory**.
- It is a **large-scale physics experiment** and observatory designed to detect cosmic gravitational waves and to develop gravitational-wave observations as an astronomical tool.
- These observatories use mirrors spaced four kilometers apart which are capable of detecting a change of less than one ten-thousandth the charge diameter of a proton.

IndIGO

- IndIGO stands for **Indian Initiative in Gravitational-wave Observations**.
- It is also known as **LIGO-India**.
- It is an initiative to set up advanced experimental facilities for a multi-institutional

observatory project in gravitational-wave astronomy in the **Hingoli** district of **Maharashtra**.

- The project will provide opportunities for **scientists and engineers to dig deeper into the realm of gravitational waves**.

Gravitational waves

- Gravitational waves are **disturbances or ripples in the curvature of spacetime**, generated by accelerated masses, that propagate as waves outward from their source.
- These cosmic ripples would **travel at the speed of light**, carrying with them **information about their origins**, as well as clues to the nature of gravity itself.
- Gravitational waves transport energy as gravitational radiation, a form of radiant energy similar to electromagnetic radiation.
- **Albert Einstein** predicted the existence of gravitational waves in 1916 in his **general theory of relativity**.

INDIAN ASTRONOMERS DISCOVER STARS HOTTER THAN SUN

Recently, a group of astronomers has discovered **eight stars** belonging to a rare class called **MRPs or Main-sequence Radio Pulse emitters** using the **Giant Metrewave Radio Telescope (GMRT)**.

Highlights:

- The study with the **Upgraded Giant Metrewave Radio Telescope (uGMRT)** found that:
 - the **magnetic field** and **temperature** are two quantities that appear to play the major role in deciding how intense the radio pulse will be.
- There are 15 known MRPs so far.

- 11 MRPs were discovered with GMRT.
- 8 of MRPs were discovered in 2021 alone.
- The success of the GMRT programme **has opened up a new window to study sun's magnetospheres.**

Main-sequence Radio Pulse (MRP) stars

- The **Main-sequence Radio Pulse** emitters are **stars that are hotter than the sun.**
- They **emit an enormous magnitude of magnetic fields**, which are **much stronger than stellar winds prevalent on stars.**
- Due to this, they emit bright radio pulses like a lighthouse.
- The **first MRP was discovered in 2000**, as a result of high sensitivity of GMRT.
- MRPs are not rare, but are **difficult to detect.**
- This is due to the fact that the **radio pulses are visible only at certain times**, and the phenomenon is mostly observable at low radio frequencies.
- The radio pulses emitted by MRPs **contain a vast amount of information regarding the stellar magnetosphere.**

Giant Metrewave Radio Telescope (GMRT)

- The **Giant Metrewave Radio Telescope** is a unique facility for radio astronomical research at metre wavelengths.

- It is set up by **National Centre for Radio Astrophysics (NCRA)** at Khodad, near Pune.
- NCRA of the Tata Institute of Fundamental Research (TIFR) is the premier institute for radio astronomy in India.
- GMRT is a **very versatile instrument for investigating a variety of radio astrophysical problems ranging from nearby Solar system to the edge of observable Universe.**
- GMRT was recently upgraded with new receivers, and is known as **Upgraded Giant Metrewave Radio Telescope (uGMRT).**
- Its astronomical **objectives** are:
 - To **detect the highly redshifted spectral line of neutral Hydrogen** expected from protoclusters or protogalaxies before they condensed to form galaxies in the early phase of the Universe.
 - To **search for and study rapidly-rotating Pulsars in our galaxy.**
- Recently, Doordarshan and All India Radio win UNESCO-ABU Peace Media Awards 2021
- The awards were launched in 2021 by Asia Pacific Broadcasting Union (ABU) and United Nations Educational Social and Cultural Organization (UNESCO) Bangkok Office.
- **Objective:** To **highlight and promote** the crucial **role of** free, independent and pluralistic **media** for building

positive peace in the minds of men and women.

- The Awards honour innovative and creative content, which **informs and educates audiences** on best practices of **building positive peace in**

three critical areas that have increasing urgency in achieving the 2030 Agenda for Sustainable Development:

- Transformative Education
- Living in harmony with nature
- Living well with diversity

ONLY 2 CASES OF POLIOVIRUS IN 2021 SO FAR: WHO

According to the World Health Organization (WHO) cases of wild poliovirus continued to be on the decline across the world.

Vaccine-derived Poliovirus (cVDPV)

Cases:

- **Vaccine-derived poliovirus** has been reported in three new countries: Guinea-Bissau, Mauritania, and Ukraine.

What is Polio?

- **Poliomyelitis** or Polio is a highly infectious viral disease that largely affects children under 5 years of age.
- The virus is transmitted by person-to-person spread mainly through contaminated water or food.

Causes:

- A virus called **poliovirus** causes polio.
- The virus enters the body through the mouth or nose, getting into the digestive and respiratory systems.
- **It multiplies** in the throat and intestines. It can also attack the nervous system.
- There are three strains of poliovirus: types 1, 2 and 3.
 - **Types 2 and 3** have been eradicated but type 1 still

affects people in a few countries.

Symptoms: Fatigue, fever, headache, neck stiffness, pain in the arms and legs etc.

Polio Vaccines:

- Inactivated polio vaccine (IPV)
- Oral polio vaccine (OPV).

Measures to Eradicate Polio:

Global Polio Eradication Initiative

- **GPEI** is an initiative created in 1988, to eradicate poliomyelitis.
- **World Health Organization** is the governing body of GPEI.

Strategy and Structure:

- WHO is responsible for planning, technical direction, surveillance and eradication of polio.
- The **Centre for Disease control and Prevention** deploys scientists and public health experts to WHO and UNICEF.
- **UNICEF** oversees the distribution of the vaccine and helping countries develop communication and awareness strategies.

Polio Eradication Efforts in India:

- Maintaining **community immunity** through National and Sub National polio rounds each year.

- **Environmental surveillance** has been established to detect poliovirus transmission in Mumbai, Delhi, Patna, Kolkata Punjab, and Gujarat.
- All States and Union Territories in the country have developed a Rapid Response Team (RRT) to respond to any polio outbreak in the country.
- **Emergency Preparedness and Response Plans (EPRP)** has been developed by all States in case of detection of a polio case.
- To reduce risk of importation from neighbouring countries, international border vaccination is being provided through

continuous vaccination teams (CVT) to all eligible children.

- A rolling emergency stock of **OPV** is maintained to respond to importation of wild poliovirus (WPV) or emergence of circulating vaccine derived poliovirus (cVDPV).

Injectable Inactivated Poliovirus Vaccine (IPV):

- India introduced **IPV immunization** as part of Polio Eradication and Endgame Strategic plan in 2015.
- It would be given along with OPV at 14 weeks of age for children under one year of age.

ASTRONOMERS FIND NEW WHITE DWARF THAT ROTATES AT RECORD-BREAKING SPEED OF 25 SECONDS

In a record-breaking discovery, astronomers have discovered a white dwarf star that completes one rotation in just 25 seconds.

White Dwarf:

- They are the stars that have **burned up all of the hydrogen** they once used as nuclear fuel.
- They are also known as **degenerate dwarf**.
- The name was coined by **Willem Luyten in 1922**.
- The nearest known white dwarf is **Sirius B**.
- It is **part of a binary star system**.

Characteristics:

- The **mass is comparable to the Sun**, while its **volume is comparable to Earth**.

- The central region is composed of a **mixture of carbon and oxygen**.
- A **thin envelope of helium** is surrounded with a **layer of hydrogen**.
- White dwarfs are extremely **dense objects with little luminosity**.
- They release **stored thermal energy**.

Formation:

- It is made up of **atoms in a plasma state**.
- When the **nuclear fuel is exhausted, the outer layers are lost**.
- It acts as a **planetary nebula**.
- Planetary nebulae are astronomical objects **made up of gaseous materials**.

- They are **extended in size and fuzzy** in appearance.
- They undergo a **process of shrinking and cooling** over millions of years.
- A white dwarf is **very hot** when it forms.
- It has **no source of energy**.

Black Dwarf:

- A black dwarf is a **kind of star**.

Formation:

- A black dwarf is made **when a white dwarf star becomes too cold**.
- When it is cold enough, it produces **no heat and light**.
- The star will **get darker and become black**.

- It doesn't have **enough mass to create enough pressure** so the remnant core is made out of carbon and oxygen.

Chandrasekhar Limit:

- **It is** coined by the Indian Astrophysicist, **Subrahmanyam Chandrasekhar**.
- Chandrasekhar Limit is **the maximum mass possible for a stable white dwarf star**.
- A limit which mandates that no white dwarf (a collapsed, degenerate star) can be **more massive than about 1.4 times the mass of the Sun**.

INDIA HAS THE HIGHEST POPULATION WITH HOUSEHOLD EXPOSURE TO PULMONARY TB

Recently, a new study was published that estimated the high-risk tuberculosis population in high-incidence countries.

Tuberculosis (TB)

- Tuberculosis is a potentially serious infectious disease that mainly **affects the lungs**.
- **Caused by:** Mycobacterium tuberculosis
- **Mode of Spread:** Spread from person to person through tiny droplets released into the air via coughs and sneezes.
- **Symptoms of TB:**
 - Coughing for three or more weeks
 - Coughing up blood or mucus
 - Chest pain, or pain with breathing or coughing
 - Unintentional weight loss
 - Fatigue

- Fever
- Night sweats
- Chills
- **Stages of TB:**
 - Exposure
 - Latent:
 - Immune system of the body keeps infectious bacteria from spreading
 - Patients don't have any symptoms, and are not contagious
 - Active disease
 - The germs multiply and make sick. Also can spread the disease to others.
 - 90% of active cases in adults come from a latent TB infection
 - **Vaccine for TB:** Bacille Calmette-Guérin (BCG)

TB in India

As per 2021 Global TB report released by WHO

- India (41%) was on the list of countries that topped those that contributed most to the global reduction in TB notifications between 2019 and 2020.
- India along with **Indonesia (14%), the Philippines (12%), China (8%), and 12 other countries accounted for 93%** of the total global drop in notifications.

The Global prevalence of TB

- The WHO estimated that some **4.1 million** people currently suffer from TB.
- **1.5 million people died** from TB in 2020 (including 214 000 people with HIV).
- One-third of the world's population is infected with TB.
- TB is a leading killer of people who have HIV.
- It's most prevalent in **developing countries**.
- Of the estimated **10.4 million new cases, only 6.1 million were**

detected and notified in 2015. This led to a gap of 4.3 million cases, undetected and untreated.

- TB occurs in every part of the world, but the majority of cases are in Asia and Africa.
- The number of people newly diagnosed with TB and those reported to national governments fell from **7.1 million in 2019** to 5.8 million in 2020.
- The 'End TB Strategy' milestones for reductions in TB disease burden by 2020 were a 35 percent reduction in the number of TB deaths.
- The funding in **the low- and middle-income** countries that account for 98% of reported TB cases remained a challenge.
- Of the total funding available in 2020, 81% came from domestic sources, with the BRICS countries (**Brazil, Russian Federation, India, China, and South Africa**) accounting for 65% of total domestic funding.



INDIAN FARMING PRACTICES: LEARNING FROM ELSEWHERE IN THE WORLD

As per the study unveiled recently in US, Integrated farming with **intercropping** increases food production while reducing environmental footprint.

Highlights:

- **Relay planting** enhances yield.
- Relay cropping is a method of **multiple cropping** where one crop is seeded into standing second crop before harvesting of second crop.
- Within-field **crop rotation**, allowing **strips for planting** other plants besides the major crop was more fruitful.
- Soil munching and no-till or a reduced tillage increases the annual crop yield up by 15.6% to 49.9%, and decreasing the environmental footprint by 17.3%, compared with traditional monoculture cropping.

What is Strip Cropping?

- Strip cropping suggests **planting several cultures** in strips alternated in crop rotation.
- It is a regular practice on sloped lands to control **soil erosion**.

- The method applies to even terrains as well when two or more species are cultivated together.
- It is like **intercropping**, because alternative species grow in-between the cash plants.

Need for Strip Cropping:

- Strip cropping agriculture is used either to **improve soil health** or support primary species growth.
- It brings **additional income** to yield producers but is the cheapest soil conservation technique.

How it is beneficial for India?

- India has a significant population of small farmers, many owning less than 2 hectares of land.
- About 70% of its **rural households** still depend primarily on agriculture for their livelihood, with 82% of farmers being small and marginal.
- Only 30% of all farmers borrow from formal sources. over 50% struggle to borrow from **money lending** sources.
- **Strip cropping** could be practiced in larger farms like the ones

owned by industry and governments.

- Boosted **soil health** and fertility improved water quality, retained soil moisture.

- **Raised water infiltration**, reduced dust emissions, increased crop productivity, enhanced biodiversity, etc.

EDUCATION MINISTER LAUNCHES BHASHA SANGAM INITIATIVE FOR SCHOOLS

Recently, government launched Bhasha Sangam.

- It is an initiative of the **Ministry of Education** under **Ek Bharat Shreshtha Bharat**.
- **Aim:**
 - To teach basic sentences of everyday usage in 22 Indian languages.
 - To make people skilled in conversations in an Indian language other than their mother tongue.

Initiatives launched under Bhasha Sangam:

Bhasha Sangam Initiative for schools

- Developed by **NCERT**.
- Learners in school will be able to get acquainted with all the languages-their scripts and pronunciation.
- Available on DIKSHA, ePathshala and 22 booklets.

Bhasha Sangam Mobile App

- Initiative of **Department of Higher Education**, in collaboration with MyGov.
- Developed by a **startup Multibhashi**, selected by myGov through a competition.

START-UP VILLAGE ENTREPRENEURSHIP PROGRAMME (SVEP) - NATIONAL RURAL LIVELIHOODS MISSION

Under Start-up Village Entrepreneurship Programme (SVEP), 102 Community Resource Persons – Enterprise Promotion (CRP-EPs) were certified.

Start-up Village Entrepreneurship Programme (SVEP):

- It is a **sub-scheme** under the **Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM)** programme.
- **Aim: To support the Self-Help Group (SHG) members** and their family members to **set-up small**

enterprises in the **non-farm sector**.

- SVEP develops an **eco-system** for enterprise development in rural areas.
- It's main objective is to **support the rural poor come out of poverty**, supporting them setup enterprises and provide support till the enterprises stabilize.
 - SVEP focusses on **providing self-employment opportunities** with financial assistance and training in business management and soft

- skills while creating local community cadres for promotion of enterprises.
- SVEP addresses **three major pillars** of rural start-ups namely - **finances, incubation and skill ecosystems**.
 - It consists of **Community Enterprise Fund (CEF)** for enterprise funding, **Cadre of Community Resource Persons-Enterprise Promotion (CRP-EP)** for providing Business Support Services
 - CRP- EP includes preparation of business plans, trainings, accessing loans from Banks etc. and dedicated centre at block level for providing information to entrepreneurs.
 - CRP-EPs are **selected from the community** where the programme is being implemented as they understand the local context and their familiarity with the NRLM eco-system.
 - CRP-EPs along with the **Block Programme Manager (BPM)** and the **Mentor** are the key **human resources at the block level** for implementing the programme.
 - The **Block Resource Centre** for Enterprise Promotion (BRC) is set up as the **base** for implementation of SVEP in the Block.
 - The BRC is the **nodal centre** for technical support for SVEP at the Block level.

Pandit Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM):

- National Rural Livelihoods Mission (NRLM) was launched by the **Ministry of Rural Development in 2015**.
- The Mission aims at creating **institutional platforms** of the rural poor, enabling them to increase household income through sustainable livelihood enhancements and improved access to financial services.
- Under the scheme, the poor would be facilitated to **achieve increased access** to rights, entitlements and public services, diversified risk and better social indicators of empowerment.
- **Implementation: NRLM works in a block for a period of ten years** till community federations take responsibility of implementation. These blocks are:
 - **Resource Block** (support from National Resource Organization),
 - **Intensive Blocks** (implemented with SRLM staff and internal community resource persons),
 - **Partnership Blocks** (support from local community and NGO) and
 - **Non-intensive Blocks** (remaining blocks not taken up for implementation in the initial phase).

NATIONAL LEGAL SERVICES DAY 2021: FROM DATE TO HOW TO ACCESS FREE LEGAL AID, ALL YOU NEED TO KNOW

Recently, the National Legal Services Authority (NALSA) observed Legal Services Day.

National Legal Service Authority (NALSA):

- It is constituted under the **Legal Services Authorities Act, 1987**
- **Aim:** to provide free legal services to weaker sections of society.
- **Objective:** to ensure that opportunities for securing justice are not denied to any citizen by reasons of economic or other disabilities.
- **Location-** New Delhi.
- **Official newsletter of NALSA-** Nyaya Deep.

Composition:

- **Patron-in-Chief-** the Chief Justice of India
- **Executive-Chairman-** Second senior-most judge of Supreme Court of India
- **The Legal Services Authorities Act** establishes statutory legal services authorities at the National, State and District level.

Functions:

- Organise **Lok Adalats** for settlement of disputes.
- **Formulates various schemes** for the implementation of preventive and strategic legal service programmes.
- **Provide free legal aid** in civil and criminal matters.

