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INDIA – CHINA DISPUTE – WHY DOES THE KAILASH RANGE MATTER?

It was in **early October 1962** that **Chairman Mao Zedong** decided to launch a **large-scale invasion to severely punish India**. While the main offensive was to be in the Eastern Sector, coordinated operations in the Western Sector were to be undertaken to capture areas up to the **1960 Claim Line in eastern Ladakh**, which entailed **elimination of 43 Indian posts**. Gaining control over **entire Aksai Chin** was essential to guarantee security of the Western Highway, linking Kashgarh in Xinjiang to Lhasa in Tibet.

The **People's Liberation Army (PLA) offensive began on 20 October 1962**, simultaneously in the **Eastern and Western Sectors**. The operations in Aksai Chin were executed in two phases. During Phase One (October 20-28, 1962) PLA went on to clear Indian posts at **Daulat Beg Oldie, Galwan, astride both banks of Pangong Tso** and **Dungti-Demchok** areas. Phase Two was launched after a tactical pause of three weeks on November 18, 1962 to capture the **strategically important Kailash Range**.

Reorganising India's defences

The **Karakoram Range ends on the northern side of the Pangong Tso**. The Kailash Range originates from the **southern bank** and runs northwest to southeast for **over 60 km**. The **Kailash Ridge is characterised by rugged, broken terrain with heights varying between 4,000-5,500m**, and its key features include **Helmet Top, Gurung Hill, Spanggur Gap, Muggar Hill, Mukhpari, Rezang La and Rechin La**. The Ridge dominates **Chushul Bowl; an important communications centre**.

The lull following Phase One was utilised by the **Indian Army to reorganise its defences**. The **3 Infantry Division** was raised at **Leh on October 26, 1962** under Major General Budh Singh. The HQ of 114 Infantry Brigade was moved to Chushul, the 70 Infantry Brigade took over the responsibility of **Indus Valley Sub Sector**, and the I63 Infantry Brigade was inducted for the Defence of Leh.



Deployment at Chushul

The **114 Infantry Brigade responsible for Chushul area** was holding a frontage of around 40 km, and was deployed as under:-

1/8 Gorkha Rifles covered the northern side of Spanggur Gap. Its two companies were deployed on the Gurung Hill, another company was deployed to the North, and a fourth company was in the Spanggur Gap itself with Battalion HQ along with an ad-hoc company at the Chushul airfield.

13 Kumaon was on the southern side of the **Spanggur Gap** with two companies on the Muggar Hill, one company at Rezang La, and a fourth company along with Battalion HQ south of it.

Brigade HQ along with 1 JAT and two troops AMX 13 tanks of 20 Lancers were located at Chushul. 13 Field Regiment less a battery, equipped with 25 Pounder guns, was in support.

Chinese plan of attack

The plan duly approved by the **Central Military Commission (CMC)** envisaged capturing both **Rezang La and Gurung Hill simultaneously**. Troops comprising three battalions of the **PLA's 4 Infantry Division** along with supporting units were concentrated in the Retuzong area, about 40 km from the border. All these units had been in action during Phase One as well. As per instructions from the CMC, operations were to be confined to the positions on the ridge line only.

Battle of Rezang La

The **C Company of 13 Kumaon**, responsible for the **defence of Rezang La**, was deployed two platoons up (Strong Points 7&9) with a third platoon and Company HQ on Point 5150 (Strong Point 8) in the centre. Besides, there were supporting detachments of 3-inch mortars, heavy machine guns and rocket launchers.

The Chinese, having carried out **detailed reconnaissance of Rezang La**, planned to outflank the position at night and attack simultaneously from the northern and southern directions at first light. Accordingly, the attacking troops were divided into two task forces. **One task force, composed of 3rd Battalion less company of 11th**



Regiment, was to attack Strong Point 9 from the south. The second task force, composed of two companies (one each from the 3rd Battalions of 10th & 11th Regiments), was to attack Strong Point 8 from the North. The 3rd Battalion less company ex-10th Regiment, and 3rd Cavalry less two companies, were to act as reserves.

The **two task forces started from Retuzong at 8 pm November 17** and were in their respective firm bases by 6 am on November 18. Following brief artillery bombardment, the attack commenced from both directions at 9:15 am. A fierce battle ensued, with the **defender beating back successive Chinese attacks**. With communication snapped and the position encircled, leaving no possibility of the C Company being reinforced, it was a “**do and die**” situation. Major Shaitan Singh, the Company Commander, even launched a local counterattack. Finally, by employing reserves, the Chinese did manage to break through and Rezang La fell by 10 pm November 18.

It was an epic battle, literally fought to the “**last man, last round**”. Of the total **141 personnel at Rezang La**, 135 fought to the finish and 5 were taken prisoners, with one lone survivor. **Major Shaitan Singh was posthumously awarded the Param Vir Chakra**. The Chinese suffered 21 killed and 98 wounded.

Battle for Gurung Hill

Gurung Hill was held by two companies of 1/8 GR (Strong Points 16, 5 & 6) located northeast at Spanggur Gap. Strong Point 16, the most dominating feature, was at a height of 5,100 m. It was held by a company minus a platoon. The defences were well coordinated and covered by a **protective minefield**. The position was supported by a troop of AMX 13 light tanks.

The **task to capture Gurung Hill** was assigned to **Ali Detachment**, the holding formation. A force of eight sections was mustered and duly reinforced by a platoon each of engineers and flame throwers, one heavy machine gun, one 57 mm recoilless gun and twelve 82mm mortars for fire support. One company of 3rd Cavalry was to act as reserve.

The **operation to capture Gurung Hill began at 9:22 am November 18**, coordinated with the attack on Rezang La. It was preceded by brief artillery bombardment. In the face of stiff resistance from Gorkhas with tanks in a direct



shooting role, the Chinese suffered heavy casualties and the attack was stalled. On regrouping and reinforcements joining in, the PLA resumed the offensive at 11 am. After repulsing repeated attacks with no reinforcements coming by, the position was captured by PLA towards last light on November 18. The intensity of fighting can be gauged from the casualties — 1/8 GR suffered 50 killed and several wounded while the Chinese sustained over 80 (killed and wounded). The **PLA could not capture the remaining part of Gurung Hill i.e. Strong Points 5 & 6.**

While **only Rezang La and part of Gurung Hill had been captured**, a decision was taken at the highest level to pull back from the **Kailash Ridge** and redeploy West of Chushul on the night of December 19. The Chinese did not follow the withdrawing troops or go for Chushul airfield. The PLA had only division-plus at their disposal for the operations in **Aksai Chin**, and hence were severely constrained to undertake any further operations. On the other hand, **India's 3 Infantry Division** had the capability to launch a limited counteroffensive. After declaring a ceasefire on November 21, Chinese troops fell back to depth positions due to logistics constraints.

August 2020: the present

The **course of history was set to reverse 58 years later** when. On August 30, 2020, the **Special Frontier Force (SFF) troops** secured **Kailash Ridge** as a pre-emptive operation, taking the PLA by surprise. This action proved a game-changer, neutralising gains made by the Chinese along the northern bank of Pangong Tso and rendering PLA positions east of Spanggur Gap-Maldo Garrison totally vulnerable. Why the PLA did not go for Kailash Ridge initially as part of its aggression in May 2020 could be because of two plausible reasons: first, **paucity of infantry as 4 Infantry Division**, now motorised, not suited to hold ground, and second, a presumption that Indian Army will not venture to undertake proactive counteractions.

In 1962, it was on the **Kailash Ridge** that **Indian soldiers proved their mettle and made the PLA pay a heavy price**, despite being poorly equipped and ill-prepared. Today, given a rich experience in high altitude-cum-glacial warfare, coupled with vastly improved equipment and infrastructure, the Indian Army is well positioned to hold the **Kailash Range for good**. The Chinese, on the other hand, are beginning to realise the harsh realities of winters at the **Line of Actual Control (LAC)**.

Aware of the inability to regain Kailash Ridge with the current force level, and with the window for launching major operations already foreclosed due to the onset of



winter, the Chinese may use all ploys to negotiate the Indian Army's pull-back from south of Pangong Tso. **India should be wary of past mistakes** and avoid falling into the Chinese trap. The PLA's current aggression, wherein it flouted a series of agreements signed between the countries over the last three decades to unilaterally alter the status quo along the LAC, is a case in point.

The **Kailash Ridge marks a tryst with history**, a turning point, as it is the first piece of territory that has been recovered from Chinese illegal occupation, but definitely not the last one as **India's claim line is the Johnson Line of 1865**. External Affairs S Jaishankar recently said that India was being tested in the seven-month-long standoff with China in eastern Ladakh. Therefore, it is time to convey a stern message to the Chinese leadership that India will not compromise on its sovereignty.

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ECONOMY

1.1 RBI says banks reluctant to lend to big business

The Reserve Bank of India (RBI) has **expressed concern over the contraction in credit offtake** by large industries and infrastructure and pointed out that there's reluctance on the part of bankers to lend to large industries.

DECELERATION:

- The central bank also **raised concern over the sharp deceleration in credit growth** in the home loan segment and the adverse effect it may have on sectors like steel, cement and construction.
- The recent decline in credit growth was mainly **due to large industries**, the central bank said in its study on 'Sectoral deployment of bank credit'.
- **Owing to the stressed assets in large industries**, there was a general reluctance on the part of bankers to lend to these industries, with the problem getting compounded by the pandemic.
- Although credit growth to large industries turned negative in November 2020, **the silver lining has been the robust growth of credit to medium industries**.
- Credit to micro and small industries registered a moderate increase between November 2019 and November 2020.
- **Credit to medium industries registered a robust growth of 19.1 per cent** in January 2021 as compared to 2.8 per cent a year ago and credit to micro & small industries registered a growth of 0.9 per cent in January 2021 as compared to 0.5 per cent a year ago.
- The RBI said there are signs of a turnaround, **as evidenced by a spurt in property purchases in the recent period** mainly on the back of support extended by the Government to this sector.
- As the economy gathers momentum in 2021 and beyond, housing loans are expected to pick up.

1.2 Rising polymer raw material prices hit MSME plastic units

- About 50,000 units in the plastics processing sector are believed to be **operating**



below 50% of their rated capacity due to a sharp rise in raw material prices, said heads of All India plastic industry associations.

- They added that if the crisis prolonged, **about 20,000 MSME plastic units would be forced to close down.**

IMPACTING THE COST COMPETITIVENESS:

- Industry bodies said large petrochemical companies, including PSUs, had exponentially **increased raw material prices by 40-155%** in the last 8-10 months.
- The associations have urged the Centre to direct Indian Oil, GAIL, OPAL, Haldia Petrochemicals and MRPL to **streamline supply of raw materials at fair prices.**
- Several industry associations have urged the government to ban the export of the raw materials for one year and **allow import of raw materials** not produced in the country.
- The industry is facing **acute shortage of polymers**, the main raw material for plastic goods production, which has varied applications.
- The increase in raw material costs and its acute shortage in market is leading to escalation in project costs and is **adversely impacting the cost competitiveness of MSMEs.**

1.3 Inflation target

- The government is expected to retain the medium-term inflation target at 4 per cent, with inflation band at 2-6 per cent, for the next five years.

Details:

- Under India's **flexible inflation targeting (FIT)** approach, the central bank is expected to work to maintain retail inflation at 4%, with an upper tolerance limit of 6% and a lower limit of 2%.
- The government may reset the rate at 5% to provide the central bank more leeway to cut policy rates and support growth in the pandemic-struck economy.

Inflation target in Indian Economy:

- Inflation targeted based on monetary **policy system** wherein the central bank (RBI) of a country has a specific target inflation rate for the medium-term and publicizes



this rate.

- The Central Government has notified 4 per cent **Consumer Price Index (CPI)** inflation as the target for the period from August 5, 2016, to March 31, 2021, with the upper tolerance limit of 6 per cent and the lower tolerance limit of 2 per cent.

1.4 Delhi's per capita income dips by 5.9%

- The **per capita income of the people of Delhi has fallen by 5.91%** (at current prices) to Rs3,54,004 during 2020-21, compared to Rs3,76,221 in 2019-20.
- Also, the Gross State Domestic Product (at current prices) fell by 3.92% in 2020-21 to Rs7,98,310 crore from ₹8,30,872 crore in 2019-20, as per the Economic Survey of Delhi 2020-21 tabled in the Delhi Assembly recently.
- Business was less in the market and because of this revenue was less for the government.
- This was due to the effect of COVID-19 and the series of lockdowns, which disrupted **the economy across the world**, according to the survey report.

LESS BUSINESS, REVENUE:

- Experts said that the fall in income and GSDP shows that there was **less money in the hands of people**, which reduced their purchasing power, and it also shows that investments had reduced.
- The **actual per capita income will be even lesser**, as this data does not take into account the unorganised sector, such as daily wage labourers, who were heavily hit during the pandemic.
- Also, **the unorganised sector has not recovered compared to organised sector**.
- Delhi government should work to “**generate employment**” and spend more money on health, education, or small infrastructure projects, which generates employment.
- The government should also try to look for an “**urban employment scheme**” on lines of Mahatma Gandhi National Rural Employment Guarantee Act to (MGNREGA).
- The year 2020 witnessed unrivalled turmoil with the novel COVID-19 virus and the resultant pandemic emerging as the **biggest threat to economic growth in a**



century.

- The pandemic has been unique in its wide-ranging effects on almost every section of the economy and the society.
- The government expects the economic condition to pick and register growth.
- In 2021-22, a sharp recovery of real GSDP of Delhi with a double-digit growth is expected based on a low base effect and inherent strengths of the economy.
- Delhi has maintained its consistent revenue surplus which was ₹7,499 crore during 2019-20 (Prov.) as compared to ₹6,261 crore during 2018-19. Also, about 30.74 lakh Foreign Tourist Arrivals (FTAs) was recorded in Delhi during 2019.

1.5 Govt. asks refiners to diversify oil imports after OPEC+ move

India has asked state refiners to **speed up diversification of oil imports** to gradually cut their dependence on West Asian suppliers after OPEC+ decided last week to largely continue production cuts in April.

DIVERSIFICATION:

- The **world's third biggest oil consumer** imports about 84% of its crude needs with over 60% of that coming from West Asian countries, which are typically cheaper than those from the West.
- India, hit hard by rising oil prices, **has urged producers to ease output cuts** and help the global economic recovery.
- In response, the Saudi energy minister told India to **dip into strategic reserves filled with cheaper oil** bought last year.
- India has asked companies to **aggressively look for diversification** as it cannot be held hostage to the **arbitrary decision of Middle East producers**.
- India had not cancelled any shipment of West Asian crude when oil demand collapsed due to COVID-19, the source said.
- OPEC's share in India's oil imports **declined to historic lows in the first 10 months** of this fiscal year.

'LONG-TERM PAY OFF':

- While initial costs could be high, the strategy will **pay off in the long term**. One plan is to **import oil from new producer Guyana**.
- Indian Oil Corp. has also **renewed its oil import contract** with Russia.
- India's oil ministry and IOC did not respond to requests for comment.
- **Iraq and Saudi Arabia are the two biggest suppliers** of crude oil to India.

1.6 MSME Credit Health Index

The latest **MSME Credit Health Index** indicates that MSME credit growth has accelerated in the quarter ending September 2020 as compared to the quarter ending in June 2020.

- The **Emergency Credit Line Guarantee Scheme (ECGLS)** has helped in the credit growth for the **Micro, Small and Medium Enterprises (MSME)** sector. **MSME Credit Health Index:**

Launch: The **TransUnion CIBIL** in partnership with the **Ministry of Statistics & Programme Implementation (MoSPI)** has launched MSME Credit Health Index



- The Index is **published quarterly**.
- **Aim:** To provide a **measure of the growth and strength of the MSME** sector in India.
 - The Index will provide government, policy makers, lenders and MSME market participants, a numeric indicator for benchmarking the health of the MSME sector.
 - **Measurement:** The Index measures the credit health of India's MSME industry on two parameters i.e, **growth and strength**. Both the growth and strength indices **follow the principle of higher the better**.
 - **Growth** is measured by plotting increase in exposure value (outstanding balances) over time.
 - An increasing Growth Index indicates improvement in credit growth.
 - **Strength** is measured by decrease/increase in credit risk in terms of **non-performing assets (NPA)**.
 - An increasing Strength Index implies better asset

quality and therefore denotes an improvement in the structural strength of the sector.

- **Significance:** This measurement model will facilitate better MSME credit risk management, formulation of strategies and policies to support the revival and resurgence of the MSME sector and the economy.
- **Latest Data:**
 - The overall growth index inched up to 114 points, which is a three-point increase from 111 in June, 2020.
 - The overall Strength Index also improved to 89 from 83 over the same period.
- **About the Emergency Credit Line Guarantee Scheme:**
 - The scheme was launched as part of the **Aatmanirbhar Bharat Abhiyan package** announced in May 2020 to mitigate the distress caused by **coronavirus**-induced lockdown, by providing credit to different sectors, especially **Micro, Small and Medium Enterprises (MSMEs)**.
 - The ECLGS provides for the **Guaranteed Emergency Credit Line (GECL) facility**.
 - The GECL is a loan for which 100% guarantee is provided by the National Credit Guarantee Trustee Company (NCGTC) to Member Lending Institutions (MLIs) – banks, financial institutions and **Non-Banking Financial Companies (NBFCs)**.
 - The loans are extended in the form of additional working capital term loan facility in case of banks and additional term loan facility in case of NBFCs to eligible Micro, Small and Medium Enterprises (MSMEs)/business enterprises and interested **PradhanMantriMudraYojana (PMMY)** borrowers.

National Credit Guarantee Trustee Company Ltd

- NCGTC is a **private limited company** incorporated under the **Companies Act, 1956** in 2014, established by the Department of Financial Services, Ministry of Finance, as a wholly owned company of the Government of India, to act as a common trustee company for multiple credit guarantee funds.
 - Credit guarantee programmes are designed to share the lending risk of the

lenders and in turn, facilitate access to finance for the prospective borrowers.

1.7 PLI Scheme for Telecom Sector

The Union Cabinet has approved the **Production-Linked Incentive (PLI) scheme for the telecom sector** with an outlay of **Rs. 12,195 crores over five years**.

- **PLI Scheme:**

- In order to **boost domestic manufacturing** and **cut down on import bills**, the central government in **March 2020** introduced a scheme that aims to give companies incentives on incremental sales from **products manufactured in domestic units**.

Ra• Apart from **inviting foreign companies to set shop in India**, the scheme also aims to encourage local companies to set up or expand existing manufacturing units.

• The Scheme has been approved for many sectors including **electronic products, IT hardware, pharmaceuticals, automobiles and components, etc.**

- **PLI Scheme for Telecom Sector :**

- **About:**

- This Scheme is for **domestic manufacturing of telecom and networking products** such as switches, routers, 4G/5G radio access network, wireless equipment and other internet of things (IoT) access devices.

- It will be **operational from 1st April, 2021**.

- **Eligibility for the Scheme:**

- It is subject to **achieving a minimum threshold of cumulative incremental investment and incremental sales** of manufactured goods.

- The **cumulative investment can be made at one go**, subject to annual cumulative threshold as prescribed for four years being

met.

- **2019-20 will be treated as the base year** for computation of cumulative incremental sales of manufactured goods net of taxes.

- **Incentives:**

- An investor who qualifies for the scheme **will be incentivised up to 20 times the minimum investment threshold**, enabling them to utilise their unused capacity.

- **Higher Incentives for MSMEs:**

- For Micro, Small and Medium Enterprises (MSMEs), the **minimum investment threshold has been kept at Rs. 10 crore**, while for others it is **Rs. 100 crore**.

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- For MSMEs, a **1% higher incentive** is also proposed in the **first three years**.

- **Significance :**

- The scheme is expected to lead to **an incremental production of about Rs. 2.4 lakh crore**, with **exports of about Rs. 2 lakh crore** over five years and bring in **investments of more than Rs. 3,000 crore**.
- Scheme is also likely to **generate 40,000 direct and indirect employment** opportunities and **generate tax revenue of Rs. 17,000 crore** from telecom equipment manufacturing.
- Through this scheme, India will move towards self-reliance. Currently, **India imports over 80%** of its telecom and wireless networking equipment.

1.8 Stock of Government Share Sales

It is expected that the **government's ambitious disinvestment** will send the primary market or the initial public offering (IPO) market into overdrive.

Government's Roadmap for Disinvestment

- The government announced a **strategic sale/disinvestment policy** for four strategic



sectors in the Budget 2021-22.

- The sectors include are **banking, insurance and financial services.**
- The Centre has **lined up minority stake sale** through various routes including offer for sale (OFS) and IPO.
- The Budget has announced **privatisation of two public sector banks** and one general insurance company in the upcoming fiscal.
- The increase in the **FDI limit in insurance from 49% to 74%** is expected to lead to an unprecedented expansion of the insurance sector.

Benefit of government share sales to retail investors

- The progress on **privatisation plans of BPCL, Shipping Corporation of India and CONCOR** has led to a big rally in their shares.
- The investors bet that the **new management and private ownership** would bring in higher efficiency leading to higher profits.
- The patient investors can pick and choose the companies they want to bet on because privatisation will be a long-drawn process over 5-10 years.
- The existing companies being put on the block could be the starting point, while **investors can wait for clarity to emerge on which banks and insurance company will be privatised.**

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1.9 Retail Inflation

Recently, **India's industrial production slipped into negative territory** again posting a contraction of 1.6 per cent due to weak manufacturing, capital goods, and mining output.

- The **retail inflation** data released separately showed the **headline number rising** to a three-month high of 5.03 per cent in February from a 16-month low of 4.06 per cent in January.

What is Retail Inflation?

- The **change in the consumer price index** over a period of time is referred to as **CPI-based inflation, or retail inflation.**
- The CPI is an index **measuring retail inflation in the economy** by collecting the



change in prices of most common goods and services used by consumers.

- The CPI is **calculated for a fixed list of items** including food, housing, apparel, transportation, electronics, medical care, education, etc.
- The CPI specifically identifies **periods of deflation or inflation for consumers** in their day-to-day living expenses.
- The **CPI is used** as a:
 - Macroeconomic indicator of inflation;
 - Tool by the central bank and government for inflation targeting and for inspecting price stability; and
 - Deflator in the national accounts

What does high retail inflation mean for markets?

- The **domestic investor sentiment will likely take a hit**, given concerns about rising inflation and contracting industrial production.
- The **steep increase in commodity costs**, especially oil prices, has started to gradually worry markets about the likely **impact on corporate earnings**.
- It might lead to concerns that the **central bank will be compelled to normalise liquidity** by revising interest rates sooner than anticipated.
- The **excess liquidity** in the system combined with **volatility in fuel prices** can pose **upward risk to inflation**.

Who maintains Consumer Price Index in India?

- In India, there are **four consumer price index numbers**, which are calculated, and these are as follows:
 - CPI for Industrial Workers (IW)
 - CPI for Agricultural Labourers (AL)
 - CPI for Rural Labourers (RL) and
 - CPI for Urban Non-Manual Employees (UNME)
- The **Ministry of Statistics and Program Implementation** collects **CPI (UNME)** data and compiles it but the remaining three are collected by the **Labour**



Bureau in the Ministry of Labour.

1.10 No back-door pact for defaulting promoters

Recently, the Supreme Court has ruled that the **defaulting promoters of insolvent companies cannot use any scheme or arrangement** to gain control of their company even if it goes into liquidation.

Supreme Court ruling on Defaulting Promoters of Insolvent Companies

- In 2019, the National Company Law Appellate Tribunal (NCLAT) held that **any person who was ineligible, under Section 29A of IBC, to bid for his company.**
 - The above mentioned person will also be **barred from proposing a scheme of compromise and arrangement** under Section 230 of the Companies Act.
- The Section 230 of the Companies Act allows promoters or creditors of the company to propose a **scheme of arrangement or compromise under which the debt of the company can be restructured.**
- The apex court upheld the NCLAT ruling and said that the Section 230 would be **applicable for promoters and creditors in normal course** of the workings of the company.
 - The Section 230 would **not be applicable** if the company is facing liquidation under IBC.
- The court held that it would **lead to a manifest absurdity** if the very persons who are ineligible for submitting a resolution plan, participating in the sale of assets of the company in liquidation in the sale of the corporate debtor.

Impact of Supreme Court ruling on Promoters of Companies

- The clarification by the Supreme Court with respect to participation of promoters in liquidation process of an insolvent company will **speed up the resolution process.**
- The experts believe that a quick liquidation is of utmost importance to **maximise the value of assets of the company.**
 - The objective of the IBC is to **find a suitable buyer for the company and liquidation** is ordered only in cases where there are no viable plans



submitted.

- The court held that **any other interpretation would have left a gaping hole in the scheme of IBC** and defeated the very object of Section 29A bar introduced both for resolution and liquidation processes.
- It also settles down the **conflicting judgments given by different benches of NCLT** which allowed some of the promoters to re-bid for the company or propose some arrangement when it was sent to liquidation.

1.11 Development Finance Institution (DFI)

Recently, the Union Cabinet has approved a Bill to set up a **development finance institution (DFI)**.

- The Union Budget 2021-22 has announced that the government will set up a new DFI called the **National Bank for Financing Infrastructure and Development**.
- The DFI will be set up on a **capital base of Rs. 20,000 crores** and will have a **lending target of Rs. 5 lakh crore** in three years.
- In 2017, the RBI specified that **specialised banks could cater to the wholesale and long-term financing needs** of the growing economy and possibly fill the gap in long-term financing.

Development Finance Institution (DFI)

- It is defined as an **institution endorsed or supported** by Government of India primarily to provide **development/Project finance** to one or more sectors or sub-sectors of the economy.
- It differentiates itself by a thoughtful balance between **commercial norms of operation**, as adopted by any financial institution like commercial bank and developmental responsibilities.
- It emphasizes the **long term financing of a project** rather than collateral based financing.
- The new DFI will start off as **100% government owned** but the Centre will bring down its **stake gradually to 26%**.
- The new DFI will have a **100% professionally managed board** with at least 50%



of them being non-official directors.

Categories of DFIs

- **National Development Banks** such as IDBI, SIDBI, ICICI, IFCI, IRBI, and IDFC.
- **Sector-specific financial institutions** such as TFCI, EXIM Bank, NABARD, HDFC, and NHB.
- **Investment Institutions** such as LIC, GIC and UTI.
- **State-level institutions** such as State Finance Corporations and SIDCs.

Objectives of Development Finance Institution (DFI)

- The **main objectives** of the development banks are
 - To promote industrial growth,
 - To develop backward areas,
 - To create more employment opportunities,
 - To generate more exports and encourage import substitution,
 - To encourage modernisation and improvement in technology,
 - To promote more self-employment projects,
 - To revive sick units,
 - To improve the management of large industries by providing training,
 - To remove regional disparities or regional imbalance,
 - To promote science and technology in new areas by providing risk capital,
 - To improve capital market in the country

Significance of Development Finance Institution (DFI)

- The new institution would have a **positive impact on the bond market** in India.
- The basic stress of a DFI is on **long-term finance and support for activities to the sectors** of the economy where the risks may be higher.
- The government will provide a **10-year tax exemption to funds invested in the**



DFI to attract long-term players such as insurance and pension funds.

- The government will also **amend the Indian Stamp Act to attract global pension funds** and sovereign funds.
- The proposed DFI will be used to **fund social and economic infrastructure projects** identified under the **National Infrastructure Pipeline (NIP)**.

1.12 Compendium on Consumer Price Index for Industrial Workers

Recently, the Union Minister of State for Labour & Employment has released the **Compendium on Consumer Price Index for Industrial Workers**.

Key Highlights

- The digitization of historical data on CPI-IW will **bridge the data gap** on the subject.
- The compendium will be an inspiration to other agencies **compiling price indices or other statistics** to follow the suit.
- The Compendium is a **first of its kind publication** and is being released at a time when the Labour Bureau is celebrating the centenary year of its formation.
- The Compendium contains **detailed and comprehensive information and explanations** on compiling consumer price index (CPI).

What is Consumer Price Index?

- It is a **comprehensive measure** used for estimation of **price changes in a basket of goods and services** representative of consumption expenditure in an economy.
- It is generally based on the **weighted average of the prices of commodities**.
- It gives an idea of the **cost of living**.
- The **inflation is measured** using CPI.
 - The **percentage change in this index over a period of time** gives the amount of inflation over that specific period, i.e. the increase in prices of a representative basket of goods consumed.
- It is a helpful pointer in understanding the **real value of wages, salaries and**



pensions, the purchasing power of a country's currency; and regulating prices.

Who maintains Consumer Price Index in India?

- In India, there are **four consumer price index numbers**, which are calculated, and these are as follows:
 - CPI for Industrial Workers (IW)
 - CPI for Agricultural Labourers (AL)
 - CPI for Rural Labourers (RL) and
 - CPI for Urban Non-Manual Employees (UNME)
- The **Ministry of Statistics and Program Implementation** collects CPI (UNME) data and compiles it but the remaining three are collected by the Labour Bureau in the Ministry of Labour.

Raja Sir's

1.13 Inflation Targeting

Recently, the experts have raised question on whether the **inflation targeting** has succeeded in its primary objective of reducing inflation.

- The **Inflation Targeting (IT) policy began in 1991** in New Zealand and was subsequently adopted by 33 countries.
 - The Inflation Targeting to adopt the IT arsenal were **Argentina and India** in 2016.
- The RBI has announced a **formal review of the policy instrument** now after six years of the Urjit Patel report (2014) on inflation and the use of inflation targeting.

What is Inflation Targeting?

- It is a **central banking policy** that revolves around **adjusting monetary policy** to achieve a specified annual rate of inflation.
- Its principle is based on the belief that **long-term economic growth is best achieved** by maintaining price stability, and price stability is achieved by controlling inflation.

Impact of Inflation Targeting



- The evidence suggests that the **inflation targeting was not responsible for the decline in India's inflation** but it contributed to a decline in GDP growth.
- **Behera and Patra (2020)** explore trend inflation in India and find that trend inflation was falling even ahead of institution of FIT.
 - They argue that adoption of flexible inflation targeting was responsible for further entrenching the tendency of a reduction in trend inflation.
- **Blaggrave and Lian (2020)** evaluate India's inflation process before and after inflation targeting.
 - They find an important role for domestic factors in driving inflation in India and suggest that inflation expectations have become more anchored since 2015.
- **Eichengreen, Gupta, and Choudhary (2020)** suggest that the policy rates became lower after adjusting for inflation and output gaps in the post FIT regime.

Pros and Cons of Inflation Targeting

Pros

- It allows central banks to **respond to shocks to the domestic economy** and focus on domestic considerations.
- The stable inflation **reduces investor uncertainty, allows investors to predict changes** in interest rates, and anchors inflation expectations.
 - If the target is published, **inflation targeting also allows for greater transparency** in monetary policy.

Cons

- The focus on inflation targeting for price stability creates an atmosphere in which **unsustainable speculative bubbles and other distortions** in the economy can thrive unchecked.
- It encourages **inadequate responses to terms-of-trade** shocks or supply shocks.

1.14 What is Demand for Grants?

Demand for Grants definition: It is a well established principle among modern democracies



that no money can be withdrawn from the exchequer of the country without the authority of law. Put simply, this means that any withdrawal or disbursement from the Consolidated Fund of India can only be done by passing a bill in the Lok Sabha, the house of people.

What are Grants in Parliament?

Article 113 of the Constitution requires that any proposal or estimate seeking withdrawal of money from the Consolidated Fund of India should be presented to the Lok Sabha in the form of a demand for grants.

Demand for Grants are proposed by Ministry

Therefore, every ministry prepares a demand for grants for the expenditure to be incurred in the next financial year. These demands are collectively presented in the Lok Sabha as part of the Union Budget.

Demand for Grants: What does it include?

The demand for grants include both charged and voted expenditure. Charged expenditures are considered liabilities of the government of India such as payment of interest and are not put to vote in the Lok Sabha.

The other category of expenditure is voted expenditure that includes revenue and capital expenditure to be incurred on a government scheme in the next financial year. Usually, there is a demand for grant for each ministry, but large ministries like Finance and Defence have more than one demand for grants.

Demand for Grants: How it is prepared

Each demand for grant is prepared in two ways:

- First, it clearly distinguishes the charged expenditure and the voted expenditure
- It also classifies expenditure as capital expenditure and revenue expenditure
- While capital expenditure results in the creation of some kind of assets for the government, revenue expenditures are operational in nature

In addition to giving the break-up of charged and voted expenditure and revenue and capital expenditure, a demand for grants also gives a gross estimate of the total expenditure to be



incurred.

A demand for grants also gives the following:

- Break-up of expenditure under different heads of account and
- Lists out the recoveries to be made from the scheme.
- The net amount of expenditure after deducting the recoveries is also shown.

Note that each demand for grants also includes:

- The total provisions required for a service or scheme, basically both revenue and capital expenditure
- Any assistance to be given to states and UTs
- Loans and advances related to that service or scheme

Demand for Grants: Powers of Lok Sabha

Under Article 113, the Lok Sabha has the power to give or refuse its assent to a demand for grants or it can reduce the amount specified in the demand.

How Demand for Grants are Presented

Article 113 (iii) prescribes that no demand for grants can be presented in the Lok Sabha without the President of India's prior approval.

Under Articles 117 and 274 of the Indian Constitution, a Presidential recommendation is also required for tabling a Money Bill in the Lok Sabha. The Finance Bill, accompanying the annual financial statement which is called the Union Budget, also carries a certificate issued by the President.

The Lok Sabha has passed **supplementary demand for grants** for the second batch (2020-2021).