Legal Aid in India:

- Legal aid means **free legal service for the promotion of the welfare of the people.**
- **Article 39 A** of the Constitution of India provides for free legal aid to the poor and weaker sections of the society.
- **Right to free legal aid is a Fundamental Right guaranteed by the Constitution** under Article 21 of the Constitution.
 - **Article 21:** No person shall be deprived of his life or personal liberty except according to procedure established by law.

Categories that are entitled to get free legal aid in India:

- member of a **scheduled caste or scheduled tribe;**
- a victim of **trafficking in human beings or beggar;**
- a **woman or child;**
- a **person with disability** as defined in clause (i) of section 2 of the Persons with Disabilities (Equal Opportunities, Protection of Right and Full Participation) Act, 1995
- a **victim of mass disaster**
- an **industrial workman;**
- **persons in custody**, including in a protective home, juvenile home, or psychiatric hospital or nursing home;
- a person whose annual income does not exceed **Rs.50,000/-**

Drawbacks of the Legal Aid System:

- **Lack of awareness** of the availability of legal aid;

- A perception that **free service is incompatible** with quality service;
- There are **not enough lawyers** delivered by the legal services authorities

- The **lawyers are uninterested** in providing competent legal assistance because of financial constraints.

75 NUTRITION SMART VILLAGES WILL STRENGTHEN INDIA'S CAMPAIGN AGAINST MALNUTRITION

A programme on "**Nutrition Smart Village**" will be initiated by Ministry of Agriculture to strengthen the POSHAN Abhiyan.

Highlights:

- **Aim:** To reach out 75 villages across India through the network of All India Coordinated Research Project on Women in Agriculture (AICRP-WIA).
- These 75 villages will be adopted by AICRP centres and ICAR-Central Institute for Women in Agriculture (CIWA) to develop **Nutri-Smart villages**.

Objectives:

- Promoting nutritional awareness

- **Education** and behavioral change in rural areas involving farm women and school children.
- Harnessing **traditional knowledge** to overcome malnutrition.
- Implementing nutrition-sensitive agriculture through **homestead agriculture** and Nutri-garden.

Features:

- Intensive **awareness campaigns** will be undertaken including Nutri-village / Nutri-diet etc. for strengthening the POSHAN Abhiyan.
- Awareness among the **women farmers** will be created about their legal rights in all walks of life.

GOVT NOTIFIES AMENDED MINERAL CONSERVATION AND DEVELOPMENT RULES

Recently, the Ministry of Mines has notified the **Mineral Conservation and Development (Amendment) Rules, 2021** to amend the Mineral Conservation and Development Rules, 2017 [MCDR].

Highlights:

- The MCDR has been framed under section 18 of the Mines and Minerals Act, 1957.

- **Aim:** To provide rules regarding conservation of minerals, systematic and scientific mining, development of the mineral in the country, and for the protection of the environment.
- The amendments in the Rules are as follows:
 - Rules prescribed that all plans and sections related to mine shall be prepared by combination of **Digital**

- | | |
|---|--|
| <p>Global Positioning System (DGPS) as may be specified by the Indian Bureau of Mines (IBM).</p> <ul style="list-style-type: none"> ○ New Rule inserted to provide for submission of digital images of mining area by lessees and Letter of Intent holders. ○ Requirement of submitting satellite images obtained from CARTOSAT-2 satellite LISS-IV sensor on the scale of the cadastral map. ▪ CARTOSAT-2 satellite: is an Earth observation satellite in Sun-synchronous orbit satellites. The satellite was built, launched, and maintained by the Indian Space Research Organisation ○ Power of taking action against incomplete or wrong or false information in monthly or annual returns given to IBM, in addition to State Govt. | <ul style="list-style-type: none"> ○ Allowed engagement of a part-time mining engineer or a part-time geologist for category 'A' mines having leased area below 25 hectares. ○ To increase employment opportunity, a diploma in mining and mine surveying is granted by the duly recognized institute in qualification for full-time Mining Engineer. ○ Penalty provisions in the rules have been rationalized. ○ Provision of forfeiture of financial assurance or performance security of the leaseholder added in case of non-submission of final mine closure plan within the period specified. ○ Amount of financial assurance increased to five lakh rupees for Category 'A' mines and three lakh rupees for Category 'B' mines from existing three and two lakh rupees. |
|---|--|

COME UP WITH MEANINGFUL MEASURES TO ERADICATE MANUAL SCAVENGING

The Madras High Court directed Tamil Nadu government to come up with meaningful measures to completely eradicate the practice of manual scavenging.

Manual Scavenging:

- Manual scavenging is the act of **cleaning sewers or removal of waste** from toilets **without the use of safety equipment**.
- In simple terms, untreated human excreta are removed from pit latrines or bucket toilets using buckets or shovels by hand.
- There are **three forms of scavenging** as defined by

the **International Labour Organization:**

- Septic tanks cleaning
- Removal of human excreta from dry latrines
- Gutters and sewer cleaning.
- Manual scavengers use basic tools such as a bucket lined with a sack and a handle. The worker then carries the waste manually and take it to the disposal sites.
- Manual scavenging constitutes problems that encompass domains of health and occupation, human rights and

social justice, gender and caste, and human dignity.

Causes of Manual Scavenging:

Lack of Waterborne latrines

- The major latrine used in urban areas is the **dry latrines** which are a major cause of manual scavenging.
- In rural areas, there are no strategies put forward to convert dry toilets.

Lack of complete rehabilitation and employment opportunities

- There is a lack of fully rehabilitating the sanitation workers.
- **Lack of employment opportunities** is a major concern.
- Also, lack of schemes that would help the families of manual scavengers contribute to existence of this practice.

Lack of liberation strategies

- There are no proper strategies put forward to liberate manual scavengers **psychologically**.
- This pushes those in the practice to get even deeper and deeper into the practice of manual scavenging.

Social stigmatization

- People regard the manual scavengers as untouchable because of their work.
- Therefore, the society is not ready to accept and include them in community activities.
- No employer offers them a job and also, landlords bar them from renting their houses.

Denial of the existence of manual scavengers

- The government and other major private institutions **deny the existence** of scavenging despite the deaths reported especially in India. As a result, no measures are taken to solve this problem.

Effects of Manual Scavenging:

Health-related problems

- The scavengers are exposed to gases such as hydrogen disulphide, carbon (IV) oxide, ammonia, and methane. Long exposure to hydrogen disulphide can lead to death by **asphyxia**.
- The gas is also associated with **visual acuity**.
- Exposure to infections in the sewer is also common due to the **numerous bacteria and rodents** residing in the sewers.
- The common infection is the **Leptospirosis** which is an occupational disease in people who are in contact with an animal such as pigs.

Structural violence against manual scavengers

- Manual scavengers are exposed to two types of violence that are **social violence and violence associated with caste discrimination**.
- Caste discrimination and the job condition can cause them to be exposed to physical violence.

Caste and gender discrimination

- Most of the manual scavengers are **women and members of the marginal class**.
- The caste is regarded as a lower class and is excluded from moving to a better occupation.

- As a result, the scavenging work is seen as part of their natural occupation.

Social Discrimination

- Most manual scavengers are **stigmatized** by the community due to the nature of their job.
- They are regarded as **untouchable** and they are forced to accept their condition.

Solutions of Manual Scavenging:

Involvement of different officials and community in initiatives

- It is necessary to involve all the major stakeholders involved.
- They include the district officials, Relations officer, Chief Medical Officer, and District Supply Officer among any other relevant officials.
- The **inclusion of the community** around the areas that are most affected into the program is also of equal importance.

Creating Awareness

- District Nodal Officers, NGOs and health officers should **educate the community** on devastating effect caused by dry latrines.
- They should also **educate the mass** on health issues, hygiene practices, and sanitation.
- The public should be **aware of the penalties** they will face once they are arrested.
- The awareness campaigns should not only address the dangers of scavenging but also give the affected community an **alternative method of making money**.

Low-Cost Latrine Model

- The same old model of pit latrine used by the community can be used to construct **small pit toilets** in a **cost-effective manner**.

Fund Management

- The funds that are released by the government and various campaigns should be put in good use.
- The officials managing the fund should then strategize on how the funds will be given to the community.

Enforcement of law

- The government should enforce the law that **prohibits scavenging**.

Investing in proper human waste management equipment

- The government should invest in **pieces of machinery** that can be used to clean ditches and septic tanks and provide the sanitation workers with **quality protective gears**.
- They can import the pieces of machinery or tools in case they are not locally available.

Measures taken by government against manual scavenging:

- The central government enacted **The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act** in 1993.
- The act punishes the employment of scavengers or the construction of dry (non-flush) latrines

- The government passed new legislation **The Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act** in 2013.
- **As per the act, it is an offence to:**
 - Employ people as manual scavengers to clean insanitary latrines.
 - Employ people to clean sewers and septic tanks without protective gear.
 - Construct insanitary latrines.
 - Not demolish or convert insanitary latrines within a certain period of this Act coming into force.
- As of 2021, a new draft bill is awaiting cabinet nod to take the 2013 Act a step further and asks for complete mechanisation, and legal basis for punishment.

- **Ministry of housing and urban affairs** has launched the **Safaimitra Suraksha Challenge**.
 - Under the campaign, sewers and septic tanks in 243 cities will be mechanised and a helpline created to register complaints if manual scavenging is reported. Cities which reach the end result will receive prize money
- **Ministry of housing and urban affairs** has launched the **'Swachhata Abhiyan App'** for uploading data relating to insanitary latrines and manual scavengers.

CSR initiatives for the benefit of Manual Scavengers

- **Project Garima** by Tata Trust
- **Robot Bandicoot:** The Greater Hyderabad Municipal Corporation (GHMC) has procured a manhole-cleaning robot called 'Bandicoot.'

AFTER 4 YEARS, SC NOD FOR SAND MINING FROM RIVER BEDS IN RAJASTHAN

The resumption of legal mining of riverbed sand in the Rajasthan after a gap of four years was approved by Supreme Court for implementation of most of the recommendations made by a Central Empowered Committee.

Genesis:

- **November 2017:** Supreme Court ordered to stop all sand mining leases in Rajasthan from carrying out mining activities in the absence of environmental clearances and a scientific replenishment study.
- **February 2020:** Supreme court directed a Central Empowered

Committee (CEC) to report on issues related to sand mining.

- **November 2021:** The supreme court approved few recommendations of Central Empowered Committee. One of them was to allow sand mining after obtaining all statutory clearances.

Sand Mining

- It is the extraction of sand, mainly through an **open pit (or sandpit)** and sometimes mined from beaches and inland dunes or dredged from ocean and river beds.

- Sand is often used in manufacturing, for example as an abrasive or in concrete.
- It is also used on icy and snowy roads usually mixed with salt, to lower the melting point temperature, on the road surface.
- Sand mining presents opportunities to extract rutile, ilmenite, and zircon, which contain the industrially useful elements titanium and zirconium.
- Besides these minerals, beach sand may also contain garnet, leucosene, sillimanite, and monazite.

Adverse Effect of Sand Mining

- **Excessive instream sand mining** is a threat to bridges, river banks and nearby structures.
- Sand mining also affects the **adjoining groundwater system** and the uses that local people make of the river.
- Instream sand mining results in the destruction of aquatic and riparian habitats through large changes in the channel morphology.
- Impacts include bed degradation, bed coarsening, lowered water tables near the streambed, and channel instability.
- Sand mining generates extra vehicle traffic, which negatively impairs the environment. Where access roads cross riparian areas, the local environment may be impacted.

Legal framework of sand mining in India

- Sand mining is defined under section 3(e) of **the mines and mineral development and regulation act, 1957(MMDR act)**. This law has been implemented by the government to prevent illegal mining.
- Central Government notifies certain minerals as 'minor' minerals from time to time. The absolute powers for deciding on procedures of minor minerals for seeking applications for granting mineral concessions, fixing rates of royalty, dead rent etc. rest only with the **State Government**.
Ordinary sand is minor mineral.

Suggestions to prevent illegal sand mining in India

- The prospecting mining operation should be under licence or lease- the lease conditions should be contrary to the rules.
- after the end of the lease period, there needs a renewal of the lease for continuing mining.
- Exceeding the lease area comes under illegal mining of this act.
- After a premature termination of the lease, there is a need for seeking permission from the **State Government for the operative mechanism of section 4(A)(1) of MMDRA, 1957**.
- Abandoned stream channels on terrace and inactive floodplains may be preferred rather than active channels and their deltas and floodplains. Replenishment of groundwater has to be ensured if

excessive pumping out of water is required during mining.

- Mining below subterranean water levels should be avoided as a safeguard against environmental

contamination and **over exploitation of resources,**

- Large rivers and streams whose periodic sediment replenishment capacity are larger may be preferred than smaller rivers.

REMOTE EDUCATION WAS INACCESSIBLE TO MOST CHILDREN, SAYS SURVEY

Indian Council for Research on International Economic Relations (ICRIER) and LIRNE Asia, unveiled a national sample survey on remote education recently.

- The survey was conducted between March and August 2021.

Highlights:

- Only 20% of **school age children** in India had access to remote education during the pandemic.
 - However, only half participated in live online lessons.
- **38% of households** reported at least one child had dropped out of school completely due to COVID-19.

Educational Services:

- Among children aged 5-18 years, 80% who were enrolled in schools prior to the pandemic did not receive any **educational services** at all.
- The situation was worse among lower socio-economic classes, and rural households.
- Among the 20% who received education, only 55% had access to live online classes, while 68% had

access to recorded audio or video lessons.

Lack of Internet Connection:

- Insufficient number of devices, poor 3G/4G signal and **high data cost** were the biggest hurdles.
- Of households with school aged children, 64% had **internet connections**, but only 31% of those received remote education, due to lack of access to devices.
- Those without internet connections the situation was worse, with only 8% receiving remote education.

Internet Users:

- Over 13 crore people came online in 2020-21, pushing up the country's **total internet users** to more than 47 crores.
- Overall **internet usage** has spiked from 19% of the population above 15 years in 2017 to 47% this year.
- **Only 5%** of households had laptops, while 4% had desktop computers.
- The vast majority relied on smartphones, which were available in 68% of households.

HABIBGANJ TO RANI KAMLAPATI: HOW A RAILWAY STATION'S NAME IS CHANGED

Recently, the name of Bhopal's Habibganj railway station has been changed to Rani Kamlapati station.

Rani Kamlapati:

- She was the **Gond queen of the region** in the **18th century**.
- She was one of **Nizam Shah's** seven wives and daughter of **Chaudhari Kirpa-Ramchandra**.
- Gond king Nizam Shah's reign was from 1600 to the year 1715, the Ginnaurgarh fort was under the Gond kings, and Bhopal too was ruled by him.
- She was the **last Hindu queen of Bhopal**, who did great work in the area of **water management** and set up parks and temples.
- She built the seven-story '**Kamlapati Palace**', which presently serves as a protected monument.
- Rani Kamlapati Palace is a secular architecture of the 18th century built of **Lakhauri bricks**, cusped arches over crumpled pillars.

Gond tribe:

- They are a **Dravidian ethnolinguistic** group.
- They are **one of the largest groups** in India.
- They are spread over the states of **Madhya Pradesh, Maharashtra, Chhattisgarh, Uttar Pradesh, Telangana, Andhra Pradesh, Bihar, and Odisha**.
- The Gond tribe has **painted and carved art** on the walls of caves which all belong to the Mesolithic Period.
- The Gonds believe that viewing good images brought in good luck. Thus, traditionally, they painted motifs, tattoos, and images on the floors and walls of their houses.
- The name of the native Gond religion is **Koyapunem**, which was founded by **Pari Kupa Lingo**.
- Gond diet has two staple millets askodo **and kutki**.
- **Keslapur Jathra** is the important festival of the Gonds.

SAURABH KIRPAL: THE MAN WHO COULD BE INDIA'S FIRST OPENLY GAY JUDGE

Saurabh Kirpal will be India's first openly gay judge.

LGBT:

- LGBT is an initialism that stands for **lesbian, gay, bisexual, and transgender**.

Historical References:

- **Rigveda** says **Vikriti Evam Prakriti**-meaning what **seems unnatural is also natural**, and

hence some scholars believe in homosexual/transsexual dimensions of human life.

- The ancient Indian text **Kamasutra** written by **Vatsyayana** dedicates a complete chapter on **erotic homosexual behaviour**.

Constitutional Provisions:

- **Article 15** of the Constitution explicitly mentions to prohibit discrimination on the basis of sexual orientation and gender identity.

Legal Provisions:

- **In 2014**, the Supreme Court of India declared transgender people a **socially and economically suppressed class**.
- The court entitled them to **reservations in education and jobs**, and also directed union and state governments to frame welfare schemes for them.
- **In 2017**, the Supreme Court gave LGBT community the **freedom to safely express their sexual orientation**.
- Therefore, an individual's **sexual orientation is protected** under the country's **Right to Privacy** law.
- In 2018, in the landmark decision of Navtej Singh Johar v. Union of India, the Supreme Court of India **decriminalised consensual homosexual intercourse** by reading down **Section 377** of the Indian Penal Code and excluding consensual homosexual sex between adults from its ambit.

Challenges faced by LGBT community in India.