- It is needed when the amount authorised by the Parliament through the **appropriation act** for a particular service for the current financial year is found to be **insufficient** for that year.
 - This grant is **presented and passed by the Parliament before the end of the financial year.**



- **Constitutional Provisions: Article 115** pertains to supplementary, additional or excess grants.
- **Other Grants:**
 - **Additional Grant:** It is granted when a need has arisen during the current financial year for additional expenditure upon some **new service not contemplated in the budget** for that year.
 - **Excess Grant :** It is granted when **money has been spent on any service during a financial year in excess of the amount granted** for that service in the budget for that year. It is **voted by the Lok Sabha** after the financial year. Before the demands for excess grants are submitted to the Lok Sabha for voting, they **must be approved by the Public Accounts Committee of Parliament.**
 - **Vote of Credit:** It is granted for meeting an unexpected demand upon **the resources of India**, when on account of the magnitude or the indefinite character of the service, the demand cannot be stated with the details ordinarily given in a budget. Hence, it is like a blank cheque given to the Executive by the Lok Sabha.
 - **Exceptional Grant:** It is granted for a special purpose and forms **no part of the current service of any financial year.**
 - **Token Grant:** It is granted when funds to meet the proposed expenditure on a new service can be made available by reappropriation. A demand for the grant of a token sum (of Re 1) is **submitted to the vote of the Lok Sabha** and if assented, funds are made available.
 - **Reappropriation** involves transfer of funds from one head to another. It does not involve any additional expenditure.
- **Article 116** of the Constitution pertains to **Votes on account, votes of credit and exceptional grants.**
- Supplementary, additional, excess and exceptional grants and vote of credit are **regulated by the same procedure** which is **applicable in the case of a regular budget.**



1.15 RBI panel to screen new bank licences

Recently, the **Reserve Bank of India (RBI)** has set up a **five-member committee** for evaluating applications for **universal banks and small finance banks**.

- An internal working group of the RBI, last year, proposed an **overhaul of the licensing policy for private banks**.
 - It suggested **allowing large corporate and industrial houses to float banks in India** after suitable amendments to the Banking Regulation Act.
- The RBI has **not yet approved or rejected the recommendations** of the working group.
- The former RBI Governor Raghuram Rajan and ex-Deputy Governor Viral Acharya have **criticised the proposal to allow corporate houses to float banking entities**.

Key Highlights

- The committee is headed by **former RBI Deputy Governor Shyamala Gopinath**.
- The other members of the **Standing External Advisory Committee (SEAC)** include:
 - RBI Central Board Director Revathy Iyer,
 - National Payments Corporation of India Chairman B Mahapatra,
 - Former Canara Bank Chairman T N Manoharan and
 - Former Pension Fund Regulatory and Development Authority Chairman Hemant Contractor
- The **tenure** of Standing External Advisory Committee (SEAC) will be for **three years**.

Purpose of the Standing External Advisory Committee (SEAC)

- The RBI had earlier said it will **screen applications for both the types of lenders** to ensure their prima facie eligibility and the applications will go to SEAC.
- The **panel's recommendations will go to another screening committee**, comprising the governor of the RBI and deputy governors.
- The central board of the RBI will take the **decision for in-principle approval**.



- The **validity of the in-principle approval will be 18 months** and it would thereafter lapse automatically.
- The rejected applicants can also **appeal against the decision within a month** of receiving the communication from the RBI.

Guidelines on on-tap licensing of universal bank

- It was issued in 2016.
- It provides that the **resident individuals and professionals having 10 years of experience** in banking and finance at a senior level are also eligible to promote universal banks.
- The **large industrial houses are excluded as eligible entities** but are permitted to invest in the banks up to 10 per cent.
- A non-operative financial holding company (NOFHC) has been made **non-mandatory in case of promoters being individuals or standalone promoting/converting entities** who/which do not have other group entities.
 - **Not less than 51 per cent of total paid-up equity capital of the NOFHC** should be owned by the promoter/ promoter group, instead being wholly owned by the promoter group.
- The RBI guidelines say existing **specialised activities have been permitted to be continued from a separate entity** proposed to be held under the NOFHC.
 - It is **subject to prior approval from the RBI** and **subject to it being ensured that similar activities are not conducted through the bank** as well.
- The **initial minimum paid-up voting equity capital for a bank will Rs 500 crore** and thereafter, the bank should have a minimum net worth of Rs 500 crore at all times.
- The promoters or the **NOFHC should hold a minimum of 40 per cent of the paid-up voting equity capital** of the bank, which should be **locked-in for five years** from the date of commencement of business of the bank.
 - The **promoter group shareholding shall be brought down to 15 per cent** within a period of 15 years from the date of commencement of business of the bank.



1.16 Falling Market: Opportunity or Reason to Worry

Recently, a sharp rise in Covid numbers over the last two weeks has unnerved the markets, which have already been **marked by concerns over high valuations and rise in bond yields.**

Concerns associated with Falling Market

- There have been concerns over the **rise in bond yields in the US** and the domestic market besides the spike in Covid numbers in India.
- There is a feeling in the market that if bond yields in the US rise further, it may **impact the fund flow into emerging markets.**
- The US Fed has indicated that there **may not be policy rate hikes through 2023** and it will continue to support the economy and maintain liquidity.
- The **elevated levels of bond yields** in the US have also resulted in some weakness and technology stocks are witnessing some correction.

Effect of rising yields on market

- The sudden bond yield rise has **moderated the enthusiasm of equity market participants** throughout the world.
- **Bond yields are inversely proportional to equity returns** i.e. when bond yields decline, equity markets tend to outperform, and vice versa.
- While a rise in bond yield **raises the cost of capital for companies**, which in turn compresses the valuations of their stocks, they also play a big role in FPI flow.

What is there for investors during fall in market?

- A number of existing investors have a feeling that they should have **sold a portion of their holding** when the Sensex hit the peak recently.
- The investors think that there are **enough opportunities to buy good stocks** and own for the longer term.
- India should follow a staggered approach of investing as they could go for **either mutual fund investment through the SIP mode, or direct stock-picking in a staggered manner.**



INDIA AND WORLD

2.1 India and Japan back in new Sri Lanka port project

- Sri Lanka recently said it will **develop the West Container Terminal (WCT) at the Colombo Port, along with India and Japan.**
- The decision comes a month after the Rajapaksa government ejected the two partners from a 2019 tripartite agreement to jointly develop the East Container Terminal (ECT), **citing resistance to “foreign involvement”.**

INDIA AND JAPAN:

- Sri Lanka said approval had been granted to develop the WCT with **investors nominated by India and Japan.**
- While the High Commission of India had “approved” Adani Ports, which was to invest in the ECT project earlier, **Japan is yet to name an investor.**
- Neither India nor Japan has officially commented on the offer, or on the said private investment from the countries.
- According to official sources in New Delhi, **Colombo had been in talks directly with the Adani Group**, while the government “was not part of” the discussions.
- Both India and Japan had expressed displeasure about **Colombo “unilaterally” pulling out** of the 2019 agreement.

WEST CONTAINER TERMINAL:

- The deal had been signed by the former Maithripala Sirisena-Ranil Wickremesinghe government.
- The February 1 decision came amid **mounting opposition from port worker unions** and sections of the clergy to “foreign involvement” in the country’s national assets.
- The Rajapaksa government has offered **India and Japan the WCT as an alternative**, allowing higher stakes.
- In the ECT project agreed upon earlier, the Sri Lanka Ports Authority (SLPA) was to hold majority 51%, but in the WCT proposal, **India and Japan will be accorded 85% stake**, as is the case in the nearby Colombo International Container Terminal (CICT), where China Merchants Port Holdings Company Limited holds 85%, the



government said.

- The terminal's further development, which is now to be undertaken by the Sri Lanka Port Authority, is aimed at **augmenting operations at an estimated cost of up to \$700 million**.
- The West Container Terminal, however, **has to be built from scratch**, requiring a much higher investment.
- **The WCT is adjacent to the China-run CICT** and just a couple of kilometres away from the China-backed Port City being built on reclaimed land, making it a strategically desirable spot for India, whose concerns over China's presence in Sri Lanka are well known.

IMPLICIT SUPPORT:

- Colombo's alternative offer also comes at a time when **Sri Lanka is seeking support at the ongoing UN Human Right Council session**, where a resolution on the country's rights record will soon be put to vote.
- The government recently wrote to Prime Minister Narendra Modi. Asked if the two developments were linked, Sri Lanka said they were "two different areas — one is commercial, other one, more of international relations."

2.2 Delhi reaches out to Dhaka for ties beyond 'strategic partnership'

- Ahead of Prime Minister Narendra Modi's visit to Bangladesh later this month, External Affairs Minister S Jaishankar made a strong outreach to Dhaka on his bilateral visit, describing the country as a **"key neighbour" and a "valued partner" not only "in South Asia but also in the broader Indo-Pacific region"**.
- Minister said India's ties with Bangladesh **"transcend even our strategic partnership"**.
- The visits have been timed with celebrations to **mark 50 years of the 1971 liberation war** that led to the birth of Bangladesh.
- Minister framed Bangladesh's importance as being central to **India's "neighbourhood first" policy** and its growing relevance in the "Act East" policy.

MUTUAL TRUST:



- Minister said “Our comfort levels are now so high that we have shown that there is no issue that we cannot discuss and resolve **through amicable dialogue.**”
- Bangladesh Prime Minister Sheikh Hasina told him that there might be problems among neighbouring countries but it should be **resolved through discussions and negotiations.**
- India and Bangladesh had a Virtual Summit in December last year, a Joint Consultative Commission between the two Foreign Ministers last September, meetings of Foreign Secretaries, Power Secretaries, Home Secretaries, Police chiefs, BSF and BGB, and defence visits.
- Minister also praised the Bangladesh PM, and described the country’s socio-economic progress as a “**reflection of the statesmanship** and leadership of Prime Minister Sheikh Hasina”.

DIPLOMACY AT WORK:

- A year after the CAA-NRC issue strained the robust ties between the two countries, quiet diplomacy appears to have worked.
- The Prime Minister’s visit later this month is timed with the **celebrations to mark 50 years of Bangladesh.**
- The Minister said every outcome and achievement in our relationship resonates through this region. It is no secret that we cite it to others as an example for emulation.
- Both the nations have focused on possible ways to materialise commitments and how to prioritise and accommodate each other’s priorities in a mutually beneficial manner, outlining **Covid cooperation, connectivity, trade, water, security, border and lines of credit** as some of the areas of discussion.
- Minister too outlined Delhi’s priorities. Both the nations are working so hard to expand relationship in all dimensions, ranging from security, trade, transport and connectivity, culture, people-to-people ties, energy, joint development of our shared resources and defence.
- On the issue of vaccines, Minister said **Bangladesh is the largest recipient of Made-in-India vaccines.**
- Recent activities go beyond consultations and gestures. There is “practical progress on the ground” — **conducting a trial run of container cargo through**



Chattogram port to Agartala, adding two new Protocol routes to inland **waterways connecting Tripura to Bangladesh national waterways**, handing over 10 broad gauge locomotives, commencing movement of container and parcel trains and forming a joint venture in the energy sector.

2.3 China gives green light for first downstream dams on Brahmaputra

- 1. A draft of China's new Five-Year Plan (2021-2025), which is set to be formally approved on March 11, 2021, has given the green light for the first dams to be built on the lower reaches of Yarlung Zangbo river, as the Brahmaputra is known in Tibet before it flows into India.
- The draft outline of the new **Five-Year Plan (FYP) for 2025** and "long range objectives through the year 2035" specifically mentions the building of hydropower bases on the lower reaches of the river as among the priority energy projects to be undertaken in the next five years.
- The lower reaches refer to the sections of the river in Tibet before it flows into India.
- The inclusion of the projects in the draft plan suggests the authorities have given the go-ahead to begin tapping the lower reaches for the first time, which marks a new chapter in the **hydropower** exploitation of the river.
- Other major projects include the construction of coastal nuclear power plants and power transmission channels.
- The project is also listed along with **the Sichuan-Tibet railway and the national water network**.

The chinese power project on Brahmaputra river:

- **In 2015 China operationalised its first hydropower project at Zangmu** in Tibet, while three other dams at Dagu, Jiexu and Jiacha are being developed, all on the upper and middle reaches of the river.
- The **Zangmu Dams** a gravity dam on the Yarlung Zangbo/Brahmaputra River 9 km (5.6 mi) northwest of Gyaca in the Tibet Autonomous Region of China. This dam is built a few kilometers **from the Bhutan-India border**.
- **List of dams on the Brahmaputra River by China:**



- **Brahmaputra River:**
- **Brahmaputra originates near Mount Kailash**, flows through Tibet where it is called Yarlung Tsangpo. It enters India in Arunachal Pradesh in Eastern Himalaya, and then enters Bangladesh where it is called Jamuna (not to be mistaken with Yamuna tributary of Ganges in India).
- It finally flows into the Bay of Bengal where it confluences with the Ganges at **Sunderban Delta**. There are existing and planned dams on Brahmaputra in Tibet and India, but none in Bangladesh.

2.4 'Trust deficit' hampering seamless movement of goods between India, Bangladesh: World Bank

- A **World Bank report** has said that a **seamless movement of vehicles** between the two neighbouring countries for trade could raise India's national income by 8% and Bangladesh's by 17%; provide **faster and cheaper access to products from Northeast** and boost real income in states such as West Bengal, Uttar Pradesh and Maharashtra.
- The report said a "**broad trust deficit** throughout the region" was a major reason behind lack of seamless transport between the two countries.
- The report found that it is about **15-20 per cent less expensive for a company in India** to trade with a company in Brazil or Germany, than with a company in Bangladesh, despite the two neighbours being party to an international motor vehicles agreement.

REPORT- "CONNECTING TO THRIVE: CHALLENGES AND OPPORTUNITIES OF TRANSPORT INTEGRATION IN EASTERN SOUTH ASIA":

- Prime Minister Narendra Modi and his Bangladesh counterpart Sheikh Hasina inaugurated the **Maitri Bridge on river Feni** via video conferencing recently.
- The bridge significantly **reduces the distance** between the southern tip of Tripura and Ramgarh in Bangladesh.
- In 2015, both India and Bangladesh signed the **Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement**.
- For the first time, the World Bank has analysed the pact from the perspective of the two countries and said that a "**trust deficit**" between the two countries was a



major reason why there was, despite the pact, no seamless movement of cargo between the two countries.

- In the case of Bangladesh and India, the low level of trust is reflected in the fact that vehicles from one country are **banned from plying the roads of the other**.
- **Removing these constraints** and integrating South Asia have the potential of delivering significant economic gains improving transport connectivity between the two countries.
- Among the major “gaps” that the two countries need to address in the MVA include **inadequate transport infrastructure, protective tariffs and nontariff barriers**, and a broad trust deficit throughout the region.
- Without these gaps, free movement of cargo between the two countries could yield a **297 percent increase in Bangladesh’s exports to India** and a 172 percent increase in India’s exports to Bangladesh.
- The report found that along with **Northeast states seeing overall benefits**, other states like West Bengal, Uttar Pradesh and Maharashtra could see the most rise in real come from free movement of cargo between India and Bangladesh.
- Currently, despite the agreement, **trucks from one country are not allowed** to enter the other. The cargo is transloaded, adding to transport and trade costs.
- On average, crossing the India–Bangladesh border at **Petrapole–Benapole**, the most important border post between the two countries, takes 138 hours, including 28 hours spent transloading cargo.
- In contrast, the time to cross borders handling similar volumes of traffic in other regions of the world, including East Africa, is less than six hours.
- **Cargo by rail faces the same treatment** while those on sea vessels have to undergo this process at ports in other neighbouring countries like Sri Lanka and Singapore.
- Free movement could also cause a **significant modal shift of cargo from India to roadways** from other modes and drive down transport costs.
- The study makes a case for a **shorter route through Bangladesh**, instead of through India, for products from Northeast states reaching a port.
- India’s northeast states are connected with the rest of India only through the **Siliguri corridor, or the “chicken’s neck”**.



- The transit restriction leads to long and costly routes between northeast India and the rest of India and the world.
- The report says that if free movement is allowed without restriction on which routes that cargo must take, shippers would prefer to take alternate, shorter routes through Bangladesh.
- Shippers in the region have a strong preference for road corridors through Bangladesh
- In the Northeast, the overall benefits from integration would be **greatest in Assam, Meghalaya, Mizoram, and Tripura**, largely because of their proximity to Bangladesh.
- The easternmost states experience **greater competition from western states and Bangladesh**, some of their economic activity would move to more competitive states.
- The Motor Vehicles Agreement (MVA) between Bangladesh, Bhutan, India, and Nepal (known as the BBIN countries), signed in 2015, **seeks to facilitate the unrestricted cross-border movement of cargo**, passenger, and personal vehicles between BBIN countries.
- Under the agreement, **trucks carrying export-import or transit cargo can move inside** the territories of other countries without transshipping to local trucks at border land ports.
- Implementation of the MVA has been delayed as the countries work to clarify some of the provisions that are supposed to be elaborated in protocols.

2.5 Push for Chabahar Port in INSTC Corridor

India expressed its **intent to include Chabahar port in the 13-nation International North South Transport Corridor (INSTC)** that extends from India to Russia, and to **expand INSTC membership** by including Afghanistan and Uzbekistan, at a “Chabahar Day” event organised as part of **Maritime India summit**.

- This Summit saw participation from several regional officials including infrastructure Ministers from Afghanistan, Armenia, Iran, Kazakhstan, Russia and Uzbekistan.

- **India's Proposal:**

- Pitching for Chabahar in the INSTC which goes via Iran's biggest port Bandar Abbas, India proposed that the land route via Kabul (Afghanistan) and Tashkent (Uzbekistan) would form the INSTC's "Eastern corridor".
 - India's push to include Chabahar in the INSTC could have been made with **an eye on the new Biden administration's push for restoring talks with Iran on the JCPOA nuclear agreement**, and the possible **easing of some sanctions**.
- Establishing an eastern corridor through Afghanistan would maximise its potential.
 - India highlighted Chabahar's role in recent years in **sending Indian humanitarian aid and emergency supplies to Afghanistan and Iran** and in **opening up trade opportunities**.

- **Chabahar Port:**



- **Location:**

- It is located on the Gulf of Oman and is only 72 km away from the **Gwadar port** in Pakistan which has been developed by China.

- **About:**

- It is the only Iranian port with direct access to the Indian ocean and consists of two separate ports named Shahid Beheshti and Shahid Kalantari.
- Afghanistan, Iran and India signed a tripartite agreement on developing Chabahar port and setting up a trilateral transport and transit corridor in 2016.

- **Significance:**

- **For India:**

- **Connectivity:**

- It is a **key part of India's plans to enhance connectivity to Afghanistan and the Central Asian states**.

- **Countering China and Pakistan:**

- It opens up a **permanent alternative route for trade** with Afghanistan and Central Asia, given the hurdles in the direct route through Pakistan.
- **China and Pakistan** are striving to increase their economic and trade cooperation through the China Pakistan Economic Corridor (CPEC) and Gwadar port, which both are part of **China's Belt and Road Initiative (BRI)**.

- **Part of Indo-Pacific Strategy:** Chabahar Port is a key element in India's Indo-Pacific strategy that also includes Eurasia's connection with the Indian Ocean Region.

Raja Sir's



- **For Afghanistan:**

- It will facilitate India's role in Afghanistan's development through infrastructure and education projects and also allow Afghanistan to have a commercial fleet under the Afghan flag sailing from Chabahar.

- **For Central Asian Countries:**

- Central Asian countries like– Uzbekistan and Kazakhstan– also view Chabahar Port as their gateway to the Indian Ocean Region.

- **International North-South Transport Corridor (INSTC):**

- It is a **multi-modal transportation established on 12th September 2000 in St. Petersburg**, by Iran, Russia and India for the purpose of promoting transportation cooperation among the Member States.
- The INSTC **was expanded** to include eleven new members, namely: the Republic of Azerbaijan, Republic of Armenia, Republic of Kazakhstan, Kyrgyz Republic, Republic of Tajikistan, Republic of Turkey, Republic of Ukraine, Republic of Belarus, Oman, Syria, Bulgaria (Observer).

- It envisions a **7,200-km-long multi-mode network of ship, rail and road route** for transporting freight, aimed at reducing the carriage cost between India and Russia by about 30% and bringing down the transit time from 40 days by more than half.
- This corridor **connects India Ocean and the Persian Gulf to the Caspian Sea** via the Islamic Republic of Iran and then is connected to St. Petersburg and North Europe via the Russian Federation.

2.6 Exercise Dustlik-2

Recently, the second edition of **India-Uzbekistan** joint military exercise “**Dustlik-2**” started in Chaubatia, Uttarakhand.

- **Counter Insurgency (CI) and Counter Terrorism (CT)** operations in mountainous, rural and urban scenarios under the **United Nations (UN)** mandate.
- **First Edition:**
 - Took place in Tashkent, **Uzbekistan in November 2019.**
- **Significance:**
 - Uzbekistan is important to India for security and connectivity to the **Central Asian region** and also Iran, it is also one **alternative India has with respect to Afghanistan.**
 - Security concerns stemming from the **conflict in Afghanistan** is one of the major challenges for India’s involvement in Central Asia.

Joint Military Exercises of India with Other Countries

Name of Exercise	Country
Garuda Shakti	Indonesia



Ekuverin	Maldives
Hand-in-Hand	China
Bold Kurukshetra	Singapore
Mitra Shakti	Sri Lanka
Nomadic Elephant	Mongolia
Shakti	France
Surya Kiran	Nepal
Yudh Abhyas	USA

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2.7 Vaccine Passports

Governments around the world are exploring the potential use of vaccine passports as a way of reopening the economy by identifying those protected against the coronavirus.

- **Vaccine Passports:**

- A vaccine passport is an e-certificate that stores and records jabs and **Covid-19** test status.
 - It can be kept in a smartphone app or in other digital formats.
 - Its contents can be flashed at security checkpoints when people travel across borders.
- The idea is modelled on the proof of **vaccination** that several countries

required even before the pandemic.

- Travellers from many African countries to the USA or India are required to submit proof that they have been vaccinated against diseases such as **yellow fever**.
- In February 2021, Israel became the first country to introduce a certification system that allows those who have been vaccinated against Covid-19 to access certain facilities and events.
- **Function of Vaccine Passports:**
 - Will **digitise vaccination records** across countries.
 - Supposed to **function as proof** that the holder has been vaccinated against Covid-19 and is, therefore, safe.
- **Potential Beneficiary of the Vaccine Passports:**
 - The primary benefit will be to the **tourism and the hospitality industries**, which are both seen as being at the heart of Covid-19 spread and are the worst hit by the pandemic.
 - The **international air travel**, which suffered massively because of the outbreak.
- **Similar Initiative:** Several associations and non-profits have been issuing their own versions for international travel:
 - **IATA Travel Pass:** The global trade body representing airlines (**The International Air Transport Association**) is developing an app called IATA Travel Pass that will provide airlines and other aviation industry stakeholders with a common platform to check for the proof of vaccination and its validity.
 - **CommonPass:** Non-profit Commons Project has been trying out an app called CommonPass, which contains a passenger's vaccination record.
- **Concerns Raised in Instituting Vaccine Passport:**
 - **WHO's Stand:**
 - The **World Health Organisation (WHO)** is **against the introduction of Covid-19 vaccination proofs** as a requirement for international travel.

- There are still critical **unknown facts regarding the efficacy of vaccination** in reducing transmission.
- **Lack of Uniformity:** The major difficulty in implementation will be the lack of uniformity across jurisdictions in requirement and issuance of proofs of vaccination.
- **Inadequate Availability of Vaccines:** Preferential vaccination of travellers could result in inadequate supplies of vaccines for priority populations considered at high risk of severe Covid-19 disease.
 - Introducing a requirement of vaccination as a condition for travel has the potential to **hinder equitable global access to a limited vaccine supply** and would be unlikely to maximize the benefits of vaccination for individual societies and overall global health.
- **Perpetuate Discrimination and Inequality:** Experts argue that vaccine passports, in any form, might make travel inequitable. Adoption of these digital passports can perpetuate discrimination and inequality, increasing the divide between socioeconomic groups.
 - Rich countries that have already bought millions of doses from pharmaceutical companies are ahead in the race. The poorer nations may have to wait for months, if not years, to start inoculations.
 - This means that if vaccine passports become a norm, then these **lower-income nations will lose out on the advantage**.
 - It will lead to exclusion of the younger generation who would be last in line to be vaccinated.
- **Privacy Concerns:** These are mainly digital certificates that are accessed by a particular service provider to check for proof of vaccination, there is a possibility that they would be used by authorities to **track the movement of their holders**.

2.8 King Bhumibol World Soil Day 2020 Award

Recently, the **Ambassador of India to the Kingdom of Thailand** has received the prestigious **King Bhumibol World Soil Day 2020 Award** on the behalf of the **Indian Council of Agricultural Research (ICAR)**.



- India bagged the award for **ICAR's awareness initiative** undertaken in December 2019, involving participation of more than 13,000 people through a social media campaign.
- The ICAR organised **interactive sessions in universities, awareness-raising activities in schools, exhibitions, screenings, field visits and training sessions**, and reached out to all soil stakeholders.
- ICAR has placed particular **emphasis on youth by raising awareness about importance of soil** for food security and climate change mitigation through quizzes, debates and on-site demonstrations.

King Bhumibol World Soil Day Award

- The **6th GSP Plenary Assembly** endorsed the establishment of the annual **King Bhumibol World Soil Day Award (WSDA)**.
- It was launched in **2018**.
- It is conferred by the **United Nation's Food and Agriculture Organization (FAO)**.
- It is aimed at **raising awareness about importance of soil health** among all stakeholders.
- It acknowledges individuals or institutions that **raise public awareness of soils** by organising successful and influential World Soil Day celebrations.
- The award is **sponsored** by the Kingdom of Thailand.
- It is named after **King Bhumibol Adulyadej of Thailand** for his lifelong commitment to raising awareness of the importance of sustainable soil management and rehabilitation for food security.
- The former winners of the King Bhumibol World Soil Day Award include **Practical Action in Bangladesh in 2018** and the **Costa Rican Soil Science Society (AACS) in 2019**.

Eligibility under King Bhumibol World Soil Day Award

- The Award may be granted to **individuals, institutions, NGOs, academia, colleges and universities, private companies** or any other entities;
- A wide range of **WSD events can be considered** for the award.



World Soil Day

- It is held annually on 5 December as a means to **focus attention on the importance of healthy soil** and advocating for the sustainable management of soil resources.
- An international day to celebrate Soil was recommended by the **International Union of Soil Sciences (IUSS) in 2002**.
- The FAO has supported the formal establishment of **WSD as a global awareness raising platform**.
- The FAO Conference unanimously **endorsed World Soil Day in June 2013** and requested its official adoption at the 68th UN General Assembly.

Indian Council of Agricultural Research (ICAR)

- It is an **autonomous organisation** under the Department of Agricultural Research and Education (DARE).
- It was established in 1929 as a **registered society** under the **Societies Registration Act, 1860**.
- It is the **apex body for co-ordinating, guiding and managing research** and education in agriculture including horticulture, fisheries and animal sciences in the entire country.

2.9 India's second biggest oil supplier is US

Recently, the **United States** overtook Saudi Arabia as India's **second biggest oil supplier** in February 2021.

- India's imports from the United States, the world's top producer, **rose 48 per cent to a record 545,300 barrels per day (bpd)** in February.
- The **imports from Saudi Arabia fell by 42 per cent** from the previous month to a decade-low of 445,200 bpd.
- Iraq continued to be the **top oil seller to India despite a 23 per cent decline** in purchases to a five-month low.
 - Iraq has **reduced annual supplies of oil to several Indian refiners** by up to 20 per cent for 2021 as OPEC's second-largest producer tries to meet



its obligations under the group's production deal.

- The **UAE slipped to fifth** position from third in January 2021 whereas **Nigeria rose to third** from fifth.

Reasons for US overtaking Saudi Arabia

- The data from trade sources revealed that the **refiners boosted cheaper US crude purchases** to record levels to offset OPEC+ supply cuts.
- The switches in supplies were triggered by **lower US crude demand**, coincided with **Saudi Arabia's voluntary extra 1 million bpd output cut** on top of an agreement by the OPEC+ to maintain lower production.
- India, the **world's third biggest oil importer and consumer**, had called on major oil producers to ease supply curbs to aid global economic recovery.
- India had pointed to **Saudi Arabia's voluntary cuts** for contributing to a spike in global oil prices.
- The **low supplies from the Middle East** dragged OPEC nations' share of India's oil imports to a record low.

2.10 Kalyani Rafael Advanced Systems (KRAS)

Recently, the India-Israel joint venture **Kalyani Rafael Advanced Systems (KRAS)** has rolled out 1st batch of **Medium-Range Surface-to-Air Missile (MRSAM)** kits.

- It a joint venture between **Kalyani Strategic Systems Ltd** and **Israel-based Rafael Advanced Defense Systems Ltd**.
- It is **India's first private sector Missile sub-systems manufacturing facility**.
- It is **India's first private sector Missile sub-systems manufacturing entity**.
- It will be engaged in development of a wide range of advanced capabilities like **Missile Technology, Command Control and Guidance, Electro-Optics, Remote Weapon Systems, Precision Guided Munitions** and **System Engineering for Missile Integration**.

Key Highlights

- The batch of the 1000 midsection **Medium-Range Surface-to-Air Missile**



(MRSAM) kits has been provided to the **Indian Army and Indian Air Force.**

- The missile sections will then be **'forwarded'** to **Bharat Dynamics Limited (BDL)**, a defence PSU, for further and future integration.
- The company has **fused Rafael's state-of-the-art technology** with the **engineering excellence of the Kalyani Group.**
- KRAS is working with partners in India to **increase the share to 50% by the time 250 kits** are supplied and 60% when 500 kits are delivered.

Significance of MRSAM Kits for India

- It marked the beginning of the journey of an **MSME Indian company** that is committed not only to the **"Make-in-India"** concept but also taking its stride towards the larger **"Atma Nirbharta"** idea (self-reliance).
- It is the beginning of a new era, **filled with self-confidence, a marked step-change in technological expertise**, and a collective demonstration of capability to be the **global manufacturing hub for defence products.**

2.11 US India Artificial Intelligence (USIAI) Initiative

Recently, the Ministry of Science & Technology has unveiled the **US India Artificial Intelligence (USIAI) Initiative.**

US India Artificial Intelligence (USIAI) Initiative

- It is an initiative of the **Indo-U.S. Science and Technology Forum (IUSSTF).**
- It focuses on **AI cooperation in critical areas** that are priorities for both countries.
- It will serve as a platform to **discuss opportunities, challenges, and barriers** for bilateral AI R&D collaboration.
- It will enable **AI innovation**, help share ideas for **developing an AI workforce**, and recommend modes and mechanisms for **catalyzing partnerships.**
- It will provide an opportunity for **key stakeholder groups to share experiences, identify new R&D areas and opportunities** that would benefit from synergistic activities.
- It leverages IUSSTF's unique ability to **bring together stakeholders from India**



and the US to create synergies that address challenges and opportunities at the interface of science, technology and society.

National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)

- It is a comprehensive Mission aimed at **complete convergence with all stakeholders** by establishing strong linkages between academia, industry, Government and International Organizations.
- It will work with all the concerned Ministries/Departments to **identify their technology needs, develop solutions and technical support** in CPS implementation.
- The **Cyber-Physical System (CPS)** combines digital/ cyber elements with physical objects and data with capabilities of communication, data collection & processing, computing, decision making and action.
- It is a **Pan India Mission** and covers entire gamut of India that includes Central Ministries, State Governments, Industry and Academia.

Indo-U.S. Science and Technology Forum (IUSSTF)

- It established under an agreement between the **Governments of India and the United States of America** in March 2000.
- It is an autonomous bilateral organization jointly funded by both the Governments that **promotes Science, Technology, Engineering and Innovation**.
- The **Department of Science & Technology**, Governments of India and the **U.S. Department of States** are respective nodal departments.

2.12 Indian OMCs planning to cut oil imports from Saudi Arabia

Recently, the state-owned oil marketing companies are set to **cut crude oil imports** from Saudi Arabia.

Reasons of cutting oil imports

- The cut in oil imports is in response to **sustained production cuts by the OPEC+ countries** amid rising crude oil prices.
- OPEC+ had **cut crude oil production levels during the peak of the Covid-19**



pandemic as the price of Brent crude fell to below \$20 per barrel.

- It is the **consistent rise in crude oil prices has contributed to auto fuel prices reaching record highs** in India as it import over 80 per cent of its crude oil requirements.
- Saudi Arabia alone has extended a **1 million barrel per day production cut** through April contributing to elevated crude oil prices.

Impact of rising crude oil prices on India

- The consistent rise in crude oil prices has led to the **prices of petrol and diesel reaching record high level across India** with the price of petrol crossing Rs 100 per litre in some parts of the country.
 - The prices of both petrol and diesel have **risen by Rs 7.5 per litre since the beginning of the year** despite oil marketing companies partially absorbing the impact of higher crude oil prices.
- The rising crude oil prices have also **magnified the impact of central and state taxes on auto fuels** which were hiked significantly in 2020 to boost revenues amid lower economic activity.
- The government officials noted that oil marketing companies are **unlikely to keep prices stable at current levels** if crude oil prices remain elevated.

Implication of cutting down oil imports

- Saudi Arabia which has consistently been the **second-largest source of crude oil for India** after Iraq was displaced by the United States.
- **India imported 2.88 million tonnes of crude oil** from Saudi Arabia in January according to data collated by the Directorate General of Commercial Intelligence and Statistics.
- The reduction in crude oil imports from Saudi Arabia would likely lead to **increased imports from other gulf countries** and the United States.
- Saudi Arabia will however continue to be one of the largest sources for the import of crude oil for India **due to its geographical proximity** and India's large crude oil requirements.
- The Industry analysts noted that the move to diversify crude oil sourcing was also a tactic to **get a better discount on procurement** which is generally difficult in a



rising crude price environment.