- LGBT community are subjected to **inequality** in all spheres of life like education, employment and social inclusion among many.
- People's **prejudices** lead them to think that LGBT people are odd and very different.

- They face **stringent opposition** from **religious sects** and are constantly threatened to be stripped off from their religion.
- They face **mental, physical, emotional and economic violence**.
 - Lesbian women are subjected to **family-sanctioned corrective rapes**, which are often perpetrated by their own family members.
 - They are **labelled** by the society as **mentally unstable** and are forced to **take medical treatment** for the same.
- In rural India, lesbian women and transmen in rural areas end up at the **bottom of the hierarchy** when it comes to basic human rights within the unit of family and village.
- One of the major factors that results in the stigmatization of LGBT people is **parental reaction towards homosexuality**.
 - Most LGBT people are acceptable to family only if they agree to behave like heterosexuals.

Transgender Rights in India:

- India has traditionally recognised a **third gender** population, considered by society as neither male or female.
 - Such individuals are known as **hijras**.
- Hijras were legally granted **voting rights** as a third sex in **1994**.

Centre's Initiatives:

Saathiya:

- It was launched by the **Ministry of Health and Family Welfare**.
- It is a resource material relating to health issues to be used as a part of a nationwide adolescent peer-education plan.

State Laws:

- The states of **Tamil Nadu and Kerala** were the first Indian states to introduce a **transgender welfare policy**.
 - According to the policy, transgender people can access **free sex reassignment surgery (SRS)** in government hospitals (only for male-to-female), free housing, admission in government colleges with full scholarship for higher studies etc.
- **West Bengal, Maharashtra and Gujarat** have formed a **transgender welfare board** with representatives from the transgender community to coordinate all policy decisions and development work.
- **Odisha**, in 2016, enacted welfare benefits for transgender people,

giving them the **same benefits as those living below the poverty line** to improve their overall social and economic status.

- **Himachal Pradesh** has set up **medical boards** at the district and state level **for assisting transgender people**.
 - The state has also enacted various schemes providing pension, skill development, scholarship and financial support for parents of transgender people.
- **Karnataka** Government issued the "**State Policy for Transgenders, 2017**", with the aim of raising awareness of transgender people within all educational institutions in the state.
- **Andhra Pradesh** announced the enactment of **pension plans for transgender people**.
 - The State Government will provide an amount of ₹1,500 per month to each transgender person above the age of 18 for social security pensions.

CABINET APPROVES CONTINUATION OF PRADHAN MANTRI GRAM SADAK YOJANA

Recently, The Cabinet Committee on Economic Affairs gave its approval to the proposals for a continuation of **Pradhan Mantri Gram Sadak Yojana (PMGSY) I and II**.

Pradhan Mantri Gram Sadak Yojana (PMGSY)

- **Launched by:** Ministry of Rural Development in 2000.

- **Aim:** To **provide good all-weather road connectivity** to unconnected Habitations.
- **Eligibility of projects:**
 - **Unconnected Habitation** of designated population size (500+ in plain areas and 250+ in North-East, hill, tribal and desert areas as per 2001 census).

- A Habitation is a cluster of population, living in an area, the location of which does not change over time.
- Desam, Dhanis, Tolas, Majras, Hamlets, etc. are commonly used terminology to describe the Habitations.
- PMGSY promotes the use of **new and green technology in the construction of rural roads.**
 - Locally available materials are used in road construction to promote cost-effective and fast construction.
 - PMGSY envisages a **three-tier Quality Assurance Mechanism** to ensure the quality of road works during construction and post-construction.

Phases of PMGSY

PMGSY Scheme is divided into three phases that are:

- **Phase I:**
 - It was **launched in December 2000** as a 100 % **centrally sponsored scheme** to provide single all-weather road connectivity.
- **Phase II**
 - This phase of **PMGSY was approved in May 2013.**
 - In this phase, the roads already built for village connectivity were to be upgraded to enhance rural infrastructure.
 - Under PMGSY-II, an up-gradation of 50,000 Km rural road network was envisaged.
 - Total 49,885 Kms road lengths have been sanctioned, of which

only 4,240 Kms road length and 254 bridges are balanced.

- **Phase III**
- It was approved in **July 2019.**
- It involves consolidation of Through Routes and Major Rural Links connecting habitations to **Gramin Agricultural Markets (GrAMs)**, Higher Secondary Schools and Hospitals.
 - Recently, Uttar Pradesh has been sanctioned 1,255 Kms road length for construction using Full Depth Reclamation Technology.
 - This construction technique will not only save cost and time in a big way but also conserve natural resources and reduce carbon footprint.

Road Connectivity Project for Left Wing Extremism Area (RCPLWEA)

- Indian Government launched this project in the year 2016.
- It was a **separate vertical under PMGSY** to provide all-weather road connectivity with necessary culverts and cross-drainage structures in 44 districts.
- These districts are critical from a security and communication point of view.
- Under the project, construction/up-gradation of 5,411.81 km road and 126 bridges/Cross Drainage works were targeted.

Funding:

- For all states: **60 (center):40 (State)**
- 8 North Eastern and 3 Himalayan States (J&K, Himachal Pradesh &

Uttarakhand): **90 (Center): 10**
(State)

CABINET APPROVES USOF SCHEME FOR PROVISION OF MOBILE SERVICES IN UNCOVERED VILLAGES OF ASPIRATIONAL DISTRICTS

The Union Cabinet has given its approval for provisioning of mobile services in Uncovered Villages of Aspirational Districts across 5 states.

Highlights:

- Aim: To **provide 4G-based mobile services** in **uncovered villages** of five states.
- States are: Maharashtra, Andhra Pradesh, Chhattisgarh, Odisha, and Jharkhand.
- The project is funded by the **Universal Service Obligation Fund (USOF)**.

Objective:

- To fulfil the vision of Digital India.
- To **enhance Digital Connectivity**.
- To provide adequate support to educational institutes for knowledge sharing & availability of job opportunity.

Universal Service Obligation Fund (USOF):

- It was set up by Indian Telegraph (Amendment) Act, 2003.
- It works under Department of Telecommunications, Ministry of Communication.
- USOF reimburse the service providers who implement the Universal Service Obligation for rural and remote areas under the New Telecom Policy (NTP) 1999.

- Universal Service means a balance between Universal Service to all uncovered areas, and high-level services capable of meeting the needs of the country's economy.
- They are generated by Universal Access Levy (UAL).
- It charges 5% UAL to telecom operators on their Adjusted Gross Revenue (AGR) to generate funds.
- AGR- the usage and licensing fee that telecom operators are charged by the Department of Telecommunications (DoT)
- The fund is non-lapsable.
- Non-lapsable: The unused amount allocated for a certain year can be used in next year.

Objective:

- To provide access to telecom services in a non-discriminatory manner in rural and remote areas at affordable and reasonable prices.

Features:

- **Availability:** The level of service is the same for all users without geographical discrimination
- **Affordability:** The price of the service should be economical.
- **Accessibility:** Services are accessible to all telephone subscribers.

Services supported by the Fund as per Indian Telegraph (Amendment) Rules, 2004:

- Stream-I: Provision of Public Telecom and Information Services.
- Stream-II: Provision of household telephones in rural and remote areas as determined by the Central Government from time to time.
- Stream-III: Creation of infrastructure for provision of Mobile Services in rural and remote areas.

- Stream-IV: Provision of Broadband connectivity to villages in a phased manner.
- Stream-V: Creation of general infrastructure in rural and remote areas for development of telecommunication facilities.
- Stream-VI: Induction of new technological developments in the telecom sector in rural and remote areas.

ANNUAL STATUS OF EDUCATION REPORT: ENROLMENT IN PVT SCHOOLS DOWN BY 15%. GOVT SCHOOLS PREFERRED DURING PANDEMIC

Recently, 16th Annual Status of Education Report (ASER) 2021 (Rural) was released.

About Annual Status of Education Report (ASER)

- It is a **citizen-led household survey**.
- It provides national estimates of **children's schooling status** and their foundational reading and arithmetic skills.
- It reaches to **children in the age group of 3-16** in almost all rural districts of India.
- It is carried **out each year by volunteers** from partner organisations like colleges, universities, non-profit organisations etc.

Highlights of the report:

- **Lack of access to digital devices** have made the children vulnerable.
- There has been an **overall increase in the proportion of**

children enrolled in govt schools.

- The report cites various reasons such as **financial distress, private schools' failure and migration, for the surge in enrolment into government schools.**
- 73.1% school respondents have received training for implementation of COVID prevention measures in 2021.
- More children in private schools had smartphone at home (79%) compared to government school going children (63.7%).
- There is 40% increase in the number of schools going children taking tuition during the closure of their schools amid the pandemic.
- This shows that the percentage of students receiving help from parents are less.

Challenges

- **Lack of constant access to technological devices**, have led to disruption in child's learning capabilities.
- **Lack of education among parents** has resulted in the over-dependence on private tuitions.
- Lack of **in-person attention in classes**, has affected the learning process of a child.
- The lack of personal interaction between teacher and student has caused difficulty in comprehending the basic sense of questions.
- The failure of teachers, who are not trained for online teaching, resulted in **degradation in the standard of teaching**.
- The **problem of gender discrimination** has also been seen along with the decline in the level of education.
- Boys and girls are getting unequal treatment in acquiring mobile devices.
- Most girls are either getting married or engaged in household chores.
- The **digital divide** has resulted in a large number of students dropping out of school.
- The absence of schooling has a long-lasting **effect on the health and nutrition of children**.

- Government's **mid-day meal programme** was a great source of nutrition and healthy well-being of a child, which got stopped due to school closure.
- The **mental wellbeing** of the child has also been adversely affected.

Initiatives

- Initiative like **PM- E-Vidya** have been undertaken by the government to provide quality education to all the students of the country.
- **PM- E-Vidya** is called **one Nation digital platform**. It includes:
 - **DIKSHA (Digital Infrastructure for Knowledge Sharing)**, a national platform for school education available for all states and the central government for grades 1 to 12.
 - TV channel called **SwayamPrabha** for those without internet facility.
 - **Swayam Massive Online Courses (MOOCs)** for open schools and pre-service education
 - **E-Pathsala** for accessing the e-textbook
 - National Repository of Open Educational Resources (NROER) an open storehouse of e-content.
- Along with this, programs like **IIT Pal, Shikshavani Podcast, Sign Language** have also been started.

MAMATA LAUNCHES DUARE RATION SCHEME IN WB

- West Bengal recently launched Duare Ration scheme.
- **Objective:** To **provide food grains** under the public

distribution system **at the doorstep** for the entire population of the State.

Under the scheme:

- 21,000 ration dealers with **financial assistance** of ₹1 lakh each to **purchase vehicles** for delivering ration to people in this manner.
- The ration vehicles will be parked at 500-meter distance in one particular lane.

- The salary of the staff engaged in the scheme will be borne by the **state government and the respective ration dealer** on **50:50 basis**.

HEALTH CARE EQUITY IN URBAN INDIA

Recently a report on Health Care Equity in Urban India was released.

- It explores health vulnerabilities and inequalities in cities in India.

Highlights of the Report:

- **Life expectancy** among the poorest is lower by 9.1 years and 6.2 years among men and women.
 - Life expectancy at birth is the average life span of a generation subject to the age-specific mortality conditions of the year.
- The current life expectancy in 2021 is 69.96 years.
 - Life expectancy in 2020 was 69.73 years, a 0.33% increase from 2019.
- **A third of India's people** now live in urban areas, 30% of them are poor.
- **Covid toll** was reported to be the highest for men in the age group of 35-69.

Government Initiatives to improve average Life Expectancy:

- **Mobilization** of public health action at multiple levels.
- **Ayushman Bharat** with Health and Wellness Centres (HWCs)

and **Pradhan Mantri Jan Arogya Yojana** (PMJAY), reduces expenditure for secondary and tertiary care hospitalization for 40% of India's population.

- 1,50,000 HWCs under **National Health Mission** (NHM) to provide Comprehensive Primary Health Care (CPHC).
- **Community and Primary Health Centres** under National programme for Healthcare of Elderly (NPHCE).
- Palliative care is provided to cases of Cancer, AIDS etc. under National programme for Palliative Care (NPPC).
- **Providing financial support** in the form of untied funds, for development of health facilities and ensuring services.
- Providing infrastructural support to State/UTs in constructing new health facilities for up-gradation of infrastructure.
- **Operationalizing health facilities** in rural areas through supply of equipment, drugs, and diagnostics.

AMIT SHAH TO LAY FOUNDATION STONE OF RANI GAIDINLIU TRIBAL FREEDOM FIGHTERS MUSEUM IN MANIPUR

Recently, the Home Minister of India laid the foundation stone for setting up of Rani Gaidinliu Tribal freedom fighters Museum in Imphal.

Rani Gaidinliu

- **Born:** 26 January 1915 at Manipur.
- She was a **Naga spiritual and political leader** who led a revolt against British rule in India.
- **Died:** 17 February 1993 at Manipur.

Pre-Independence Contribution

- She joined the **Heraka religious movement**, which later turned into a political movement seeking to drive out the British from Manipur and the surrounding Naga areas.
- She was arrested in 1932 at the age of 16 and was sentenced to life
-

imprisonment by the British rulers.

- Nehru gave her the **title of "Rani" ("Queen")**, and she gained local popularity as Rani Gaidinliu.

Post-Independence Contribution

- She continued to work for the upliftment of her people.
- She acted as an advocate of the ancestral Naga religious practices.
- She staunchly resisted the conversion of Nagas to Christianity.

Recognitions received:

- Tamrapatra Freedom Fighter Award-1972
- Padma Bhushan-1982
- Vivekananda Seva Award-1983
- Birsa Munda Award-posthumously

CENTRE PROVIDES BIG BOOST TO TEXTILES INDUSTRY; ANNOUNCES UNIFORM GST RATE FOR MMF TEXTILES

To address inverted tax structure in man-made fibre (MMF) textile, Ministry of Textiles has recently notified the uniform goods and services tax (GST) rate at 12 % on MMF, MMF yarn, MMF fabrics and apparel.

Uniform GST rate in MMF

- Earlier, the GST on Man-made fibres (MMF), MMF Yarn and MMF Fabrics were **18%, 12% and 5% respectively**.
- Such taxation created **build-up of credits and cascading costs**.

- It further led to **accumulation of taxes at various stages of MMF value chain and blockage of crucial working capital** for the industry.
- Also, such differential rates create problems in tax compliance.

Significance of the decision

- **Uniform GST rate will reduce the compliance burden of industry.**
- The **uniform tax rate** will help **resolve the input tax credit (ITC) residues** that were

accumulated due to the inverted tax structure earlier.

- It will also benefit the work related to **dyeing and printing services** to absorb and recover unutilised input tax credit ITC.
- Since a significant portion of MMF products is expected to be exported, it will also lend a better scope for encashing the unutilised ITC.
- A uniform taxation will **provide clarity to the issues caused by the inverted duty structure.**

Concern:

- Even though it will help in increasing cash flow and reduce the compliance burden for the assesses, **it may increase the cost of the finished goods** in the hands of the customer.

What is inverted duty structure?

- The Inverted Duty structure is a mechanism wherein the **rate of the tax on the inputs is greater than the rate of the tax on the output supplies.**
- That is, the GST rate paid on purchases is more than the GST rate payable on sales.
- The inverted duty structure is a **revenue loss for the government** as it has to refund the tax already paid (in inputs).
- Under GST, the **inverted duty structure is identified for goods and not for services.**

Concern over inverted duty structure

- Under this, the tax payers face **capital issues** as crucial

resources remain blocked in the form of ITC.

- There are problems in utilizing the unused tax credit even though GST have provisions for it.
- Inverted duty structure has led to a situation where businesses were not able to use the tax credits fully to settle their final output tax liability, leading to accumulation of unused tax credits.
- Thus, it caused **refund-related** issues under the GST regime.

Man Made fibers (MMF)

- Man-made fibres (MMF) are **fibres made by man.**
- They are mainly of two types: **synthetic and cellulosic.**
- **Synthetic fibres** are produced from crude oil
- The main varieties are polyester, acrylic and polypropylene.
- **Cellulosic fibres** are produced from wood pulp.
- The most common natural polymer fibre is viscose, which is made from the polymer cellulose obtained mostly from farmed trees.
- The main varieties are viscose fibre, modal, etc.
- **Fibres from Inorganic Materials**
- The inorganic man-made fibres are fibres made from materials such as glass, metal, carbon or ceramic.

- These fibres are very often used to reinforce plastics to form composites.
- However, the man-made fibre and natural fibre mainly cotton blends are more popular.

Key facts on Man-made fibres (MMF)

- The domestic MMF industry of India mainly comprises of two components: **polyester and viscose**.
- India is the **second largest producer of both polyester and viscose globally**.
- MMF is primarily used to produce **100% non-cotton fabrics and blended fabrics:**

- These are used in readymade garments, home textiles and other industrial textiles.
- Factors that boost the demand of manmade fibres in India are as follows:
 - increasing use in nonwovens and technical textiles
 - changing consumer trends including increasing emphasis on fitness and hygiene,
 - rising brand consciousness,
 - fast changing fashion trends,
 - increasing women participation in workforce.

PRADHAN MANTRI AWAAS YOJANA – GRAMIN COMPLETES 5 YEARS

Recently Pradhan Mantri Awaas Yojana – Gramin has completed its 5 years.

Pradhan Mantri Awaas Yojana-Gramin (PMAYG)?

- PMAY-G was introduced in 2016.
- Central Government came up with the vision to fulfil the **'Housing for All'** scheme by the year 2022.
- **Aim:** To provide pucca house with some of the basic amenities.
- At present, the minimum size of the houses to be built under the scheme has been increased to 25 sq. mt. from 20 sq. mt.

PMAYG Subsidy Scheme

Under the scheme, **beneficiaries can avail** a loan of up to Rs.70,000 from financial institutions.

- Interest subsidy is 3%
- The maximum principal amount for the subsidy is Rs.2 lakh

Features of PMAYG Scheme:

- The cost will be shared in a 60:40 ratio between the Central and State governments in plain areas.
- **In the Himalayan states, northeastern states, and the Union Territory (UT) of Jammu & Kashmir, the ratio is 90:10.**
- 100% financing from the Centre for **Union Territories** including the UT of Ladakh.
- **Beneficiaries are provided** Rs.90.95 per day of unskilled labor from Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).
- Assistance for construction of toilets of up to Rs.12,000 will be provided under **Swachh Bharat Mission-Gramin (SBM-G)**.

Beneficiaries under the Scheme:

- **Families with houses** having one, or two rooms with a kutchra wall and kutchra roof.
- Households without a literate adult above 25 years of age.
- Households without an adult male member aged between 16 and 59 years of age.
- **Households without any adult member** between 16 and 59 years of age.
- Households without any able-bodied members and with a disabled member.
- **Landless households** who derive income from casual labour.
- Scheduled Caste, Scheduled Tribe, and Minorities.

Challenges:

- **Lengthy approval process** is a major barrier towards curbing the cost of projects.
- **Higher GST slab** on elementary products such as cement, tiles and bricks have led to a spike in prices, thus impacting the overall construction costs.
- **Technology** plays a vital role in reducing the cost of construction
- However, India is still a long way from adopting the most efficient technologies required for mass construction.
- A **shortage of skilled workers** poses as a major challenge towards the achievement of the goal of PMAY-G.

FIRST ALL-INDIA SURVEY ON DOMESTIC WORKERS KICKS OFF

Recently, Union Minister for Labour and Employment flagged off the first-ever **All India Survey on Domestic workers**.

Domestic Workers survey

- The Domestic Workers (DW) survey is carried out in **742 districts in 37 states and Union Territories**.
- The survey will cover **all types of domestic services** like cook, driver, housekeeping, tutor (for children), watchman, etc.
- The conducted survey will help the government in policy-making for workers.

Objectives of Survey

- Estimate the number/proportion of DWs at National and State level.

- Household Estimates of Live-in/Live-out DWs.
- Average number of DWs engaged by different types of households.

Draft National Policy on domestic workers

- **Aim:**
 - To protect workers against abuse, harassment, violence and guarantee the rights in the matter of social security.
- **Benefit holders:**
 - 50 lakh domestic workers in the country including maids, drivers, etc.

Silent features:

- Inclusion of Domestic Workers in the existing legislation.

- Domestic workers will have the right to register as workers. Such registration will facilitate their access to rights & benefits accruing to them as workers.
- **Right to form their associations, trade unions.**
- Right to have **minimum wages, access to social security, protection from abuse, harassment, violence.**
- Right to enhance their **professional skills.**
- Protection of Domestic Workers from **abuse and exploitation.**
- **Domestic Workers** to have access to **courts, tribunals, etc.**
- Establishment of a mechanism for **regulation of concerned placement agencies.**

Steps initiated by the government:

- **Domestic Workers Sector Skills Council** has been established

under the Ministry of Skills Development.

- To enable the professionalization of domestic workers and enable their career progression.
- The government conducted **Aam Aadmi Bima Yojana and Pradhan Mantri Suraksha Bima Yojana**
- To provide life and disability coverage to the **unorganized workers**
- The central government inducted **Social security schemes like National Old Age Pension Scheme, Janani Suraksha Yojana.**
- To ensure the social security of workers.
- The government enacted the **Unorganized Workers' Social Security Act, 2008**
- To provide a formulation of social security schemes and life disability cover.

“NFHS-5 SHOWS MOMENTUM TOWARDS ACHIEVING SDG IS GETTING FURTHER ACCELERATED”: MEMBER (HEALTH), NITI AAYOG

Recently, the fifth round of the National Family and Health Survey (NFHS) was released by the Union Health Ministry.

Highlights of the Survey:

Gender Equality:

- India now has **1,020 women for every 1000 men.**

Birth:

- **Births in institutional facilities, such as a hospital, improved by nearly eight percentage points.**

Malnutrition:

Stunting and wasting in children only **dropped** by a maximum of **three percentage points.**

Fertility:

- India hit a **total fertility rate (TFR) of 2.0**, a decrease from the **2.2 in the NFHS-4.**
 - The **urban TFR is 1.6** and the **rural TFR is 2.1.**
 - **According to the United Nations Population Division,** a TFR of about **2.1** children per woman is called **replacement-level fertility.**

Financial Inclusion of women:

- The share of women who had a bank account they themselves use went up from 53% in NFHS-4 to 78.6% in NFHS-5.
 - Similarly, health insurance coverage has increased from 28.7% to 41%.

Marriage:

- The share of women aged 20-24 who married before turning 18 has declined from 27% to 23% in the last five years.

Basic Necessities:

- All states, except Manipur, Meghalaya, Assam and Jharkhand, had over 90% population with access to improved drinking water sources.
- Only Uttar Pradesh, Meghalaya, Assam, Jharkhand and Arunachal Pradesh had less than 95% population living in households with access to electricity.

NFHS-5:

NFHS-5 includes some new focal areas, such as

- Death registration
- Pre-school education
- Expanded domains of child immunisation
- Components of micro-nutrients to children
- Menstrual hygiene
- Frequency of alcohol and tobacco use, which will give requisite input for strengthening existing programmes and evolving new strategies for policy intervention.

National Family Health Survey:

- The National Family Health Survey (NFHS) is a large-scale, multi-round survey conducted in a **representative sample** of households throughout India.
- First survey was conducted in **1992-93**.
- The survey is **conducted** by **Ministry of Health and Family Welfare**, Government of India.
 - **International Institute for Population Sciences (IIPS) Mumbai**, is the **nodal agency**, responsible for providing coordination and technical guidance for the survey.
- The survey provides state and national information for India on fertility, infant and child mortality, the practice of family planning, maternal and child health, reproductive health, nutrition, anaemia, utilization and quality of health and family planning services.
- Each successive round of the NFHS has had **two specific goals**:
 - To provide **essential data on health and family welfare** needed by the Ministry of Health and Family Welfare and other agencies **for policy and programme purposes**.
 - To **provide information** on important emerging **health and family welfare issues**.

Recently, Assam celebrated Lachit Diwas on November 24 to commemorate the heroism of Lachit Borphukan.

Lachit Borphukan

- **Lachit Borphukan** was born in early **seventeenth century** to Momai Tamuli, who was the first Borbarua under the Ahom King Prataap Singha.
- **Borbarua** is the Governor of upper Assam and Commander-in-Chief of the Ahom army.
- He was given positions of **responsibility of the scarf-bearer (Soladhara Barua)** of the Ahom Swargadeo.
- It was a position equivalent to a **Private Secretaryship**, which was regarded as the first step in career of an ambitious diplomat and politician.
- The Ahom kingdom was ruled by a king, called **Swargadeo**, who had to be a descendant of the first king Sukaphaa.
- He was a commander and Borphukan in the Ahom kingdom.
- In the **Ahom system** of governance, **Borphukan was one of the five patra mantris (councillors) who possessed both executive and judicial powers.**
- The Ahom kingdom was a late medieval **kingdom** in the Brahmaputra Valley **in** Assam.
- It maintained its sovereignty for nearly 600 years.

- He was **known for his strategies** which resisted Mughal expansion into the kingdoms of Assam.
- He is best known for his leadership in the **1671** Battle of Saraighat and defeated the Mughal forces under the command of Ramsingh I.
- Later, King Chakradhwaj Singha selected Lachit Borphukan to **lead the army** in the campaign against the Mughals who held Guwahati.
- He died about a year later due to illness.

Battle of Saraighat

- The Battle of Saraighat was a **naval battle** fought in **1671** between the Mughal Empire and the Ahom Kingdom **on the** Brahmaputra River **at** Saraighat, **now in** Guwahati.
- The Mughal army was led by the Kachwaha **king, Raja** Ram Singh I and the Ahom Kingdom was led by Lachit Borphukan.
- The Ahom Army defeated the Mughal Army by brilliant **uses of the** terrain, **clever diplomatic negotiations to buy time**, guerrilla tactics, psychological warfare, military intelligence.
- The Ahom kingdom had a strong navy, which eventually led them to win the battle.
- **The Battle of Saraighat was the last battle in the last major**

attempt by the Mughals to extend their empire into Assam.

- Borphukan is known for his brilliant valour which restricted

the British expansion into the state of Assam.

EMPOWERED COMMITTEE OF NORTH EAST INDUSTRIAL DEVELOPMENT GRANTS REGISTRATION TO 105 INDUSTRIAL UNITS

The Empowered Committee of North East Industrial Development Scheme granted registration to 105 new industrial units in the North East.

North East Industrial Development Scheme (NEIDS):

- **Launched:** 2017 during Five Years Plan
- **Aim:** To promote sustainable industrializations and employment generation in North East regions states.
- **Nodal Agency:** North East Industrial Development Financial Corporation Ltd. (NEDFi)
- It is a scheme that covers eligible industrial units in the manufacturing and service sectors.
- **Objective:**
 - To accelerate economic growth and boost in the process of industrialization in the North-Eastern Region of India.
 - To enhance employment in the North East regions
 - To give preference to eligible industrial units under the Micro, Small and Medium Enterprises (MSME).

Incentives under the Scheme:

- **Central Capital Investment Incentive for the Access to Credit (CCIAC)-**
 - **30% investment** in Plant & Machinery with the upper limit of 5 crore.
- **Central Interest Incentive (CII)-**
 - It provides **3% Working Capital Credit** by the eligible Banks or Financial institutions for the first 5 years.
- **Central Comprehensive Insurance Incentive (CCII)-**
 - **100% Reimbursement** of insurance premium on Plant & Machinery for the period of 5 years.
- **Goods and Service Tax (GST) Reimbursement-**
 - The reimbursement that will be up to the extent of Central Government share of CGST and IGST for the period of 5 Years.
- **Income Tax (IT) Reimbursement-**
 - It is provided for the period of first 5 years.
- **Transport Incentive (TI)-**
 - Up to **20%** of the cost of transportation provided by **railways** for movement of finished goods.

- **20%** cost of transportation through **Inland Waterways** Authority of India.
- **33%** cost of transportation of air by scheduled airlines and Non-Scheduled Operator Permit (NSOP) holders
- **Employment Incentive (EI)-**

- Centre provides **3.67%** of the employer's contribution to the Employees' Provident Fund (EPF).
- **8.33%** Employee Pension Scheme grant of the employer in the scheme of Pradhan Mantri Rojgar Protsahan Yojana (PMRPY).

THE DEPARTMENT OF ANIMAL HUSBANDRY AND DAIRYING TO CELEBRATE "NATIONAL MILK DAY" ON NOVEMBER 26, 2021

The Department of Animal Husbandry and Dairying Celebrated National Milk Day.

- Union Minister will confer **National Gopal Ratna Awards**.

Rashtriya Gokul Mission:

- It is a part of **National Livestock mission**.
- **Established-** 2014
- **Aim:** To improve the milk production and productivity in a scientific manner.
- It is a focussed project under **National Programme for Bovine Breeding and Dairy Development**.

Objectives:

- Development and conservation of **indigenous breeds**
- Breed improvement programme for indigenous cattle **breeds to improve their genetic makeup and increase the stock;**
- Enhancement of **milk production and productivity;**
- **Upgradation of nondescript cattle** using elite indigenous breeds

- **Distribution of disease free high genetic merit bulls** for natural service.

Implementing Agency: State Implementing Agencies (SIA)

Participating Agencies: CFSPTI, CCBFs, ICAR, Universities, Colleges, NGO's, Cooperative Societies.

Initiatives under Rashtriya Gokul Mission:

- **Awards for encouraging farmers societies:**
- **Gopal Ratna awards:**
 - For maintaining **the best herd of Indigenous Breed(s)**
 - For practicing **best management practices**.
- **Categories:**
 - Best Dairy farmer rearing indigenous cattle breeds
 - Best Artificial Insemination Technician (AIT)
 - Best Dairy Cooperative/ Milk producer Company/ Dairy Farmer Producer Organisation

Kamdhenu awards:

- For Best managed Indigenous Herd **by Institutions/Breeders' Societies**.

- **Gokul Gram:**
 - The RGM envisages **establishment of integrated cattle development centres.**
 - **Aim:** to develop indigenous breeds including **up to 40% nondescript breeds.**
 - **Objectives:**
 - To **promote indigenous cattle rearing** and conservation **in a scientific manner.**
 - To **propagate high genetic merit bulls** of indigenous breeds.
 - To **optimize modern Farm Management practices** and promote Common Resource Management.
 - To **utilize animal waste** in economical way.

National Kamdhenu Breeding Centre:

- **Objectives:**
 - Conservation, promotion and development of 41 species of cattle and 13 species of animals.
 - **1000 High Genetic Merit Indigenous animals** will be maintained.
 - **Machinery** for making modern semen centers, veterinary clinics, Biogas plants,
 - Arrangements of **balanced diet, gumutra and dung materials** etc. will also be established.
 - Arrangements for **Vermi-Compost, Silage Pit, Training, Milk Processing** etc. will also be arranged.

- Special emphasis on **development of extinct species.**
- **Rs. 25 crore each has been released to Madhya Pradesh and Andhra Pradesh** for establishment of National Kamdhenu Breeding Centre.
- **E-Pashu Haat- Nakul Prajnan Bazaar:**
 - **e-market portal** connecting breeders and farmers for disease free bovine germplasm

Pashu Sanjivni:

- An **Animal Wellness Programme** encompassing provision of Animal Health cards.
- **Advanced Reproductive Technology:**
 - It includes **Assisted Reproductive Technique-** In-vitro Fertilization (IVF)/ Multiple Ovulation Embryo Transfer to improve availability of disease-free female bovines.
- **National Bovine Genomic Center for Indigenous Breeds (NBGC-IB):**
 - It will be established for **selection of breeding bulls** of high genetic merit.

Dr. Verghese Kurien:

- He was a **social entrepreneur** who made dairy farming India's largest self-sustaining industry.
- He is known as **Father of White Revolution** and **Milkman of India.**

- He started **Operation Flood**, which is known as the world's largest agricultural program.
- He **established 30 institutions** that are run by various farmers and workers.
- He has also established **Amul Brand**.

- Due to his efforts **India became the largest producer of milk in 1998**.
- He is felicitated with **15 honorary degrees** and many renowned awards.

VAN DHAN YOJANA OF TRIFED GENERATING TRIBAL ENTREPRENEURSHIP IN NAGALAND

Van Dhan Yojana of TRIFED is generating Tribal entrepreneurship in Nagaland.

Van Dhan Scheme:

- It is a **Market Linked Tribal Entrepreneurship** Development Program.
- It is an **initiative targeting livelihood generation for tribal** gatherers and transforming them into entrepreneurs.
- **Launched-** 2018
- **Aim** - to improve tribal incomes through value addition of tribal products.
- **Nodal Department-** Ministry of Tribal Affairs.
- **Nodal Agency-** Tribal Cooperative Marketing Development Federation of India (TRIFED)
- **Objective-**
 - To set-up tribal community-owned **Van Dhan Vikas Kendra Clusters** (VDVKCs) in predominantly forested tribal districts.

- To strengthen them into **Tribal Producer Companies**.

Features of the scheme:

- It is a **Mechanism for Marketing of Minor Forest Produce** (MFP)
- It works through **Minimum Support Price (MSP) & Development of Value Chain**.
- **10 Self Help Groups (or Van dhan Kendras) of 30 Tribal** gatherers is constituted.
 - 15 such tribal SHGs / Van dhan Kendras, each comprising of up to 20 tribal NTFP gatherers or artisans (about 300 members) form Van Dhan Vikas Kendra Clusters (VDVKCs).
- During the year 2020-21, Govt. of India has sanction for an amount of **Rs. 144.60 lakh for 10 Van Dhan Vikas Kendra**.
- It is **100% Central Government Funded** with TRIFED providing Rs. 15 lakhs for each 300 member Van Dhan Kendra.



A MOVEMENT TO ROOT OUT INVASIVE ALIEN SPECIES

Environmentalists, farmers, and green activists, have come together to form a forum called **Movement Against Biological Invasions** to prevent flora and fauna increasingly under siege from invasive species in Maharashtra.

Invasive Species?

- **An invasive species** is an organism that is not indigenous, or native, to a particular area.
- It can cause great economic and environmental harm to the new area.
- The species **adapt to a new area** easily and reproduce quickly.
- Many invasive species are introduced into a new region accidentally.
- **Example:** Zebra mussels are native to the Black Sea and the Caspian Sea in Central Asia. However, Zebra mussels arrived in the Great Lakes of North America accidentally. There are now so many zebra mussels in the Great Lakes that they have threatened native species.