- India, the **world's third-biggest oil importer and consumer**, imports more than 80% of its oil needs and relies heavily on the Middle East.

2.13 Mizoram's bond with people fleeing Myanmar

Recently, the Mizoram Chief Minister has written to the Prime Minister of India could not turn a blind eye to the **“humanitarian crisis unfolding in front of us in our own backyard”**.

- Despite the Centre's reluctance, Mizoram Chief Minister Zoramthanga held a **virtual meeting with Myanmar Foreign Minister-in-exile** Zin Mar Aung of the National League for Democracy.
- The Centre is against the **accommodation of the people fleeing Myanmar** in light of the recent military coup and the crackdown on protesters.
- The Home Ministry has written to the governments of **Border States Mizoram, Nagaland, Manipur and Arunachal Pradesh**, as well as the Assam Rifles, asking them to identify Myanmar nationals fleeing the coup and deport them.
- Mizoram has been **reluctant to send back Myanmar** and sought that they be provided political asylum by the Centre.

Geography along the Mizoram-Myanmar border

- The **Chin Hills, or the Indo-Chin hill** ranges as they are often called, is a **mountainous region in north-western Myanmar**.
- It is a **heavily-forested mountain region** which was the home of numerous tribes that fall under the Zo umbrella.
- The Zo people include **all the tribes** that come under the **Chin-Kuki-Mizo ethnic group** spread across Myanmar, India and Bangladesh.
 - It includes a host of tribes, sub-tribes and clans such as **Chin, Kuki, Mizo, Zomi, Paitei, Hmar, Lushei, Ralte, Pawi, Lai, Mara, Gangte, Thadou** etc.

Who are the Chin communities?



- The Myanmar areas bordering Mizoram are **inhabited by Chin communities**.
- They are believed to have **originated in China**.
- The Chin communities are **ethnically Mizo brethren** with whom Mizoram have been having close contact throughout all these years even before India became independent.
- They have **migrated through Tibet to settle in Myanmar**, and speak a group of the Tibeto-Burman languages.

Bond between Chin people in India and Myanmar

- The Chin people in India and Myanmar consider themselves **“one people”** despite past conflicts: the Indo-Chin people.
- Mizoram is predominantly **Christian**, as are the Chin people of Buddhist-majority Myanmar.
- Mizoram officials refer to the **refugees’ status as a Christian minority people** in seeking asylum for them, and also the fear of persecution by the junta.
- **Rih Dil in Chin state**, Myanmar, is a cultural and spiritual lake for the Mizos, deeply revered in folklore, shaping pre-Christian belief of traditional Mizo views of life after death.

Porosity of Mizoram-Myanmar Border

- The **Mizoram-Myanmar border is porous** as Myanmar residents have been crossing this open border for decades.
- In the early 20th century, **Mizos from Champhai district and elsewhere migrated to Myanmar**, setting up villages in the Kalay-Kabaw valley.
- Many Mizo families also migrated to Myanmar in 1966 and 1986, when the **Mizo National Front sought secession from India**, to escape counter-insurgency operations from the Indian government.
- In 1988, a **crackdown on pro-democracy demonstrators in Myanmar** drove Chin refugees across the Tiau River to Champhai district in India and has since been integrated into Mizo society.

Free Movement Regime (FMR) between India and Myanmar

- It allows **locals on either side to go up to 16 km** on the other side and stay up to 14



days.

- In border trade, **Mizoram depends to a large extent on Myanmar for many essential commodities** including beef, pork, good quality rice, fruits, and household utensils.
- Mizoram sends across items scarce in Myanmar such as **medicines or fertilisers**.
- **India's Look East, Act East policy and greater interactions** on the border have strengthened an already strong connection between the people on either side of the border.

India's stand on refugees seeking asylum

- India is **not a signatory** to the 1951 United Nations Convention and 1967 Protocol Relating to the Status of Refugees.
- It **does not currently** have a national law on refugees.
- In 2011, the Centre circulated to all states and Union Territories a **Standard Operating Procedure to deal with foreign nationals** who claimed to be refugees.
 - An illegal immigrant can be a foreign national who enters India on **valid travel documents and stays beyond their validity**, or a foreign national who enters **without valid travel documents**.
- The **long-term visa (LTV)** can be recommended by states or union territories to the Ministry of Home Affairs on grounds of well-founded fears of persecution on account of race, religion, sex, nationality, and ethnic identity, membership of a particular social group or political opinion.
 - The LTV-holders are allowed to take up **private-sector employment and enroll in any academic institution**.

2.14 Pabbi Anti-terror 2021

Recently, the decision to hold the joint exercise "**Pabbi-Antiterror-2021**" was announced during the 36th meeting of the Council of the **Regional Anti-Terrorist Structure (RATS)** held in Tashkent, Uzbekistan.

Pabbi Anti-terror 2021



- It is a **joint anti-terror exercise** which will include **India, Pakistan, China** and other **members of the Shanghai Cooperation Organisation (SCO)**.
- It aims to **improve cooperation between the competent authorities** of the SCO member states in identifying and suppressing channels that finance terrorist activities.
- It would be the first time that **Indian forces will travel to Pakistan** for any military exercise.

What is Regional Anti-Terrorist Structure (RATS)?

- It is a **permanent organ of the SCO**, headquartered in Tashkent.
- It serves to **promote cooperation of member states** against terrorism, separatism and extremism.

What is National Counter Terrorism Centre (NCTC)?

- It imparts **specialised pre-induction training to Pakistan Army** units earmarked for Federally Administered Tribal Areas (FATA) and SWAT.
- It also offers **counter terrorism training services to law enforcement agencies** including Pakistan Air Force, Pakistan Navy, Defence Services Guards, Strategic Plans Division, Punjab Rangers, among others.
- It was **set up in 2014** by then Pakistan Army chief Gen. Raheel Sharif.

Shanghai Cooperation Organisation (SCO)

- It is a **permanent intergovernmental international organisation** established in 2001.
- It was formed in Shanghai (China) by **Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan**.
- The Shanghai Cooperation Organisation Charter was signed during the **St. Petersburg SCO Heads of State** meeting in 2002 and came into force in 2003.
- In 2017 Astana, the status of a **full member of the Organization** was granted to **India and Pakistan**.
- The organisation has two permanent bodies i.e. the **SCO Secretariat based in Beijing** and the **Executive Committee of the Regional Anti-Terrorist Structure**



(RATS) based in Tashkent.

- The SCO comprises **eight member states**, namely **India, Kazakhstan, China, Kyrgyzstan, Pakistan, Russia, Tajikistan, and Uzbekistan**.
- The SCO counts **four observer states**, namely **Afghanistan, Belarus, Iran and Mongolia**.
- The SCO has **six dialogue partners**, namely **Azerbaijan, Armenia, Cambodia, Nepal, Turkey and Sri Lanka**.

2.15 India slams Oxfam Inequality Index

Recently, the Minister of Labour and Employment has given a written reply to a question on India's performance under **Oxfam Inequality Index**.

Key Arguments of India

- The Ministry said that the index **lacked clarity** and **did not take into account provisions** of the four new labour codes.
- The rank assigned to India and **methodology adopted is not clear**, and does not take into account the entire gamut of provisions in the Indian legislations relevant to protection of labour rights.
- The Minister said though India was **not a signatory to two International Labour Organisation conventions** on the freedom of association and protection of the right to organise (C87) and the right to organise and collective bargaining (C98), **the principles of the conventions were "available to workers"**.
- The methodology **does not take into account the various provisions** that have been provided in the Labour Codes.

India's performance under Oxfam Inequality Index

- The 2020 index placed India at rank **151 in terms of workers' rights** and **129 overall out of 158 countries**.
- It put India at rank **141 out of 158 countries in public services** and ranks **19 in terms of progressive tax**.
- India had scored **low on labour rights performance, unemployment and**



inequality in wages with regard to the labour pillar in the index.

Oxfam Inequality Index

- The 2020 edition is the **third edition of the Commitment to Reducing Inequality (CRI) Index**, which ranks 158 governments across the world on their commitment to reducing inequality.
- It **measures government policies and actions in three areas** that are proven to be directly related to reducing inequality:
 - Public services (health, education and social protection);
 - Taxation; and
 - Workers' rights
- Each pillar now contains **three levels of indicator**:
 - **Policy commitment indicators**: these measure the commitment of governments through their policies (which may not always be implemented in practice);
 - **Coverage or implementation indicators**: these look at who is covered (or not) as a result of policy actions, or how well a government puts policies on paper into practice; and
 - **Impact indicators**: these measure the impact of policy actions on levels of inequality

2.16 India has world's fourth strongest armed forces

Recently, the **Military Direct** has released a study report called '**Ultimate Military Strength Index**'.

China has the strongest military force in the world while **India stands at number four**.

- China has the strongest military in the world, **scoring 82 out of 100 points** in the index
- The **USA**, despite their enormous military budgets, comes in **2nd place with 74 points**, followed by **Russia with 69, India at 61** and then **France with 58**.
- The **world's biggest military spender** with a budget of USD 732 billion per year is



the USA, followed by **China with USD 261 billion** and **India stood at USD 71 billion.**

- The report highlighted that in a hypothetical conflict, **China would win by sea, USA by air and Russia by land.**

Ultimate Military Strength Index

- It ranks the **total available active military manpower** by country, from highest to lowest.
- It was calculated after taking into consideration various factors including **budgets, number of inactive and active military personnel, total air, sea, land and nuclear resources, average salaries, and weight of equipment.**
- The finalized **Global Firepower ranking utilizes over 50 individual factors** to determine a given nation's **PowerIndex (PwrIdx) score.**
- There are currently **140 countries considered for the Global Firepower (GFP) annual defense review.**

2.17 India-US to re-establish Homeland Security Dialogue

Recently, the Biden administration has announced the **re-establishment of the Homeland Security Dialogue** with India that was discontinued by the previous Trump dispensation.

- The two countries had welcomed efforts to **“reinvigorate” the dialogue at the 2+2 dialogue** of the foreign and defence ministers of the two countries held in October 2020.
- The increased cooperation among the four countries (US, India, Japan and Australia) on emerging technology was one of the key outcomes of the **First Quad Summit.**

What is Homeland Security Dialogue?

- It is an initiative of the **Obama administration.**
- It was announced by **Prime Minister Dr. Manmohan Singh and President Barack Obama in November 2010** as part of the global strategic partnership between India and the United States.



- The **first India-US Homeland Security Dialogue** was held in May 2011 in India.
- The **second India-US Homeland Security Dialogue** was held in Washington DC in 2013.
- The dialogue at the ministerial level **were not scheduled after 2013 though working groups set up as part of the dialogue continued** to engage on several areas of mutual concern and issues.

Significance of Homeland Security Dialogue

- It is quite important as both **United States and India have shared concerns about terrorism.**
- It enables **open line of communications and rapport** between the leading officials which can ensure better coordination, keeping citizens from both nations safer.
- The **sharing of information on sources** of cyberattacks, the tactics, and potential countermeasures will be very helpful.
- It affirmed the **strategic importance of cooperation for the security of the two countries** and their people, based on their shared values of democracy, pluralism and openness.

2.18 UN Institute for Training & Research (UNITAR)

Recently, the Prime Minister, Shri Narendra Modi has expressed gratitude to **UN Institute for Training & Research (UNITAR)** which has commended India's remarkable progress in reducing the premature mortality from Non Communicable Diseases.

UN Institute for Training & Research (UNITAR)

- It was created in 1963 to **train and equip young diplomats from newly-independent UN Member States** with the knowledge and skills needed to navigate through the diplomatic environment.
- It is governed by a **Board of Trustees** and is headed by an **Executive Director.**
- It is a **project-based organization** and **does not receive any funds** from the regular United Nations budget.
- It is **financed entirely from voluntary contributions** derived mainly from UN Member States, other UN agencies, international and intergovernmental



organizations, foundations NGOs and the private sector.

- Its **framework is aligned with the 2030 Agenda** and is structured around five pillars that correspond to four of the five thematic pillars of the 2030 Agenda: **Peace, People, Planet and Prosperity.**
- The Institute originally had its headquarters based in New York and a European Office in Geneva but in 1993, **UNITAR's headquarters were transferred to Geneva.**

Objectives of UNITAR

- It provides **innovative learning solutions to individuals, organizations and institutions** to enhance global decision-making and support country-level action for shaping a better future.
- It provides **training and capacity development activities to assist mainly developing countries** with special attention to Least Developed Countries (LDCs), Small Island Developing States (SIDS) and other groups and communities who are most vulnerable.
- It aims to **reflect a drive for results and programming to develop the capacities** of individuals, institutions and organizations with a view to overcoming global challenges.

Significance of UNITAR

- It has acquired **unique expertise and experience in designing and delivering** a variety of training activities.
- It has become a **leading institute in the provision of customized and creative learning solutions** to institutions and individuals from both public and private sectors.

Core Functions of UNITAR

- **Providing high-quality learning solutions** to address the capacity development needs of individuals, organizations and institutions;
- **Advising and supporting governments,** the UN and other partners with knowledge services, including those that are technology-based;
- **Facilitating knowledge and experience sharing** through networked and



innovative processes; and

- **Integrating innovative strategies, approaches and methodologies** into our learning and related knowledge products and services.

2.19 India's stand on Sri Lanka at United Nations

Recently, the India has abstained from voting on a resolution in the **United Nations Human Rights Council (UNHRC)** that makes a wide-ranging and damaging commentary on the human rights situation in Sri Lanka.

It is the **eighth resolution on Sri Lanka** at the Human Rights Council since the end of the war against the LTTE in 2009.

- **India's record of voting** on these resolutions reflects:

- The ups and downs of New Delhi-Colombo relations;
- The pressures on coalitions in India;
- The influence of politics and parties in Tamil Nadu; and
- The ebb and flow of regional and international geopolitics

Resolution 46/L1, 2021

- It has decided to **“strengthen”** the Office of the High Commissioner on Human Rights.
- It aims to **collect, consolidate, analyse, and preserve information and evidence and develop possible strategies** for future accountability processes for gross violations of human rights.
- It also aims to **advocate for victims and survivors and to support relevant judicial and other proceedings**, including in Member States, with competent jurisdiction.
- It refers to **“persistent” lack of accountability for rights abuses** committed through the years by “all parties” in Sri Lanka, including the LTTE.
- It expresses a **lack of confidence** in the ability of the present government in Colombo to address the shortcomings.
- It describes the trends emerging over the past year as an **“early warning sign”** of



the deterioration of the climate in Sri Lanka for individual freedoms and rights.

Previous Resolution of UNHRC on Sri Lanka

- **Resolution S-11, 2009:** It reflected Sri Lanka's optimism following the defeat of the LTTE.
 - It urged the international community to help with financial assistance towards rebuilding, and welcomed the "resolve" of the Sri Lankan government to begin a broader dialogue.
 - The preamble to the resolution contained a commitment by Sri Lanka "to a political solution with implementation of the 13th Amendment to bring about lasting peace and reconciliation".
 - India, the architect of the 13th Amendment in Sri Lanka, was among the 29 countries that voted in favour of the resolution.
- **Resolution 19/2, 2012:** It was moved by United States.
 - It took note of the LLRC report that it did not address the serious allegations of violations of international law, and urged it to implement the "constructive" recommendations contained in it.
 - India was among 24 countries that voted in favour of the resolution along with the US and the European bloc.
 - It came as a big shock to Colombo when New Delhi joined the West in acting against it.
- **Resolution HRC 22/1, 2013:** India was concerned at the lack of progress by Sri Lanka in commitments given in 2009, and urged it to move forward on public commitments.
 - In 2013, India joined 25 countries including the European bloc in voting against Sri Lanka.
 - India called on the devolution of political authority through full implementation of the 13th Amendment and building upon it.
- **Resolution 25/1, 2014:** India abstained from resolution that called for an independent and credible investigation and asked Sri Lanka to make public the results of its investigations into alleged violations by security forces.



United Nations Human Rights Council (UNHRC)

- It is an **inter-governmental body** within the United Nations system.
- It is responsible for **strengthening the promotion and protection of human rights** around the globe and for addressing situations of human rights violations and make recommendations on them.
- It has the ability to **discuss all thematic human rights issues** and situations that require its attention throughout the year.
- It meets at the **UN Office at Geneva**.

2.20 First Training Squadron's (1TS) Overseas Deployment

Recently, the Indian Naval Ship **INS Shardul** made a **port call at Antsiranana, Madagascar** as part of **First Training Squadron's (1TS) Overseas Deployment**.

- The First Training Squadron's (1TS) forms a part of **Southern Naval Command (SNC)**.
- The 1TS is the **training command of the Indian Navy**.
- India and Madagascar share a strong maritime relation and visit by the First Training Squadron to Antsiranana is a step towards further **strengthening the bonds of friendship** between the two nations.

INS Shardul

- It is the lead ship of the **Shardul-class amphibious warfare vessels**.
- It is a **Landing Ship Tank of the Indian Navy** whose primary role is to transport troops, vehicles, armaments and accomplish all objectives of an amphibious operation.
- Its objectives includes **landing of combat equipment and personnel to an Amphibious Objective Area**.
- It has the capability to **launch and recover Marine Commandos** through sea as well as by helicopters.
- It can act as a **"Hospital Ship"** with facilities provided in containerised form as well as a **"Fleet Tanker"** for limited exercise.



Madagascar

- It is the **largest African island** situated in the **Indian Ocean**.
- In terms of area, it is the **fourth largest island country** in the world.
- It is recognized as one of the **world's top ten hotspots for biodiversity**.
- In January 2020, Indian Navy launched '**Operation Vanilla**' to assist the population of Madagascar affected by Cyclone Diane.

2.21 Indo-Korean Friendship Park

Recently, **India's First Indo-Korean Friendship Park** was jointly inaugurated at **Delhi Cantonment**.

Indo-Korean Friendship Park

- It is a **monument to India's contributions** as part of 21 countries which participated in **Korean war 1950-53**, under the aegis of the United Nations.
- It has been developed in joint consultation with **Ministry of Defence, Indian Army, Delhi Cantonment Board, Embassy of Korea and Korean War Veterans Association of India**.
- It includes an **entrance gate beautifully made in Korean style** signifying the graceful culture, a jogging track, well landscaped garden and an amphitheater.
- It has an **imposing handshake artifact** standing tall at the entrance bearing flags of India and South Korea.
- It has a **larger than life statue of General KS Thimayya**, a celebrated soldier who led the Indian contingent as Chairman of Neutral Nations Repatriation Commission (NNRC) in Korea headed by India.
- The **five pillars raised in the backdrop of General Thimayya's statue** are embossed with details of operations carried out by 60 Parachute Field Ambulance during the Korean War.
 - One pillar also encompasses **Nobel Laureate Gurudev Rabindranath Tagore's narration** of Korea as "**The Lamp of the East**" which was published in Korean daily "**Dong-A-Ilbo**" in 1929.



Significance of South Korea to India

- The **New Southern Policy of South Korea** is aimed at elevating Korea's strategic ties with the Association of Southeast Asian Nations (ASEAN) and with India to bring relations on par with Korea's four major diplomatic partners: the United States, China, Japan and Russia.
 - The NSP policy **places Southeast Asia and India at the centre of Korea's foreign policy agenda**, so far dominated by the Korean Peninsula and the role of these four major powers.
- **Seoul's political elite are coming to view India and the ASEAN countries as new economic partners**, driven by their need to reduce over-dependence on traditional trade allies like China and the United States.
- The fact that India has **no sensitive issues with South Korea aids the cause of strategic cooperation** between the two states.
- As India does not carry any unknown variables in its market, **South Korea finds little risk of economic cooperation with India** as compared to China.
- The bilateral defence industry collaboration with South Korea could help in the **development of indigenous capability** to fill the vital technology gap.
 - The high-end and sophisticated nature of the South Korean defence electronic capabilities makes **Seoul an indispensable defence partner**.
- South Korea could play an important role in **containing China's presence in Indian Ocean Region (IOR)** by becoming the part of a multilateral coalition.

Challenges in India-South Korea Relations

- The **South Korean firms prefer local investments over FDI domestically** and therefore making it difficult for India to take Foreign Direct Investment (FDI) to South Korea.
- The direct cooperation and engagement between Indian and South Korean **maritime forces remained limited** because of the cautious approach of India on this front.
- There is **reluctance from South Korea to partner with India** in any initiative in South Asia that challenged other regional powers.
- In August 2019, a simmering conflict between Japan and South Korea **erupted into**



a full diplomatic crisis, when Japan threatened to slow down exports of materials essential to South Korean industries, which might pose a problem for New Delhi.

2.22 Exercise Desert Flag

Recently, the **Exercise Desert Flag –VI** has been successfully culminated with de-induction of the Indian contingent from UAE.

Exercise Desert Flag

- It is an **annual multi-lateral large force employment exercise** hosted by UAE.
- The **Indian Air Force (IAF)** has participated in the exercise for the **first time**, fielding Su-30MKI fighter aircraft.
- The six countries **UAE, USA, France, Saudi Arabia and Bahrain** apart from **India** participated with aerial assets.
- **Jordan, Greece, Qatar, Egypt and South Korea** participated as observer forces.
- The **objectives** of the exercise were to:
 - Expose coalition participating forces to large force employment;
 - Sharpen tactical capabilities; and
 - Enhance interoperability along with fostering closer relations between the participating forces.
- The aim for the participating crew and specialist observers was to **expose them to operational environment** in scenarios requiring multinational forces working together.

2.23 Permanent Indus Commission

Recently, the annual meeting of the **Permanent Indus Commission (PIC)** comprising of Indus Commissioners of India and Pakistan was held in New Delhi.

- The talks are being held against the **backdrop of a thaw in bilateral relations**, which had taken a hit after the 2019 Pulwama suicide bombing and a subsequent military standoff.



- The last meeting of the **permanent Indus commission** was held in Lahore in August 2018.
- In February 2021, the **Indian and Pakistani militaries recommitted themselves** to the 2003 ceasefire on the Line of Control (LoC) in Jammu and Kashmir, raising hopes for further improvements in bilateral ties.

Key Highlights of 116th meeting of the India-Pakistan Permanent Indus Commission

- The two sides discussed on the designs of two Indian projects, namely, **Pakal Dul (1000 MW)** and **Lower Kalnai (48 MW)**.
- The Indian side held that these projects are **fully compliant** with the provisions of the Treaty and provided technical data in support of its position.
- The Pakistan side requested **India for sharing of information on design** of other Indian hydropower projects being planned to be developed.
- Pakistan has raised objections to the **designs of Pakal Dul and Lower Kalnai hydropower plants** and sought more information on the projects in Ladakh sanctioned after the **abrogation of Article 370**.

Permanent Indus Commission

- It is a **bilateral commission** consisting of officials from India and Pakistan, created to **implement and manage the goals and objectives and outlines of the Indus Waters Treaty (IWT)**.
- The two Commissioners are required to **meet at least once every year**, alternately in India and Pakistan under the provisions of the Indus Waters Treaty 1960.

Indus Waters Treaty

- It was signed between **India and Pakistan in 1960**.
- It was brokered by **World Bank**.
- The **treaty fixed and delimited the rights and obligations of both countries** concerning the use of the waters of the Indus River system.
- The Indus River rises in the **southwestern Tibet Autonomous Region of China** and flows through the **Kashmir region** and then into **Pakistan to drain into the Arabian Sea**.
- The treaty gave the waters of the **western rivers i.e. the Indus, Jhelum, and**



Chenab to Pakistan and those of the eastern rivers i.e. the Ravi, Beas, and Sutlej to India.

Pakal Dul Hydro Electric Project

- It is proposed on the **Marusudar River**, a tributary of the **Chenab River**
- It is located in **Kishtwar district in Jammu and Kashmir.**

Lower Kalnai project

- It is proposed in **Kishtwar and Doda districts.**
- It is a 48MW hydroelectric power project on **Lower Kalnai Nalla**, a tributary of **Chenab River.**

INTERNATIONAL

3.1 Why scientists want 'Australia's worst female serial killer' to be pardoned based on genetics

- In Australia, Leading scientists and medical experts are calling for the pardon of convicted child killer Kathleen Folbigg after a recent study showed that her victims — four of her children — may have died of natural causes.
- Medical experts have argued that her children died due to a rare genetic defect. They inherited a genetic mutation from their mother called **CALM2**.
- CALM-2 mutations are known to cause sudden death due to cardiac arrest.
- Calmodulin 2 is a protein that in humans is encoded by the CALM2 gene. Mutations in CALM2 are associated to cardiac arrhythmias.

Who is Kathleen Folbigg?

- Folbigg, 53, was arrested in 2003 following a seven-week trial in which she was convicted of smothering her four children — Caleb, Patrick, Sarah and Elizabeth — over a ten-year period during moments of frustration.
- Genome sequencing of Sarah and Laura's DNA, pulled from their neonatal heel prick tests, showed that they had both inherited a genetic mutation from their mother called CALM2.
- According to the experts, CALM-2 mutations are known to cause sudden death due



to cardiac arrest. Folbigg's sons Caleb and Patrick's genomes showed a different genetic mutation, which may have also contributed to their deaths, the scientists claimed. They both possessed a variant of the BSN gene, which has been linked to lethal epileptic fits.

What happens if Folbigg gets pardoned?

- If pardoned, Folbigg's convictions will not automatically be overturned. Rather, she will still have to appeal her conviction in the NSW courts.

3.2 Russia kept India out, US brings Delhi to talk stable for Afghan peace plan

- India is finally at the table with five other countries to **decide on the roadmap for peace in Afghanistan** after six months of hectic behind-the-scenes diplomacy.
- This mechanism has been suggested by Washington even as **Moscow is learnt to have suggested a plan that kept New Delhi out.**

INDIA'S INCLUSION:

- Russian interlocutors — amid growing proximity between Moscow and Beijing — suggested that **Russia, China, US, Pakistan and Iran should be at the table.**
- This, officials said, was apparently done at the **behest of Pakistan which has never wanted India to be part** of any roadmap for the region.
- New Delhi, for long on the sidelines, **reached out to all key players in Afghanistan** and other countries to make its way to the negotiating table. India's interests need to be safeguarded.
- By being part of the team, **New Delhi hopes to have a role in setting the terms** — especially concerning terrorism, violence, women's rights and democratic values.
- India's refrain has been that it wants an **Afghan-led, Afghan-controlled and Afghan-owned** process but ground realities have been such that other players have dictated terms.
- US Secretary of State Antony Blinken sent a letter last week to Afghan President Ashraf Ghani and chairman of the High Council for National Reconciliation, Abdullah Abdullah.
- In it, he proposed a regional conference under the UN auspices with



foreign **ministers of US, India, Russia, China, Pakistan and Iran** to discuss a “unified approach” on Afghanistan.

ACKNOWLEDGMENT:

- New Delhi’s engagement with Iran and its strategic investment in developing the Chabahar port as an access to Afghanistan helped India’s inclusion.
- The Biden administration’s proposal is also an **acknowledgment of India’s proactive role** in the Afghan reconstruction process, an official said.
- The current **outreach to Islamabad over the ceasefire along the LoC** will also be a factor at the table.
- US Secretary of State’s letter called for holding talks between Afghan elders and the Taliban in Turkey in the coming weeks to hammer out a revised proposal for a 90-day reduction in violence.

Raja Sir's

3.3 Uighur Muslims

Recently, several hundred **Uighur Muslim** women in Turkey staged an **International Women’s Day** march against the extradition agreement of Turkey with China and demanding the closure of **mass incarceration camps in China’s Xinjiang Province**.

- Earlier in 2020, the **United States House of Representatives approved a legislation** calling for sanctions on Chinese officials responsible for oppression of Uighur Muslims.
- **Uighur Muslims:**
 - The Uighurs are a predominantly **Muslim minority Turkic ethnic group**, whose origins can be traced to Central and East Asia.
 - The Uighurs speak their own language, similar to Turkish, and see themselves as culturally and ethnically close to Central Asian nations.
 - The Uighurs are considered to be **one of the 55 officially recognized ethnic minority communities in China**.
 - However, China recognises the community only as a regional minority and **rejects that they are an indigenous group**.

- Currently, the largest population of the Uighur ethnic community lives in **Xinjiang region of China**.
 - A significant population of Uighurs also lives in the neighbouring Central Asian countries such as **Uzbekistan, Kyrgyzstan and Kazakhstan**.
 - **Xinjiang is technically an autonomous region within China** — its largest region, rich in minerals, and sharing **borders with eight countries, including India, Pakistan, Russia and Afghanistan**.
- **Persecution of Uighurs:**
 - Over the past few decades, as economic prosperity has come to Xinjiang, it has brought with it in **large numbers the majority Han Chinese**, who have cornered the better jobs, and left the Uighurs feeling their livelihoods and identity were under threat.
 - This led to **sporadic violence, in 2009** culminating in a riot that killed 200 people, mostly Han Chinese, in the region's capital Urumqi.
 - Uighur Muslims for decades, under the **false accusation by the Chinese government of terrorism and separatism**, have suffered from abuses including **persecution, forced detention, intense scrutiny, surveillance and even slavery**.
 - However, **China claims its camps to be 'educational centres'** where the Uighurs are being cured of "extremist thoughts" and radicalisation, and learning vocational skills.
 - China claims that Uighur groups want to establish an independent state and, because of the Uighurs' cultural ties to their neighbours, leaders **fear that elements in places like Pakistan may back a separatist movement in Xinjiang**.
- **China's Extradition Treaty:**
 - In December 2020, **China approved an extradition treaty with Turkey** aimed at strengthened judicial cooperation to facilitate a crackdown on transnational criminals including terrorists.
 - Extradition is the formal process of one state surrendering an

individual to another state for prosecution or punishment for crimes committed in the requesting country's jurisdiction.

- The extradition agreement comes amidst **deepening economic and financial ties between Turkey and China.**
 - China is also Turkey's leading supplier of **Covid-19** vaccines.
- Since 1990, the **Uighur** diaspora in Turkey has become more vibrant and has attracted widespread attention globally through demonstrations, conferences, meetings and briefings.
- **Concerns of Uighur Muslims:**
 - **If Turkey ratifies the treaty**, this will be the **last nail in the coffin of Uighur culture** as China will silence the biggest Uighur diaspora outside Xinjiang.
 - The treaty will become another **instrument in the hands of China for the prosecution of its enslaved Uighur minority.**

India's Stand:

- The Indian government has maintained near silence on the **Uighur** crisis.
- All the countries should reconsider their position and **urge China to immediately stop the persecution of Muslims and the prohibition of Islam in Xinjiang.**
- China must close its "Vocational Training Centers," release the religious and political prisoners from prisons and detention camps. It should adopt **multiculturalism** and accept the Uighurs and other Turkic Muslims of China as ordinary citizens equal to native Chinese.

3.4 France launched First Military Exercise in Space

Recently, **France** has launched its **first military exercise in space.**

- The **French Space Forces Command**, Commandement de l'Espace (CdE) was created in 2019 and is set to have **500 personnel by 2025.**
- The investments in the space programme are also set to reach **\$5 billion during 2019-25.**



- The military drill comes after a **Russian “spy-satellite”** had tried to approach a **Franco-Italian satellite** in what Paris called an “act of espionage”.
- In 2017, **Russia’s Olymp-K attempted to intercept transmissions from the Athena-Fidus satellite** which is used by both Italian and French armies for secure communications.
- In 2020, the United States also accused Russia of having “**conducted a non-destructive test**” of an anti-satellite weapon from space.

Military Exercise in Space

- The exercise is codenamed ‘**AsterX 2021**’ in memory of the **first French satellite** from 1965.
- The aim of the exercise is to evaluate French military’s ability to **defend its satellites** and other defense equipment from an attack.
- Under the exercise, the French military will monitor a potentially **dangerous space object** as well as a threat to its own satellite from another foreign power possessing a considerable space force.
- The **new US Space Force and German space agencies** are taking part in the French exercises.
- The military drill is part of the French government’s strategy to make the country the **world’s third-largest space power**.

Since 2005 — Feel The Pulse of UPSC...

3.5 India’s arms imports down by 33%: SIPRI Report

Recently, the **Stockholm International Peace Research Institute (SIPRI)** has released a report on international arms transfer.

- The arms exports by **Russia**, which accounted for 20% of all exports of major arms in 2016–20, **dropped by 22%**.
- The exports by **China**, the world’s fifth largest arms exporter in 2016-20, **fell 7.8%** between 2011-15 and 2016-20.
 - China accounted for **74% of Pakistan’s military imports** during the last five years, which is an increase from 61% in 2011-15.
- The **United States**, world’s largest arms exporter, saw its **global share of exports**



went up from 32% to 37% between 2011-15 and 2016-20.

- The **five largest arms exporters** in 2016-20 were the **US, Russia, France, Germany and China**, while the **top importers** were **Saudi Arabia, India, Egypt, Australia and China**.

India and SIPRI Report

- The report attributed the **drop in India's arms imports** mainly to an attempt to **reduce its dependence on Russian arms** and complex procurement processes.
 - Russia was the **most affected supplier for India** and India's imports of US arms also fell by 46%.
- India is planning **large-scale arms imports** in the coming years from several suppliers.
- The report highlighted that **India's top three arms suppliers** during 2016-20 were **Russia (accounting for 49% of India's imports), France (18%) and Israel (13%)**.
- India accounted for **0.2% of the share of global arms exports** during 2016-20.
 - It implies that India is the **world's 24th largest exporter** of major arms.
 - It represents an **increase of 228% over India's export share of 0.1%** during the previous five-year period of 2011-15.
- The report highlights that **Myanmar, Sri Lanka and Mauritius were the top recipients** of Indian military hardware.