How they are Spread?

- They can be introduced to an area by **ship ballast water**, firewood, accidental release, and by people.
- **Human actions** are the primary means of invasive species introductions.

Threats

Invasive species can cause harm to wildlife. It can **breed and spread quickly**, taking over an area.

Direct threats:

- **Preying on native species**
- Outcompeting native species for food or other resources
- **Carrying disease**
- Preventing native species from reproducing or killing a young native species.

Indirect threats:

- It can change the **food web** in an ecosystem by destroying or replacing native food sources.
- It can alter the **diversity of species** that are important habitat for native wildlife.
- Some species can change the conditions in an ecosystem, like **changing soil chemistry** or the intensity of wildfires.

Examples of Invasive Species

- **Cogon grass** is an Asian plant that arrived in the United States as seeds in packing material. It provides no food value for native wildlife, and increases the threat of wildfire as it burns hotter and faster than native grasses.
- **Feral pigs** will eat almost anything, including native birds. They compete with native wildlife for food sources like acorns. Feral pigs spread diseases, such as brucellosis, to people and livestock.

- **European green crabs** found their way into the San Francisco Bay area in 1989. They outcompete native species for food and eat huge quantities of shellfish, threatening commercial fisheries.
- **Water hyacinth** is an aquatic plant, introduced to the U.S. from South America. In the wild, it forms dense mats, reducing sunlight for submerged plants and aquatic organisms, crowding out native aquatic plants.

CALL TAKEN DUE TO COVID, POLLUTION': DELHI DOUBLES DOWN ON CRACKER BAN

The Delhi government urged high court, that it will not allow any firecrackers, including green crackers, to be sold and used in the Capital in wake of Covid-19 pandemic and **deteriorating air quality.**

Green Crackers?

- **Developed By:** Council for Scientific and Industrial Research (CSIR).
- **Green crackers** emit pollutants at a 30% lesser rate than their conventional counterparts.

Key Features:

1. Green crackers are made using less polluting raw materials.
 - Their **chemical formulation** ensures reduced particle emission into the

atmosphere by suppressing the dust produced.

2. While regular crackers emit about 160 decibels of sound, green crackers' **emission rate is limited** to 110-125 decibels
3. **Manufacturers** need to sign a deal with the CSIR in order to make fireworks using the green cracker formulation.
4. There are three types of green crackers available in India - SWAS, STAR and SAFAL.
5. Green crackers in many cases, use **polluting chemicals** like aluminum, barium, potassium nitrate and carbon, but the quantity is reduced which in turn lowers the emission by about 30 per cent.

STATE OF CLIMATE IN 2021: EXTREME EVENTS AND MAJOR IMPACTS

Recently, United Nations World Meteorological Organization (WMO) launched State of Climate Report 2021.

Highlights:

- The world has **warmed 1.1°C** since industrialization in the 19th century.
- The **atmospheric concentration** of carbon dioxide, has reached beyond **413 parts per million (ppm)**.
- **Methane** and nitrous oxide, also reached record levels of 262% and 123% of their preindustrial levels.
- The **ocean absorbs** on average 23% of the CO₂ that human emits.
 - Carbon changes the ocean chemistry, making it more acidic.

Key Points:

Greenhouse Gases

- In 2020, greenhouse gas concentrations reached **new highs**.
- **Levels of carbon dioxide (CO₂)** were 413.2 parts per million (ppm), methane at 1889 parts per billion (ppb) and nitrous oxide at 333.2 ppb, respectively, 149%, 262% and 123% of pre-industrial levels. The increase has continued in 2021.

Floods and Droughts

- More than 300 people died in flash flooding in China and losses reached almost \$18 billion.
- **Western Europe** had record rain, flooding and landslides that killed more than 200 people.
- Much of subtropical **South America** experienced drought.

- Madagascar faces a historic drought-related **malnutrition crisis**.

Temperatures

- The **global mean temperature** for 2021 was about 1.09°C above the 1850-1900 average.
- 2021 will be between the 5th and 7th warmest year on record and 2015 to 2021 will be the **seven warmest** years on record.
- 2021 is less warm than recent years due to the influence of a moderate **La Niña** at the start of the year.
 - La Niña has a temporary cooling effect on the global mean temperature and influences regional weather and climate.
- The imprint of La Niña was seen in the **tropical Pacific** in 2021.

Ocean

- The upper 2000 m depth of the ocean continued to warm in 2019 reaching a new record high.
- Much of the ocean experienced at least one **'strong' Marine Heatwave** in 2021.
- The Laptev and Beaufort Sea in the **Arctic** experienced "severe" and "extreme" marine heatwaves from January to April 2021.
- **Open ocean surface pH has declined** globally over the last 40 years and is now the lowest for at least 26,000 years.
 - As the **pH of the ocean** decreases, its capacity

to absorb CO₂ from the atmosphere also declines.

Sea Level

- **Global mean sea level** changes due to ocean warming via thermal expansion of sea water and land ice melt.
- **Sea level** continued to rise by **4.4 millimeters** a year as water warms and expands, and higher temperatures melt glaciers.
- The mean global mean sea level rise was 2.1 mm per year between 1993 and 2002 and 4.4 mm per year between 2013 and 2021.
- This was mostly due to the accelerated **loss of ice mass** from glaciers and ice sheets.

Glaciers and Ice Sheets

- A warm, dry summer in 2021 in **western North America** resulted in melting of region's mountain glaciers.
- The **Greenland Ice Sheet** melt extent was close to the long-term average through the early summer.
- 2020 saw rain for the first time at the **Greenland ice sheets** and brought fire-inducing tropical temperatures to Western Canada.

Socio-Economic Impacts of climate change:

- Following a peak in **undernourishment** in 2020 (768 million people), there is a decline in global hunger to around 710 million in 2021 (9%), but the numbers in many countries were already higher than in 2020
- This striking increase (19%) was mostly felt among groups already suffering from food crises or worse rising from 135 million people in 2020 to 161 million by September 2021
- **People are facing** starvation and a total collapse of livelihoods mostly in Ethiopia, South Sudan, Yemen, and Madagascar (584 000 people).
- **Ecosystems** are degrading at an unprecedented rate, which is anticipated to accelerate in the coming decades.
- The degradation of ecosystems is limiting their ability to support human well-being and **harming their adaptive capacity** to build resilience.

IFAD: CLIMATE CHANGE ADAPTATION PROGRAM CAN ASSIST 10 MILLION PEOPLE IN ASIA AND THE PACIFIC

Recently, International Fund for Agricultural Development (IFAD) launched Building climate resilience in the Asia Pacific region report.

- It will help vulnerable people in the region become resilient to climate change.

Highlights:

- **Climate change** is posing an additional threat to the Asia-Pacific region.
- The rural population dependent on rainfed agriculture has been affected.
- Climate, weather, and **geophysical hazards** cost the region an estimated \$780 billion annually.
- The Enhanced Adaptation for Smallholder Agricultural Programme (ASAP+) will channelling an additional US\$500 million in climate finance to support 10 million vulnerable people, particularly women and youth.

Recommendations:

- There should be effective **use of technology** to accelerate climate risks and impacts assessments.
- **Digital mapping** and other technologies, along with local knowledge can be useful to identify climate-vulnerable hotspots.
 - These hotspots can be provided focused support to adapt.
- **Public sector initiatives** should be combined with private sector players, providing inputs and machinery, advisory services, technology solutions and market access to be able to market more profitable products.
- **Private players** can provide the new inputs needed by small farmers when they adopt new crops and cultivation techniques.

- They should connect them with markets for new, more profitable kinds of produce.

Haor Infrastructure and Livelihood Improvement Project:

- The project will help reduce poverty in five districts of the Haor basin of Bangladesh: Netrakona, Habiganj, Brahmanbaria, Kishorganj and Sunamganj.
- It includes poor rural people, smallholder farming households with less than 2.5 acres of land.
- Women from poor households and small traders and intermediaries in local markets.
- **Aim:** To improve road infrastructure, build local capacity and expand access to natural resources, technology, and markets.

IFAD:

- The International Fund for Agricultural Development (IFAD) is a specialized agency of the United Nations.
- It was established in December 1977.
- **Headquarters:** Rome, Italy
- **Aim:** To eradicating poverty and hunger in developing countries.
- It works in remote rural areas of the world to help countries achieve the Millennium Development Goals.
- Through **low-interest loans** and grants, IFAD develops and finances projects that enable rural poor people to overcome poverty.

Functions:

- IFAD **tackles poverty**, acts an advocate for the small farmers, herders, fisherfolk, landless workers, artisans and indigenous peoples who live in rural areas.
- It **works with governments**, donors, non-governmental organizations, local communities, and many other partners to fight the underlying causes of rural poverty.
- IFAD **support rural development** programmes and projects, increase poor people's access to financial services, markets, technology, land, and other natural resources.

What is (ASAP+)?

- The **Enhanced Adaptation for Smallholder Agriculture**

Programme (ASAP+) is a climate financing mechanism to channeling climate finance to small scale producers.

Objectives:

- Help leverage existing **climate finance** for small-scale agricultural producers.
- Increasing the resilience of small-scale producers, transforming food systems from production to consumption.
- **Reducing climate change** threats to food security.
- Helping to **mitigate carbon** and contribute to achieving countries' commitments, including **nationally determined contributions (NDCs)** and National Adaptation Plans (NAPs).

WHAT IS THE GLOBAL METHANE PLEDGE, AND WHY IS METHANE SIGNIFICANT FOR CLIMATE CHANGE?

Recently, The Global Methane Pledge was launched at the ongoing UN COP26 climate conference in Glasgow.

Global Methane Pledge?

- **Announced:** The pledge was first announced in September by the US and EU.
- It is an agreement to **reduce global methane emissions**.
- **Aim:** To cut down **methane emissions** by up to 30 per cent from 2020 levels by the year 2030.
- Methane accounts for about half of the 1.0 degrees Celsius net rise in global average temperature since the pre-industrial era.
- Rapidly reducing methane emissions is complementary to

action on carbon dioxide and other greenhouse gases, and is regarded as the single most effective strategy to reduce global warming.

Methane?

- Methane is a greenhouse gas, which is also a **component of natural gas**.
- Because it is a **greenhouse gas**, its presence in the atmosphere increases Earth's temperature.
- The various sources of methane including human and natural sources.
 - Human sources of methane include landfills, oil and natural gas systems,

agricultural activities, coal mining, wastewater treatment, and certain industrial processes.

- The oil and gas sectors are among the largest contributors to human sources of methane.
- The methane is held underground within the coal and is extracted by drilling into the coal seam and removing the groundwater.

Why is dealing with methane important for climate change?

- Reducing methane emissions can **deliver a host of other energy, safety, and local air and water quality benefits.**
- Methane contributes to background tropospheric ozone levels both as an ozone precursor and by contributing to global warming, which raises daytime temperatures.

- By reducing global methane emissions, one can **lower tropospheric ozone formation and reduce associated mortalities, particularly in equatorial regions.**

- Leachate from landfills and manure and waste from agricultural facilities can infiltrate local waters and cause disease, eutrophication, and other environmental problems.
- Producing energy from recovered methane can also help to **avoid the use of higher CO2 and pollutant intensive energy resources such as wood, coal, and oil.**
 - It also provides local sources of alternative energy that can spur local economic development.

WHEAT COULD EXPAND TO HIGHER LATITUDES IF WARMING TRENDS CONTINUE: STUDY

According to the recent study, the cultivation of wheat could expand to higher latitudes by 2030, if global warming trends continue.

Wheat Crop Cultivation:

- Wheat is **the main cereal crop** in India.
- It is **the second important food** crop next to rice.
- **Wheat producing regions in India:** Uttar Pradesh, Punjab, Haryana, Madhya Pradesh, Rajasthan, Bihar and Gujarat.

Climate:

- Wheat is mainly a plant of mid-latitude grasslands.
- It requires cool temperature (ideally 10° to 15°C in winter and summer temperature varying from 21°C to 26°C) with low to moderate rainfall.
- **Winter and spring wheat** are the two major types of the crop.
- Winter wheat is always sown **in the fall;**
- Spring wheat is sown in **the spring** but can be sown in the fall where **winters are mild.**

Soil:

- Soils with a **clay loam or loam texture**, good structure and **moderate water** holding capacity are ideal for wheat cultivation.

- **Heavy soil with good drainage** is suitable for wheat cultivation under dry conditions.

'DRAMATIC' BOOST NEEDED IN CLIMATE ADAPTATION: UN ENVIRONMENT AGENCY

The United Nations Environment Programme (UNEP) recently released the **Adaptation Gap Report 2021: The Gathering Storm.**

Highlights:

- The gap between **costs of adaptation** and the current financial flow is widening.
- Estimated adaptation costs in developing countries are **5 to 10 times greater** than current public adaptation finance flows.
- The costs of adaptation are estimated at **\$140-300 billion per year by 2030** and **\$280-500 billion per year by 2050** for developing countries.
- **Climate finance** flowing to developing countries for mitigation and adaptation planning and implementation reached \$79.6 billion in 2019.
- Even if the world limits warming to 1.5°C, many climate risks remain irreversible.

Obstacles:

- \$16.7 trillion of fiscal stimulus has been deployed around the globe, but only a small portion of this funding has targeted adaptation.
- Fewer than **one-third of 66 countries** studied had explicitly

funded COVID-19 measures to address climate risks as of June 2021.

- The heightened **cost of servicing debt**, with decreased government revenues, will hamper future government spending on adaptation, particularly in developing countries.

Progress in Planning and Implementation:

- Around 79% of countries have adopted at least **one national-level adaptation** planning instrument, like plan, strategy, or law, with an increase of seven per cent since 2020.
 - 99% of countries that do not have such an instrument in place are in the process of developing one.
- 65% of the countries have one or more sectoral plans in place, and 26% have one or more sub-national planning instruments.

Suggestions:

- More and stronger implementation of **adaptation actions** is needed to avoid climate risks, particularly in developing countries.
- **Governments** should use the fiscal recovery from the pandemic

to prioritize interventions that achieve economic growth and climate change resilience.

- They should set up **integrated risk management** approaches and establish flexible disaster finance frameworks.

- **Advanced economies** should help developing countries to free up fiscal space for green and resilient COVID-19 recovery efforts through concessional finance and substantive debt relief.

TURTLE SMUGGLING CONTINUES: FOREST OFFICIALS SEIZE 40 TURTLES FROM ODISHA'S MALKANGIRI

Around 40 Indian flapshell turtles (*Lissemys punctata*) were released from a smuggling racket.

Indian flapshell turtles (*Lissemys punctata*):

- It is a **freshwater species of turtle**.
- The "flap-shelled" name comes from the presence of **femoral flaps located on the plastron**.
 - Plastron- It is a flat part of the shell structure of a turtle
- These flaps of skin cover the limbs when they **retract into the shell**.

Peculiar features:

- The nose is **short and stout**.
- The edges of the **jaws are smooth**.
- The **claws are large and heavy** and the **tail is very short**.
- Indian flapshell turtles are **omnivores**. They feed on frogs, fishes, shrimp, snails, aquatic vegetation, plant leaves, flowers, fruits, grasses, and seeds.

Habitat:

- They are found in **Pakistan, India, Sri Lanka, Nepal, Bangladesh (Indus and Ganges drainages), and Myanmar**
- They live in the **shallow, quiet, often stagnant waters** of rivers,

streams, marshes, ponds, lakes and irrigation canals, and tanks.

- They prefer **waters with sand or mud bottoms** because of their tendency to burrow.

Conservation Status:

- **IUCN Red List:** Vulnerable
- **CITES:** Appendix II
- **Wildlife (Protection) Act, 1972:** Schedule I

Threats:

- Turtles are **smuggled and killed** for their supposed aphrodisiac properties, livestock feed, to make leather from their skins, to make potions from their blood and to use as fishing bait.
- Turtles are also used for **meat and medicines**.

Conservation efforts:

- **KURMA app** is a mobile-based application aimed at turtle conservation.
 - It was launched on the occasion of **World Turtle Day** (23rd May)
 - It was developed by the Indian Turtle Conservation Action Network (ITCAN) in collaboration with the Turtle Survival Alliance-India and

Wildlife Conservation Society-India.

- **Indian Turtle Conservation Action Network (ITCAN)**
 - It is a citizen science initiative launched to provide a platform

for the exchange of information on turtles and to provide assistance to enforcement forest departments.

ROADKILL AND EXTINCTION RISK FOR LEOPARDS IN NORTH INDIA

According to a recent study, the leopard population of North India is at highest risk due to Roadkill and extinction.

The leopard (Panthera pardus):

- Leopards are part of the **cat family**.
- The name "leopard" comes from the Greek word **leopardus**, which is a combination of **leon** (lion) and **pardus** (panther).

Peculiar Features:

- They are well known for their **cream and gold spotted fur**; some leopards have black fur with dark spots.
- Males and females **vary in weight**.
- They are **nocturnal**, hunting prey at night.
- Leopards are **carnivores**
- They are very **strong swimmers**.

Habitat:

- They live in **rocky landscapes** with dense bush and riverine forests, but they have

been highly adaptable in both **warm and cold climates**.

- They are largely restricted to **Sub-Saharan Africa with small numbers also found in India, Pakistan, Malaysia, China**

Conservation Status:

- **IUCN Red List:** Vulnerable
- **CITES:** Appendix I
- **Wildlife (Protection) Act, 1972:** Schedule I
 - Animals in Schedule I are provided **absolute protection** against **hunting and commercial exploitation** and attracts maximum penalty for the violation of such provisions.

Threats:

- **Poaching** for illegal trade in body parts
- **Habitat Loss**
- **Human-Leopard conflict**
- **Deaths in Road accidents.**

AMAZON, APPLE, MAHINDRA JOIN FIRST MOVERS COALITION TO DRIVE ZERO-CARBON TECH DEMAND

Amazon, Apple, Mahindra join First Movers Coalition which was launched at the **COP26 Summit** being held in **Glasgow**.

The First Movers Coalition:

- It's a platform for companies to **commit to buying zero-emission goods and services** by 2030.

- **Aim:** to **unlock the untapped potential of emerging technologies** needed to decarbonize the world by 2050.
- **Objective:** to create **demand for low-carbon technologies**, make them **cost-**

competitive and build the clean supply chains of the future.

- It works across **eight key sectors:** steel, cement, aluminium, chemicals, shipping, aviation, trucking, direct air capture.

LUNG FUNCTION HIT BY STUBBLE BURNING: STUDY

As per a study, Pollution from stubble burning significantly reduced lung function and is particularly harmful to women in rural Punjab.

Highlights:

- The study was conducted in six villages of Patiala, Punjab and spanned in two phases.
- The concentrations of **PM2.5**, increased more than twice, from 100 g/m³ to 250 g/m³.
 - These are around 10-15 times higher than the **World Health Organisation's** prescribed air quality standards.
 - The WHO's guidelines prescribe annual PM2.5 average at 5 ug/m³ and PM10 annual average at 15 ug/m³.
- A two to **three-fold** increase was noted in most of the respiratory symptoms including wheezing, breathlessness on exertion, cough, skin rashes, runny nose, or itchiness of eyes etc.
- The highest number of **respiratory complaints** were reported by the elderly population (>40-60).
- It was lowest in the younger age group (>10-18) during crop burning period.

- There was decline in lung function with increase in PM2.5 concentration across all age groups.
- There was a **10-14% decline** in lung function in men and nearly 15-18% decline in women.

Stubble Burning?

- **Stubble burning** is the act of removing paddy crop residue from the field to sow wheat.
- It's usually required in areas that use the 'combine harvesting' method which leaves crop residue behind.

Environmental and Health Risk:

- Crop residue burning release
 - 149.24 million tonnes of **carbon dioxide** (CO₂)
 - Over 9 million tonnes of carbon monoxide (CO)
 - 0.25 million tonnes of oxides of Sulphur (SOX)
 - 1.28 million tonnes of particulate matter
 - 0.07 million tonnes of black carbon.
- **The heat** from burning paddy straw penetrates 1 centimeter into the soil, elevating the temperature to 33.8 to 42.2 degree Celsius.

- This kills the bacterial and fungal populations critical for a fertile soil.
- Burning of crop residue causes **damage** to other micro-organisms present in the upper layer of the soil as well as its organic quality.

- 84.5 per cent people suffer from **health problem** due to increased incidence of smog.
- 76.8 per cent people reported **irritation in eyes**, 44.8 per cent reported irritation in nose, and 45.5 per cent reported irritation in throat.

LATE ORDOVICIAN MASS EXTINCTION: RESEARCH LOOKS AT NEW REASON FOR FIRST MASS EXTINCTION ON EARTH

According to the recent study, Late Ordovician mass extinction is the reason behind Earth's first mass extinction.

Key Findings:

Cause of mass extinction:

- The cooling climate during **Late Ordovician period** likely changed the ocean circulation pattern.
- **This** caused a **disruption in the flow of oxygen-rich water from the shallow seas** to deeper oceans, leading to a mass extinction of marine creatures.

The other big extinction events were:

- **The Devonian mass extinction** (about 375 million years ago) wiped out about 75% of the world's species.
- **The Permian mass extinction** (about 250 million years ago) also known as the Great Dying caused the extinction of over 95% of all species.
- **The Triassic mass extinction** (200 million years ago) eliminated about 80% of Earth's species, including some dinosaurs.

AT FAULT FOR A FROTHY YAMUNA: RAW SEWAGE, FROTHING AGENTS

As per the experts, the froth formation in Yamuna is a clear symptom that the river in that stretch is dead.

River Frothing:

- River frothing is one of the signs of the exceptionally **high levels of pollution in the river**.

The main causes of river frothing are:

Natural Causes:

- **Dead and decaying parts** of plants contain fats molecules that do not mix with water.
- They form an **invisible floating layer** on the water surface. When

the water gets disturbed by waves, this fatty layer gets beaten into a froth.

- The foam made from organic matter in rivers and lakes can last for a long time.

Manmade Causes:

- The **high level of phosphates** in the rivers is what causes such foam to build up.
 - Phosphates are an ingredient used in many **detergents** which are designed to reduce the

surface tension of water. These compounds make cleaning a lot easier.

- However, these phosphates persist in water, which leads to **eutrophication**.
 - **Eutrophication** is a process by which a water body becomes enriched with minerals and nutrients, causing the growth of algae that in turn cuts off oxygen from mixing

with the water and sunlight from reaching the depths of the water body.

- This **lowers the oxygen content**, killing off marine life that is essential to maintain the quality of water.
- These phosphates are responsible for the alarming amount of foam that forms on the surface of the river, similar to the foam created by detergents.

‘GLOBAL SEA LEVELS ROSE BY A FACTOR OF TWO WITHIN 10 YEARS’: WMO

As per the latest report of World Meteorological Organisation (WMO), the mean global **sea level rise** was 2.1mm per year between 1993 and 2002 and 4.4mm per year between 2013 and 2021.

Ghoramara Island:

- It is located **92 km south of Kolkata in the Sundarbans Delta complex** of the **Bay of Bengal**.

- Every year, with houses and acres of land being swallowed by the sea, the **topography** of the island alters.
- The rapid erosion of the island, has grabbed the attention of those attempting to understand how rising sea levels and climate change are impacting lives and migration patterns.

GLOBAL RESILIENCE INDEX INITIATIVE

Recently, a global coalition of ten organisations launched the **Global Resilience Index Initiative (GRII)**.

Highlights:

About:

- It was launched during the **UNFCCC Conference of Parties (CoP) 26** adaptation day (8th November 2021), it will be the **world’s first curated, open-source reference index**.
- It has been launched to **build a universal model for assessing resilience to climate risks**.

- It will **provide reference data on climate and natural hazard risks** to inform and protect populations and economies, particularly in emerging and developing countries, form a basis for mobilising the trillions of investment needed to meet the **Paris goals** on climate-resilient development.
- It **can be used in aggregated risk management** across sectors and geographies.
- **Goal:** The coalition wants to achieve two immediate goals.

- First, they want to **provide global open reference risk data** developed using insurance risk modelling principles.
- Second, they want to **provide shared standards and facilities applicable to a wide range of uses:**
 - **Corporate climate risk disclosure.**
 - National adaptation planning and reporting.
 - Planning of pre-arranged humanitarian finance.
 - **Partners & Supporters:** GRII has been initiated with partial funding and in-kind contributions from the insurance sector and partner institutions such as:
 - **Coalition for Disaster Resilient Infrastructure (CDRI)**
 - Coalition for Climate Resilient Investment (CCRI)

Need:

- Natural **catastrophes cost nearly USD 200 billion globally in 2020.** Since 1970, over 2 million people have

died in climate-related disasters; 9 out of every 10 in developing countries.

- Almost **every country has felt the harsh impact of climate change** in recent years in some form or another.
- Systems and economies resilient to climate disruption **can save millions of lives and livelihoods.**

Significance:

- The outcomes of this risk analysis **will help close the insurance protection gap and direct investment and aid to where they are needed the most.**
- It will **help global economic sectors** understand, in concrete terms, the value of building climate resilience and the costs of doing nothing, this **will address the data emergency that is contributing to the climate crisis.**
- It will **enable asset owners to compare portfolio risks** across geographies and hazards, as well as helping countries to prioritise **national adaptation investments.**

INDIA IN TOP 10 IN CLIMATE PERFORMANCE RANKING, SAYS NEW REPORT

The global Climate Change Performance Index (CCPI) was recently released by the German watch, along with Climate Action Network (CAN) and New Climate Institute on the side-lines of the COP26.

Report:

- It evaluates **60 countries and the European Union** on 4 categories, with 14 indicators: **i) Greenhouse gas emissions, ii) Renewable energy, iii) Energy use and iv) climate policy.**

Highlights:

India related highlights

- India's rank: 10th
- India's performance was rated **high in the GHG Emissions, Energy Use, and Climate Policy** categories, and **medium in Renewable Energy.**

Global highlights

- No country performed well enough in all index categories to achieve an overall very high rating in CCPI.

- Among G20 countries (responsible for 75% of world's GHG emissions), UK (7th), India (10th), Germany (13th), and France (17th) are four G20 countries among the high-performers.
- **China** is the current **biggest polluter** in world.

Reason for India high performance:

- **India aims** to achieve a target of renewable electricity capacity of 450 GW and a 30% electric vehicle share by 2030.
- India's considerable improvement of renewables targets and the focus on implementation and achievement of **Nationally determined contributions** (NDC) targets.
- There have been initiatives to **promote more electric vehicles** in the transport sector.

Concern:

- No Indian states have announced a clear coal phase-out.
- In fact, the pipeline of proposed coal power plant development is the world's second largest. This shows that India is indirectly supporting fossil fuels.

Suggestions:

- Initiatives can be taken to **promote more electric vehicles with better infrastructure** in the transport sector.
- India should set an **explicit net zero target for 2050**.
- India should **leverage its domestic success on renewables and emissions** intensity into international initiatives.
- India should take steps to strengthen **policies on climate vulnerability, adaptation, and resilience building**.

COP26 SPECIAL REPORT ON CLIMATE CHANGE AND HEALTH

Recently, World Health Organization released 2021 WHO Health and Climate Change Global Survey Report at the ongoing 26th **Conference of Parties** (CoP26) in Glasgow.'

The report **is based on a triennial, voluntary survey sent to all 194** WHO member states and a small number of non-member territories.

Highlights:

- 49 of the 95 respondent countries (52 percent) have a **national health and climate change plan** or strategy in place.
- The remaining 25 percent of countries (24 out of 95) have a plan or **strategy under development**.

- Two-thirds (67%) of surveyed countries have conducted a climate change and health vulnerability and adaptation assessment.
- Less than 40% of countries include weather and climate information in their health surveillance systems for climate-sensitive diseases.
- Only one-third of surveyed countries have climate-informed health early warning systems for heat-related illness and mortality from extreme weather events.
- Growing number of countries (27%) have conducted assessments of the climate

resilience of their health care facilities.

- Only a small proportion of ministries of health in **low-and-lower-middle-income** countries (**LLMICs**) (28%) are currently receiving international funds to support climate change and health work.
- Countries have significantly increased health considerations in their **Nationally Determined Contributions** (NDCs).

Conference of the Parties (COP)

- It is the supreme decision-making body of an international **Convention**.
- All States that are Parties to the **Convention** are represented at the COP, at which they review the implementation of the Convention.
- As well as any other legal instruments that the COP adopts and takes decisions necessary to promote the effective implementation of the Convention.
- All States that are Parties to the **Convention** are represented at the COP.
- At CoP, they review the:

- Implementation of the Convention.
- Other legal instruments that the COP adopts and takes decisions necessary to promote implementation of the Convention.
- It also looks after **institutional and administrative** arrangements.
- **Aim:**
 - To review the national communications and emission inventories submitted by Parties. Based on this information.
 - To assess the effects of the measures taken by Parties and the progress made in achieving the ultimate objective of the Convention.

Key Facts:

- The first COP meeting was held in **Berlin, Germany** in March 1995.
- The COP meets in Bonn, the seat of the secretariat unless a Party offers to host the session.
- The COP Presidency rotates among the five recognized UN regions that are **Africa, Asia, Latin America, the Caribbean, Central and Eastern Europe, and Western Europe**.

STUDY IDENTIFIES INDIA AMONG GLOBAL FLASH DROUGHT HOTSPOTS FROM 1980-2015

Recently, a new study has identified India among global flash drought hotspots from 1980-2015.

Flash drought:

- Flash drought is the **rapid onset or intensification of drought**.

- It is set in motion by **lower-than-normal rates of precipitation**, accompanied by **abnormally high temperatures, winds, and radiation**.

- Flash droughts **poses a risk to agriculture, ecosystems, and water availability.**

Highlights of the study

- There is a **7-8-fold increase** in the frequency of flash droughts in India due to the concurrent occurrence of extremely dry and hot periods during the monsoon season and greenhouse emissions.
- The Indian summer monsoon varies across different time scales such as **interannual** or **diurnal**, but **the intra seasonal variations** are the most

prominent and crucial ones that impact agriculture production.

- The intra seasonal variation in the monsoon along with **warmer temperatures** will increase the risk of flash droughts.
- An increased frequency of flash drought poses a major risk to crop production due to **soil moisture depletion** and intra seasonal monsoon variation.
- 10-15 %of areas under the cultivation of rice and maize were affected by flash droughts during the monsoon seasons in India between 1951 and 2018.

LANDSLIPS HIT KOTTAYAM, PATHANAMTHITTA HIGH RANGES

Recently, the eastern high ranges of Kottayam and Pathanamthitta experiences the spell of extreme showers and were hit by a series of **landslides.**

What is a landslide?

- A landslide is defined as **the movement of a mass of rock, debris, or earth** down a slope.
- Landslides are a type of “mass wasting,” which denotes any down-slope movement of soil and rock under the direct influence of gravity.
- The term "landslide" encompasses five modes of slope movement: **falls, topples, slides, spreads, and flows.**
- These modes of slopes are further subdivided by the type of geologic material (bedrock, debris, or earth).
- The landslides types examples are:

- Debris flows**
 - Sometimes referred to as mudslides, mudflows, lahars, or debris avalanches—are common types of fast-moving landslides.
- Rock falls**
 - Rockfalls are a newly detached mass of rock falling from a cliff or down a very steep slope.

Causes of landslide

- Gravity is generally the force driving landslide movement.
- Factors that trigger landslide movement include heavy rainfall, erosion, poor construction practices, freezing and thawing, earthquake shaking, and volcanic eruptions.
- Landslides are typically associated with periods of heavy rainfall or rapid snowmelt and tend to worsen the effects of flooding.

- Areas burned by forest and brush fires are particularly susceptible to landslides.

Mitigation measures to prevent landslides in India

- Early warning systems and monitoring systems should be installed in **landslide-prone areas**.

- Hazard mapping can be done to identify the areas which are more prone to landslides.
- Restriction on the **construction** in the risky areas should be imposed.
- Afforestation programs should take place to reduce landslides in a **particular area**.

EARTH'S FIRST LANDMASS EMERGED IN SINGHBHUM: STUDY

A study has found that earth's earliest continental landmass was created from Jharkhand's Singhbhum region 3.2 billion years ago.

- Earlier, it was believed that continents rose from the **oceans about 2.5 billion years ago**.
- **How Scientists conducted the study?** They found **sandstones** in Singhbhum having signs of ancient river channels over 3.2 billion years old, representing the earliest crust exposed to air.

Sandstones:

- Sandstone is a sedimentary rock composed of **sand-size grains of mineral, rock, or organic material**.
- It is formed through **transportation, deposition, compaction and cementation of different mineral composition of sand grains**.

Properties:

- **Texture:** Clastic (only noticeable with a microscope)

- **Hardness:** Variable, soft to hard, dependent on clast and cement composition.
- **Colour:** Variable through grey, yellow, red to white
- Sandstone can form **under the sea or on land**.

Sandstone Formation:

- It is formed by fragments of a **pre-existing rock or be mono-minerallic crystals**.
- It contains a **cementing material** that binds the sand grains together.
- The most common cementing materials are **silica and calcium carbonate**.

Where is the Sandstone found?

- Rivers
- Lakes
- Deserts
- Deltas
- Beach and shoreface sands

Uses:

- Sandstone was used **domestic construction**.
- It has also been used for **artistic purposes** to create ornamental fountains and statues.
- Sandstones are **easy to work**.

- They are used to **make grindstones and for sharpening blades.**

SC WEIGHS SECURITY, GREEN WORRIES OVER CHAR DHAM ROAD EXPANSION PROJECT

The Supreme court has addressed the environmental impacts and strategic importance of road expansion along the Char dham project, considering the army's request for upgradation.