SIPRI

- It is an **independent international institute** dedicated to research into conflict, armaments, arms control and disarmament.
- It was **established in 1966**.
- It **provides data, analysis and recommendations**, based on open sources, to policymakers, researchers, media and the interested public.
- The **SIPRI's mission** is to:
 - Undertake research and activities on security, conflict and peace;
 - Provide policy analysis and recommendations;

- Facilitate dialogue and build capacities;
- Promote transparency and accountability; and
- Deliver authoritative information to global audiences.

3.6 Dead Sea



Recently, the **Israeli archaeologists** have announced the discovery of dozens of new **Dead Sea Scroll** fragments.

- The **scrolls are bearing a biblical text** found in a desert cave and believed hidden during a Jewish revolt against Rome nearly 1,900 years ago.
- The fragments of **parchment bear lines of Greek text** from the books of Zechariah and Nahum.
 - They have been **radiocarbon dated** to the 2nd century AD.
- The new pieces are believed to belong to a **set of parchment fragments** found in a site known as **“The Cave of Horror”**.
- The cave is located in a remote canyon in the **Judean Desert** south of Jerusalem.
- The fragments are believed to have been stashed away in the cave during the **Bar Kochba Revolt**.
 - It was an armed **Jewish uprising against Rome** during the reign

of **Emperor Hadrian**, between 132 and 136 AD.

Significance of Dead Sea Scrolls

- They are the first new scrolls found in **archaeological excavations in the desert south of Jerusalem** in 60 years.
- The artifacts were found during an operation by the **Israel Antiquities Authority in the Judean Desert** to find scrolls and other artifacts to **prevent possible plundering**
- The Dead Sea Scrolls is a **collection of Jewish texts found in desert caves** in the West Bank near Qumran in the 1940s and 1950s.
 - It dates from the **3rd century B.C. to the 1st century A.D.**
 - It includes the **earliest known copies of biblical texts and documents** outlining the beliefs of a little understood Jewish sect.

Dead Sea

- It is located between **Israel and Jordan** with parts in the **West Bank**.
- It is a **salt lake** in south-western Asia.
- It is also called the **Sea of Death, Salt Sea, and Sea of Lot**.
- It is the **lowest water body on Earth**, with the lowest elevation on land.
- The **movement of the African and Arabian tectonic plates** shifted the land between the Dead Sea and the Mediterranean rose.
- The sea is fed by the **waters of freshwater springs and aquifers**.
- The **high salt and mineral content of the Dead Sea** mean that this body of water has powerful healing properties.
 - It is a popular destination for **treating skin problems** such as acne, psoriasis and cellulite, as well as muscle ache and arthritis.

3.7 United Kingdom's Turing Scheme

Recently, the United Kingdom government has launched the **Turing scheme** after having left the **European Union's flagship Erasmus scholarship** programme after Brexit.



Turing Scheme

- The scheme would commence from the **new academic year** i.e. 2021/22.
- The British government has allocated **110 million pounds** for the first year.
- It would enable up to **35,000 students from across the country** to study or work across the world.
- Under the programme, after **schools and universities successfully apply for funding for exchanges**, university study and work placements, they can invite their students to apply for individual funding.
- The beneficiaries of the scheme from disadvantaged backgrounds can receive up to 490 pounds per month towards **living costs, travel funding** and money to offset the **cost of passports, visas and insurance**.

Significance of Turing Scheme

- It will **enable schools, colleges and universities in the UK to apply for government funding** to allow students to study and work across the globe, including in India.
- The scheme would be a **global programme** in which every country in the world will be able to partner with UK institutions.
- It is aimed towards **ensuring social mobility, and targets students from disadvantaged backgrounds** and areas from where not many could benefit under the previous Erasmus+ scheme.
- It is part of the UK's drive to **increase the amount generated from education exports**, including fees and income from overseas students and English language teaching abroad.
- The government aims to **generate 35 billion pounds per year**, and bring **6 lakh international students** to the country by 2030.

3.8 Border Dispute between Kenya and Somalia

Recently, **Kenya** has said that it will not take part in proceedings of the **International Court of Justice (ICJ)** over its **maritime border dispute** with neighbouring **Somalia**.



- In 2014, Somalia had asked the International Court of Justice (ICJ) to **adjudicate after negotiations to resolve the issue bilaterally failed**.
- **Kenya resisted** by arguing that the ICJ did not have jurisdiction to hear the case.
 - The argument of Kenya is based on a **2009 argument between the two neighbours** that Kenya said amounted to a commitment to settle the dispute out of court.
- In 2017, the ICJ ruled that it **did have the right to rule in the case**, and in 2019 said that it would begin public hearings.
- The move comes after **Somalia's decision to sever diplomatic relations with Kenya** in December 2020, after it accused Nairobi of meddling in its internal affairs.

What is the border dispute between Kenya and Somalia?

- The main point of disagreement between the two neighbours is the **direction in which their maritime boundary in the Indian Ocean** should extend.
- Somalia is of the view that the **sea border should be an extension of the same direction in which their land border runs** as it approaches the Indian Ocean, i.e. towards the southeast.
- Kenya argues that the **territorial southeast border should take a 45 degree turn as it reaches the sea**, and then run in a latitudinal direction, i.e. parallel to the equator.
 - It would be **advantageous arrangement for Kenya**, whose coastline of 536 km is more than 6 times smaller than Somalia's (3,333 km).

Importance of disputed area

- The **triangular area** created by the dispute is around 1.6 lakh sq km large,



and **boasts of rich marine reserves.**

- It is also believed to have **oil and gas deposits.**
- Both Somalia and Kenya have accused each other of **auctioning off blocks from this area.**

3.9 Global Wage Report 2020-21

The **International Labour Organisation (ILO)** report titled '**Global Wage Report 2020-21: Wages and minimum wages in the time of COVID-19**' is available at ILO's official website.

- The **Code on Wages, 2019** universalises and creates a statutory right of minimum wages for all workers whether in organized or unorganised sector.
- The new concept of **statutory floor wage** has also been introduced in the Code on Wages.
- The Code also provides that the **minimum wages are to be ordinarily reviewed** and revised by the appropriate Governments in intervals not exceeding five years.

Highlights of Global Wage Report 2020-21

- It comments on various issues including on Indian workers having **low average wages, longer hours** as well as that the **workers in Asia and the Pacific.**
- The 2020-21 edition analyses the **relationship of minimum wages and inequality**, as well as the wage impacts of the COVID-19 crisis.
- The global wage **growth fluctuated between 1.6 and 2.2 per cent** in the four years preceding the COVID-19 pandemic (2016–19).
 - In advanced **G20 economies**, the real wage growth fluctuated between **0.4 and 0.9 per cent.**
 - Among advanced G20 economies, **wage growth accelerated** the most (by 22 per cent) in the **Republic of Korea**, followed by **Germany (15 per cent).**
- In the first half of 2020, a **downward pressure on the level or growth rate of average wages** was observed in two thirds of the countries.
 - In Brazil, Canada, France, Italy and the United States, average wages



have been **rising markedly because of job losses** mainly affecting those at the lower end of the wage scale.

- The impacts of the **crisis on total wages have fallen differently on men and women**, the latter being disproportionately affected.
- The COVID-19 crisis **disproportionately affected lower-paid workers**, thereby increasing wage inequalities.
- The **temporary wage subsidies** have enabled many countries to compensate part of the wage bill that would have been lost, and to lessen the effect of the crisis on wage inequality.
- The report highlighted that **minimum wages, statutory or negotiated**, exist in 90 per cent of the 187 ILO Member States.
- The report states that an **estimated 327 million wage earners are paid at or below the applicable hourly minimum wage** which represents 19 per cent of all wage earners, and includes 152 million women.

Global Wage Report

- It is a **flagship report of ILO** which examines the **evolution of real wages around the world**, giving a unique picture of wage trends globally and by region.
- It is **central to the analysis of wage trends and labour market developments** as well as to the theoretical debate about the role of labour in the economy.
- It is an **indispensable publication** for economists, trade unionists, employers and the interested public.
- It analyses the **latest wage statistics and provides insights on wage policies** based on research projects carried out by the ILO.
- It is probably the most **comprehensive worldwide database on wages and wage inequality** currently available.

International Labour Organisation (ILO)

- It is the **only tripartite United Nations agency** established in 1919.
- It brings together **governments, employers and workers** of 187 member States.
- It aims to **set labour standards, develop policies and devise programmes** promoting decent work for all women and men.



3.10 China-Taiwan Clash on Pineapple

Recently, the **ties between China and Taiwan**, which have historically been rocky over issues such as sovereignty, foreign relations and military build-up, are now being tested by an **unusual subject i.e. pineapples**.

China's views on Taiwan's Pineapple

- In March 2021, **China had banned the import of pineapples from Taiwan**, alleging there was a **risk of "harmful creatures"** that could threaten its own agriculture.
- Taiwan has **refuted China's claims of pests being found in imported pineapples**, and has gone on to insist that the move is aimed at increasing political pressure on Taiwan.
- The trade between the two amounted to **\$150.5 billion in 2018**, up from \$35 billion in 1999.
- **China is Taiwan's largest trading partner**, making up nearly 30% of the island's total trade which includes commerce in agricultural products.

Response from Taiwan on China's claim

- China said that it would **stop pineapple imports from Taiwan** but the latter expressed fears that the ban could cause a **glut of the produce on the island**, and cause its price to fall.
- According to Taiwan's Council of Agriculture, the island last year exported 10% of the 420,000 tonnes of pineapple that it grows annually, with most of the exports going to China.

About #Freedom Pineapple campaign

- The Taiwanese President Tsai Ing-wen kicked off a **"pineapple challenge"** on social media to attract more Taiwanese consumers to buy the fruit and counter China's move.
- The call was **seconded by the de facto embassies of the US and Canada in Taiwan**, who posted pictures on social media professing their love for pineapples from the island.



- The campaign also received an **enthusiastic response on social media** in several other countries, including the UK, US, and India.
- The campaign helped Taiwan receive orders for **5,000 tonnes of the fruit** from Japan.
- The Taiwanese government said that it had **secured enough orders to cover the loss that would have been caused by the Chinese ban** after it launched the #Freedom Pineapple campaign.

Larger dispute between Taiwan and China

- Under its **“One China” policy**, Beijing considers Taiwan a province of China, even though **Taiwan is a democratic, self-ruled country**.
- China repeatedly insists that Taiwan should be called **“Chinese Taipei”**, in efforts to prevent international recognition of Taiwan as a country.
- The dispute first began after the **surrender of Japan during World War II**, when the island of Taiwan was put under Chinese control.
- Taiwan was **internationally recognised as the government of the Republic of China (RoC)**, and still officially calls itself so.
- Beijing has **asserted sovereignty over Taiwan** and has consistently tried to quash attempts signifying independence.

3.11 Sanctions on China over Uighurs

Recently, the **European Union, the US, Britain, and Canada imposed sanctions on Chinese officials and entities for human rights abuses against Uighurs and other Muslim minorities** in Xinjiang province.

- **Australia and New Zealand welcomed the Western action** by issuing statements that they were concerned about reports of abuses from Xinjiang.

What are the Sanctions imposed on China?

- The sanctions from EU, UK, US and Canada, which include **travel bans and freezing of assets**, are against the Xinjiang Production and Construction Corps Public Security Bureau.



- The sanctions from US implies that **all property and interests in property of the persons above that are in the United States or in the possession or control of U.S. persons are blocked** and must be reported to Office of Foreign Assets Control.
- The US Department of Treasury informed that **any entities that are owned, directly or indirectly, 50 percent or more by one or more blocked persons** are also blocked.
- It is the **first time the EU has imposed sanctions on China** since an arms embargo after the 1989 Tiananmen Square crackdown.

Counter Arguments of China over sanctions

- It has **consistently denied all reports of atrocities against Uighurs**, maintaining it is only **“deradicalising”** elements of its population in the interests of security.
- China has maintained that all it is doing in the camps is to **de-radicalize people and give them skill training**, so they can stay away from violence and extremism.
- China **sanctioned five Members of European Parliament and the Political and Security Committee**, the EU’s main foreign policy decision-making body, among others.
- China also **summoned the EU ambassador**, Nicolas Chapuis, and the UK ambassador, Caroline Wilson, to lodge **“solemn protests”**.

Reasons for Sanctions over China

- Over the past few decades, **more and more Han Chinese have settled in Xinjinag**, which saw violent clashes between them and the Uighurs.
- China is now accused of putting over a million people in internment camps to **“de-Muslimise” them** and make them **integrate better in the Communist country**.
- The allegations are that these people have been **forced to leave behind their occupations, properties and families**, to stay at the camps.
- The survivors, human rights organisations, and governments of other countries have **alleged physical, psychological and sexual torture**.

Uighurs

- Xinjiang has a **large number of Uighurs**, who are **Muslims of Turkic descent**.



- There are about 12 million Uighurs, living in **north-western China in the region of Xinjiang**, officially known as the **Xinjiang Uyghur Autonomous Region (XUAR)**.
- The **Uighurs speaks their own language** and sees themselves as **culturally and ethnically close to Central Asian nations**.

3.12 Suez Canal blocked by traffic jam

Recently, the **Suez Canal has been blocked** after a large cargo ship ran aground while passing through it, bringing traffic on the busy trade route to a halt.

Suez Canal

- It is a critical shipping artery that connects the **Mediterranean and Red Seas** through **Egypt**.
- It is a **human-made waterway** and as one of the world's **most heavily used shipping lanes**, carrying over 12% of world trade by volume.
- It was built in 1869 to provide a **major shortcut for ships moving between Europe and Asia**.
- The **150-year-old canal was controlled by British and French** interests in its initial years, but was **nationalised in 1956** by Egypt.
- In 2015, Egypt announced plans to further **expand the Suez Canal**, aiming to reduce waiting times and double the number of ships that can use the canal daily by 2023.

Significance of Suez Canal

- The canal is a major source of income for Egypt's economy, with the **African country earning \$5.61 billion in revenues** from it in 2020.
- According to reports, **nearly 50 ships pass through it every day**, and it accounts for 12% of world trade.
- The **majority of oil transported by sea passes through the Suez Canal**, which is the fastest crossing from the Atlantic Ocean to the Indian Ocean, but demands hefty passage tolls.
- The **journey between ports in the Gulf and London**, for example, is **roughly halved** by going through the Suez as compared to the alternate route via the



southern tip of Africa.

Reasons for traffic jam at Suez Canal

- The vessel blocking Suez is the Ever Given which is a **Panama-registered container ship** that is on its way to Rotterdam in the Netherlands from China.
- The 2018-built vessel, which is 400-m long and 59-m wide, got stuck at Suez Canal due to a **mishap caused by bad weather**.

3.13 World Development Report 2021

Recently, the **World Development Report 2021: Data for Better Lives** has been released by **World Bank**.

- The report highlights that **most countries have shied away from an open-data policy** and more so countries with developing economies.
- The report stated that **only 11 per cent low-income countries consistently made available** with a license classifiable as 'open'.
- The comparable rate for **lower-middle-income countries was 19 per cent, for upper-middle-income countries 22 per cent and high-income countries 44 per cent**.

Challenges posed by report

- **Underinvestment in public intent data systems:** Only half the countries had a national statistical plan that was fully funded as of 2019.
 - While 93 per cent of high-income countries had a **fully funded national statistical plan, not a single low-income country had one**.
 - Lower-income countries were **unable to harness the potential of data** due to a lack of institutions, decision-making autonomy, and financial resources.
- **Gaps in data on women and girls were particularly severe:** Only 10 of the 54 gender-specific indicators (19 per cent) in the United Nations-mandated sustainable development goals were widely available.
 - **Only 24 per cent of the available gender-specific indicators** were from



2010 or later.

India and World Development Report 2021

- The report stated that the concerns on assessment of global poverty by World Bank, which has been **skewed due to absence data on poverty from India.**
- India **monitors 54 out of the 130 SDG indicators.**
- The **overall number of monitored indicators has gone up** but the country has dropped four indicators from its tracking list pointed out the State of India's Environment In figures, 2020.

Recommendations of World Development Report 2021

- The data offer tremendous potential to **create value by improving program and policies, driving economies, and empowering citizens.**
- The perspective of poor people has largely been **absent from the global debate on data governance** and urgently needs to be heard.
- The report called for **international cooperation to harmonise regulations and coordinate policies** so that the value of data can be harnessed to benefit all, and to inform efforts toward a green, resilient and inclusive recovery.
- The making of **data accessible to more users and creating systems that facilitate their reuse** also opens the door for data to be misused in ways that can harm individuals or development objectives.

World Development Report

- It is **annual report** which is being published since 1978.
- It is an **invaluable guide to the economic, social, and environmental state** of the world today.
- It provides **in-depth analysis and policy recommendations on a specific and important aspect of development** from agriculture, the role of the state, transition economies, and labor to infrastructure, health, the environment, and poverty.

NATIONAL

4.1 PM calls for water conservation drive



- Prime Minister recently said there was a **need to start conserving water** right away and that the Jal Shakti Ministry would be launching a 100-day “**catch the rain**” **campaign** soon.
- PM said there was a need to have **collective responsibility on water conservation**.
- In most parts of India, rainfall begins in May-June. In a few days from now, Jal Shakti Abhiyan 100 days ‘catch the rain’ is being initiated by the Jal Shakti Ministry for the sake of cleaning up the water sources around us and conserving rainwater.

‘SELF-RELIANT INDIA’:

- When we talk of science, many a time people restrict it to physics, chemistry or labs, but the spread of science is much more than that.
- And there is a lot of contribution of the power of science to the Atmanirbhar Bharat campaign.
- PM said we have to move science forward with the mantra of ‘**Lab to Land**’.
- For making India more self-reliant, it was not just “bigger things”, such as missiles, aircraft, tanks and Metro trains, that would achieve the goal. PM cited the example of a farmer in Uttar Pradesh who has started growing chia seeds.

CHIA SEEDS

- Chia seeds has been in the news for some time now. People connected to health awareness **give a lot of importance to Chia seeds** and it has a lot of demand too in the world.
- In India, it is mostly sourced from abroad, but now people are taking up the challenge to be **self-reliant in chia seeds, too**.
- Similarly, a farmer in Uttar Pradesh has begun farming of chia seeds. Cultivation of chia seeds will also **increase his income and will help in the self-reliant India** campaign too.

4.2 The third edition of Rashtriya Sanskriti Mahotsav begins with great enthusiasm at Murshidabad

- The **third and final edition of the Rashtriya Sanskriti Mahotsav 2021 in West**



Bengal organized by the Ministry of Culture, Government of India began on 27th February 2021 at Murshidabad, West Bengal.

- The Mahotsav started with colourful performances by the local artists, which included ‘**Baul Gaan**’, ‘**Alkup Gaan**’, ‘**Leto gaan**’, ‘**Jhumuriya**’ and **Ranpa folk dances**.
- Besides the performances of the artists, 70 stalls of handicrafts, paintings, embroidery, and jute crafts etc. also attracted the people.

RASHTRIYA SANSKRITI MAHOTSAV:

- Rashtriya Sanskriti Mahotsav, the flagship festival of Culture Ministry has been organized since 2015 with the active participation of Seven Zonal Culture Centres and has been playing a pivotal role **to take the vibrant culture of India out to the masses instead of confining to auditoria and galleries**.
- It has been instrumental in showcasing, folk and tribal art, dance, music, cuisines & culture of one state in other states reinforcing the **cherished goal of “Ek Bharat Shreshtha Bharat”** and at the same time providing an effective platform to the artists and artisans to support their livelihood.
- **Earlier Rashtriya Sanskritik Mahotsavs have been held till date since November, 2015** in various states and cities such as Delhi, Varanasi, Bengaluru, Tawang, Gujarat, Karnataka, Tehri and Madhya Pradesh.

————— *Since 2005 ——— Feel the Pulse of UPSC...*

4.3 Engineering research policy launched

- Karnataka launched the country’s maiden **Engineering Research & Development (ER&D) Policy** recently to **raise its contribution to the sector in the country to 45%** in the next five years.
- The State government anticipates the policy has the potential to **create over 50,000 jobs in the ER&D space** in five years.
- According to industry apex body Nasscom, **ER&D has the potential to become a \$100-billion industry in the country** in the next five years.

FASTEST GROWING INDUSTRY:

- Unveiling the policy, Deputy Chief Minister, who holds the IT/Biotechnology and Science and Technology portfolios, said, “The **ER&D sector in the country is the**



fastest growing industry with a CAGR of 12.8%.

- Meanwhile, the global engineering research and development industry is expected to reach a **spend of \$2 trillion by 2025**.
- Considering this scenario, this policy aims to prepare the State to make **use of the future opportunities** emanating from this sector.
- Karnataka is already the leading contributor to the country's ER&D industry revenue and is home to over 400 R&D centres, global capability centres and engineering service providers.
- Through this policy, Karnataka is aiming to grow our contribution, **develop more intellectual properties (IPs)**, and make the state a skilled knowledge capital.
- The government would invest in skilling, improve academia and industry collaboration, and also encourage IP creation locally in a big way.
- The new policy, drafted jointly by the Department of Electronics, IT, Biotechnology and Science and Technology, Karnataka Innovation and Technology Society, and Nasscom in consultation with industry stakeholders, has identified five key focus sectors such as **aerospace and defence; auto, auto components and EV; biotechnology, pharma and medical devices; semiconductors, telecom, ESDM; and software products**.
- The new ER&D policy heralds a new chapter in the **State's position as a hub of innovation and transformation**.

4.4 Field trials for Census-NPR to begin soon

The Registrar-General of India (RGI) is preparing to conduct **field trials of the first phase of the Census and the National Population Register (NPR)** using a mobile application in all the States and Union Territories.

FIRST PHASE:

- The first phase involving **house listing and housing census**, along with updating the NPR, was scheduled from April 1 last year, but was postponed indefinitely due to the pandemic.
- It is unlikely that the exercise will be conducted this year as the **vaccination drive is still at an early stage**.



- The officials are planning to **conduct pre-tests or field trials** through the app in one block each of every district, which is expected to cover 50 to 60 households.
- The app will contain questionnaires on house listing and housing census and the NPR.
- The dates for conducting the Census exercise have not been finalised yet. But the enumerators will have to be trained in using the app.
- Many enumerators are young schoolteachers who are expected to use the app instead of the paper schedule [form]. There will be **incentives for the electronic form**.

SECOND PHASE:

- The second phase of the Census is **population enumeration**.
- The RGI, on January 9, 2020, notified the 31 columns for which the enumerators will seek response for the house listing and housing census.
- **The questions** include whether the respondent has access to LPG or piped natural gas connection; owns a radio, transistor, television, laptop, computer, telephone, mobile phone or smartphone; and has access to the Internet.
- **The questions for the NPR have not been made public yet**, but the pre-test conducted in 2019 included additional questions such as the date and place of birth of father and mother, last place of residence and mother tongue, Aadhaar (optional), voter ID card, mobile phone and driving licence numbers.
- The Opposition-ruled States have expressed apprehensions over the additional questions.

ELECTRONIC DATABASE:

- In 2010 and 2015, the NPR collected details on 14 parameters only. It already has an electronic database of more than 119 crore residents.
- The app will have the **NPR schedule also**. Before it is rolled out, the app has to be tested for glitches, and field trials are to be conducted.
- Recently, Union Minister of State for Home informed the Rajya Sabha that “**an app for the collection of data and a Census portal** for the management and monitoring of various Census-related activities has been developed”.



- Instruction manuals for enumerators and other Census functionaries have been prepared.
- **A pre-test of the Census was undertaken** from August 12, 2019 to September 30, 2019 in selected areas of all the States and Unions Territories to test the Census questionnaire and methodology.

4.5 OTT platforms will not have to register: Centre

- The Ministry of Information and Broadcasting has clarified that **over-the-top (OTT) platforms will not have to register with the government**, and no government nominee will be present in the self-regulatory body.
- The Centre recently had notified **new rules and guidelines for OTT platforms and digital news media**.

STATEMENT FROM THE MINISTRY:

- The I&B Ministry said it merely requires them to **disclose information and that there is no requirement of registration** of any kind with the Ministry.
- The rules focus on **self classification of content** instead of any form of censorship. The platforms were expected to develop a **grievance redressal mechanism** to tackle complaints about content.
- Dispelling rumours, the Ministry clarified that in the self-regulating body, **no member will be appointed by the government**.
- The government would create an **inter-departmental committee to look at complaints** that remain unresolved at the self-regulatory level.
- The Ministry reasserted that the **code of ethics had been brought** in following representations from various cinema and TV bodies, stating that while there were regulations for them, none existed for the OTT industry.
- The government would come out with **progressive institutional mechanism** for OTT players and develop a level-playing field with the idea of self-regulation.

4.6 Content needs to be checked, says SC

- The Supreme Court recently made it amply clear to over-the-top (OTT) platforms



such as Netflix and Amazon Prime Video that it is in **favour of “screening” the content shown by them.**

- It said some of the films hosted by the platforms **were pornographic.**

SC OBSERVATION:

- Traditional film viewing has become extinct. Now, films and web series are viewed by the public on these platforms. Should there not be some screening?
- We feel there should be some screening. There is pornography on some films.
- Senior advocate Mukul Rohatgi, appearing for Amazon producer Aparna Purohit's bail, said this “was not about pornography but the **right to freedom of expression**”.
- “But a balance has to be struck,” SC retorted.
- Solicitor-General Tushar Mehta said the **content included “filthy abuses”**.
- The Bench asked the guidelines to be placed on record and scheduled a hearing for March 5. The **Information Technology (Guidelines for Intermediaries and Digital Media Ethics Code) Rules of 2021** requires the streaming platforms to comply with a new three-tier self-regulatory complaint redressal system.

4.7 IISc in top 100 list in natural sciences category

- The **Indian Institute of Science broke into the top 100 in the natural sciences category** of the QS World University Rankings by Subject 2021, which were released recently.
- With regard to subject rankings, there are two new entrants in the top 100 list: JNU's **anthropology programme** and **O.P. Jindal Global University's law programme**, which is also the only private institution in the list.

IITs:

- In the broad engineering and technology category, only three institutions made it to the top 100 — **the Bombay, Delhi and Madras IITs** — in comparison to five institutions last year.
- The Kharagpur and Kanpur IITs dropped out of the top 100 though the former is one of the government's Institutes of Eminence (IoEs).



- The Bombay, Delhi and Madras IITs, which are also IoEs **getting extra Central funding** with the specific aim of rising in global rankings, have all dropped several places this year as well.

DU FALLS 48 PLACES:

- In the other two broad categories, the **University of Delhi was the highest ranked Indian institution in social sciences and management**, but fell 48 places to drop out of the top 200.
- The **All India Institute of Medical Sciences remained the only institution in the top 300** in life sciences and medicine, but also dropped more than 10 places.
- Overall, 25 Indian programmes from 12 institutions made it to the top 100 in their specific subject areas, two fewer than in 2020.
- Two programmes from the IIT Bombay and one each from the the Madras and Kharagpur IITs slipped out of the list.
- Only two of the IoE programmes in the top 100 subject-specific list improved their rankings this year.
- The top-ranked Indian programme globally is the **IIT Madras petroleum engineering programme** which dropped one place to the 30th rank, followed by mineral and mining engineering at Bombay and Kharagpur IITs, which are ranked at 41st and 44th place in their field.
- The **University of Delhi's development studies programme** is the only other one in the top 50, sliding in at the 50th rank.
- QS Head of Evaluation Leigh Kamolins noted that **India had a good performance in COVID-19 research**, ranking fifth in the world in terms of the number of published research papers on the pandemic.

How rankings are calculated?

- QS World University Rankings by subject calculate performance based on four parameters:
- Academic reputation.
- Employer reputation.
- Research impact (citations per paper).



- The productivity of an institution's research faculty.

4.8 Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.

- The implications of the government's new rules to regulate digital media.

The grievance mechanism:

- These rules seek to provide a grievance redressal mechanism for users of social media platforms, messaging applications, streaming services as also digital news publishers. These are much stricter and broader in scope compared to the existing rules. These rules aim to regulate social media, digital media and OTT Platforms (Over The Top).
- The grievance mechanism which the government-mandated will be a **three-tier** mechanism:
 - 1st Tier- Grievance Redressal Mechanism
 - 2nd Tier- Self Regulatory Body
 - 3rd Tier- Over Sight Mechanism

Details:

- The said rules are neither under parliament scrutiny nor are they statutory but it still provides broad powers to the government for regulating and censoring social media intermediaries including the online news media.
- The new rule empowers the Information & Broadcasting Secretary to directly block the content for public access for specific content in case of an emergency.
- According to the newly unveiled rules, an intermediary refers to portals of the social media network, media sharing sites, portals, blogs, websites, apps, online discussion forums, and "other such functional intermediaries".
- The online platform will be following the program code mentioned under the cable television network regulation act and should also fulfill the norms of journalistic conduct prescribed by the press council of India which regulates the content produced on television and print media.
- Over The Top platform (OTT) will **not** be allowed to produce and stream any content which is against the sovereignty and integrity of India, which is hurtful and



damages our country friendly relations with other countries, and any content, which is likely to stir up and encourage any kind of violence or disturb public order in the state or country.

- As per the rules, the platform will also have to consider India's diverse racial and religious nature and take proper precautions while streaming activities, practices, beliefs, or acts of any religious or racial groups.

Regulation of OTT Platforms:

- While streaming any content the Platform will be required to follow the law of the land and will have to mandatorily set up the three-tier grievance redressal structure like the digital media platforms.
- In cases of online content, the 2nd tier which is the self-regulatory body will be empowered to direct the publisher to relook into the ratings of specific content, make relevant changes and modifications in content, age classification, and edit the synopsis of the content in question.
- The rule also makes it mandatory for the content creators to differentiate their content into 5 age-based categories which are **U (Universal), U/A 7+, U/A 13+, U/A 16+, and A (Adult)**, and must also execute parental lock feature for content coming under U/A 13+ or higher with a dependable and authentic age verification machinery for content coming under the category of "A".
- Also, both the OTT Platform and the online news media will have to inform the ministry and publish a monthly report which will mention all the details of the grievance received and the action taken to address those grievances.

4.9 What the new rule on airbags means for passengers and carmakers

- **The Union Ministry of Road Transport** and Highways has issued a Gazette notification regarding mandatory provision of an airbag for passengers seated on the front seat of a vehicle, next to the driver.
- The Ministry has mandated that "**Vehicles** manufactured on and after the April 1, 2021, in the case of new models, and August 31, 2021, in the case of existing models, shall be fitted with airbags for the person occupying the front seat, other than the driver."
- This has been mandated as an important safety feature and is also based on



suggestions of the **Supreme Court Committee on Road Safety.**”

- The latest mandate is for all existing models in the M1 category — passenger motor vehicles having not more than eight seats in addition to the driver’s.

What is an Airbag?

- An airbag is a vehicle occupant-restraint system using a bag designed to inflate extremely quickly, then quickly deflate during a collision. It consists of the airbag cushion, a flexible fabric bag, an inflation module, and an impact sensor.
- The purpose of the airbag is to provide a vehicle occupant with a soft cushioning and restraint during a crash event. It can reduce injuries between the flailing occupant and the interior of the vehicle.
- An **airbag** pops up as a protective cushion between the passenger and the car’s dashboard during a collision.

Implications of this decision

- **India accounts for 10% of all road crash** victims in the world, as per a recent World Bank report.
- **In a country where 415 people** die in road accidents every day, an airbag can literally be a lifesaver.
- **Some of the other safety features in automobiles are:**
 - Anti-Lock Braking System (ABS)
 - Speed Alert System
 - Reverse Parking Sensors
 - Driver and passenger seat belt reminder
 - Manual override for central locking system

4.10 Delhi HC seeks response on petition against new IT Rules

- The Delhi High Court sought a response from the Centre on a petition challenging the new IT (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, claiming it seeks to **regulate online news portals by imposing government oversight** and a vaguely worded ‘Code of Ethics’.



- HC issued notices to the Ministry of Electronics and Information Technology (MEITY) and Ministry Of Information & Broadcasting on the plea filed by Foundation for Independent Journalism.

PETITION:

- The petition argued that the new IT Rules issued on February 25, 2021, were “palpably illegal” in seeking to **control and regulate digital news media** when the parent statute nowhere provided for such a remit.
- It said the new IT Rules had “**profound and serious harms for digital news media**” and was destructive of their rights.
- The plea stated that the IT Rules, 2021, introduced two distinct sets of regulations — one, **due diligence norms** to be followed by ‘intermediaries’ and two, ‘**Code of Ethics**’ ought to be adhered to by ‘publishers’, along with a three-tier compliance mechanism.
- While ‘intermediaries’ were recognised and regulated by the IT Act, the plea said that the new IT Rules **laid down a separate ‘Code of Ethics’** for the two kinds of publishers — publishers of news and current affairs content, and publishers of online curated content.
- The parent (IT) Act **does not recognise digital news media as a separate category of entities** and does not seek to subject them or their content to any set of special regulations
- The content to be regulated by the parent Act, as offences, was **limited to sexually explicit material, child pornography, showing private parts of individuals, cyber terrorism**, etc. to be prosecuted and tried by normal courts.
- The IT Rules, 2021, expand the scope of the Act even further by providing for a Code of Ethics and a **three-tier regulatory system to administer a loose-ranging Code of Ethics**, that contains wide and vague terms as ‘**half-truths**’, ‘**good taste**’, ‘**decency**’.
- The IT Rules, 2021, provide for an **oversight mechanism**, including the setting up of an Inter-Departmental Committee which has the **power to hear grievances** regarding compliance with the said Code of Ethics.
- They also have the power to recommend to the Ministry of I&B, draconian measures such as **ordering the deletion, modification of content or blocking the**



same.

4.11 Rights of the Overseas Citizens of India (OCI)

Recently, the government has notified a consolidated list of rights of the **Overseas Citizens of India (OCI)**.

- The rights and restrictions are not new, they have been **notified previously in 2005, 2007, and 2009**. They were also mentioned in an OCI brochure published by the Ministry of Home Affairs in November 2019.
- **Multiple Entry Lifelong Visa:**
 - OCI cardholders will be entitled to get multiple entry lifelong visas for visiting India for any purpose.
- **Prior Permission:**
 - OCI cards would need prior permission for a set of activities that include **research, journalism, mountaineering, missionary or Tablighi work, and visits to restricted areas.**
- **Parity with Non Resident Indians (NRIs):**
 - OCI cardholders will enjoy parity with NRIs in **adoption of children, appearing in competitive exams, purchase or sale of immovable property** barring agricultural land and farmhouses, and **pursuing professions** such as doctors, lawyers, architects, and chartered accountants.
- **Parity with Indian Nationals:**
 - They have parity with Indian nationals in the matter of domestic air fares, entry fees to monuments and public places.
- **Entrance Exams and Admissions:**
 - OCIs **can appear** for all-India entrance tests such as **National Eligibility cum Entrance Test (NEET)**, Joint Entrance Examination (Mains), Joint Entrance Examination (Advanced) or such other tests **to make them eligible for admission only against any NRI seat or any supernumerary seat.**

- The OCI cardholder **shall not be eligible for admission against any seat reserved exclusively for Indian citizens.**
- **Other Economic, Financial and Educational fields:**
 - In respect of all other economic, financial and educational fields not specified in the latest notification or the rights and privileges not covered by the notifications made by the **Reserve Bank of India** under the **Foreign Exchange Management Act, 1999**, the **OCI cardholder shall have the same rights and privileges as a foreigner.**
- **Exemption:**
 - They are exempted from registration with the **Foreigners' Regional Registration Officer (FRRO)** for any length of stay in India.
 - Foreigners visiting India who **hold long-term visas (more than 180 days)** are required to register their presence in India with the Foreigners' Regional Registration Office (FRRO).
- **Restrictions:**
 - There will be **no restriction in visiting religious places** and attending normal religious activities like attending religious discourses.
 - However, preaching religious ideologies, making speeches in religious places, distribution of audio or visual display/pamphlets pertaining to religious ideologies, spreading conversion etc. **will not be allowed.**

Overseas Citizen of India

- The **Ministry of Home Affairs** defines an OCI as a person who:
 - Was a citizen of India on or after **26th January 1950**; or
 - Was eligible to become a citizen of India on **26th January 1950**; or
 - Is a **child or grandchild of such a person**, among other eligibility criteria.
- According to **Section 7A of the OCI card rules**, an applicant is not eligible for the OCI card if he, his parents or grandparents have ever been a citizen of Pakistan or Bangladesh. The category was introduced by the government in 2005.
- The Government of India via **Citizenship (Amendment) Act, 2015** merged

the Person of Indian Origin (PIO) category with OCI category in 2015.

A PERSON OF INDIAN ORIGIN (PIO)	PIO VS OCI	OVERSEAS CITIZEN OF INDIA (OCI)
<ul style="list-style-type: none"> ➤ Means a foreign citizen (except a national of Pakistan, Afghanistan Bangladesh, China, Iran, Bhutan, Sri Lanka and Nepal) ➤ A foreign citizen whose one of the parents/ grandparents/ great grandparents was born and a permanent resident of India ➤ Who is a spouse of a citizen of India or a PIO 		<p>A foreign national, who was eligible to become citizen of India on 26.01.1950 or was a citizen of India on or at anytime after 26.01.1950 or belonged to a territory that became part of India after 15.08.1947 is eligible for registration as Overseas Citizen of India (OCI). Minor children of such person are also eligible for OCI. However, if the applicant had ever been a citizen of Pakistan or Bangladesh, he/she will not be eligible for OCI.</p>
<p>BENEFITS</p> <ol style="list-style-type: none"> 1. PIO card holders do not require a visa to visit India for a period of 15 years from the date of issue of the PIO card. 2. They are exempted from registration at FRRO/ FRO if their stay does not exceeds 180 days. In case if the stay exceeds 180 days, they shall have to register with FRRO/ FRO within the next 30 days 3. They enjoy parity with NRIs in economic, financial and educational benefits 4. All future benefits that would be exempted to NRIs would also be available to the PIO card holders 		<p>BENEFITS</p> <p>OCIs are entitled to a multipurpose, multiple entry, lifelong visa allowing them to visit India at any time, for any length of time and for any purpose</p> <ul style="list-style-type: none"> ➤ Exempted from police reporting for any length of stay in the country ➤ Have also been granted all rights in the economic, financial and education fields in parity with NRIs except, the right to acquisition of agricultural or plantation properties

Non Resident Indian

- A Non-Resident Indian (NRI) means a person resident outside India who is a **citizen of India** or is a person of Indian origin.
 - An Indian citizen residing outside India for a combined total of at least **183 days in a financial year** is considered to be an NRI.
- NRIs **enjoy voting rights** and are required to **pay and file the income tax return** on their Indian income like resident Indians.
 - NRI is more of a technical classification for taxation purposes and investment purposes.
- However, in case an **NRI wishes to take up foreign citizenship, he/she will have to give up Indian citizenship** as the Indian constitution does not allow dual citizenship.
 - A person cannot hold Indian as well as foreign citizenship simultaneously.



Foreigner

- As per the the **Foreigners Act, 1946**, foreigner means a person who is not a citizen of India.
- The Fundamental Rights guaranteed by **Articles 14, 20, 21, 21A, 22, 23, 24, 25, 26, 27 and 28** are available to all persons whether citizens or foreigners. The **Fundamental Rights guaranteed by Articles 15, 16, 19, 29, and 30** are available only to citizens of India.

4.12 CERAWeek Global Energy and Environment Leadership Award

The **Prime Minister of India** was conferred with the **Global Energy and Environment Leadership Award** by **Cambridge Energy Research Associates (CERA)**.

- He was awarded for his commitment to expanding India's leadership in **sustainable development** to meet the country's, and the world's, future energy needs.
- He addressed the **CERAWeek conference** and **highlighted the steps taken by India** to address the issue of climate change and attaining the target of achieving clean fuel.
- **CERAWeek Global Energy and Environment Leadership Award:**
 - The Award was **instituted in 2016**.
 - It **recognises the commitment of leadership on the future of global energy and environment**, and for offering solutions and policies for energy access, affordability and environmental stewardship.
- **Cambridge Energy Research Associates (CERA):**
 - It is a **consulting company in the United States** that specializes in advising governments and private companies on energy markets, geopolitics, industry trends, and strategy.
- **CERAWeek:**
 - It was **founded in 1983 by Dr. Daniel Yergin**.
 - It is an **annual energy conference, organized in Houston (USA) in March**, since 1983.



- CERAWeek by **IHS Markit** is the annual international gathering of energy industry leaders, experts, government officials and policymakers, leaders from the technology, financial and industrial communities – and energy technology innovators.
- **CERAWeek 2021** was convened virtually from 1st-5th March, 2021.
 - **Theme:** The New Map: Energy, Climate, and Charting the Future.
- **Highlights of PM Address:**
 - The Prime Minister in his address discussed the key initiatives taken by India to attain climate justice:
 - **National Hydrogen Mission,**
 - **PM KUSUM,**
 - **Bharat – 6 emission norms,**
 - **Give It Up Subsidy Movement,**
 - **SATAT initiatives,**
 - **Blending of ethanol,**
 - **Modern techniques of irrigation,**
 - **Organic farming,**
 - **International Solar Alliance,**
 - India's commitment towards the **Paris Climate Accord,** and
 - Talked of **Mahatma Gandhi's Principle of Trusteeship.**
 - At the core of Trusteeship is **collectivism, compassion and responsibility.**

4.13 Janaushadhi Diwas

The **Bureau of Pharma PSUs of India (BPPI)** celebrated the **3rd Janaushadhi Diwas** (7th March 2021) to spread awareness about quality generic medicines, available at low prices.



- **Theme** of Janaushadhi Diwas was “**Seva Bhi – Rozgar bhi**”. The **Janaushadhi week** was celebrated across the country from **1st-7th March 2021**.
- As a part of celebrations, the Prime Minister **inaugurated the 7,500th Janaushadhi Kendra** at NEIGRIHMS, **Shillong**.
- **Janaushadhi Kendra:**
 - **Bureau of Pharma PSUs in India (BPPI)** supports **Janaushadhi Kendras** as a part of **Pradhan Mantri Bhartiya Janaushadhi Pariyojana**.
 - These are the **centres from where quality generic medicines** are made available to all.
 - The **number of stores** has grown to more than **7400** and all **734 districts** of the country have Janaushadhi Kendras.
 - **Government grants of up to Rs. 2.5 lakhs** are provided for setting up of Pradhan Mantri Janaushadhi Kendras, which can be set up by doctors, pharmacists, entrepreneurs, **Self Help Groups (SHGs)**, NGOs, charitable societies, etc. at any suitable place or outside the hospital premises.
- **Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP):**
 - **PMBJP is a campaign launched by the Department of Pharmaceuticals in 2008** under the name Jan Aushadhi Campaign.

- The campaign was **revamped as PMBJP in 2015-16.**

- **Bureau of Pharma PSUs of India (BPPI) is the implementation agency for PMBJP.**
 - The Bureau of Pharma PSUs of India **works under the Ministry of Chemicals & Fertilizers.**
 - BPPI has also developed the **Janaushadhi Sugam Application.**
- PMBJP stores have been set up to provide **generic drugs**, which are available at lesser prices but are equivalent in quality and efficacy as expensive branded drugs.
- It also intends to extend the coverage of quality generic medicines so as to **reduce the out of pocket expenditure on medicines** and thereby **redefine the unit cost of treatment per person.**

Raja S



- A medicine under PMBJP is **priced on the principle of a maximum of 50% of the average price of top three branded medicines.** Therefore, the price of Janaushadhi Medicines is **cheaper at least by 50% and in some cases, by 90%** of the market price of branded medicines.
- **Performance Analysis:**
 - In the current financial year 2020-21, PMBJP has already achieved sales of Rs. 593.84 crores. This has **led to savings of approximately Rs. 3600 crores of the common citizens** of the country.
 - This scheme is also providing a good source of **self-employment with sustainable and regular earnings.**

4.14 INS Karanj

Recently, the **INS Karanj** was commissioned to the Indian Navy.

INS Karanj

- It is India's third **Scorpene-class diesel-electric submarine.**
 - The two submarines of this class, **INS Kalvari and INS Khanderi**, have

already been commissioned into the Navy.

- The fourth of the class, **INS Vela**, has been undergoing trials at sea.
- The Scorpene-class diesel-electric submarines are one of the **quietest conventional submarines** currently in service around the world.
- The submarines have been **designed by France's Naval Group** and **built in India by Mazagon Dock Limited** under **Project 75**.
- The Scorpene-class submarines will be fitted with **indigenous air-independent propulsion systems** after successful trials of the system.
- The Kalvari-class submarines can be deployed in different roles which include **guarding strategic points in the sea, laying mines, gathering intelligence, dropping marine commandos and engaging with enemy ships** when required.

INS Khanderi

- It is India's second **Scorpene-class attack submarine**.
- It has been manufactured by the state-run **Mazagon Dock Shipbuilders Limited** in Mumbai.
- The attack submarine is inspired by the **fish 'Kanneri'** which is found in the Arabian Sea.
- It is equipped with a **set of missiles and torpedoes** that can be fired upon detecting enemy targets.
- It has been equipped with advanced **Exocet SM39 anti-ship missile**.

4.15 Bamiyan Buddhas

Recently, the **Bamiyan Buddhas** have been brought back to life in the form of **3D projections** in an event called "**A Night with Buddha**".

- In March 2001, the Taliban began **blowing up two monumental Buddha statues** in Afghanistan's Bamiyan Valley.
- The Bamiyan Buddhas were great examples of a **confluence of Gupta, Sassanian and Hellenistic artistic styles**.



- The Bamiyan Buddhas are said to date back to the **5th century AD** and were once the **tallest standing Buddhas** in the world.
- **Salsal and Shamama**, as they were called by the locals, rose to heights of 55 and 38 metres respectively.
- The Salsal means “**light shines through the universe**” and the Shamama is “**Queen Mother**”.

Significance of Bamiyan Valley

- Bamiyan is situated in the **high mountains of the Hindu Kush** in the central highlands of **Afghanistan**.
- The valley, which is set along the line of the **Bamiyan River**, was once integral to the **early days of the Silk Roads**.
- Bamiyan became a major **trade, cultural and religious centre** when the **Buddhist Kushan Empire spread**.
- The Kushans were able to **develop a syncretic culture** because China, India and Rome sought passage through Bamiyan.

‘A Night with Buddha’

- It started in 2013 as a way of **creating a bridge between different cultures** and in memory of Afghanistan’s pre-Islamic heritage.
- It featured a projection of **Salsal, the taller of the two Buddhas**, into the niche where it once stood.

4.16 Inner-Line Permit (ILP) in Niti and Nelang Valleys

Recently, the Uttarakhand government had sought withdrawal of “**inner-line permit**” (ILP) system in Niti Valley and Nelang Valley.

- Uttarakhand shares a **350-km border with China** and a **275-km boundary with Nepal**.
- **Chamoli and Uttarkashi** share boundaries with **China**, whereas **Udham Singh Nagar and Champawat** have common boundaries with **Nepal**.
- **Pithoragarh** is strategically more sensitive as it shares boundaries with both **China**



and Nepal.

- In Uttarakhand, tourists have to obtain **ILP for locations near China border**, at least in the three districts of **Uttarkashi, Pithoragarh and Chamoli**.
- The withdrawal of ILP system is aimed for **better border management and expansion of tourism** and other economic activities in villages located there.

Inner Line Permit

- It is **colonial-era concept** of separating the **tribal-populated hill areas** in the Northeast from the plains.
- It has its origin from the **Bengal Eastern Frontier Regulation Act (BEFR), 1873**.
- During the British rule, the BEFR prohibits an outsider's i.e. "**British subject or foreign citizen**", entry into the area beyond the Inner Line without a pass and his purchase of land there.
 - After Independence, the Indian government replaced "**British subjects**" with "**Citizen of India**".
- Its aim is to **prevent settlement of other Indian nationals in the States where ILP regime is prevalent**, in order to protect the indigenous/tribal population.
- It is valid in **Arunachal Pradesh, Nagaland, Mizoram and Manipur**.
- It is issued by the **concerned state governments**.

Nelang Valley

- It is an **inner line area (India-China border)** opened to domestic tourists only during the day.
- The **ITBP and the Army are deployed** in the two villages of Nelang Valley i.e. Nelong and Jadong.
- The **foreign tourists are prohibited** in this area while **domestic tourists are allowed entry with ILP**.
- The **maximum number of people allowed** is 24 in a day and they **cannot stay** there at night.

Niti Valley



- It is in **Joshimath** in Chamoli district.
- It is the **last populated village before China border**.
- The **foreign tourists can travel to Niti village** after obtaining ILP from Joshimath for a single-day visit, but night stay remains prohibited.
- The **domestic tourists can travel to the village any time** in the year by producing any identity proof.

4.17 Amendment to Licensing Conditions for Telecom Sector

Recently, the Department of Telecommunications (DoT) has amended the **licensing conditions for telecom companies** after the Union Cabinet has approved the PLI scheme for Telecom Sector.

What are trusted telecom products or trusted telecom equipment sources?

- It is considered to be **a product, a company, or a technology** that has been deemed safe by the government of a country for use in crucial and critical infrastructure.
- The classification of telecom products and their sources is done by a new **National Security Directive** under the categories of **‘trusted’ and ‘non-trusted’**.
- The list of products telecom companies will be allowed to use in their network would be approved by the **National Cyber Security Coordinator**.
- It will make its **decision based on the approval of a committee** headed by the deputy National Security Advisor (NSA).

New Licensing Conditions for Trusted Telecom Equipment

- The new norms **included defence and national security as parameters** for the purchase of trusted telecom products and from trusted equipment sources.
 - It implies that the designated authority can, citing these two aspects, order telecom companies to **not to use the products which it has deemed unsafe**.
- The new norms **restrict the use of any products** that do not appear on the trusted telecom equipment source list or the trusted telecom product list.
- The telecom company, aspiring to expand its network, has to take **prior permission**



from the **National Cyber Security Coordinator** if the equipment or product is not from a trusted source.

Implication New Licensing Norms in Telecom Sector

- The Chinese telecom equipment vendors will find it **difficult to supply equipments to Indian telecom players** in the future.
- The state-run telcos are likely to be impacted because **BSNL and MTNL have equipment from Chinese vendors** in their 3G and older networks.

4.18 India's Biggest Floating Solar Power Plant

Recently, the Government of India has informed that **India's Biggest Floating Solar Power Plant** is likely to be commissioned in May 2021.

India's Biggest Floating Solar Power Plant

- It is commissioned by the energy conglomerate **National Thermal Power Corporation (NTPC)**.
- It is being set up at **Ramagundam thermal power plant reservoir** near Peddapalli district.
- It will be **single location largest floating solar plant** in the country as of now.
- It has a **capacity of 100 MW** which is estimated to cost around Rs 423 cr will have 4.5 lakh photovoltaic panels.
- The NTPC's efforts to set up floating solar power projects are being aimed at **reducing its carbon footprints and accelerate its green energy production** to 30 per cent of its capacity.

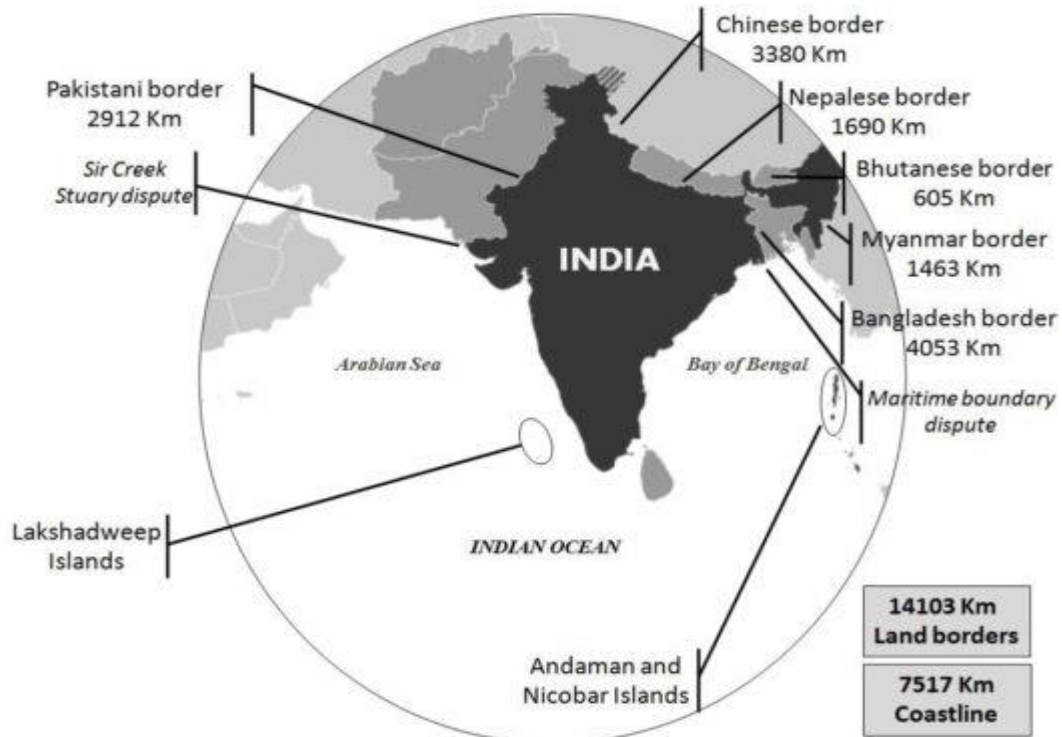
World's largest solar plant

- The **world's largest solar power plant** with 600 MW capacity is being set up on **Omkareshwar Dam on Narmada River** in Madhya Pradesh.
- The project costing Rs 3,000 cr is expected to **start power generation only by 2022-23**.

Largest dam-based solar project

- **South Korea** is building the **largest dam-based floating solar power plant** in the world with a capacity of 41MW.
- The project will be set up at **Hapcheon dam**.

4.19 INS Talwar



Recently, the INS Talwar, stationed at Gulf of Oman, has received a broadcast call from a stranded merchant cargo ship, MV Nayan.

INS Talwar

- It is a **Talwar-class frigate** of the Indian Navy.
 - It is a **modified Krivak III-Class frigate**.
- It was **built in Russia**, and commissioned into the Indian Navy in 2003.
- It is a **multirole frigate** which has participated in various operations and exercises since her commissioning, including **anti-piracy operations** off the coast of Somalia.



- It supports naval forces during **air, surface and sub-surface missions**.
- It is used to **detect and destroy enemy** submarines and other surface ships.
- It is fitted with a **Trebovaniye-M combat** information and control system.

4.20 Atmanirbhar Niveshak Mitra Portal

Recently, the **Department for Promotion of Industry and Internal Trade (DPIIT)** is in the process of finalising a dedicated digital portal “**Atmanirbhar Niveshak Mitra**”.

Atmanirbhar Niveshak Mitra Portal

- The development of Atmanirbhar Niveshak Mitra Portal is under the “**Invest India**” agency
- The portal is aimed at **handholding and facilitation, information dissemination, and facilitation of domestic investors**.
- It will have a **dedicated digital investment promotion and facilitation team** which will facilitate domestic investors to directly connect or request meetings with the Invest India experts.
- It will **digitally support investors** throughout their doing business journey in India and help them getting all the information which includes:
 - Finding an investment opportunity to exploring incentives & taxes applicable to their businesses;
 - Information and assistance for doing business in India;
 - Sources of funding; and
 - Information on raw material availability, training, management requirement and tender information

Salient Features of Atmanirbhar Niveshak Mitra Portal

- **Daily updates on Policies and New Initiatives** by Central and State Government will be made available on the portal.
- **One on one Meetings & Discussions** with the Invest India experts which will ensure adequate facilitation to domestic investors and issue resolution.



- **AI based Chat Bot** for resolving queries.
- **One-stop-shop to access all MSME portals** like Champions portal, MSME Samadhaan, MSME Sampark etc.
- Information on **Export Promotion Councils and B2B platforms** of chambers of commerce.

4.21 Ayya Vaikunda Swamikal

Recently, the Prime Minister Shri Narendra Modi has paid his respects to **Ayya Vaikunda Swamikal** on his birth anniversary.

Ayya Vaikunda Swamikal

- Ayya Vaikunda (1809-1851) was a **great humanist and social thinker**.
- He lived in the **Princely Kingdom of Travancore** in the early decades of the **19th Century Kerala**.
- He is remembered as the **first well known social reformer in India** who critiqued the **caste discrimination and religious hierarchy** and fought **against the practice of untouchability**.
- His gave an exhortation of **'ONE CASTE, ONE RELIGION, ONE CLAN, ONE WORLD, ONE GOD'**.
- He was **against idol worship** and he did not allow the portraitures to draw his figure.
- His theory and practice like **'samathva samajam', 'sama panthi bhojan', 'thottu namam podunkal'** aimed at cultivating a thought of equality and unity in Indian minds.
- He founded **'samathva samajam' in 1836** and was considered the **first socio reform movement** in India.
- He called the rule of the British as **'Ven Neechan'** and the rule of the king of Travancore as **'The Neechan of Ananthapuri'**.
- He advised his followers to **practice Dharma** and the most important form of Dharma was considered **'Annadhanam'**.
 - He organized **'Sama Panthi Bhojana'** in each and every place of worship



in the name of 'Annadanam'.

4.22 Azadi Ka Amrit Mahotsav

Recently, the Prime Minister has flagged off the 'Padyatra' (Freedom March) and inaugurated the curtain raiser activities of the 'Azadi Ka Amrit Mahotsav'.

'Padyatra' (Freedom March)

- It is a symbolic 386-km "Dandi March" from Sabarmati Ashram in Ahmedabad to Dandi in Navsari district of South Gujarat.
- It has marked the 91st anniversary of the historic salt march led by Mahatma Gandhi.
- The march will follow the original route via Kochrab Ashram and Chandola Lake, followed by a night halt at Aslali.
- The journey will see "big events at six places" associated with Gandhi.
 - These include MK Gandhi's birthplace Porbandar, along with Rajkot, Vadodara, Bardoli (Surat), Mandvi (Kutch) and Dandi (Navsari).

Azadi Ka Amrit Mahotsav

- It is a series of events to be organised by the Government of India to commemorate the 75th Anniversary of India's Independence.
- It will be celebrated as a Jan-Utsav in the spirit of Jan-Bhagidari.
- It is based on five pillars i.e. Freedom Struggle, Ideas at 75, Achievements at 75, Actions at 75 and Resolves at 75 as guiding force for moving forward keeping dreams and duties as inspiration.
- The Azadi Amrit Mahotsav means elixir of inspirations of the warriors of freedom struggle and also elixir of new ideas and pledges and nectar of Aatmanirbharta.

Dandi March by Mahatma Gandhi

- The Dandi March or Salt March was part of Mahatma Gandhi's non-violent protest against the British monopoly on production of salt.

- It was an **act of civil disobedience** led by Mohandas Gandhi to protest British rule in India.
- It was a **24-day march** which began on March 12 and they reached Dandi on April 5, 1930.
 - After making salt at Dandi, Gandhi headed to **Dharasana salt works** and was arrested on May 5, 1930, and taken to the **Yerwada central prison**.
- **Lord Irwin** was the **Viceroy of India** at the time of Dandi March.

Reason for Dandi March in 1930

- The **Britain's Salt Act of 1882** prohibited Indians from collecting or selling salt, a staple in their diet.
- The Indian citizens were **forced to buy the vital mineral from their British rulers**, who, in addition to exercising a monopoly over the manufacture and sale of salt, also charged a heavy salt tax.

4.23 Bhadar Dam

Recently, the Gujarat state irrigation department has begun replacing all its 29 floodgates after the 2015 flash floods damaged three floodgates of the **Bhadar dam**.





Bhadar Dam

- It is located at **Lilakha village in Gondal taluka Rajkot.**
- It is the **second largest reservoir** of Saurashtra.
- It has a gross storage capacity of 188.14 million cubic metres (mcm), the **second-highest in the Saurashtra region** after the Shetrunji dam.
- The construction work for this **dam started in 1952** and water for irrigation from it was given to farmers for the first time in 1963.
- The Bhadar Dam and Shetrunji Dam are constructed across **Shetrunji and Bhadar rivers.**

Bhadar River

- It originates from **Jasdan taluka of Rajkot.**
- It is one of the **major rivers of Kathiwar (Saurashtra) peninsula** in Gujarat.
- There are 9 major tributaries of which 6 tributaries namely **Gandali, Chapparwadi, Phopal, Utawali, Moj and Venu** are feeding from the right.
- The remaining 3 tributaries are **Vasavadi, Surwa and Galolio** from the left.

Shetrunji Dam and River

- It originates from the **Amreli district of Rajkot.**
- Its tributaries are **Satali, Thebi, Gagario, Rajaval, Kharo, Shel, Khari and Talaji.**

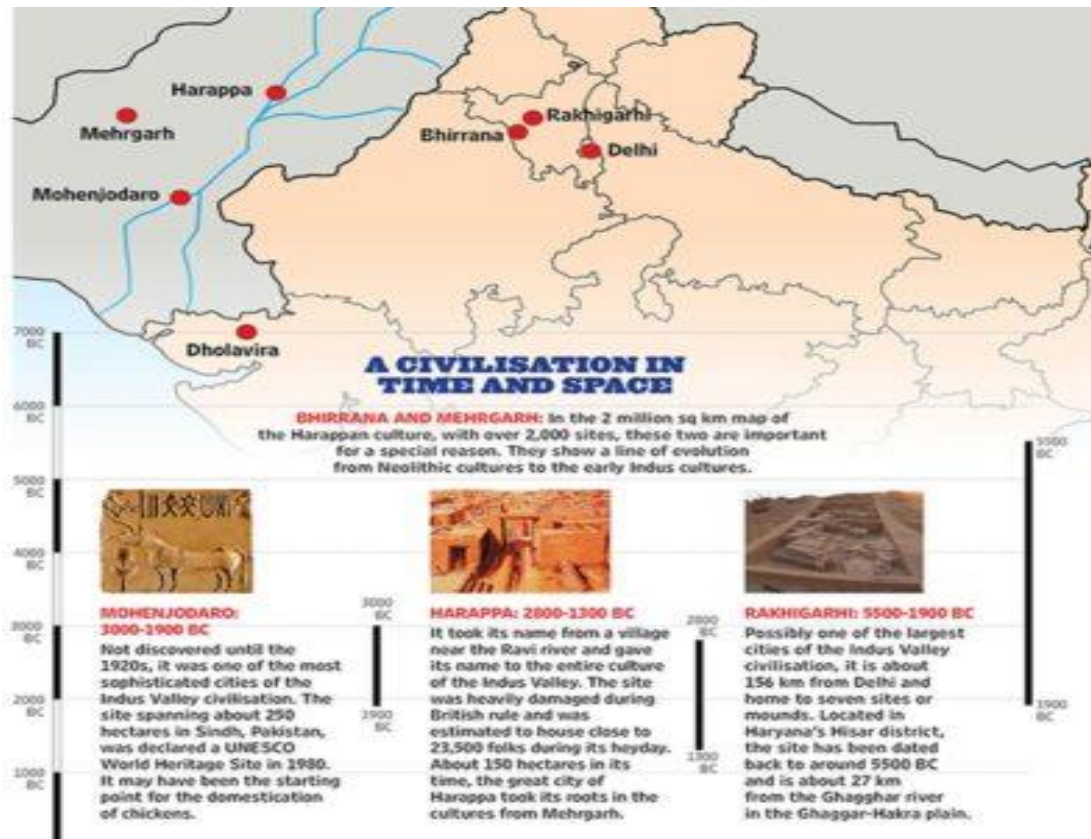
4.24 Development of Rakhigarhi

Recently, the Minister of State (I/c) of Culture and Tourism has informed that **Rakhigarhi is being developed** as one of the five identified iconic archaeological sites.

- The union budget of 2020 has announced **five iconic archaeological sites** located across five states which will be developed by the Archeological Survey of India (ASI).

The other four sites are **Hastinapur (Uttar Pradesh), Shivsagar (Assam), Dholavira**

(Gujarat) and Adichanallur (Tamil Nadu).



- The repairing of boundary wall, pathways, public amenities, solar lights, benches are being provided for development of the sites and its environs.
- The excavation is also proposed at the site to showcase the archaeological remains in a holistic manner.

Rakhigarhi

- The ancient site of Rakhi-Khas and Rakhi-Shahpur are collectively known as Rakhigarhi.
- It is located on the right bank of now dried up Palaeo-channel of Drishadvati.
- It is located in Hissar district, Haryana.
- The site has yielded various stages of Harappan culture and is one of the largest Harappan sites in India.
- The site shows the sequential development of the Indus culture in the now dried



up Saraswati basin.

Findings from Rakhigarhi

- The site revealed mature Harappan phase represented by **planned township having mud-brick as well as burnt-brick houses** with proper drainage system.
- The **ceramic industry represented by red ware**, which included dish-on-stand, vase, jar, bowl, beaker, perforated jar, goblet and handis.
- **Animal sacrificial pit lined with mud brick** and triangular and circular fire alters on the mud floor have also been excavated that signifies the ritual system of Harappans.
- **A cylindrical seal with five Harappan characters** on one side and a symbol of an alligator on the other is an important find from this site.

Raja Sir's

4.25 Baralacha La Pass

Recently, the Border Roads Organisation (BRO) team trekked through 15 to 20 feet of snow in a bid to open the **Baralacha La Pass** that connects **Lahaul in Himachal Pradesh to Leh** before schedule.

Baralacha La

- It is a **high mountain pass** in the **Zaskar range** in **Jammu and Kashmir**.
- It is a high plateau where three different mountain ranges, namely **Pir Panjal, Zaskar and the Great Himalayas** meet at an altitude above 16,000 feet.
- **Bhaga River is situated near Baralacha Pass** which originates from the **Surya Taal Lake**.
 - Bhaga River is a tributary of the **Chandrabhaga River**.
- It connects **Lahaul district** in Himachal Pradesh to **Leh district** in Ladakh.
- It acts as a **water divide** between the Bhaga River and the Yunam River.

Border Roads Organization (BRO)

- Its aim is to **develop and maintain road networks in border areas** of India as well as friendly neighboring countries (Afghanistan, Bhutan, Myanmar, and Sri



Lanka).

- The parent cadre of BRO consists of officers from the **Border Roads Engineering Service (BRES)** and personnel from the General Reserve Engineer Force (GREF).
- It also consists of officers from and troops drawn from the **Indian Army's Corps of Engineers**.
- It is operational in **twenty states and three union territories** of Andaman & Nicobar Islands, Jammu & Kashmir and Ladakh.
- It is under the control of **Ministry of Defence**.

4.26 The Medical Termination of Pregnancy (Amendment) Bill 2021

Recently, the Rajya Sabha has approved the **Medical Termination of Pregnancy (Amendment) Bill, 2021**.