Genesis:

- **2018:** The government published a circular stipulating **maximum road carriageway width of 5.5 metres to minimise the risk of landslides.**
- **September 2020:** The supreme court ordered the Ministry of Road Transport and Highways to follow the 2018 circular on the Char Dham highway project.
- **November 2021:** Central government asked supreme court to modify the September 2020 order by allowing broadening of the road.
- **Rational behind government's plea:**
 - The roads in the char Dham project are **strategic as it connects the India-China border** with the Army camps in Dehradun and Meerut where missile bases are located.
 - Thus, widening the road (i.e., carriageway width) will allow Indian military to **easily transport missiles across India-China border.**
- **Protest:** An NGO has protested against the widening of roads, **citing the felling of trees in the wildlife-rich area.**

Chardham project

- The Char Dham project is a **two-lane highway project** in Uttarakhand, taken up by the **Ministry of Road Transport and Highways.**
- **Aim:** To widen the road by 10 meters thereby improving the connectivity between the four important pilgrim towns of **Badrinath, Kedarnath, Gangotri and Yamunotri.**
- **All of these four sites are devoted to a specific deity. Gangotri - Goddess Ganga, Yamunotri - Goddess Yamuna, Kedarnath - Lord Shiva and is one of the 12 jyotirlingas, and Badrinath - Lord Vishnu.**
- It will **widen 900 km of highways** connecting the pilgrimage sites and the Tanakpur-Pithoragarh stretch of National Highway (NH125), a part of the Kailash Mansarovar Yatra route.
- Implementing Agencies: Uttarakhand State **Public Works Department (PWD), Border Roads Organisation (BRO)** and the **National Highway & Infrastructure Development Corporation Limited (NHIDCL).**
- **NHIDCL** is a fully owned company of the Ministry of Road Transport & Highways.
- **BRO**, an executive force in India, develops and maintains road

networks in India's border areas and friendly neighbouring countries.

- BRO functions under the Ministry of Defence.
- Border Roads Organisation (BRO) has completed construction of a **440 m long tunnel** below the Chamba town on the Rishikesh-Dharasu road highway.
- The construction of the **Chamba tunnel** is a part of the Char Dham Project.
- The project is being implemented in **Engineering, Procurement, and Construction (EPC) model**.
- Under the EPC model, the project cost is completely borne by the government.

Environmental Concerns

- Environmentalists had pointed out that the **unregulated cutting** of trees and scooping up land at the base of the hills is irreversibly damaging the ecosystem
- This resulted in making the regions **dangerously prone to landslides**.
- The Supreme Court of India appointed a **Ravi Chopra committee** to look into the matter and it found that several norms were violated during the construction of the project.
- The committee recommended the construction to be done without disturbing the ecological balance.

SMOG TIGHTENS GRIP ON DELHI-NCR; SEASON'S WORST AIR QUALITY INDEX RECORDED AT 471

Delhi, in November, reported an average **Air Quality Index of 471** -- the highest reported in 2021.

Reasons for air pollution:

- Vehicular Emission
- Stubble Burning
- Lack of pollution control measures

Impact of Polluted Air:

- Pollutants affect a person's immunity; it can also cause **autoimmune disorders**.
- Exposure to pollutants can also lead to a condition called **vasculitis**, meaning inflammation of blood vessels that leads to narrowing of the vessels. This may cause stroke.

- The polluted air affects some vital organs of the human body.

Chokes lungs:

- **Particulate Matter (PM) 2.5 and PM 10** is considered dangerous because these are of respirable size, and can travel down to the lowest part of the lung where gas exchange takes place.
- The particulate matter formed due to diesel or kerosene burning can even **cause lung cancer**.
- The **ultrafine particles of 0.1 micron** or less penetrate the lung and **reach the blood stream**, and once in blood these can reach anywhere — the brain, the heart, kidneys etc.

Harms the heart

- Breathing in heavily polluted air can cause irreversible **damage to the cardiac arteries**.
- The fine particles that lungs aren't able to filter reach the blood stream, they get **attached to the walls of the arteries**.
- Over a period, it could lead to the formation of clots and may cause blockage.
 - There's sudden narrowing of the blood vessels that eventually can lead to a heart attack
- Respiratory diseases such as **chronic bronchitis** can also cause damage to the heart.

Impacts the brain

- When heart malfunctions, it automatically also affects the brain functioning by restricting the flow of blood or oxygen flow.
- Inhaling pollutants emits certain chemical responses within the body that can also cause stroke over a period of time.

Air Quality Index (AQI):

- National Air Quality Index was launched in **2014**.
- **Aim:** To disseminate information on air quality in an easily understandable form for the general public.
- It shows air quality of various pollutants into a **single number (index value), nomenclature and colour**.
- An AQI between zero and 50 is considered good, 51 and 100 satisfactory, 101 and 200 moderate, 201 and 300 poor, 301

and 400 very poor, and 401 and 500 severe.

- According to **Graded Action Response Plan (GARP)**, the air quality is considered to be in the 'emergency' category if the PM_{2.5} and PM₁₀ levels continue to be above 300 micrograms per cubic metre and **500 micrograms per cubic metre** respectively for 48 hours.
- **Eight pollutants** act as major parameters in deriving the AQI of an area namely:
 - Particulate matter (PM) 10,
 - PM_{2.5}
 - Ozone (O₃)
 - Sulphur dioxide (SO₂)
 - Nitrogen dioxide (NO₂)
 - Carbon monoxide (CO)
 - Lead (Pb)
 - Ammonia (NH₃)

Government Initiatives to curb Air pollution:

- India has launched the **National Clean Air Program (NCAP)** to reduce PM concentrations by 20-30% by 2024, keeping 2017 as the base year. Under NCAP, 122 non-attainment cities have been identified based on Air Quality data from 2014-2018.
- The Central Government has notified a **Comprehensive Action Plan (CAP)** in 2018 identifying timelines for actions identified for prevention, control and mitigation of air pollution in Delhi and NCR.
- **Graded Response Action Plan (GRAP)** was notified on January

12, 2017, for prevention, control and abatement of air pollution in Delhi and NCR.

- It identifies graded measures and implementing agencies for response to four AQI categories, namely, Moderate to Poor, Very Poor, Severe and Severe + or Emergency.

Awareness Campaigns:

- **SAMEER app** has been launched wherein air quality information is available to public along with provision for registering complaints against air polluting activities.
- **Crowd sourcing of innovative ideas/ suggestions/proposals** from public is done through Central Pollution Control Board website to strengthen efforts for improving air quality in Delhi-NCR.

- A **smog tower** at has been installed in Delhi with a height of over 20m, is of downdraft type, i.e., polluted air comes in from the top of the tower and clean air comes out of the bottom is intended for localised reduction in air pollution (Particulate Matter).
- **PRAN portal:**
 - The PRANA portal will provide all information related to various policies/programmes/schemes/activities of the stakeholders along with the progress made towards improvement in air quality across the country.
 - This portal will be a platform for monitoring and feedback on all efforts made for air quality improvement.

CLIMATE CHANGE & LOCUST INFESTATIONS: FAO SEEKS ADAPTATION PLANS AT COP26 EVENT

Recently, Global Landscapes Forum Climate hybrid conference was held by Food and Agricultural Organization (FAO) at United States.

- In the conference, it was discussed that Infestation of desert locusts, which has plagued a vast swathe from eastern Africa to India in recent years, is closely linked to climate change.

Locust:

- They are a group of **short-horned grasshoppers** that often increase greatly in numbers and migrate long distances.

- Locusts are termed as the **oldest migratory pests** in the world.
- They are **large herbivorous insects**.
- It can be **serious pests of agriculture** due to their ability to form dense and highly mobile swarms.
- They differ from ordinary grasshoppers in their ability to change behaviour (gregarize) and form swarms that can migrate over large distance.

Peculiar features:

- Adult male and female locusts are distinguished by the shape of the **tip of the abdomen**.
- **Male** - tip of abdomen smooth and rounded.
- **Female** - tip of abdomen jagged
- **Adult male locusts are smaller than adult females** of the same species.

Four species of locusts are found in India:

- Desert locust
- Migratory locust
- Bombay Locust
- Tree locust

Impact of Locust Attack:

- **On Farmers:** Locusts not only destroy valuable standing crops but can also devastate the livelihoods of farmers and those associated with the agricultural supply chain.
- **On Urban Areas:** Due to harvest of Rabi crops, there were no crops in the field. This led to the desert locusts invade green spaces in urban areas.

Measures

- An integrated **climate change mitigation, disaster management, and sustainable development system** needs to be developed in order to deal with the locust attack.

- **Aerial spraying** of the optimum number of insecticides at all possible breeding sites.
- **Continuous crop monitoring** during the subsequent Kharif season is required.
- The Indian Council of Agricultural Research (ICAR) has admitted that since the 1990s there has not been much " **systematic research** "on desert locusts and the current invasion is a wake-up call to revive the program.
- **To allocate more funds** to forecast current global environmental changes in order to understand the causes, implications, and formulate national responses.
- There is also a need to **strengthen the disaster management framework** at the local level.

Locust Warning Organisation:

- It works under **Ministry of Agriculture**.
- Headquarters: **Jodhpur, Rajasthan**.
- **Key responsibility:** Monitoring and control of the locust situation in Scheduled Desert Areas mainly in Rajasthan and Gujarat, and partly in Punjab and Haryana.
- It **implements the Locust Control and Research scheme**.

GOVERNMENTS ADOPT GLASGOW CLIMATE PACT, OPERATIONALIZE PARIS AGREEMENT

Recently, the UN Framework Convention on Climate Change, adopted **Glasgow Climate Pact**.

Glasgow Meeting:

- The Glasgow meeting was the 26th session of the Conference of

Parties (CoP) to the UN Framework **Convention on Climate Change**, or COP 26.

- It is **conducted every year** to construct a global response to **climate change**.
- These meetings earlier delivered two international agreements, the **Kyoto Protocol** in 1997 and the Paris Agreement in 2015
- The **Paris Agreement** is now the active instrument to fight climate change.

Glasgow Climate Pact

At CoP26, countries agreed on pact known as Glasgow Climate Pact.

- **Aim of the pact:** Avert dangerous climate change.
- The pact has:
 - **Focused** over the failure of the developed countries to deliver on their \$100 billion promise.
 - **Initiated discussions** on setting the new target for climate finance, beyond \$100 billion for the post-2025 period.
 - Asked the **developed countries** to provide transparent information about the money they plan to provide.

Loss and Damage:

- The frequency of **climate disasters** has been rising rapidly, and many of these causes' largescale devastation.
- The worst affected are the poor and **small countries**, and the island states.
- There is no institutional mechanism to compensate these nations for the losses, or provide them help in the form of relief and rehabilitation.

Carbon Markets:

- **Carbon markets** are effective instrument to reduce overall emissions.
- They facilitate the **trading of emission reductions**.
- It allows countries, or industries, to earn carbon credits for the emission reductions they make in excess of their targets.
- These carbon credits can be traded to the highest bidder in exchange of money.
- **The Glasgow Pact** has allowed these carbon credits to be used in meeting countries' first nationally-determined contributions (NDC) targets.

What was achieved?

Mitigation: The agreement has emphasized stronger action towards achieving the 1.5-degree target. Accordingly, it has:

- Asked countries to strengthen their **2030 climate action plans**, or NDCs by 2022.
- **Established** a work programme to urgently scale-up mitigation ambition and implementation.
- To convene an annual meeting of ministers to raise ambition of 2030 climate actions.
- To convene a meeting of world leaders in 2023 to scale-up ambition of climate action.
- Asked countries to make efforts to **reduce usage of coal** as a source of fuel, and abolish "inefficient" subsidies on fossil fuels.
- It called on all parties to accelerate phase-out of coal and fossil fuel subsidies.

Adaption: Countries, especially the smaller and poorer ones, and the small island states, consider adaptation to be the most important component of climate action.

- These countries, due to their lower capacities, are facing the worst impacts of climate change and require immediate technology and capacity building for their adaptation activities.

The Glasgow Climate Pact has:

- Asked the **developed countries** to double the money being provided for adaptation by 2025 from the 2019 levels.
 - In 2019, about \$15 billion was made available for adaptation that was less than 20 per cent of the total climate finance flows.
- Created a two-year work programme to define a global goal on adaptation.
 - **The Paris Agreement** has a global goal on mitigation to reduce greenhouse gas emissions to keep the temperature rise within 2 degrees Celsius of pre-industrial times.
 - A similar global goal on adaptation has been missing, primarily because of the difficulty in defining such a target.

Finance:

Every climate action has financial implications.

- **Developed countries** will provide finance and technology to the developing nations to help them deal with climate change.
- In 2009, developed countries had promised to mobilize at least **\$100 billion** every year from 2020.

- It was reaffirmed during the Paris Agreement, which asked the developed countries to scale up this amount from 2025.
- However, the 2020 deadline passed but the \$100 billion promise has not fulfilled yet.

Outcomes of the Summit:

- India announced a **Panchamrit** (a mixture of five elements) of climate actions.
 - It raised the targets for two of its **existing climate targets**, and promised to turn net-zero by the year 2070.
 - These targets are:
 - By 2030, to increase **non-fossil energy** capacity to 500 GW.
 - By 2070, India will achieve **net-zero emissions**.
 - It will fulfil 50 per cent of its energy requirement through renewable energy by 2030.
 - To bring economy's **carbon intensity** down to 45% by 2030.
 - To reduce 1 billion tonnes of **carbon emissions** from the total projected emissions by 2030.
 - **Brazil**, would advance its net-zero target year from 2060 to 2050.
 - China come out with a roadmap for its commitment to let emissions peak in 2030, and for its 2060 net-zero target.
 - Israel announced a net zero target for 2050.
 - Over 100 countries pledged to reduce methane emissions by at least **30 per cent from present levels by 2030**.
 - If achieved, it is estimated to avoid about 0.2-degree Celsius

temperature rise by the middle of the century.

- Some countries promised to arrest and **reverse deforestation** by 2030.
- Over 30 countries signed a declaration to work towards a transition to 100 per cent zero-emission cars by the year 2040.

'PAKKE DECLARATION' - ARUNACHAL PRADESH ADOPTS RESOLUTION FOCUSING ON 75 NEW STRATEGIES TO TACKLE CLIMATE CRISIS

Recently, the **Arunachal Pradesh cabinets** adopted a declaration on climate change, approved the new state butterfly, and launched the **e-Cabinet portal**.

Kaiser-e-Hind butterfly

- It is a **rare species of swallowtail butterfly** found from Nepal and north India east to north Vietnam.
- Its name means "**emperor of India**".
- It is a local and rare butterfly that is protected by Indian and Nepalese law.
- It would be a keystone species for conservation of high-altitude forest.

Pakke Tiger Reserve

- It is also known as **Pakhui Tiger Reserve**.
- It is a Project Tiger reserve in the Pakke Kessang district of Arunachal Pradesh in northeastern India.
- **Established:** 1966
- **Location:** It lies in the undulating and hilly foothills of the **Eastern Himalayas in Arunachal Pradesh's Pakke Kessang District**.
- It is bounded by Bhareli or Kameng River in the west and north, and by Pakke River in the east.

- **Area:** Total Area of the tiger reserve is 862 km².
- **Flora:**
 - It contains lowland semi-evergreen, evergreen forests and Eastern Himalayan broadleaf forests.
 - A total of **343 woody species** of flowering plants (angiosperms) have been recorded from the lowland areas of the park.
 - It has a high representation of species from the families **Euphorbiaceae** and **Lauraceae**.
 - A total of **1500 species** of **vascular plants** are found.
- Vascular plants are defined as land plants with lignified tissues for conducting water and minerals throughout the plant.
- **Fauna**
 - **Large cats:** The Bengal tiger, Indian leopard, and clouded leopard.
 - **Canids:** Wild dogs and Asiatic jackal.
 - **Monkeys:** The Rhesus macaque, Assamese macaque, and the capped langur.
 - At least 296 bird species have been recorded in the Tiger reserve.

INDIA NEEDS ABOUT \$10 TRILLION TO MEET NET ZERO TARGET, SAYS STUDY

As per the Council on Energy, Environment and Water, India will need \$10 trillion to meet its goals of net zero,

or to effectively eliminate carbon dioxide emissions by 2070.

Highlights:

- Around \$8.4 trillion would be needed to scale up generation from renewable energy and contributing towards **infrastructure**.
- Another \$1.5 trillion would have to be invested in **industrial sector** for setting up green hydrogen production capacity to advance the sector's decarbonization.
 - **Green hydrogen** is hydrogen gas made from renewable energy and can be used from heating to powering batteries and fuelling vehicles.
- **India would fall** short by \$3.5 trillion to achieve net-zero emissions by 2070.
- **Investment support** of \$1.4 trillion, in the form of concessional finance, would be required from developed economies to mobilise foreign capital.
 - **Concessional finance** refers to loans at below-market interest rates.
- India's total installed **solar power capacity** would need to increase to 5,630 gigawatts by 2070.
- **The usage of coal**, especially for power generation, would need to peak by 2040 and drop by 99% between 2040 and 2060.

- **Crude oil consumption** across sectors would need to peak by 2050 and fall by 90% between 2050 and 2070.
- **Green hydrogen** could contribute 19% of the total energy needs of the industrial sector.

India 5 Goals as announced at COP 26 UN climate conference:

- **To raise** the non-fossil fuel-based energy capacity of the country to 500 GW by 2030
- To meet 50% of the country's energy requirements using **renewable energy sources** by 2030
- To reduce the total projected **carbon emission** by one billion tonnes between now and 2030
- To reduce 45% carbon intensity by 2030
- To become carbon neutral and achieve net-zero emissions by 2070

Council on Energy, Environment and Water (CEEW):

- CEEW is one of South Asia's leading not-for-profit policy **research institution**.
- It was established in 2010.
- **The Council uses data**, integrated analysis, to explain the use, reuse, and misuse of resources.