- The bill seeks to amend the **Medical Termination of Pregnancy Act, 1971**.
- The Bill was **approved in Lok Sabha** in March 2020.
- There were several petitions received by the Courts seeking permission for **aborting pregnancies at a gestational age** beyond the present permissible limit.
- The petitions were submitted on the grounds of **Foetal abnormalities or pregnancies due to sexual violence** faced by women.

Salient Features of MTP (Amendment) Bill 2021

- It has **enhanced the upper gestation limit from 20 to 24 weeks** for special categories of women which will be defined in the amendments to the MTP Rules.
 - It would include **survivors of rape, victims of incest and other vulnerable women** (like differently-abled women, minors) etc.
- The opinion of **only one provider will be required up to 20 weeks** of gestation and of **two providers for termination of pregnancy** of 20-24 weeks of gestation.
- The upper gestation limit **does not apply in cases of substantial Foetal abnormalities** diagnosed by Medical Board.
 - The **composition, functions and other details of Medical Board** is to be



prescribed subsequently in Rules under the Act.

- The name and other particulars of a woman whose pregnancy has been terminated **shall not be revealed except to a person authorised** in any law for the time being in force.
- The **ground of failure of contraceptive** has been extended to women and her partner.

Significance of MTP (Amendment) Bill 2021

- The bill is for **expanding access of women to safe and legal abortion services** on therapeutic, eugenic, humanitarian or social grounds.
- It aims to **increase upper gestation limit for termination of pregnancy** under certain conditions and to **strengthen access to comprehensive abortion care**.
- The amendments will **increase the ambit and access of women to safe abortion services** and will ensure dignity, autonomy, confidentiality and justice for women who need to terminate pregnancy.

4.27 MILAN Anti-Tank Guided Missiles

Recently, the Ministry of Defence has signed a ₹1,188 crore deal with state-run **Bharat Dynamics Limited (BDL)** for supply of 4,960 **MILAN-2T Anti-Tank Guided Missiles (ATGMs)** for the Indian Army.

MILAN-2T Anti-Tank Guided Missiles

- The Milan-2T is a **Tandem Warhead ATGM** with the range of 1,850 metres.
 - The tandem warheads comprise a **forward charge and a rear charge** separated by a blast shield.
- It is produced by **Bharat Dynamics Limited (BDL)** under license from **MBDA Missile Systems, France**.
- It can be **fired from ground** as well as **vehicle-based launchers**.
- It can be **deployed in anti-tank role** for both offensive and defensive tasks.

MILAN ATGM



- It is a **portable medium-range, anti-tank weapon** manufactured by Euromissile, based in Fontenay-aux-Roses in **France**.
- The system was developed for the **French and German Armies** and over 360,000 missiles and 10,000 launch units have been produced since 1972.
- It is in **service in 41 countries**.
- MILAN 3, armed with a **tandem warhead with a new firing post** with jam-resistant pulsed-beacon infrared guidance, has been in production since 1996.
- The **MILAN ADT/ER** is the latest version of the missile system with **new digitised firing post** and **new extended-range missile**.

4.28 Anangpal Tomar II

Recently, a government seminar was conducted in Delhi which highlighted the legacy of the long-forgotten **Tomar king Anangpal II**.

Anangpal Tomar II

- He belonged to the Tomar dynasty that ruled parts of **present-day Delhi and Haryana** between the **8th and 12th centuries**.
- He was **instrumental in populating Indraprastha** and giving it its present name, Delhi.
- Anangpal of the Tomar Rajputs **founded Delhi between 1053 and 1109 AD**.
- Anangpal Tomar II was succeeded by his **grandson Prithviraj Chauhan**.

Tomar Dynasty

- The **Delhi Sultanate was established in 1192** after Prithviraj Chauhan's defeat in the Battle of Tarain (present-day Haryana) by the Ghurid forces.
- In middle of 11th century, he built a **fort called Lal Kot (literally Red Fort)**, in which the Qutb Minar stands today, and founded a town.
- Tomars and their Delhi link find mention in some modern-day literature as well.
 - The noted medieval historian Professor **K A Nizami's Urdu book, Ehd-e-Wusta ki Dilli**, translated in English as Delhi in Historical Perspectives,



looks at Delhi across six centuries (from 1300 to 1800).

- It mentioned that **Delhi formally emerged as a city only in the 11th century**, when Tomar Rajputs took over the mountainous Aravalli region.
- It said that the most reliable evidence about the **early history of Delhi is inscribed on the iron pillar** of Masjid Quwaatul Islam, adjacent to the Qutab Minar.
- Basheeruddin Ahmed in **Waqeat-e-Darul Hukumat Dehli** and Gordon Risley **Hearns in The Seven Cities of Delhi** refer to an invasion and conquest of Delhi by Chauhan Rajputs in AD 1151.
 - It provides that they reached an arrangement that the **Tomar should marry a Chauhan princess** so that their offspring becomes the king of Delhi.

4.29 Indian Naval Landing Craft Utility (LCU) L58

Recently, the **Indian Naval Landing Craft Utility (LCU) L58** has been commissioned into the Indian Navy at Port Blair, Andaman & Nicobar Islands.

Indian Naval Landing Craft Utility (LCU) L58

- It is the **eighth and last ship** of the Landing Craft Utility (LCU) **Mark IV Class**.
- It is **indigenously designed and built** by Garden Reach Shipbuilders & Engineers Ltd (GRSE), Kolkata.
- The LCU 58 is an **amphibious ship** which can carry 160 troops, in addition to its crew.
- It is capable of carrying various types of **combat vehicles** such as Main Battle Tanks (MBTs), BMPs, Armoured Vehicles, trucks, etc.
- It is fitted with an advanced **Electronic Support Measure (ESM)** suite to intercept enemy radar transmissions, an advanced **Integrated Bridge System (IBS)** and a sophisticated **Integrated Platform Management System (IPMS)**.
 - It will allow **single station monitoring** of the ship's navigational and machinery equipment respectively.
- The main armament of the ship includes **two indigenously manufactured 30 mm CRN 91 guns** which are controlled by a Stabilised Optronic Pedestal (SOP).



- The SOP is an **electronic day-night director sight** manufactured by Bharat Electronics Limited (BEL).
- It is manned by a **motivated team of five officers and 50 sailors**.

4.30 Vehicle Scrapping Policy

Recently, the Union Minister of Road Transport & Highways has announced the **Vehicle Scrapping Policy** or **Voluntary Vehicle-Fleet Modernization Program (VVMP)**.

- In the **Union Budget 2021-22**, the Finance Minister has announced that the government intends to go ahead with a “Vehicle Scrapping Policy”.
- The automotive sector has long been **undergoing multiple regulatory challenges** on a frequent basis for over 2 to 3 years.

Key Provisions of Vehicle Scrapping Policy

- The criterion for a vehicle to be scrapped is primarily based on the **fitness of vehicles through Automated Fitness Centres** in case of commercial vehicles and Non-Renewal of Registration in case of private vehicles.
- The criterion is adapted from **international best practices** after a comparative study of standards from various countries like Germany, UK, USA and Japan.
- The vehicle **failing the fitness test or failing to get a renewal of its registration certificate** may be declared as **End of Life Vehicle**.
- The criteria to determine vehicle fitness will be primarily **emission tests, braking, safety equipment**, among many other tests which are as per the Central Motor Vehicle Rules, 1989.
- The policy will **not be applicable** on vintage cars.

Proposals of Vehicle Scrapping Policy

- It is proposed that **commercial vehicles be de-registered after 15 years** in case of failure to get the fitness certificate.
 - The **increased fees for fitness certificate and fitness test** may be applicable for commercial vehicles 15 year onwards from the date of initial registration.



- It is proposed that **Private Vehicles be de-registered after 20 years** if found unfit or in case of a failure to renew registration certificate.
 - The **increased re-registration fees** will be applicable for private vehicles 15 year onwards from the date of initial registration.
- It is being proposed that **all vehicles** of the Central Government, State Government, Municipal Corporation, Panchayats, State Transport Undertakings, Public Sector Undertakings and autonomous bodies may be **de-registered and scrapped after 15 years** from the date of registration.
- The scheme shall provide **strong incentives to owners of old vehicles to scrap old and unfit vehicles** through registered scrapping centres, which shall provide the owners with a scrapping certificate.

Financial Incentives under Vehicle Scrapping Policy

- The **scrap Value for the old vehicle** given by the scrapping centre, which is approximately 4-6% of ex-showroom price of a new vehicle.
- The state governments may be advised to **offer a road- tax rebate** of up to 25% for personal vehicles and up to 15% for commercial vehicles
- The vehicle manufacturers are also advised for **providing a discount of 5% on purchase of new vehicle** against the scrapping certificate.
- The **registration fees may also be waived for purchase** of new vehicle against the scrapping certificate.

Need for Vehicle Scrapping Policy

- The older vehicles **pollute the environment 10 to 12 times more** than fit vehicles and pose a risk to road safety.
 - India has approximately **7 lakh trucks, buses and taxis manufactured** before 31 December 2000 that contributes 15-20 per cent of vehicular pollution
- The policy is touted as a major step to **boost the Indian automobile sector** which is reeling under the adverse impact of the Covid-19 pandemic.
- The deregistering of vehicles is a **nightmarish experience for most owners** who want to sell or get their old vehicle scrapped.



- It deters many owners interested to discard their old vehicles

Significance of Vehicle Scrapping Policy

- It is aimed at **creating an Eco-System** for phasing out of Unfit and Polluting Vehicles.
- The objectives of the policy are to:
 - **Reduce** population of old and defective vehicles;
 - **Achieve** reduction in vehicular air pollutants to fulfil India's climate commitments;
 - **Improve** road and vehicular safety,;
 - **Achieve** better fuel efficiency;
 - **Formalize** the currently informal vehicle scrapping industry; and
 - **Boost** availability of low-cost raw materials for automotive, steel and electronics industry.
- The Ministry of Road Transport and Highways will promote setting up of **Registered Vehicle Scrapping Facility (RVSF)** across India.

Possible Implications of Vehicle Scrapping Policy

- It is expected to **attract additional investments** of around Rs. 10,000 Crore and 35,000 job opportunities.
- It is expected to be a **'win-win' for all** as it helps **reduce India's oil import bills** by improving fuel efficiency, **reduce environmental pollution** and improve road and vehicular safety.
- It has the potential to **increase automobile industry's turnover** to Rs. 10 lakh crore from the existing Rs. 4.5 lakh crore.
- The financial incentive for a vehicle user is **lucrative enough to scrap their vehicle** and is expected to lead to an increase in sales volumes of the industry in the medium to long term.

4.31 Stone from Sita Eliya

Recently, the government has announced that a **stone from Sita Eliya** will be used in the



construction of **Ram temple in Ayodhya.**

- It is said to mark the place where **Goddess Sita was held captive by the Lankan king Ravana** and where she regularly prayed to Lord Rama for her rescue.
- **A temple in Sita Eliya** is dedicated to Goddess Sita.
 - The vibrant and colourful temple is known as the **Seetha Amman Temple.**
- It is **found on the top of the rock** across a brook are round markings believed to be the **footprints of the elephant** that belonged to Ravana.

4.32 Importance of Jaapi, Xorai and Gamosa in Assam

Recently, the decorative **jaapis (field hats), hand-woven gamosas and bell-metal xorais** are making frequent appearances in Assam as the polling date draws closer.

Jaapi

- It is a **conical hat made of bamboo and covered with dried tokou** (a palm tree found in rainforests of Upper Assam) leaves.
- The landscape of rural Assam features a **more utilitarian version of jaapi**, which farmers wear to protect themselves from the harsh weather, both sun and rain, while working in the fields.
 - The decorated ones, on the other hand, are used to **felicitate people who visit Assam VIPs, politicians etc.**
- The first possible recorded use of jaapi dates back to the **Ahom-era buranjis, or chronicles.**
- It was also seen and popularised in the **first Assamese film, Joymati (1935)** made by cultural icon Jyotiprasad Agarwala.
- The bulk of Assam's jaapis are made by artisans based in a cluster of **villages in Nalbari district.**

Xorai

- It is made of **bell-metal.**
- It is essentially a **tray with a stand at the bottom**, with or without a cover.



- It can be found in **every Assamese household**.
- It is primarily used as an **offering tray during prayers**, or to **serve tamale-paan (betel-nut) to guests**.
- The bulk of xorais in Assam are made in the **state's bell metal hub Sarthebari in Bajali district**.
- It was used during the time of **Vaishnavite reformer Sankardeva**.

Gamosa

- The Gamosa, which literally translates to a **cloth to wipe one's body**, is **omnipresent in Assam**, with wide-ranging uses.
- It can be used at home as a **towel (uka gamosa)** or in **public functions (phulam/floral gamosa)** to felicitate dignitaries or celebrities.
- It is a **“symbol of the Assamese nation”**.
 - Its use in that context can be traced back to 1916 and 1917 when the **Asom Chatra Sanmillan (first student organisation)** and **Asom Sahitya Sabha (premier literary organisation)** were founded.
- It assumed a new role only during the **anti-foreigner Assam Agitation of the early 1980s**, when Assamese nationalism reached its crescendo.

4.33 CPWD to Lay Three Roads on the China Border in Ladakh

Recently, the **Central Public Works Department (CPWD)** has floated tenders worth a total of ₹212.99 crore for **laying and maintenance of three high altitude roads** on the India-China border in Ladakh.

- The projects are titled as **“roads to Indo China Border”** from the Indo-Tibetan Border Police bases at **Shilung La, Nyakmikle and Hena**.
- The work is situated in **Leh District of Union Territory of Ladakh** near International Border.
- The document provided that all the three roads would be **single lane projects** as per the relevant specifications of National Highways.
- The single-lane road project of 10.22 km length till the **Shilung La base** was



estimated to take 42 months and cost ₹93.80 crore.

- The **Nyakmikle road project** was estimated to cost ₹55.37 crore and take 30 months for construction of the 9.29 km stretch.
- The 7.64 km **Hena project** till the ITBP post was estimated to cost ₹63.82 crore and take up to 30 months to construct.

Shilung La

- It is a **high mountain pass** at an elevation of 4.808m (15,774ft) above the sea level.
- It is located in the **Chang-Chemno mountain range**.
- It is situated in **Leh district of Ladakh**.

Central Public Works Department (CPWD)

- It came into **existence in 1854** when **Lord Dalhousie** established a central agency for execution of public works.
- It is **headed by DG** who is also the **Principal Technical Advisor to the Government of India**.
- It has **PAN India presence** and has ability to undertake construction of complex projects even in difficult terrain and maintenance in post construction stage.
- It envisages a **lead role** for itself in the execution, maintenance and standardization of the built environment in India.

4.34 Places of Worship (Special Provisions) Act, 1991

Recently, the Supreme Court has asked the Centre to respond to a plea challenging the **Places of Worship (Special Provisions) Act, 1991**.

Provisions of Places of Worship Act, 1991

- It seeks to maintain the **“religious character” of places of worship** as it was in 1947, except in the case of Ram Janmabhoomi-Babri Masjid dispute.
- It is an Act to **prohibit conversion** of any place of worship.
- It aims to provide for the **maintenance of the religious character of any place of worship** as it existed on the 15th day of August, 1947.



- The sections 3 and 4 of the Act declare that the **religious character of a place of worship shall continue** to be the same as it was on August 15, 1947.
 - It says that **no person shall convert any place of worship** of any religious denomination into one of a different denomination or section.
- The section 4(2) says that **all suits, appeals or other proceedings regarding converting the character of a place of worship**, that were pending on August 15, 1947, **will stand abated when the Act commences**.
 - It also called that **no fresh proceedings** can be filed.
- The **legal proceedings can be initiated** with respect to the conversion of the religious character of any place of worship **after the commencement of the Act** if the change of status took place after the cut-off date of August 15, 1947.

Viewpoint of Places of Worship Act, 1991 on Ayodhya

- The Section 5 says that the act **does not to apply to Ram Janma Bhumi Babri Masjid**.
 - Nothing contained in this Act shall apply to the place or place of worship commonly known as **Ram Janma Bhumi-Babri Masjid** situated in Ayodhya in the State of Uttar Pradesh.

Exemption under Places of Worship Act, 1991

- Any place of worship that is an **ancient and historical monument or an archaeological site**, or is covered by the **Ancient Monuments and Archaeological Sites and Remains Act, 1958**;
- A suit that has been finally **settled or disposed of**; and
- Any dispute that has been **settled by the parties or conversion of any place** that took place by acquiescence before the Act commenced.

Viewpoint of Supreme Court on Places of Worship Act, 1991

- In the 2019 Ayodhya verdict, the Constitution Bench referred to the law and said it **manifests the secular values of the Constitution** and strictly prohibits retrogression.
- The apex court has highlighted that the **law addresses itself to the State** as much as to every citizen of the nation.



- Its norms bind those who govern the affairs of the nation at every level and it **implements the Fundamental Duties under Article 51A** and are positive mandates to every citizen as well.
- The State enforced a **constitutional commitment and operationalized its constitutional obligations** to uphold the equality of all religions and secularism which is a part of the basic structure of the Constitution.

Why is the law under challenge?

- The leaders have challenged the law on the ground that **violates secularism**.
- It has been argued that the cut-off date of August 15, 1947 is **“arbitrary, irrational and retrospective”**.
- It is considered that the law **prohibits Hindus, Jains, Buddhists, and Sikhs from approaching courts to “re-claim” their places of worship** which were “invaded” and “encroached” upon by “fundamentalist barbaric invaders”.
- It is argued that the Centre has no power to **legislate on “pilgrimages” or “burial grounds”** which is under the state list.
- The criticism against the law is that the cut-off is the date of Independence, which means that **status quo determined by a colonial power is considered final**.

4.35 Khelo India Scheme

Recently, the Ministry of Youth Affairs & Sports has decided to **extend Khelo India scheme from 2021-22 to 2025-26**.

- The Ministry has furnished an **Expenditure Finance Committee (EFC)** memorandum to the Ministry of Finance for extension/continuation of the Khelo India Scheme from 2021-22 to 2025-26.
- An amount of ₹ 8750 crore has been estimated as **financial implication of the new Khelo India Scheme (2021-22 to 2025-26)** in the EFC memorandum.
- An amount of ₹ 657.71 crore has been allocated in the **Budget Estimate (B.E.) for the year 2021-22** under the Khelo India Scheme.
- The first Khelo India Games were held in 2018.

Features of Khelo India Scheme



- It is a **National Programme for Development of Sports** launched in 2017-18.
- It came into existence by **merging three existing schemes** namely:
 - **Rajiv Gandhi Khel Abhiyan** – To provide infrastructure in rural areas and to encourage sporting culture in the country through competitions
 - **Urban Infrastructure Scheme** – To provide quality sports infrastructure in urban areas so as to provide facilities for talent to hone their skills
 - **National Sports Talent Search** – To identify young talent
- **Financial Assistance:** The talented players identified in priority sports disciplines at various levels by the High-Powered Committee will be provided annual financial assistance of INR 5 lakh per annum for 8 years.
- **Eligibility:** The age limit set for application in this scheme is 10 to 18 years.
- It draws inspiration in respect of organization of competitions from **Khel Mahakumbh** which is organized annually by **Government of Gujarat**.

Objectives of Khelo India Scheme

- **Mass participation of youth** in annual sports competitions through a structured competition;
- **Identification of talent;**
- **Guidance and nurturing of the talent** through existing sports academies and new set up either by the central Government or State Government or in PPP mode; and
- **Creation of Sports Infrastructure** at Tehsil, District, State levels, etc.

Significance of Khelo India Scheme

- It has been introduced to **revive the sports culture in India at the grass-root level** by building a strong framework for all sports played in our country.
- It aims to establish **India as a great sporting nation**.
- Under this program, about **20 million children of the age group of 10 to 18 years** will be included in the National Physical Fitness Campaign.
- It aims to **promote mass participation in sports** and achieve effective implementation.
- The programme takes care to **develop sports infrastructure in both rural and**



urban areas and provides for not only identification of talent but guiding and nurturing of the talent.

- It aims at the impact of the entire **sports ecosystem, community sports, including infrastructure, coaching for excellence, talent identification**, competition structure as well as the sports economy.

4.36 Gandhi Peace Prize

Recently, the **Gandhi Peace Prize for the year 2019 and 2020** has been announced by the Ministry of Culture.

- The Gandhi Peace Prize for the year **2019** is being conferred on **(Late) His Majesty Sultan Qaboos bin Said Al Said of Oman**.
- The Gandhi Peace Prize for the year **2020** is being conferred on **Bangabandhu Sheikh Mujibur Rahman**.
- The recent awardees include **Vivekananda Kendra, India (2015); Akshaya Patra Foundation, India and Sulabh International (Jointly, for 2016); Ekal Abhiyan Trust, India (2017) and Shri Yohei Sasakawa, Japan (2018)**.

Gandhi Peace Prize

- It is an **annual award** instituted by Government of India since **1995** i.e. the 125th Birth Anniversary commemoration year of Mahatma Gandhi.
- The award is **open to all persons** regardless of nationality, race, language, caste, creed or sex.
- It will be given to **individuals, associations, institutions or organizations** who have worked selflessly for **peace, non-violence and amelioration of human sufferings**.
- The **contributions made during ten years** immediately preceding the nomination are considered.
- The Jury for Gandhi Peace Prize is chaired by **Prime Minister** and comprises of two ex-officio members, namely the **Chief Justice of India** and **Leader of the single largest Opposition Party in Lok Sabha**.
 - The two eminent members are also part of the Jury i.e. **Speaker of the Lok Sabha**, and **Founder of Sulabh International Social Service**



Organization.

- The award carries an amount of **Rs. 1 crore, a citation, a plaque and an exquisite traditional handicraft/ handloom item.**

4.37 Operation Thiruvallur

Recently, the troops of Southern Command, Pune have launched “**Operation Thiruvallur**”.

Operation Thiruvallur

- It is being undertaken under the aegis of “**Aid to Civil Authorities**”.
- It involves the **safe disposal of nearly 10 tonnes of unexploded ordnance** which had possibly been collected inadvertently by some factories located in the general area of SIPCOT Industrial Estate in Gummidipoondi in Thiruvallur district of Tamil Nadu.
- It is an Indian army’s massive **effort to ensure and enhance security of citizens.**
- It is a classic demonstration of **joint coordination and planning** undertaken between the **Army and Tamil Nadu State Government.**
 - The operation has been specifically **approved by Ministry of Defence** on the request of Tamil Nadu government.
- It is being launched in continuance of **Southern Command’s efforts** to contribute directly towards **security and well-being of people.**

Significance of Operation Thiruvallur

- The aim of the operation is to **ensure a safe environment for all citizens** in and around Gummidipoondi.
- It involves **segregation & disposal of unexploded ordnance** from a metal scrap dump, now covered with undergrowth.

4.38 Ken-Betwa Link Project

Recently, a memorandum of agreement was signed between Union Minister of Jal Shakti and the chief ministers of Madhya Pradesh and Uttar Pradesh to implement the **Ken-Betwa Link**



Project (KBLP) on the occasion of World Water Day.

- In the 1970s, the idea of **transferring surplus water from a river to water-deficit area** was mooted by the then Union Irrigation Minister.
- He suggested construction of a **National Water Grid** for transferring water from water-rich areas to water-deficit areas.
- It was in August, 1980 that the Ministry of Irrigation prepared a **National Perspective Plan (NPP)** for water resources development envisaging inter-basin water transfer in the country.

Ken-Betwa Link Project

- It is the **first project under the National Perspective Plan** for interlinking of rivers.
- Under this project, water from the **Ken River will be transferred to the Betwa River.**
- The Ken and Betwa Rivers are **tributaries of river Yamuna.**
- It **lies in Bundelkhand**, a drought-prone region, which spreads across **13 districts of Uttar Pradesh and Madhya Pradesh.**

Phases of Ken-Betwa Link Project

- **Under Phase-I**, one of the components i.e. Daudhan dam complex and its appurtenances like Low Level Tunnel, High Level Tunnel, Ken-Betwa link canal and Power houses will be completed.
- **Under Phase-II**, three components such as Lower Orr dam, Bina complex project and Kotha barrage will be constructed.

Significance of Ken-Betwa Link Project

- The project will provide **annual irrigation of 10.6 lakh hectares of land** i.e. 1 lakh hectare in Madhya Pradesh and 2.5 lakh hectare in Uttar Pradesh.
- It will provide a **drinking water supply to a population of about 62 lakh** i.e. 41 lakh in Madhya Pradesh and 21 lakh in Uttar Pradesh.
- The project will also generate **103 MW of hydro power generation** and **27 MW of solar power generation.**



- It will be of **immense benefit to the water-starved region** of Bundelkhand.
 - The **districts involved** are Panna, Tikamgarh, Chhatarpur, Sagar, Damoh, Datia, Vidisha, Shivpuri and Raisen of Madhya Pradesh and Banda, Mahoba, Jhansi and Lalitpur of Uttar Pradesh.
- It will pave the way for more interlinking of river projects to ensure that **scarcity of water does not become an inhibitor** for development in the country.

National Perspective Plan (NPP)

- The NPP comprised of two components namely, the **Himalayan Rivers Development** and the **Peninsular Rivers Development**.
- Based on the NPP, the **National Water Development Agency (NWDA)** identified 30 river links—16 under Peninsular component and 14 under Himalayan Component.

4.39 PRANIT: E-Tendering Portal

Recently, the Ministry of Power has released an **E-Tendering Portal 'PRANIT'**.
PRANIT

- It is an e-tendering portal established by **Power Grid Corporation of India Limited (POWERGRID)** which is a central PSU under Ministry of Power.
- It will lead to **less paperwork and ease of operation**, making the **tendering process more transparent**.
- It has been **certified by Standardisation, Testing and Quality Certification Directorate (STQC)**, Ministry of Electronics and Information Technology, Government of India.
- POWERGRID is now the **only organization in India to have an e-Procurement solution** on SAP Supplier Relationship Management (SRM) with PRANIT.

4.40 Appointment of Chief Justice of India

Recently, the **Chief Justice of India S A Bobde** has officially recommended the **second most senior Judge of the Supreme Court**, Justice N V Ramana, as his **successor**.



Appointment of Judges of Supreme Court

- The judges of the Supreme Court are **appointed by the president**.
- The **chief justice is appointed by the president** after consultation with such judges of the Supreme Court and high courts as he deems necessary.
- The **other judges are appointed by president after consultation with the chief justice** and such other judges of the Supreme Court and the high courts as he deems necessary.
- The **consultation with the chief justice is obligatory** in the case of appointment of a judge other than Chief justice.

Appointment of Chief Justice of India

- From 1950 to 1973, the practice has been to **appoint the senior most judge of the Supreme Court** as the chief justice of India.
- The above **established convention was violated in 1973** when A N Ray was appointed as the Chief Justice of India by superseding three senior judges.
- The discretion of the government was curtailed by the Supreme Court in the Second Judges Case (1993), in which it ruled that the **senior most judge of the Supreme Court should alone be appointed** to the office of the chief justice of India.

Qualifications of Judges of Supreme Court

- A person to be appointed as a judge of the Supreme Court should have the following **qualifications**:
 - He should be a **citizen of India**.
 - He should have been a **judge of a High Court** (or high courts in succession) for five years; or
 - He should have been an **advocate of a High Court** (or High Courts in succession) for ten years; or
 - He should be a **distinguished jurist** in the opinion of the president.
- It is clear that the Constitution has **not prescribed a minimum age for appointment** as a judge of the Supreme Court.



Oath or Affirmation of Judges of Supreme Court

- A person appointed as a judge of the Supreme Court, before entering upon his Office, has to **make and subscribe an oath or affirmation before the President.**

4.41 National Commission for Allied and Healthcare Professions Bill 2021

Recently, the Lok Sabha has passed the **National Commission for Allied and Healthcare Professions Bill** after it was passed in Rajya Sabha.

Key Provisions National Commission for Allied and Healthcare Professions Bill 2021

- **Allied health professional:** The Bill defines ‘allied health professional’ as an **associate, technician, or technologist trained to support the diagnosis and treatment** of any illness, disease, injury, or impairment.
 - Such a professional should have **obtained a diploma or degree** under this Bill.
 - The duration of the **degree /diploma should be at least 2,000 hours** (over a period of two to four years).
- **Healthcare professional:** A ‘healthcare professional’ includes a **scientist, therapist, or any other professional who studies, advises, researches, supervises, or provides preventive, curative, rehabilitative, therapeutic, or promotional** health services.
 - Such a professional should have **obtained a degree** under this Bill.
 - The duration of the **degree should be at least 3,600 hours** (over a period of three to six years).
- **Allied and healthcare professions:** The Bill specifies **certain categories of allied and healthcare professions** as recognised categories.
 - These are mentioned in the Schedule to the Bill and include **life science professionals, trauma and burn care professionals, surgical and anaesthesia related technology professionals, physiotherapists, and nutrition science** professionals.
 - The central government may amend this Schedule after consultation with the National Commission for Allied and Healthcare Profession.



- **National Commission for Allied and Healthcare Professions:** The Bill sets up the National Commission for Allied and Healthcare Professions.
 - The Commission will consist of:
 - Chairperson,
 - Vice-Chairperson,
 - Five members (at the level of Joint Secretary) representing various Departments/ Ministries of the central government,
 - One representative from the Directorate General of Health Services,
 - Three Deputy Directors or Medical Superintendents appointed on a rotational basis from amongst medical institutions including the AIIMS, Delhi and AIIPMR, Mumbai, and
 - 12 part-time members representing State Councils, among others
- The Commission will perform the **following functions** with regard to Allied and Healthcare professionals:
 - Framing policies and standards for regulating education and practice;
 - Creating and maintaining an online Central Register of all registered professionals;
 - Providing basic standards of education, courses, curriculum, staff qualifications, examination, training, maximum fee payable for various categories; and
 - Providing for a uniform entrance and exit examination, among others
- **Professional Councils:** The Commission will constitute a Professional Council for every recognised category of allied and healthcare professions.
 - The Professional Council will consist of a **president and four to 24 members**, representing each profession in the recognised category.
 - The Commission may **delegate any of its functions to this Council**.
- **State Councils:** Within six months from the passage of the Bill, state governments will constitute State Allied and Healthcare Councils.
 - The State Councils will consist of:



- Chairperson (at least 25 years of experience in the field of allied and healthcare science),
- one member representing medical sciences in the state government,
- two members representing state medical colleges,
- two members representing charitable institutions, and
- two members from each of the recognised categories of allied and healthcare professions, nominated by the state government, among others.
- The State Councils will:
 - Enforce professional conduct and code of ethics to be observed by allied healthcare professionals;
 - Maintain respective State Registers;
 - Inspect allied and healthcare institutions; and
 - Ensure uniform entry and exit examinations
- **Offences and penalties:** No person is allowed to practice as a qualified allied and healthcare practitioner other than those enrolled in a State Register or the National Register.
 - Any person who contravenes this provision will be punished with a fine of Rs 50,000.

Significance of National Commission for Allied and Healthcare Professions Bill 2021

- It seeks to **regulate and standardise the education and practice** of allied and healthcare professionals in the country.
- It is aimed at **fulfilling long-pending demands of the sector, and enhances employment opportunities** for professionals.
- The group of allied professionals is large and the bill is trying to **regulate this field, by providing dignity to their roles.**
- It is expected to **benefit an estimated 9 lakhs allied and healthcare-related professionals** and thousands of other professionals joining the workforce annually.



4.42 Ad-Hoc Judges in High Court

Recently, the Supreme Court has suggested that **appointing ad-hoc judges in high courts** would overcome the vacancy crisis in the judiciary and reduce the number of pending cases.

Ad-Hoc Judges in High Court

- The **President can appoint** duly qualified persons as **additional judges of a high court for a temporary period** not exceeding two years when:
 - There is a **temporary increase in the business** of the high court; or
 - There are **arrears of work** in the high court.
- The President can also appoint a **duly qualified person as an acting judge** of a high court when a judge of that high court (other than the chief justice) is:
 - **Unable to perform the duties** of his office due to absence or any other reason; or
 - **Appointed to act temporarily as chief justice** of that high court
- **Tenure:** An acting judge holds office until the permanent judge resumes his office.
 - The Constitution provides that both the additional or acting judge **cannot hold office after attaining the age of 62 years.**

Constitutional Provisions for Ad-Hoc Judges in High Court

- The SC had asked **all 25 high courts to respond to a public interest litigation** filed by Lucknow-based non-profit organisation, Lok Prahari, asking for the appointment of retired judges as ad-hoc judges under **Article 128 of the Constitution.**
- Article 128 talks about “**attendance of a retired judge**” as the judge of the Supreme Court.
 - It states that the Chief Justice of India at any time, with the previous consent of the President, may request any person who has **held the office of a judge of the Supreme Court or the high court** to sit and act as **a judge of the Supreme Court.**
- **Under Article 224A**, the retired high court judges can be appointed as ad-hoc



judges to HCs.

4.43 CJI's remark on Uniform Civil Code

Recently, the Chief Justice of India (CJI) has lauded **Goa's Uniform Civil Code**, and encouraged "intellectuals" indulging in "academic talk" to visit the state to learn more about it.

- In September 2019, the Supreme Court had described Goa as a **"shining example" with a Uniform Civil Code.**
- It observed that the founders of the Constitution had **"hoped and expected" a Uniform Civil Code for India** but there has been no attempt at framing one.
- The founders of the **Constitution in Article 44 in Part IV dealing with the Directive Principles of State Policy** had hoped and expected that the State shall endeavour to secure for the citizens a Uniform Civil Code throughout the territories of India

What is Uniform Civil Code?

- It is one that would provide for **one law for the entire country**, applicable to all religious communities in their personal matters such as marriage, divorce, inheritance, adoption etc.
- **Article 44** of the Constitution lays down that the state shall endeavour to secure a Uniform Civil Code for the citizens throughout the territory of India.
- Article 44 is one of the Directive Principles of State Policy as defined in **Article 37, are not justiciable (not enforceable by any court)** but the principles laid down therein are fundamental in governance.
- **Article 43** mentions "state shall endeavour by suitable legislation", while the phrase "by suitable legislation" is absent in Article 44.

Fundamental Rights vs DPSP

- The Supreme Court held in **Minerva Mills (1980)** states that "Indian Constitution is founded on the bed-rock of the balance between Parts III (Fundamental Rights) and IV (Directive Principles)".
- **Article 31C inserted by the 42nd Amendment in 1976** lays down that if a law is



made to implement any Directive Principle, it cannot be challenged on the ground of being violative of the Fundamental Rights under Articles 14 and 19.

Idea of a Uniform Civil Code relate to the fundamental right to religion

- **Article 25** lays down an individual's fundamental right to religion;
- **Article 26(b)** upholds the right of each religious denomination or any section thereof to "manage its own affairs in matters of religion";
- **Article 29** defines the right to conserve distinctive culture.
- An individual's freedom of religion under Article 25 is subject to "**public order, health, morality**" and other provisions relating to fundamental rights, but a group's freedom under Article 26 has not been subjected to other fundamental rights.

POLITICAL ISSUES, HUMAN RIGHTS AND GOVERNANCE

5.1 MoRTH releases Rating mechanism for National Highways

- The Ministry of Road Transport and Highways has released the ratings for 18,668 km of completed 4/6 lane NH stretches covering 343 toll plazas.
- This has been done by NHAI under MoRTH, which has taken initiative to improve **its accountability towards road users**, who pay user fee for use of developed National Highways.
- This initiative has been taken as per vision of **improving the quality of public services**.
- The fundamental objective of highway rating is "**Minimum time with maximum safety in stress free environment**" from highway users' perspective.

REAL-TIME MONITORING:

Each toll plaza of highway is judged based on three major criteria viz. **Efficiency, Safety and and User Services**.

- These criteria are further divided into a total of 39 parameters which include average speed, road condition, facility for public like VUP/ PUP/ FOB, service road, delay at toll plaza, accidents, incident response time, wayside amenities, general cleanliness, etc.
- These criteria were framed after detailed studies held in NHAI & MoRTH before its



final approval by MoRTH/ GOI.

- No such criteria has been developed across the Globe in the past which evaluates the **performance of highway from the users' perspective**.
- The Ministry has also begun **real-time monitoring** of toll plazas across the country.
- It is a simple help to **improve traffic congestion problem at toll plazas/ city roads/highways** by using central monitoring system along with bundle of analytics and quick decision-making outputs.
- This is eventually likely to facilitate saving the Commute Time, Improve Customer Experience, Save Fuel Wastage Cost and Reduce Carbon Footprint.
- It uses several technologies like **Satellite Imagery, GIS, Remote Sensing** along with a proprietary algorithm to remotely monitor the congestion status of the roads.
- The frequency sample of data can be as low as even 1-5min depending upon the requirements.
- The Ministry informed that 11,035 km of NH have been constructed during this year, which represents a rate of 35 kms per day.
- The Ministry reiterated resolve to **achieve the rate of 40 km per day** within the balance months of this financial year.

5.2 U.S. thinktank report classifies India as 'partly free'

- **Freedoms in India have reduced**, according to a report from a U.S. thinktank, Freedom House, resulting in India being classified as '**partly free**'.
- India's score was 67, **a drop from 71/100 from last year** (reflecting 2019 data) downgrading it from the free category last year (based on 2020 data).

FREEDOM IN THE WORLD 2021: DEMOCRACY UNDER SIEGE:

- The government in India and its State-level allies continued to **crack down on critics during the year**.
- Freedoms in India have reduced, **according to a report from a U.S. thinktank**, Freedom House, resulting in India being classified as 'partly free'.
- The ruling Hindu nationalist movement also encouraged the **scapegoating of Muslims**, who were disproportionately blamed for the spread of the virus.



- Rather than serving as a champion of democratic practice and a counterweight to authoritarian influence from countries such as China, **Indian government is tragically driving India itself toward authoritarianism.**
- The private media are vigorous and diverse, and investigations and scrutiny of politicians do occur. However, **attacks on press freedom have escalated dramatically** under the current government.
- Reporting has become significantly less ambitious in recent years, **citing the use of security, defamation, sedition and contempt of court laws** to quiet critical media voices.
- Separately, revelations of **close relationships between politicians, business executives and lobbyists** on one hand and leading media personalities and owners of media outlets, on the other, have **dented public confidence in the press.**

ON AMERICA:

- On the U.S., the Freedom House said the **risky state of American democracy** was on display during the January 6 attack on the Capitol.
- It listed what it called the Trump presidency's "**unprecedented attacks**" on **American democracy** (examples included were dismissing inspectors general to sowing mistrust over the electoral system). The U.S. dropped three points over one year, down to 83/100.
- The United States will need to work vigorously to **strengthen its institutional safeguards**, restore its civic norms and uphold the promise of its core principles for all segments of society if it is to protect its venerable democracy and regain global credibility.

ON CHINA:

- China, classified as '**not free**', dropped a point from last year going down to 9/100.
- The malign influence of the regime in China, the world's most populous dictatorship, was especially profound in 2020," citing **Beijing's disinformation and censorship campaign** following the outbreak of COVID-19.

5.3 Proactive tracking will 'make suspects out of people': Petitioner of 66A SC judgment

- Privacy activist and lawyer Shreya Singhal told the government's move to ask



'significant **social media intermediaries**' to have **automated tools** to proactively track certain words is akin to "active hunting", and will "make suspects out of people".

- It was on Singhal's plea that the **Supreme Court had in 2015 struck down Section 66A of the Information Technology Act**, saying that the provision "clearly affects" the fundamental right to freedom of speech and expression, guaranteed by the constitution.

NEW GUIDELINES:

- IT Ministry's draft Data Protection Bill includes new guidelines for social media intermediaries. Messaging apps needing to "**enable the identification of the first originator** of the information on its computer resource".
- The new guidelines would end up **weakening overall security, harm privacy** and contradict the principles of data minimisation, according to an expert in public policy.
- The **new guidelines for social media intermediaries**, announced by the Centre on February 25 put the onus of using "technology-based measures, including automated tools or other mechanisms to proactively identify information" related to rape, child sexual abuse or any conduct related to that, whether explicit or implicit.
- The same clause, however, also says that social media intermediaries will also have to use the same tools to proactively track information that has previously been removed or access to which has been disabled by a court order or an order of the government agency.
- These include information which may impact sovereignty and integrity of India, security of the State, friendly relations with foreign states or public order, according to the new guidelines.
- The new guidelines for social media intermediaries also mandate that platforms that have over 50 lakh registered users in India and are primarily in the business of messaging "**shall enable the identification of the first originator of the information on its computer resource**" if such an order is passed by a competent court or by the government under Section 69 of the IT Act.

CRITICISM:

- Privacy activist and lawyer Singhal said "Say one of the track words is interfaith



marriage or love jihad, then you are criminalising your entire population... your entire citizenry you are making a suspect and from that suspects' pool, you have a crime already. You want to attribute that crime to some people,".

- A two-judge Bench of (now retired) Justice J Chelameswar and Justice Rohinton F Nariman had in their judgment in the Section 66A case also said that phrases like “annoying”, “inconvenient” and “grossly offensive” were **extremely vague in nature** and that what one person found offensive may not be as offensive to the other.
- “Say the rules are in place and they put into that automated tracking the phrase ‘toolkit’. Can you imagine how many arrests would have been made? There was so much outrage on one tweet,” **said Singhal**.
- The latest guidelines for social media intermediaries have also **drawn objections from several privacy experts and lawyers**, with some saying they could “undermine the principles of open and accessible internet, the fundamental right of privacy and freedom of speech and expression enshrined in the Constitution”.
- The traceability provision as provided in Rule 5(2) will undermine end-to-end encryption services offered by instant messaging applications.
- Although it requires a judicial order or an order issued under Section 69 of the Information Technology Act, 2000, this does not solve the problem when the **encryption technology itself is compromised**.
- **An expert said**– “When the first originator is from outside India, the significant intermediary must identify the first originator within the country, making an already impossible task more difficult. This would essentially be a mandate requiring encrypted services to either store additional sensitive information or/and break end-to-end encryption.”
- **Singhal said**– Though there has been no judicial challenge to the rules so far, most experts are of the opinion that some stakeholders, who are directly impacted by the rules, will approach the courts sooner than later. “I hope it does not withstand judicial scrutiny. They have completely obfuscated the whole of judiciary here. Earlier, you had to file a police complaint if you had anything objectionable. Here you have set up this one board where anyone can file a complaint, which is reviewed by administrators who may not have a judicially trained person”.



5.4 GoM suggests steps to stem 'negative narrative'

In an effort to “neutralise” what it calls a “negative narrative”, a Group of Ministers (GoM), formed to fine-tune “government communication”, has come out with suggestions to **track “50 negative and 50 positive influencers” on social media**, “neutralise the people who are writing against the government without facts and set[ting] false narratives/spread[ing] fake news” and take other steps.

GOI OBSERVATION:

- It emerges that **the decisions on capping FDI (foreign direct investment) at 26% for digital news media** and the new IT rules that have a separate section dealing with code of ethics for Over the Top (OTT) platforms such as Netflix were a result of the GoM’s deliberations.
- The FDI cap was essential, the GoM felt, to **constrict the “foreign influence”** on Indian media.
- A list of media personnel and prominent persons, who are pro our line of thought — both nationally and globally, should be prepared.
- Few eminent academicians, Vice Chancellors, retired Indian Foreign Service officers etc, should be identified who can write our achievements and project our viewpoint.

‘DIRECT ACTION’:

- Direct action against those writing against the government. India should have a strategy to **neutralise the people who are writing against the government** without facts and set[ting] false narratives / spread[ing] fake news.
- The action points recommended by the GoM include **enlarging the Prasar Bharati News Service** into a “mainline news agency”.
- The agreed long-term strategies include “coordination with schools of journalism as present students are the future journalists”.
- The journalists who were supportive of the government, even if unemployed now, should be roped in. The report says this suggestion would be acted upon.
- The GoM’s report was published by sections of the media. There is so far no official word on its contents.



5.5 Industry: Haryana quota law will slow recovery, cut jobs, bring inspector raj

- Industry representatives have told that the move by the Haryana government requiring that **locals — born in the state or living there for five years — account for 75% of all hiring by companies in jobs** with gross salary under Rs 50,000 per month will potentially **slow the post-Covid economic recovery**, increase compliance burden and usher in an “inspector raj.”
- Recently, the state administration notified the **Haryana State Employment of Local Candidates Act 2020**, which requires all companies, LLPs, trusts, societies and partnership firms with more than 10 employees to follow these local employment requirements and specifically empower the district administrations to enforce the new regulations through inspections with a 24-hour notice.
- The legislation, the government argued, is aimed at **boosting local employment** particularly for the youth in unskilled jobs.
- The Andhra Pradesh assembly in 2019 passed a similar law, which has subsequently been challenged in courts.

CRITICISMS:

- Industry players, however, were unanimous in **calling the move “regressive”** and pointed to how the lack of a sufficiently large qualified domestic workforce in Haryana made the implementation of the new act “impractical”.
- The economic recovery (post-Covid) will definitely be affected by these restrictions. The move would hinder investments coming into Haryana.
- Industry was in talks with the Haryana government **seeking a relook at the legislation**. The move could further **affect the competitiveness of Haryana**.
- Under the regulations, firms and companies would also have to register all of their employees receiving a gross salary of Rs 50,000 or less on a government portal and update it at regular intervals.
- Industry sources noted that employees with salaries under Rs 50,000 accounted for about **60-70% of the workforce of major industries in Haryana**.
- Reservation affects productivity and Industry competitiveness. This is like giving encouragement to inspector raj.



- The provision in the law requires a firm to seek exemption from the district administration if it cannot find enough qualified workers. This brings in an **element of bureaucratic discretion** in the entire process.
- It is not possible for so many skilled and semi-skilled local workers to become available so quickly.
- The legislation would damage small firms and halt expansion plans. This will lead to **job destruction** instead of job creation for locals as **nobody will expand operations in the state and foreign investors will not even consider investing here.**

5.6 SC seeks States' views on 50% cap on quota

- The Supreme Court recently decided to examine whether its nearly three-decade-old judgment which fixed **reservation for the marginalised and the poor in government jobs and educational institutions** at 50% needs a relook.
- In 1992, a nine-judge Bench of the court had drawn the “Lakshman rekha” for reservation in jobs and education at 50%, **except in “extraordinary circumstances”**.
- However, over the years, several States, such as Maharashtra and Tamil Nadu, have crossed the Rubicon and passed laws which **allow reservation shooting over 60%**.

MARATHA QUOTA LAW:

- A five-judge Bench set up to hear the **challenge to the Maratha quota law**, decided not to confine the question of reservation spilling over the 50% limit to just Maharashtra.
- The Bench expanded the ambit of the case by making other States party and inviting them to make their stand clear on the question of **whether reservation should continue to remain within the 50% boundary or not.**
- The court framed a series of questions, which include whether the **Indira Sawhney verdict of 1992, fixing 50% limit on quota**, needs to be relooked by a larger Bench of more than nine judges.
- Another question is whether the **Maharashtra State Reservation for Socially and Educationally Backward Classes (SEBC) Act of 2018**, which provides 12% to 13% quota benefits for the Maratha community, thus taking the reservation

percentage in the State across the 50% mark, was enacted under “extraordinary circumstances”.

- The Indira Sawhney judgment had categorically said “**50% shall be the rule**, and only in certain **exceptional and extraordinary situations** for bringing far-flung and remote areas population into mainstream the said 50% rule can be relaxed”.
- The court will also examine whether the **Maharashtra State Backward Classes Commission**, had made up a **case of “extraordinary circumstances” of deprivation** suffered by the Maratha community, requiring the helping hand of reservation even at the cost of crossing the 50% line.
- In fact, the Bombay High Court had, in June 2019, **reduced the quantum of reservation for Marathas from the 16% to 12%** in education and 13% in employment.

MANY STATES BREACHED CEILING

“Reservation being extreme form of protective measure... should be confined to minority of seats. Even though the Constitution does not lay down any specific bar... the principle of balancing equality ordains reservation, of any manner, not to exceed 50%

—9-member SC bench on Nov 16, 1992 in Indra Sawhney judgment

➤ Since the 1992 order, several states have passed laws breaching 50% ceiling, including **TN, Maharashtra, Haryana, Telangana, Andhra, MP, UP, Rajasthan & Chhattisgarh**

➤ Many of these laws have either been stayed or are facing legal challenges

➤ SC was hearing challenge to Maharashtra govt's decision to extend quota to Marathas

102nd CAA, 2018:

- A significant question the Bench wants to judge is whether the Constitution (One Hundred Second Amendment) Act of 2018, which introduced the **National Commission for Backward Classes (NCBC)**, interferes with the authority of the



State legislatures to provide benefit to the social and educationally backward communities in their own jurisdiction.

- The Constitution Amendment Act had introduced **Articles 338B and 342A** in the Constitution.
- **Article 338B deals with the NCBC.** Article 342A empowers the President to specify the socially and educationally backward communities in a State.
- It says that it is for the **Parliament to include a community in the Central List** for socially and backward classes for grant of reservation benefits.
- The court wants to delve into the issue whether **Article 342A strips the State legislatures of their discretionary power** to include their backward communities in the State List.

5.7 'Only half of govt. schools, anganwadis have tap water'

- **Only half of government schools and anganwadis have tap water supply**, despite a 100-day campaign for 100% coverage being launched by the Jal Shakti Ministry in October 2020, according to information provided to the Parliamentary Standing Committee on Water Resources.

POOR GOVERNANCE:

- **Less than 8% of schools in Uttar Pradesh and 11% in West Bengal have it**, while it is available in only 2-6% of anganwadis in Assam, Jharkhand, Uttar Pradesh, Chhattisgarh and Bengal.
- At a time when **schools and anganwadis are just starting to reopen** after a year-long shutdown, COVID-19 safety protocols require repeated handwashing by students and teachers.
- In its report on the demand for grants submitted to the Lok Sabha on Monday, the Standing Committee urged the Ministry to take up the matter with laggard States.
- The campaign to **provide potable piped water supply for drinking and cooking purposes** and tap water for washing hands and in toilets in every school, anganwadi and ashramshala or residential tribal school was launched on October 2, Gandhi Jayanti.
- The 100-day period should have ended on January 10, 2021. However, as of



February 15, only **48.5% of anganwadis and 53.3% of schools had tap water supply**, the Ministry told the Parliamentary panel.

PROGRESS MADE:

- Seven States — Andhra Pradesh, Goa, Haryana, Himachal Pradesh, Tamil Nadu, Telangana and Punjab — achieved 100% coverage.
- A number of other States also made significant progress in that time, and 1.82 lakh grey water management structures and **1.42 lakh rainwater harvesting structures** were also constructed in schools and anganwadi centres.
- However, some States/ UTs have indicated that they need more time to complete the task and sustain the efforts. Therefore, the campaign has been extended till March 31, 2021.
- The panel noted that “**children are more susceptible to water-borne diseases**, more so when there is also a need for repeated washing of hands as a precautionary measure during the pandemic.

5.8 V-Dem Institute's Democracy Report

Recently, the **Sweden's V-Dem Institute** has released the fifth annual democracy report titled ‘**Autocratisation goes viral**’.

Status of India in V-Dem Institute's Democracy Report

- It has downgraded India from “**the world's largest democracy**” to an “**electoral autocracy**”.
- The report highlighted the reasons for such a downgrade are “**muzzling**” of the **media**, and **overuse of defamation and sedition laws**.
- India has **moved from the top 50%** of the 180 countries analysed by V Dem to the **bottom 50%**.
 - In 2019, India was last **among the 90 countries in the top 50%** but in 2020, it is **ranked 97th**, falling into the bottom 50%.
- India's score was at an **all-time high at 0.57** (on a scale of 0-1) in 2013 but it had **declined to 0.34** by the end of 2020.



- India has been regarded as **autocratic as is Pakistan**, and worse than both its neighbors **Bangladesh and Nepal**.
- The report highlighted that the use of defamation “**frequently used to silence journalists**” and the use of the **Unlawful Activities Prevention Act (UAPA)** have placed constraints on civil society.
- The report notes that civil society is being **increasingly muzzled while organisations aligned with the “Hindutva movement”** have gained freedom.

V-Dem (Varieties of Democracy) Report

- It claims to produce the **largest dataset on democracy** with almost 30 million data points for **202 countries from 1789 to 2020**.
- It summarizes the **state of democracies of the world** against the backdrop of developments that have taken place over the past decade.
- The V-Dem Institute is an **independent research institute** based at the University of Gothenburg.
 - It has published **data-heavy worldwide democracy** reports since 2017.
- The report finds that **liberal democracies have diminished** over the past decade from 41 countries to 32 countries.

Top 10 Autocratizing Countries (2010-2020)

- The global decline during the past decade is **steep and continues in 2020**, especially in the **Asia-Pacific region, Central Asia, Eastern Europe, and Latin America**.
- It notes an accelerating wave of autocratisation **engulfing 25 nations**, home to one-third of the world’s population.
- It highlights that the number of democratizing countries has **dropped by almost half to 16**, hosting a mere 4 per cent of the global population.

TABLE 1: TOP-10 AUTOCRATIZING COUNTRIES, 2010–2020

		CHANGE	LDI 2010	LDI 2020	REGIME TYPE 2010	REGIME TYPE 2020
1	Poland	-0.34	0.83	0.49	Liberal Democracy	Electoral Democracy
2	Hungary	-0.32	0.68	0.37	Electoral Democracy	Electoral Autocracy
3	Turkey	-0.29	0.40	0.11	Electoral Democracy	Electoral Autocracy
4	Brazil	-0.28	0.79	0.51	Electoral Democracy	Electoral Democracy
5	Serbia	-0.27	0.51	0.24	Electoral Democracy	Electoral Autocracy
6	Benin	-0.26	0.55	0.29	Electoral Democracy	Electoral Autocracy
7	India	-0.23	0.57	0.34	Electoral Democracy	Electoral Autocracy
8	Mauritius	-0.23	0.73	0.50	Liberal Democracy	Electoral Democracy
9	Bolivia	-0.18	0.41	0.231	Electoral Democracy	Electoral Autocracy
10	Thailand	-0.17	0.34	0.17	Electoral Autocracy	Closed Autocracy

The classification of regime type is not only based on the LDI score but also the Electoral Democracy Index, as well as the extent to which elections overall have been free and fair. See Lührmann et al. (2018) for details.

5.9 Mera Ration Mobile App

Recently, the Ministry of Consumer Affairs, Food & Public Distribution has launched the 'Mera Ration' mobile app.

- The One Nation One Ration Card system was **started initially in 4 States** in August 2019.
- It has been swiftly rolled out in a very short span of time in **32 States/UTs by December 2020**.
 - The **integration of remaining 4 States/UT (Assam, Chhattisgarh, Delhi and West Bengal)** is expected to be completed
- It covers nearly **69 Crore NFSA beneficiaries** (about 86% NFSA population) in the country.

Mera Ration mobile app

- It has been developed by the **Department of Food & Public Distribution** and **National Informatics Centre (NIC)**.
- The **salient features** of the Mera Ration App are:



- The beneficiaries can identify and locate the nearest fair price shop;
- The beneficiaries can easily check details of their:
 - Foodgrain entitlement
 - Recent transactions
 - Status of Aadhaar seeding
- The migrant beneficiaries can register their migration details through the application.
- The application is currently available in **English and Hindi**.

Significance of Mera Ration mobile app

- It will benefit especially those **ration card holders who move to new areas for livelihoods**.
- It aims to **facilitate various ONORC related services among NFSA beneficiaries**, particularly migrant beneficiaries, Fair Price Shop (FPS) dealers and other relevant stakeholders.

5.10 Serving Bureaucrats cannot be State Election Commissioners: Supreme Court

Recently, the Supreme Court has pulled up Goa for **entrusting additional charge of election commissioner to a state official** and ordered the state government to **appoint an independent election chief** immediately.

- The apex court highlighted that **entrusting additional charge of State Election Commissioner to a government official** has resulted in mockery of the Constitution.
- The top court also directed **all state election commissioners** across the country, who currently **holds additional charge**, to step down immediately.
- The Supreme Court stated that a **government employee or bureaucrat cannot be appointed** as Election Commissioner.
- The top court has issued the direction by exercising its powers under **Articles 142 and 144** of the Constitution.
 - Under Article 142, the apex court is **empowered to issue directives to do**



“complete justice” whereas Article 144 obligates **all authorities to act in aid of the Supreme Court.**

State Election Commissioner

- **Appointment of SEC:** The SEC is appointed by the concerned state Governor on the advice of the Chief Minister.
- **Removal of SEC:** The state election commissioner can be removed only by the President.
 - He can be removed only in like manner and on the like grounds as a judge of a high court.
- **Functions of SEC:** Article 243K provides the superintendence, direction and control of the preparation of electoral rolls and the conduct of all elections to the panchayats shall be vested in the state election commission.
- **Article 243ZA:** The superintendence, direction and control of the preparation of electoral rolls for, and the conduct of, all elections to the Municipalities shall be vested with SEC.
 - The State Election Commission should **submit its annual or special reports** to the Election Commission of India and to the Governor.
 - The functions of **delimitation, reservation and rotation of seats should be vested in a Delimitation Commission** and not in the State Election Commission.
- **Qualifications for SEC:** The person to be appointed as the State Election Commissioner shall be a person:
 - Who is or has been a judge of a High Court; or
 - A person who has served the Government in the rank of a Commissioner for a minimum period of five years, or has served the State Government in a higher rank, namely, Financial Commissioner.
- **Age:** The State Election Commissioner shall not be below the age of fifty-five years.
- **Term of office:** The State Election Commissioner shall hold office for a period of five years from the date he assumes office;
 - Provided that where the SEC attains the age of sixty-five years before the



expiry of the said term of five years, he shall vacate his office on the date on which he attains the said age;

- Provided further that the State Election Commissioner may, at any time, by writing under his hand addressed to the Governor, resign his office.
- **Reappointment of SEC:** On ceasing to hold office, the State Election Commissioner shall not be eligible for any further appointment under the Government.

5.11 Privilege Motion

Recently, the opposition has said that it will table a **privilege motion** against Meghalaya Chief Minister for allegedly misleading the House on the power purchase agreement signed with NTPC in 2007.

Privilege Motion

- It is concerned with the **breach of parliamentary privileges** by a minister.
- It is moved by a member when he feels that a minister has committed a **breach of privilege of the House**.
 - It can also be moved **against one or more of its members** by withholding facts of a case or by giving wrong or distorted facts.
- Its purpose is to **censure the concerned minister**.

Provisions of the Constitution to protect the privileges of the legislature

- The powers, privileges and immunities of either **House of the Indian Parliament and of its Members and committees** are laid down in **Article 105 of the Constitution**.
- **Article 194 deals** with the powers, privileges and immunities of the **State Legislatures, their Members and their committees**.
- The parliamentary privilege refers to the **right and immunity enjoyed by legislatures**, in which legislators are granted protection against civil or criminal liability for actions done or statements made in the course of their legislative duties.

What does breach of legislature's privilege constitute?



- While the Constitution has accorded special privileges and powers to parliamentarians and legislators to **maintain the dignity and authority of the Houses** but these powers and privileges are not codified.
- There are **no clear and notified rules** to decide what constitutes a breach of privilege and the punishment it attracts.
- Any act that **obstructs or impedes either House of the state legislature in performing its functions**, or which obstructs or impedes any Member or officer of such House in the discharge of his duty, directly or indirectly, to produce such results is treated as breach of privilege.
- It is a **breach of privilege and contempt of the House to make speeches or to print or publish libel reflecting on the character or proceedings** of the House, or its Committees, or on any member of the House for or relating to his character or conduct as a legislator.

Procedure to be followed in case of Breach of Privilege

- The **Legislative Assembly Speaker or Legislative Council Chairman constitutes a Privileges Committee** consisting of 15 members in the Assembly and 11 members in the Council.
- The members to the committee are nominated based on the **party strength in the Houses**.
- The **Speaker or Chairman first decides** on the motions.
 - If the privilege and contempt are found prima facie, then the Speaker or Chairman will forward it to the **Privileges Committee** by following the due procedure.
- At present, there is **no Privileges Committee in either House** of the state legislature.
- The Privilege Committee has **quasi-judicial powers** which will seek an explanation from all the concerned.
 - It will **conduct an inquiry** and will make a recommendation based on the findings to the state legislature for its consideration.
 - The punishment can include **communicating the displeasure of the state legislature to the offender**, summoning the offender before the House

and giving a warning, and even sending the offender to jail.

5.12 Centre vs State in Delhi

Recently, the Centre has introduced the Government of **National Capital Territory of Delhi (Amendment) Bill, 2021** in Lok Sabha.

- **Delhi's current status** as a Union Territory with a Legislative Assembly is an outcome of the **69th Amendment Act**.
 - The amendment act introduced the **Articles 239AA and 239BB**.
- The GNCTD Act was passed simultaneously to **supplement the constitutional provisions relating to the Assembly and the Council of Ministers** in the national capital.
- The GNCTD Act outlines the **powers of the Assembly, the discretionary powers enjoyed by the L-G, and the duties of the Chief Minister** with respect to the need to furnish information to the L-G.

Key Highlights of NCT of Delhi Bill 2021

- The Centre claims that the amendment Bill seeks to give **effect to the Supreme Court's interpretation** in the “statement of objects and reasons” section.
 - The bill “further defines” the **responsibilities of the elected government and the Lt Governor** in line with the Constitutional scheme.
- The bill has made it clear that the term “**government**” in any law made by the Legislative Assembly **shall mean the L-G**.
 - It implies that the government means the **Lieutenant Governor of the NCT of Delhi appointed by the President under Article 239** and designated as such under **Article 239 AA of the Constitution**.
- It adds that the **L-G's opinion shall be obtained before the government takes any executive action** based on decisions taken by the Cabinet or any individual minister.

Viewpoint of Judiciary on Centre vs State in Delhi

- In its 2018 verdict, the five-judge Bench had held that the **L-G's concurrence is**



not required on issues other than police, public order and land.

- It had added that **decisions** of the Council of Ministers will have to be communicated to the L-G.
- The court ruled that requiring prior concurrence of the **Lieutenant Governor would absolutely negate the ideals of representative governance and democracy** conceived for the NCT of Delhi by Article 239AA of the Constitution.
- The court ruled that the **L-G was bound by the aid and advice** of the council of ministers.
- The status of the **Lieutenant Governor of Delhi is not that of a Governor of a State**, rather he remains an Administrator, in a limited sense, working with the designation of Lieutenant Governor.

Changes to be brought by Amendment Bill

- The elected government had **stopped sending files on executive matters to the L-G** before the implementation of any decision which is encouraged by the Supreme Court verdict.
- The Bill seeks to add a provision in the original GNCTD Act, 1991, **barring the Assembly or its committees** from:
 - Making rules to take up matters concerning day-to-day administration; or
 - Conducting inquiries in relation to administrative decisions
- The Bill makes it **mandatory for the Delhi government** to take the opinion of the L-G before any executive action in the city.
- It says that the **Delhi assembly won't be able to make rules for regulating, its procedure and the conduct of its business** which are inconsistent with the Rules of Procedure and Conduct of Business in the Parliament of India.

Discretionary Powers of LG under current rules

- The L-G does have the power to refer any matter, over which there is a **disagreement with the elected government, to the President under Article 239AA(4)**.
- In 2019, the Delhi Law Secretary has argued that the **elected government cannot use the Supreme Court verdict to keep the L-G in the dark** about its decisions.



- It would **prevent him from taking informed decisions** on whether to invoke Article 239AA(4) or not.
- The SC had also categorically pointed out that the **L-G should not act in a mechanical manner** without due application of mind so as to refer every decision of the Council of Ministers to the President.

5.13 National Ayush Mission (NAM)

Recently, the Minister of State (Ministry of AYUSH) has provided information on the implementation of **National AYUSH Mission (NAM)**.

- The setting up of AYUSH Hospitals and Dispensaries comes under the purview of respective State/UT Governments because **Public Health is a State subject**.
- In 2020, the Union Cabinet has approved the proposal to **operationalise AYUSH HWCs through States/UTs** under the broad umbrella of **National AYUSH Mission (NAM)** in a phased manner by 2023-24.

National Ayush Mission (NAM)

- It is a **centrally sponsored scheme** for development and promotion of AYUSH system of medicine including Homoeopathy.
- It is a **flagship scheme of Ministry of AYUSH** approved and notified in 2014.
- The **grant-in-aid is being provided to State/UT Governments** for development and promotion of AYUSH as per their proposed State Annual Action Plans (SAAPs).
- The **specific resource pool with respect to NAM** for each State/UT Government is allocated and communicated by the Central Government.
- It provides **financial assistance for upgradation of Government/ Panchayat/ Government aided AYUSH Hospitals and Dispensaries** for undertaking addition/ alteration of existing premises, furniture, fixtures, equipments etc.

Salient Features of National Ayush Mission (NAM)

- **Co-location of AYUSH facilities** at Primary Health Centers (PHCs), Community Health Centers (CHCs) and District Hospitals (DHs);



- **Supply of essential drugs** to AYUSH Hospitals and Dispensaries;
- **Up gradation** of exclusive State Government AYUSH Hospitals and Dispensaries;
- Setting up of up to **50 bedded integrated AYUSH Hospital**;
- Upgradation of **State Government Educational Institutions**;
- Setting up of **new State Government AYUSH Educational Institutions** including Yoga and Naturopathy in the State where it is not available;
- **Strengthening of State Government/ Public Sector Undertaking (PSU)** Ayurveda, Siddha, Unani and Homoeopathy (ASU&H) Pharmacies and Drug Testing Laboratories (DTL);
- Cultivation and Promotion of **Medicinal Plants**; and
- Upgradation of Health facilities (**AYUSH Dispensaries and Health sub-centers**) into AYUSH Health and Wellness Centre.

Objectives of National Ayush Mission (NAM)

- To provide **cost effective AYUSH Services**, with a universal access through upgrading AYUSH Hospitals and Dispensaries, co-location of AYUSH facilities at Primary Health Centres (PHCs), Community Health Centres (CHCs) and District Hospitals (DHs).
- To establish a **holistic wellness model based on AYUSH principles and practices** to empower masses for 'self-care' to reduce the disease burden, out of pocket expenditure and to provide informed choice to the needy public.
- To strengthen **institutional capacity at the state level** through upgrading AYUSH educational institutions, State Govt. ASU&H Pharmacies, Drug Testing Laboratories and ASU & H enforcement mechanism.
- Support cultivation of medicinal plants by adopting **Good Agricultural Practices (GAPs)** so as to provide sustained supply of quality raw-materials and support certification mechanism for quality standards, Good Agricultural/Collection/Storage Practices.
- Support setting up of **clusters through convergence of cultivation, warehousing, value addition and marketing** and development of infrastructure for entrepreneurs.



5.14 Orunodoi Scheme

- It is a **cash transfer scheme** which will cover over **18 lakh families of the state** who will receive **830 rupees per month** in their bank accounts.
- The monthly assistance would **support a family to buy medicines** worth Rs 400 per month, **50 per cent subsidy of four kg pulses** worth Rs 200, Rs 80 for **sugar and for essential vegetables and fruits** worth Rs 150.
- It is the **biggest ever scheme in post-Independence Assam** because the scheme would strengthen the role of the women as the money will be deposited in the bank accounts of the women of the families.
- The scheme will be rolled out in **29 districts at the moment**.
- The number of beneficiaries will **increase to about 22 lakh** after the BTC districts are included.