WHY IS INDIA'S COAL USAGE UNDER SCRUTINY?

India's policy towards phase down rather than phase out the use of coal at UN Climate Change Conference in Glasgow

has raised questions about India's commitment to tackling climate change.

At the Conference of Parties (COP 26) summit, India had committed to be carbon neutral by 2070.

Consumption of Coal in India:

- **Coal is used** to meet over 70% of India's electricity needs, most of this coal comes from domestic mines.
- India produced 716 million tonnes of coal in 2020-21.
- **Most of the country's coal production** is limited to Chhattisgarh, Odisha, Jharkhand, and Madhya Pradesh with a total production of over 550 million tonnes, contributing to over 75% of the country's total coal production.

Goal

- India would increase the **non-fossil fuel energy capacity to 500 GW by 2030**, meet 50% energy needs from renewable sources and reduce carbon emissions by 1 billion in 2030.
- Currently India meets about **12% of its electricity** needs from **renewable sources**.
- To **reduce emissions by 1 billion tonnes**, India would need to reduce its carbon output by 22% by 2030.

What is Coal?

- Coal is a **combustible black sedimentary rock**, formed as rock strata called coal seams.
- It consists of **carbon** along with hydrogen, sulfur, oxygen, and nitrogen.
- It is formed when dead plant matter decays into peat and

converted into coal by the heat and pressure of deep burial over millions of years.

Uses of Coal:

1. Electricity Generation

- **Power generation** is the primary use for coal worldwide.
- Thermal coal is burnt to produce electricity.

2. Metal Production

- **Metallurgical coal** is a key ingredient in steelmaking.
- Coal converted to coke is used to produce around 70% of the world's steel.
- It is widely used in the production of aluminum and copper.

3. Cement Production

- **By-products of coal combustion** like fly ash play an important role in manufacturing cement.

4. Gasification and Liquefaction

- Coal is heated and pressurized with steam to produce gas for domestic lighting, heating, and cooking.
- It is **liquefied** to make synthetic fuels like petroleum or diesel.

5. Other Industries

- Other major users of coal include the paper, textile, and **glass industries**.
- It is used in the manufacture of carbon fiber and silicon metals, used for the household and other sectors.

Impacts of burning Coal:

Air Pollution:

- When coal is burned it releases several airborne toxins and

pollutants like mercury, lead, sulfur dioxide, etc.

- **Health impacts** can range from asthma, breathing difficulties, brain damage, heart problems, cancer, etc.

Water pollution:

- **Coal-fired power plants**, produce million tons of coal ash every year.
- The waste ends up in ponds, lakes, landfills, contaminating waterways and drinking water supplies.
- Other water impacts include:
 - **Acid rock drainage** from coal mines

- **Obliteration** of mountain streams and valleys by mountain top mining.

- **Mountaintop mining (MTM)**, is a form of surface mining at the ridge of a mountain.

Global Warming:

- When coal is burned, it reacts with oxygen in the air to produce carbon dioxide.
- **Carbon dioxide increases** the temperature of earth above normal limits.
- Consequences of global warming include drought, sea level rise, flooding, extreme weather, etc.

BRAZIL'S AMAZON DEFORESTATION HITS 15-YR HIGH AFTER 22% JUMP FROM PRIOR YEAR

Recently, the National Institute for Space Research's Prodes monitoring system showed that the Brazilian Amazon lost 13,235 square kilometers of rainforest.

Deforestation

- It is the **removal of a forest or stand of trees** from land that is then converted to a **non-forest use**.
- Deforestation can involve the **conversion of forest land to farms**, ranches, or urban use.

Causes of deforestation in Amazon

- Farmers clearing land for small-scale subsistence agriculture.
- Land development such as road construction near the forest area
- Human resettlement
- Forest Fires

Impact of Deforestation

- **Impact on global warming**

- Deforestation can both reduce the carbon sink value of the land while increasing emissions through wildfires.

- The **Amazon Basin** has been one of the **largest sinks of CO2**, absorbing 1/4 of terrestrial land captured carbon

• **Impacts on water supply**

- The deforestation of the **Amazon rainforest** has had a significant negative impact on Brazil's freshwater supply.

• **Impact on local temperature**

- The deforestation of the Amazon rainforest will raise the temperature in Brazil by 1.45 degrees.

Amazon rainforests

- It is a **moist broadleaf tropical rainforest** in the Amazon biome

that covers most of the Amazon basin of South America.

- The majority of the forest is contained within Brazil with **60% of the rainforest**.
- Further, Peru with 13%, Colombia with 10%, and with minor amounts in Bolivia, Ecuador, French Guiana, Guyana, Suriname, and Venezuela.
- Four nations have "**Amazonas**" as the name of one of their first-level administrative regions, and France uses the name "**Guiana Amazonian Park**" for its rainforest-protected area.
- The Amazon represents over **half of the planet's remaining rainforests**.
- Around 400-500 indigenous **Amerindian**

tribes live in the Amazon rainforest.

- Amazon River which runs through the Amazon rainforest is the **world's second-longest river after the Nile**.
- The forest is so thick that the ground remains permanently in darkness. Only **1% of the sunlight** makes it to the forest ground.
- Amazon rainforest is a **carbon sink** it absorbs carbon dioxide and stores it. So, it is a major player in maintaining carbon levels globally.
- One-fourth of the **world's western medicine** uses ingredients from **the Amazon rainforest**

WHY ASSAM IS RADIO-COLLARING ELEPHANTS AND THE CHALLENGES AHEAD

Recently, to avoid human-elephant conflict Assam Forest department planned to collar at least five elephants in high-conflict habitats.

Cause of human-elephant conflict in India

- The factor that results in Elephant-human conflict are:
 - **Habitat loss and fragmentation**
- Elephants are being killed by humans for reasons other than ivory and habitat degradation.
- **Change in cropping pattern**
- Elephants may prefer feeding on crops when compared to wild

forage because of their higher nutritive content and palatability.

- **Lethal retaliation against elephants**
- This was illustrated in the case of >60 elephants found dead in retaliation incidents in North East India.
- **Elephants across Asia live in a variety of habitats and landscapes**
- Agricultural encroachments and are also found in fragmented landscapes with a mosaic of crop fields, plantations, and patches of forest.

Suggestions to prevent Human-Elephant conflict

- **Protected areas and ecological corridors**
 - There is need to give emphasis on ecological corridors that allows elephants to move between secure habitats without being disturbed by humans.
- **Electric fences and trenches**
 - Physical exclusion methods such as electric fences and trenches are commonly used to deter elephants from entering farmland and human settlements.
- **Acoustic deterrents**
 - Farmers guard crops and scare away crop-raiding elephants by yelling, setting off firecrackers or carbide cannons, hitting metal objects, and throwing stones.
- **Light-based deterrents**
 - Farmers may light bonfires and use flaming torches or flashlights to guard ripening crops and deter raiding elephants.
- **Early detection and warning**
 - Techniques for early detection and warning of elephants involve using mobile phones for quick communication among farmers, and between farmers and local officials.

Long Term Methods

Land-use planning

Some of the recommended land-use changes that address the spatial basis of conflict are

- **Reduce the conflict interface** between elephants and people.
 - Restrict and consolidate human settlements and relocate agricultural activity within elephant habitat
- Make agriculture production more efficient
 - Change location of fields, move to inedible crops, grow a diversity of crops, change cropping patterns

Buffer zone

- Having another farm along the forest boundary as a buffer will be useful where forest are prone to elephant.

Habitat protection and Forest Management

- In cases where home ranges of elephants include Reserve Forests, they need to be managed as **Elephant Conservation Areas**.
- Revenue Forests that include elephant home ranges need to be acquired and managed as Reserve Forests.

HIMALAYAN GLACIER CHANGED TRACK 20,000 YEARS AGO: STUDY

Nearly 20,000 years ago, The Himalayan glacier changed course and over time fused into an adjacent glacier.

Glacier:

- It is a persistent body of dense ice that is constantly moving under its weight.
- **Formation:**

- Due to the accumulation of snow exceeding its ablation over many years, often centuries.
- **Types of Glaciers**
- Glaciers fall into two groups:
- **Alpine glaciers:**
- These glaciers form on mountainsides and move downward through valleys.
- Alpine glaciers create or deepen valleys by pushing dirt, soil, and other materials out of their way.
- Eg: **Gangotri Glacier, Yamnotri Glacier.**
- **Ice sheets:**
- Ice sheets form broad domes and spread out from their centers in all directions.
- Ice sheets glaciers cover everything around them with a thick blanket of ice, including valleys, plains, and even entire mountains.
- Eg: **Antarctica and the Island of Greenland.**
- **Structure of Glaciers**
- A glacier originates at a location called its **glacier head** and terminates at its **glacier foot, snout, or terminus.**

- Glaciers are broken into zones based on surface snowpack and melt conditions.
- **The ablation zone** is the region where there is a net loss in glacier mass.
- The upper part of a glacier, where accumulation exceeds ablation, is called the **accumulation zone.**

Kali River

- **Source:** Pithoragarh district, Uttarakhand
- **Mouth:** Ghaghra River, Uttar Pradesh, India
- **Geographical Location:**

It originates at **Kalapani** in the Himalayas at an elevation of 3,600m in the **Pithoragarh district in Uttarakhand, India.**

- It flows along Nepal's western border with India and has a basin area of 14,871 km².
- It joins the Ghaghra River, a tributary of the Ganges.
- **Economic Importance:**
- It offers potential for **hydroelectric power generation.**
- The river is also proposed as a source for one of the many projects in the Himalayan component of the Indian Rivers Inter-link project.

CABINET APPROVES CONTINUATION OF THE UMBRELLA SCHEME "OCEAN SERVICES, MODELLING, APPLICATION, RESOURCES AND TECHNOLOGY (O-SMART)"

Recently, the Cabinet Committee on Economic Affairs gave its approval for continuation of the Ocean Services Modelling Application Resources and Technology (O-SMART) and Atmosphere & Climate Research-Modelling Observing

Systems & Services (ACROSS) schemes from 2021-26.

ACROSS:

- Launched by **Cabinet Committee of Economic**

Affairs with a period of 2017 to 2020.

- **Aim:** To improve the quality of weather and climate forecast along with strong R&D.

Objectives:

- It focuses on providing **climate and weather predictions** for the enhancement of society.
- **Upgrading the skill** of climate and weather estimation via intensive observations and research.
- **To improve the efficiency** in distribution and transmission approach to provide services like aviation services, climate services, tourism, Agro-meteorological services, etc.

Implementing Agencies:

- Indian Institute of Tropical Meteorology
- India Meteorological Department
- Indian National Centre for Ocean Information Service
- National Centre for Medium-Range Weather Forecasting.

Benefits:

- It will offer better **weather and climate prediction** along with ocean forecasts.
- It will provide a considerable amount of technical and scientific staff with the required managerial support, thus creating **employment opportunities**.
- A significant number of organizations will be assembled **Indian Council of Agricultural Research (ICAR)**,

local municipalities and universities ensuring better connectivity to the services regarding weather.

Sub-Schemes under ACROSS:

- Commissioning of Polarimetric Doppler Weather Radars (DWRs)
- Upgradation of Forecast System
- Weather & Climate Services
- Atmospheric Observations Network-1
- Numerical Modelling of Weather and Climate
- Monsoon Mission III
- Monsoon Convection Clouds and Climate Change
- High Performance Computing System (HPCS)

O-SMART:

- **O-SMART Scheme** was launched by the cabinet committee period from 2017-2018 to 2019-2020 with an overall cost of Rs. 1,623 crores.
- **Aim:** To improve the ocean research and setting up early warning weather systems.
- It addresses **ocean development activities** such as resources, technology, observations, and science.
- **Provides** scientific and technological background required for the implementation of various aspects of the Blue Economy.
 - **Blue economy** is related to the exploitation, preservation, and regeneration of the marine environment.

Objectives:

- To update information on Marine Living Resources in **Exclusive Economic Zone (EEZ)**.
 - EEZ is an area of coastal water near a country's coastline, to which the country claims exclusive rights for fishing, drilling, and other economic activities.
- **To monitor water levels** of sea pollutants for health assessment of the coastal waters of India.
- To develop shoreline, change maps for the assessment of coastal erosion.
- **To Develop Ocean observation systems** for the acquisition of real-time data from seas around India.
- Develop High-resolution models for the ocean forecast and reanalysis systems.

- To develop technologies generating energy and freshwater from oceans.
- **Support maintenance** and operation of research vessels for ocean monitoring.

Significance:

- It will provide several **economic benefits** to the user communities in the coastal areas including the ocean sectors and coastal states.
 - The sectors will include fisheries, shipping, and offshore industry.
- The scheme benefits **fishermen community** who receives information about weather conditions in the coastal waters and the allocation of fish potential.
 - This will help in reducing the search time for fishermen, resulted in saving fuel costs.

NUCLEAR ENERGY HELPED PREVENT 72 BILLION TONNES CO₂ EMISSIONS SINCE 1970

Nuclear electricity generation will need to double between 2020 and 2050 for the world to meet its net-zero ambitions.

Nuclear Reactors:

- A nuclear reactor is a device used to **initiate and control a fission nuclear chain reaction** or nuclear fusion reactions.
- Nuclear reactors are used for **electricity generation** and in **nuclear marine propulsion**.
- Heat from nuclear fission is passed to a working fluid (water or gas), which in turn runs **through steam turbines**.

- The produced steam or gas **drive a ship's propellers** or turn electrical generators' shafts.
- Nuclear generated steam can be used for **industrial process heat** or for district heating.
 - Some reactors are used to produce isotopes for medical and industrial use, or for production of weapons-grade plutonium.
- **Uranium** is the most widely used **fuel** by nuclear power plants for nuclear fission.
 - Nuclear power plants use a certain type of uranium—**U-235**—as fuel

because its atoms are **easily split apart**.

India's Nuclear Energy:

- India has been making advances in the field of thorium-based fuels and on a prototype for an atomic reactor using thorium and low-enriched uranium, a key part of India's three stage nuclear power programme done in the fusion power area through the ITER initiative.
- **ITER** (International Thermonuclear Experimental Reactor) is an international nuclear fusion research and engineering

megaproject aimed at replicating the fusion processes of the Sun to create energy on earth.

- Members:
 - The European Union, China, India, Japan, Russia, South Korea, and the United States.
- India is planning to increase the present share of nuclear energy's contribution in electricity **generation of 3 per cent to 10 per cent by 2022 and 26 per cent by 2052.**



MINISTRIES OF SPORT HANDED OVER THE TROPHIES TO THE WINNERS OF NATIONAL SPORTS AWARDS 2020.

National Sports Awards

- National Sports Award is **the collective name given to the six sports awards** of the Republic of India.
- It is awarded annually by the **Ministry of Youth Affairs and Sports**.
- They are **presented by the President of India**.

- The list of Awards that comes under the National Sports Award are:
 - **Maulana Abul Kalam Azad Trophy**
 - It was instituted in the year 1956–1957.
 - It is given to the university for "top performance in the inter-university tournaments" over last year.

- **Arjuna Award**
 - It was instituted in the year 1961.
 - It is given to sportspersons for "consistent outstanding performance" over the last four years.
 - The award comprises "a bronze statuette of Arjuna, certificate, ceremonial dress, and a cash prize of ₹15 lakh.
- **Dronacharya Award**
 - It was instituted in the year 1985.
 - It is given to coaches for "producing medal winners at prestigious international events".
 - The award comprises "a bronze statuette of Dronacharya, a certificate, ceremonial dress, and a cash prize of ₹15 lakh.
- **Major Dhyan Chand Khel Ratna**
 - It was instituted in the year 1991–1992.
 - It is given to sportspersons for "most outstanding performance by a sportsperson" over the last four years.
- The award comprises "a **medallion**, a **certificate**, and a **cash prize** of ₹25 lakh.
- **Dhyan Chand Award**
 - It was instituted in the year 2002.
 - It is given to individuals for "lifetime contribution to sports development".
 - The award comprises "a Dhyan Chand statuette, a certificate, ceremonial dress, and a cash prize of ₹10 lakh.
- **Rashtriya Khel Protsahan Puruskar**
 - It was instituted in the year 2009.
 - It is given to organizations (both private and public) and individuals for "playing a visible role in the area of sports promotion and development" over the last three years.

NEERAJ CHOPRA RECEIVES KHEL RATNA AWARD: INDIA'S 'GOLDEN BOY' FELICITATED WITH TOP HONOUR

Olympic gold medalist Neeraj Chopra received Major Dhyan Chand Khel Ratna award from Indian President recently.

Highlights:

- It is the highest sporting honour of India.
- It was Instituted in 1991–92 and was formerly known as the Rajiv Gandhi Khel Ratna Award in Sports and Games.
- It is awarded **annually by Ministry of Youth Affairs and Sports**.
- The **Ministry of Youth Affairs and Sports** had announced the National Sports Awards.
- **Awards given for:** "spectacular and most outstanding performance in the field of sports over a period of **four years**" at international level.