Eligibility under Orunodoi Scheme

- The applicant, a woman, has to be a **permanent resident of Assam**, whose **composite household income** should be less than Rs 2 lakh per annum.
- Families with **specially-abled members** and **divorced/widowed/separated/unmarried women** are prioritised.
- Poorer families, those **without National Food Security Act (NFSA) or ration cards**, are also given priority.

Who are excluded under Orunodoi Scheme?

- Families without any women members, MPs, MLAs (former and current), members of Panchayati Raj institutions and urban local bodies, government officials and employees of cooperative societies.
- Families owning four-wheelers, mechanised boats, tractors or refrigerators, ACs and washing machines, or more than 15 bighas of agricultural land.

Significance of Orunodoi Scheme

- It is first of its kind initiative because the **state government has introduced a massive cash transfer programme** which is very close to the initiative of Prime

Minister Narendra Modi's universal basic income.

- It is the first of its kind in the country as **no other state has such a high coverage of Direct Benefit Transfer (DBT) scheme** nor matches the amount of cash transfer that is being made.
- It marks a **paradigm shift in the approach to poverty alleviation programme**, where the government does not decide how money should be spent for the poor.
- **Widow, unmarried or divorced women and the physically challenged are usually considered a burden** in many households but this will ensure that they are not a liability but an asset and their position in the family will improve.

5.15 Mullaperiyar Dam Issue

DRAWING LINES Kerala, Karnataka & Andhra Pradesh have started building check dams on rivers which they share with TN



TN VS ANDHRA PRADESH
Check dams across river Palar

- > Twenty-three check dams have been constructed between 1990 and 2005 across Palar river in Andhra Pradesh
- > A new check dam has been built across Palar near Giggaganipenta in Chittoor district

HOW WILL IT AFFECT TN?

- > The Andhra Pradesh govt has raised heights of at least six check dams over the last one year to double their water storage level
- > TN contends that Andhra is aggressively raising the heights of its check dams to curtail water flow into Tamil Nadu


TN VS KARNATAKA
Dam at Mekadatu across Cauvery

- > Karnataka wants to build a reservoir across river Cauvery near Mekadatu in Kanakapura taluk
- > State claims the dam will meet the drinking needs of Bengaluru besides generating 400MW power

HOW WILL IT AFFECT TN?

- > TN govt, farmers, opposition parties and Tamil outfits have opposed the project
- > They say the dam would reduce flow of water from Cauvery to TN, hitting hard the livelihood of farmers in delta districts
- > But Karnataka says it would only tap surplus water and not draw from Tamil Nadu's share

FOR A RAINY DAY: A recently raised check dam on river Palar in Andhra Pradesh



TN VS KERALA
Check dams across river Bhavani

- > Kerala plans to construct six check dams across interstate river Bhavani
- > Two have been completed – one at Thekkuvattai, near Attapady in Palakkad district, 30km from Coimbatore border and other at Manjakandi
- > Kerala says check dams will utilise 6 TMC water awarded from the Bhavani basin by the Cauvery Tribunal 10 years ago; the Supreme Court had ratified the verdict

HOW WILL IT AFFECT TN?

- > Farmers in Coimbatore, Erode and Tirupur fear the water flow would go down in Bhavani flowing into TN once the check dams are built on the Kerala side

Recently, the Supreme Court has said that the **Tamil Nadu Chief Secretary shall be responsible and appropriate action will be taken** on failure to give information on the rule



curve for Mullaperiyar dam to the Supreme Court-appointed Supervisory Committee.

- In November 1979, a tripartite meeting decided that **water level had to be brought down from the full reservoir level of 152 ft to 136 ft**, in order to enable Tamil Nadu carry out dam strengthening works.
- Tamil Nadu had started demanding restoration of the **water level in the Mullaperiyar** as it had completed the task assigned to it.
- The Supreme Court was approached when **no consensus was reached** through negotiations.
- The **Supervisory Committee** has been directed to issue directions or take steps to address the three core safety issues:
 - The monitoring and performance of the instrumentation of the dam;
 - Finalising the rule curve; and
 - Fixing the gate operating schedule

Rule Curve in Dams

- Rule curve in a dam **decides the fluctuating storage levels** in a reservoir.
- The **gate opening schedule** of a dam is based on the rule curve.
- It is part of the “**core safety**” mechanism in a dam.

Mullaperiyar Dam

- It is a **126-year-old dam** perched high up in the **Western Ghats**, adjacent to Kerala's famed **Periyar wildlife sanctuary**.
- It is located in the **Idukki district of Kerala**, is **operated and maintained by Tamil Nadu** for meeting the drinking water and irrigation requirements of five of its southern districts.
- It is a **masonry gravity dam** on the **Periyar River**.
- It was **constructed between 1887 and 1895** by the British Government to divert water eastwards to the Madras Presidency area (present-day Tamil Nadu).

Why Decommissioning of Mullaperiyar Dam is opposed?

- It is strongly opposed by Tamil Nadu state, which inherited a **lease agreement**



between the former princely state of Travancore (now Kerala) and the British government.

- The lease allows Tamil Nadu to **operate the dam and divert 640 million cubic metres of water annually** for irrigation and power generation.

5.16 Development of Nomadic Tribes

Recently, the Minister of State for Social Justice and Empowerment has informed the parliament regarding the **development of De-notified, Nomadic and Semi-Nomadic Communities**.

- The **National Commission for De-notified, Nomadic and Semi-Nomadic Tribes** was constituted in 2015 under the chairmanship of **Bhiku Ramji Idate**.
- It was entrusted with the **task of identifying and enlisting these communities** State-wise, assessing the status of their development and recommending appropriate strategies for their economic upliftment.
- According to the Idate Commission report, **Haryana and Uttar Pradesh have the largest number of DNT and NT** communities respectively.
- The government set up a **Development and Welfare Board under the Societies Registration Act, 1860** under the aegis of the Ministry of Social Justice and Empowerment for implementing development and welfare programmes for the DNT.

Who are Denotified, Nomadic and Semi-Nomadic Communities (DNCs)?

- The DNTs are a **heterogeneous group** engaged in various occupations such as **transport, key-making, salt trading, entertaining etc.**
- The term '**De-notified Tribes**' stands for all those communities which were once notified under the **Criminal Tribes Acts**, enforced by the British Raj between **1871 and 1947**.
- The acts were repealed by the **Independent Indian Government in 1952**, and these communities were "**De-Notified**".
- The terms such as nomads and semi-nomads are applied to '**social groups who undertook a fairly frequent, usually seasonal physical movement** as part of their



livelihood strategy.

- The Nomadic tribes maintain **constant geographical mobility** while semi-nomads are those who are on the move but **return to a fixed habitations once a year**, mainly for occupational reasons.

Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities (DWBDNCs)

- It has been constituted in 2019 for a period of **three years extendable up to 5 years** with following terms of reference:
 - To formulate and Implement Welfare and Development programme as required, for De-notified, Nomadic and Semi-Nomadic Communities.
 - To identify the locations/areas where these communities are densely populated.
 - To assess and identify gaps in accessing existing programmes and entitlements and to collaborate with Ministries/Implementing agencies to ensure that ongoing programmes meet the special requirements of De-notified Nomadic and Semi-Nomadic Communities.
 - To monitor and evaluate the progress of the schemes of Government of India and the States/UTs with reference to De-notified Nomadic and Semi-Nomadic Communities.
 - Any other related work as may be assigned by the Ministry of Social Justice and Empowerment.

Schemes for Denotified Tribes (DNTs)

- **Dr. Ambedkar Pre-Matric and Post-Matric Scholarship for DNTs:** It is a Centrally Sponsored Scheme launched in 2014-15.
 - It is aimed at welfare of those DNT students who are not covered under SC, ST or OBC.
 - The income ceiling for eligibility is Rs. 2.00 lakh per annum.
- **Nanaji Deshmukh Scheme of Construction of Hostels for DNT Boys and Girls:** It is a Centrally Sponsored Scheme launched in 2014-15.
 - It is implemented through State Governments/ UT Administrations/



Central Universities.

- Its aim is to provide hostel facilities to those DNT students who are not covered under SC, ST or OBC and to enable them to pursue higher education.
- The income ceiling for eligibility is Rs. 2.00 lakh per annum.
- The scheme “**Assistance to Voluntary Organization working for the Welfare of Other Backward Classes (OBCs)**” has been extended for DNTs and EBCs.
 - It is a **Central Sector Scheme** aimed at of Assistance for Skill Development of Backward Classes (OBCs)/ De-notified, Nomadic and Semi-Nomadic Tribes (DNTs)/ Economic Backward Classes (EBCs).

5.17 GRAM UJALA Programme

Recently, the Ministry of Power has launched the **GRAM UJALA programme** in Arrah, Bihar.

Need of GRAM UJALA Programme

- The rural population of India is **still unable to afford discounted LEDs**.
- The programme will have a significant impact on **India’s climate change action**.
 - If all 300 million lights in India were replaced, the **total energy savings would be 40,743 million kWh/year**, avoided peak demand of 22,743MW/year and CO2 reductions of 37 million tons per year.
- It will not only give a **fillip to our fight against climate change** by increasing energy efficiency, but also usher in a **better standard of life, financial savings, and better safety** for the citizens in rural areas.

GRAM UJALA Programme

- It is a **customized program for rural India**, based uniquely and innovatively on **carbon finance**.
- Under the programme, the **LEDs will be available for only Rs 10 each for each household**, in exchange for **working condition old incandescent lamps**.
 - Under the programme, **7 watt and 12-Watt LED bulbs with 3 years**



warranty will be given to rural consumers against submission of working Incandescent bulbs.

- It will be implemented in **villages of the 5 districts only** and consumers can exchange a **maximum of 5 LED bulbs**.
- Under the GRAM UJALA programme, **CESL will distribute high quality LED bulbs**, at an affordable cost of 10 rupees per bulb in rural areas.
 - The Convergence Energy Services Limited (CESL) is a **wholly owned subsidiary of Energy Efficiency Services Limited (EESL)**, a PSU under Ministry of Power.
- In the first phase of this programme, **15 million (1.5 crore) LED bulbs will be distributed** across villages of **Aarah (Bihar), Varanasi (Uttar Pradesh), Vijaywada (Andhra Pradesh), Nagpur (Maharashtra)**, and village in western Gujarat.

Significance of GRAM UJALA Programme

- Under the programme, the **carbon credit documentation will be sent to UN accredited validators** for inclusion into the **Shine Program of activities**.
- It will provide **clean energy access** and make a significant contribution towards **mitigating climate change** and achieving a sustainable future.
- It will have a significant impact on India's climate change action **energy savings of 2025 million KWh/year** and **CO2 reductions of 1.65 million T CO2/year**.
- It will enable **better illumination**, at an affordable price of INR 10/bulb.
- It will usher in a **better standard of life, financial savings, more economic activity, better safety for rural citizens** and help in achieving a sustainable future.

5.18 Lokayukta

Recently, the Bihar state assembly has passed the **Lokayukta (Amendment) Bill, 2021**.

Key Highlights

- It proposes to punish people **filing false cases before the anti-corruption ombudsman body** to prevent any waste of time or misuse of the institution.



- The bill proposes that a **case against a person filing a false case** can be filed in the district court.
- If the person is found guilty of it or for giving false testimony or filed wrong affidavit, he/she will be **sentenced to a jail term of upto three years besides a provision for fine.**

Who is Lokayukta?

- The **Lokpal and Lokayuktas Act (2013)** seek to establish the institution of the **Lokpal at the Centre and the Lokayukta at the level of the State.**
- It must be noted here that the **institution of Lokayukta** was established **first in Maharashtra** in 1971.

Structural Variations

- The structure of the Lokayukta is **not same** in all the states.
- The states like Rajasthan, Karnataka, Andhra Pradesh and Maharashtra have created the **Lokayukta as well as Upalokayuktas** whereas some states have created only Lokayuktas.

Appointment of Lokayukta

- The Lokayukta and Upalokayuktas are **appointed by the governor** of the state.
- The governor in most of the states consults the **chief justice of the state high court** and the **Leader of Opposition** in the state legislative assembly while appointing Lokayuktas.

Tenure of Lokayuktas

- In most of the states, the term of office fixed for **Lokayukta is of 5 years duration or 65 years of age**, whichever is earlier.
- He is **not eligible for reappointment** for a second term.

Jurisdiction of Lokayukta

- There is **no uniformity regarding the jurisdiction of Lokayukta** in all the states.
- The **chief minister is included within the jurisdiction of Lokayukta** in the states of Himachal Pradesh, Andhra Pradesh, Madhya Pradesh and Gujarat, while he

is excluded from the purview of Lokayukta in the states of Maharashtra, Uttar Pradesh, Rajasthan, Bihar and Orissa.

- The **ministers and higher civil servants** are included in the purview of Lokayukta in almost all the states.
- The **authorities of the local bodies, corporations, companies and societies** are included in the jurisdiction of the Lokayukta in most of the states.

5.19 Jal Shakti Abhiyaan-Catch the Rain (JSA-CTR)

Recently, the Ministry of Jal Shakti has announced a campaign called ‘**Jal Shakti Abhiyaan-Catch the Rain (JSA-CTR)**’.

- The campaign “**Catch the Rain**” with the tag line “**Catch the rain, where it falls, when it falls**” was launched in 2020 to nudge the states and all stakeholders to create **Rain Water Harvesting Structures (RWHS)**.
- A massive awareness drive was launched in 2020 in collaboration with the “**Nehru Yuva Kendra Sangathan**” (NYKS) as a preparatory step for the 2021 Jal Shakti Abhiyaan-Catch the Rain campaign.

Catch the Rain Campaign

- It is a **nationwide campaign** of the Ministry of Jal Shakti under **National Water Mission**.
- Its focus will be on **saving and conserving rainwater** with the theme “**Catch the rain, where it falls, when it falls**”.
- It would **cover both urban and rural areas of all the districts** in the country during the pre-monsoon and monsoon periods of 2021.
- The **activities involved** during the campaign are:
 - Drives to make check dams, water harvesting pits, rooftop RWHS etc.;
 - Removal of encroachments and de-silting of tanks to increase their storage capacity;
 - Removal of obstructions in the channels which bring water to them from the catchment areas etc.; and
 - Repairs to step-wells and using defunct bore-wells and unused wells to



put water back to aquifers etc.

5.20 Mines and Minerals (Development and Regulation) Amendment Bill, 2021

Recently, the Lok Sabha has passed a Bill to amend the **Mines and Mineral (Development and Regulation) Act (MMDR Act)** through a voice vote.

- India produces **95 minerals and has same potential like South Africa and Australia** but the mining sector was **under-explored** and India still had to import minerals like gold and coal.
- The operators are **currently only allowed to use coal and minerals extracted** from captive mines for their own industrial use.

Key Changes under MMDR (Amendment) Bill 2021

- It **removes the distinction between captive and non-captive mines** and seeks to introduce an index-based mechanism by developing a **National Mineral Index (NMI)** for statutory payments.
- The **National Mineral Exploration Trust (NMET)** which is entrusted with responsibility of looking after the functioning of the mining sector will be made an **autonomous body**.
- **Sale of minerals by captive mines:** It proposes to allow captive miners of both coal and other minerals to sell up to 50 per cent of their production after meeting the requirements of the end-use plant and on paying additional royalty to the state government.
- It proposes to **fix additional royalty payments to states** for the extension of mining leases for central public sector enterprises.
- **Auction by the central government in certain cases:** It proposes to empower the central government to conduct auctions or re-auction processes for the grant of a mining lease if a state government fails to complete the auction process.
- **Conditions for lapse of mining lease:** The Act provides that a mining lease will lapse if the lessee:
 - is not able to start mining operations within two years of the grant of a lease, or

- has discontinued mining operations for a period of two years.
- The Bill adds that the threshold period for lapse of the lease may be extended by the state government only once and up to one year.

Significance of MMDR (Amendment) Bill 2021

- The government has highlighted that the amendments will **create jobs and allows private players with enhanced technology** into the mining sector.
- The mining sector right now contributes 1.75% to the country's GDP but the **proposed reforms will raise the contribution to 2.5%**.
- It aims to **streamline the renewal of the auction process** for minerals and coal mining rights.
 - The increased flexibility would **allow miners to maximise output from captive mines** as they would be able to sell output in excess of their own requirements.
- The empowerment of central government to conduct auctions would likely **lead to greater transparency in the auction process** as there is a perception that state governments may in some cases prefer some bidders.

5.21 Mission Gramodaya

Recently, the Union Agriculture Minister and Chief Minister of **Madhya Pradesh** have launched **Mission Gramodaya** in the state.

- The **Pradhan Mantri Awas Yojana** is being effectively implemented in Madhya Pradesh with houses are being rapidly constructed for the homeless.
- The facilities including **insurance amount, relief amount, Samman Nidhi** and other facilities will be provided to the farmers of the state.

About Mission Gramodaya

- Under the Gramodaya mission, the **basic and fundamental infrastructure** will be expanded alongwith **housing facilities** in rural areas.
- It has been started in the **entire state of Madhya Pradesh**.
- Under this mission, every village will have **concrete roads, gram panchayat**



building, Muktidham and sports grounds in every gram panchayat.

- Under the mission, **water will be supplied through taps in every house in every village** and arrangements are being made to supply tap water to 26 lakh houses this year.
- The self-help groups in Mission Gramodaya will be **empowered financially** with loans at 2% interests.
 - The self-help groups are being entrusted with the **task of making school uniforms and nutritious food** for anganwadis.
- Under the mission, an **advanced school with state-of-the-art facilities** will be built in every 20 to 25 km radius in the state.

5.22 SAAMAR Campaign

Recently, the **Jharkhand government** has announced the launch of **SAAMAR campaign**.

The **Comprehensive National Nutrition Survey** conducted in the state during March 2017 to July 2017 has stated that:

- 36% of under five years of age are **stunted—height for age**,
- 29% are affected from **wasting—weight for height**, and
- 45% are **underweight—weight for age**, indicating the status of undernutrition.
- The **National Family Health Survey-4** data states that every second child in the state is stunted and underweight.
 - It also states that every third child is affected by stunting and **every 10th child is affected from severe wasting** and around 70% children are anemic.

SAAMAR Campaign

- SAAMAR stands for **Strategic Action for Alleviation of Malnutrition and Anemia Reduction**.
 - The campaign is aimed to **tackle malnutrition** in the state.
- It aims to **identify anemic women and malnourished children** and converge



various departments to effectively deal with the problem in a state where malnutrition has been a major problem.

- It has been launched with a **1000 days target, under which annual surveys will be conducted** to track the progress.
- It talks of convergence between **Rural Development Department** and **Food and Civil Supplies** and engagement with **school management committees, gram sabhas** among others and making them aware of nutritional behaviour.
- It will capitalize on the **Tejaswini Project functioning in the 17 districts** of the state where 12, 800 youth communities are being trained in various skills, entrepreneurship and for jobs.
- It will **start with every panchayat** which will be treated as a unit and there will be 8-10 parameters to tackle the nutritional issue.
- **Nutrition Sabhas will be conducted and the Mukhiyas will work** along with every village's Anganwadi Sevika, Sahayika, Poshan Sakhi, School Management Committee President, and Jal Sahiya among others.
- A **social audit will be conducted** after which a panchayat will be given the tag of Malnutrition Free Panchayat.

5.23 Right to Counsel in Custody

Recently, the **National Investigation Agency (NIA)** told a special court in Mumbai that the arrested assistant police inspector Sachin Waze was insisting on his **lawyer being present during interrogation.**

Rights of an accused related to access to lawyer

- The **International Covenant on Civil and Political Rights** affirms the right of an accused to be informed of the reasons for an arrest, the charges against him and the right to be provided legal assistance.
- The **“Miranda rights” or “Miranda warning”** require a police officer to inform a suspect being arrested that he has the right to talk to a lawyer for advice before being questioned, and the right to have a lawyer with him during questioning.
- In India, the safeguards available to a person in such circumstances are **enshrined**



in the Constitution.

- **Article 20 (3)** states that no person accused of any offence shall be compelled to be a witness against himself.
- **Article 22** states that a person cannot be denied the right to consult and to be defended by a legal practitioner of his choice.
 - It includes provisions that grant an accused the “**right to consult**” a lawyer.
- The section **41D of the Criminal Procedure Code (CrPC)** states that an accused is entitled to “meet an advocate of his choice during interrogation, though not throughout interrogation”.

What does the law say on lawyers’ access during interrogation?

- Unlike in some countries, the **lawyers in India are not allowed** to be with an accused throughout their investigation.
- The courts also rely on the Supreme Court judgment in the **D K Basu case of 1997**, considered the guiding principles to be followed by investigating agencies in cases of arrest or detention.
 - The judgment states that “**an arrestee may be permitted to meet his lawyer during interrogation, though not throughout the interrogation**”.
- The Supreme Court stressed that the safeguards for accused, but also spoke of “**difficulties in detection of crimes**”, especially in cases of “hardcore criminals”.
 - It ruled that a **lawyer cannot be permitted to remain present** throughout the interrogation.

Police v/s Judicial custody

- Whenever a person is arrested by police or investigating agency and detained in custody and if the **investigation cannot be completed in 24 hours**, the person is mandated to be **produced before a magistrate court**.
- The **section 167 of CrPC** and subsequent provisions lay down procedures that may follow in various scenarios.

- The magistrate may further remand the **person to custody of police for a period not more than 15 days** as a whole.
- The police custody means that the **person is confined at a lock up or remains in the custody** of the officer.
- **After lapse of 15 days or the police custody period** granted by the magistrate, the person may be further **remanded to judicial custody**.
 - The judicial custody means that the **person is detained under the purview of the judicial magistrate** is lodged in central or state prison.
 - In judicial custody, the **person can apply for a bail as per the CrPC chapter 33** pertaining to the bails and bonds.
 - The **judicial custody can extend up to 60 or 90 days** as a whole, depending upon the maximum punishment prescribed for the offence.
- An undertrial person **cannot remain in judicial custody beyond half the time period** of prescribed maximum punishment.

Difference between Judicial and Police Custodies

- In police custody, the **investigating authority can interrogate a person** while in judicial custody, **officials need permission of the court for questioning**.
- In police custody, the **person has the right to legal counsel, right to be informed of the grounds** which the police have to ensure.
- In the judicial custody in jails, while the person under responsibility of the magistrate, the **Prison Manual comes into picture for routine conduct of the person**.

5.24 Borphukan

Recently, a controversy broke out when the Congress and the Asom Jatiya Parishad slammed PM Narendra Modi for referring to **Borphukan** as a freedom fighter.

- **Lachit Borphukan** was a general during the **17th Century** period of the **Ahom dynasty**.
- He is credited with **defeating the Mughals (Aurangzeb)** in the **Battle of Saraighat (1671)** on the **Brahmaputra**.



- It was one of the greatest achievements of the Ahom Kingdom and a sheer epitome of **tactical brilliance, perfect use of terrain, guerrilla warfare and intelligence gathering.**
- He is remembered as the **greatest military hero of Assam.**
- According to **Arup Kumar Dutta**, author of the book **The Ahoms**, Borphukan represents a time when the “**Assamese race was united and able to fight an alien, formidable force such as the Mughals**”.
- The **Tai-Ahom ethnic community**, seen as the **descendants of the Ahom dynasty** who reside in Upper Assam, represent Assamese sub-nationalism.

5.25 National Aquifer Mapping and Management program (NAQUIM)

Recently, the Minister of State for Jal Shakti has informed that out of nearly 33 lakh sq km geographical area of the country, a mappable area of around **25 lakh sq km has been identified by the CGWB** to be covered under **National Aquifer Mapping and Management program (NAQUIM).**

National Aquifer Mapping and Management program

- It was started as a part of the **Ground Water Management and Regulation scheme** to describe and characterize the aquifers to develop plans for ground water management.
- The plans related aquifer maps and management are being regularly shared with State Governments through the **State Ground Water Coordination Committees** which is being chaired by the concerned Principal Secretaries of the respective States.
- The **Central Ground Water Board (CGWB)** is the implementing agency of the NAQUIM.
- The **CGWB is responsible for organizing Public Interaction Programme (PIP) regularly** in order to facilitate participation at grassroots levels for the discussion related to aquifer maps and management plans,
- The **vision** of the programme is to:
 - Identify and map aquifers at the micro level;
 - Quantify the available groundwater resources; and



- Propose plans appropriate to the scale of demand and aquifer characteristics, and institutional arrangements for participatory management.
- Aquifer mapping is a process wherein a **combination of geologic, geophysical, hydrologic and chemical field and laboratory analyses are applied** to characterize the quantity, quality and sustainability of ground water in aquifers.

Central Ground Water Board (CGWB)

- It is a subordinate office of the **Ministry of Jal Shakti**.
- It is the **National Apex Agency** entrusted with the responsibilities of providing **scientific inputs for management, exploration, monitoring, assessment, augmentation and regulation** of ground water resources of the country.
- It was established in 1970 by renaming the **Exploratory Tube wells Organization under the Ministry of Agriculture** and it was merged with the Ground Water Wing of the Geological Survey of India during 1972.
- It is a **multi-disciplinary scientific organization** consisting of Hydro-geologists, Geophysicists, Chemists, Hydrologists, Hydro-meteorologists and Engineers.

5.26 Election Commission's new rules for polling agents

Recently, the Election Commission's decision to **change the rules for appointing polling agents** has sparked off a debate in West Bengal.

Who is a polling agent?

- A polling agent is a person **appointed as a representative of a political party** as it is not possible for a candidate to be physically present at every polling booth on the day of the elections.
- The Election Commission allows a **candidate to appoint a polling agent who keeps an eye on the voting process**.

New Rules for Polling Agent

- The new regulation says that a **political party can now nominate a polling agent**



for any booth within the assembly segment he/she is a voter from.

- Previously, the polling agent **had to be a voter of the booth or an adjoining booth** that he/she is working at.
- The ECI has defended the change in rule saying that the **new norms have been formulated so that every political party gets to appoint polling agents** as it is difficult to convince people to sit at the booths amid the Covid-19 pandemic.

Role of Polling Agent

- As per the Election Commission's rules, a polling agent should be **familiar with the rules and procedures to conduct elections using EVMs and VVPATs**, and with the working of these machines.
- A polling agent attends the **demonstrations arranged by the Returning Officer**, where the functioning and operation of these machines are explained.

Raja Sir's

SCIENCE AND TECHNOLOGY

6.1 ISRO puts Brazil's Amazonia-1, 18 other satellites into orbit

- The Indian Space Research Organisation (ISRO) recently successfully launched **Brazil's optical earth observation satellite, Amazonia-1, and 18 co-passenger satellites** — five from India and 13 from the U.S. — from the Satish Dhawan Space Centre at Sriharikota.
- The satellites were carried on board the **PSLV-C51, the 53rd flight of ISRO's launch vehicle** and the first dedicated mission of its commercial arm, NewSpace India Ltd.
- The mission was undertaken under a commercial arrangement with Spaceflight Inc., U.S.
- The PSLV-C51, equipped with two solid strap-on boosters, the third such launch of the PSLV-DL variant, lifted off from the first launch pad at Sriharikota.
- Of the 13 satellites from the U.S., **one is a technology demonstration satellite** and the remaining are for two-way communications and data relay.
- The satellites from India are the Satish Dhawan SAT (SDSAT) built by Space Kidz India, a nano-satellite intended to study the radiation levels, space weather and demonstrate long-range communication technologies; the UNITYsat, a combination



of three satellites for providing radio relay services; and another satellite belonging to the DRDO.

- The SDSAT has an engraving of Prime Minister Narendra Modi on the top panel to show **solidarity for the aatmanirbhar initiative and space privatisation**, SpaceKidz said.
- The Bhagavad Gita was also sent on board an SD card to give the scripture, which teaches oneness as the highest form of humanity, the highest honour.
- Roughly 16 minutes after lift-off, the PS-4 engine was cut-off and the Amazonia-1, weighing 637 kg, belonging to the Brazilian National Institute for Space Research (INPE), was separated a minute later.

NEW REFORMS

- The satellite will further **strengthen the existing structure** by providing remote sensing data to users for monitoring deforestation in the Amazon region, according to ISRO.
- The Amazonia-1 was injected into its precise orbit of 758 km in a sun-synchronous polar orbit.
- Thereafter the other 18 customer satellites were placed into their intended orbits. The entire operation took about 1 hour and 55 minutes to completion.
- “This particular mission is special because **these five Indian satellites are coming under the new space reform** announced by the Government of India.
- ISRO has 14 missions planned this year, including the first unmanned mission around the end of the year.

6.2 CSIR lab helped develop key molecule for Covaxin

The Indian Institute of Chemical Technology (IICT), a Council for Scientific and Industrial Research (CSIR) lab here, **played a role in the development of Covaxin**, the indigenous vaccine developed by the city-based Bharat Biotech International Limited.

- The vaccine is a highly purified, whole virion, inactivated SARS-Cov-2.
- The vaccine has been formulated with ‘**Algel-IMDG**’, which contains chemically absorbed TLR7/8 as an agonist or an adjuvant onto aluminium hydroxide gel to



generate the requisite type of immune responses without damaging the body.

- The firm had approached the IICT to **develop the synthetic route for the adjuvant molecule TLR 7/8** with indigenous chemicals at an affordable price and with highest purity.
- This indigenously developed molecule aided Bharat Biotech to scale up the production of the adjuvant.

SWIFT PROCESS

- Senior scientists completed the chemical process in a record four months for the **development of analytical method for testing TLR7/8 adjuvant molecule** and also got the method validation procedures through National Accreditation Board for Testing and Calibration Laboratories (NABL) accredited lab.
- The process technology developed by CSIR-IICT for the molecule is playing an important role in the **production of adjuvant for COVAXIN**.
- CSIR-IICT team rose to the occasion in making the **process affordable and enabling development of the molecule** in record time.
- This is another instance of the CSIR's commitment towards '**Atmanirbhar Bharat**' or **self-reliant India**.
- CSIR labs, apart from helping the pharma industry launch repurposed drugs through process development and conducting clinical trials, have extensively contributed towards launching of **diagnostic kits including 'Feluda' and dry swab direct RT-PCR method** for the screening of SARS-CoV-2.

6.3 Chinese cyber attack foiled: Power Ministry

- "State-sponsored" **Chinese hacker groups targeted various Indian power centres**, the Union Power Ministry said recently, but added that these groups have been thwarted after government cyber agencies warned it about their activities.
- While the government refused to confirm or deny The New York Times report, based on a **U.S. cybersecurity firm's claim that the Mumbai power outage in October 2020 was part of a coordinated cyberattack by China**, it said it has suffered "no data breach".


GOI STATEMENT:

- There is **no impact on any of the functionalities** carried out by the Power Sector Operations Corporation (POSOCO) due to the referred threat.
- **No data breach/data loss has been detected** due to these incidents.
- There was no direct mention of the Mumbai power outage on October 12, 2020, that lasted several hours.
- **Prompt actions are being taken by the Chief Information Security Officers** at all these control centres under operation by POSOCO for any incident/advisory received from various agencies.

CERT-in:

- U.S. company Recorded Future's report blames Chinese group "Red Echo" for the Mumbai outage.
- Ministry of Electronics and Information Technology's (MeitY's) **Cyber Emergency Response Team (India) (CERT-in)** alerted about the threat from malware called "ShadowPad" in November 2020.
- **NTRO's National Critical Information Infrastructure Protection Centre (NCIIPC)** in February 2021 had alerted of the threats, weeks before the Recorded Future report was released.
- NCIIPC informed [Power Ministry] through a mail dated 12th February, 2021 about the threat by Red Echo through a malware called Shadow Pad.
- It stated that Chinese state-sponsored threat Actor group known as Red Echo is targeting Indian Power sector's Regional Load Dispatch Centres (RLDCs) along with State Load Dispatch Centres (SLDCs).

SAFEGUARD MECHANISM:

- The Indian Computer Emergency Response Team (**CERT-In**) is an office within the Ministry of Electronics and Information Technology of the Government of India. It is the **nodal agency to deal with cyber security threats like hacking and phishing**. It strengthens security-related defence of the Indian Internet domain.
- **National Critical Information Infrastructure Protection Centre (NCIIPC)** is an organisation of the Government of India created under Sec 70A [1] of the



Information Technology Act, 2000 (amended 2008),[2] through a gazette notification on 16 January 2014. Based in New Delhi, India, it is designated as the National Nodal Agency in respect of Critical Information Infrastructure Protection. **It is a unit of the National Technical Research Organisation (NTRO).**

ACTION TAKEN:

1. The Ministry listed actions it took as a result of the warnings that have ensured that **there is no “communication and data transfers”** taking place to the Internet Protocol addresses(IPs) mentioned as dangerous by NCIIPC.
2. All IPs and domains listed in NCIIPC mail have been blocked in the firewall at all control centres.
3. **Log of firewall is being monitored** for any connection attempt towards the listed IPs and domains.
4. Additionally, all systems in control centres were scanned and cleaned by antivirus.

6.4 Interconnected sectors raise need for robust cyber defence strategy

- Even as contradictory claims emerge from the Centre and the Maharashtra government over the **involvement of Chinese actors in the Mumbai power outage of October last year**, the allegations have put focus on the **need for India to be better prepared to protect its critical infrastructure** against globally rising cyber-attack attempts on key infrastructure.
- Cybersecurity experts pointed out that this is particularly significant given the **increasing interconnectedness of sectors and proliferation of entry points into the internet**, which could further grow with the adaption of 5G.

NATIONAL CYBER SECURITY STRATEGY:

- A National Cyber Security Strategy is being formulated by the **Office of National Cyber Security Coordinator** at the National Security Council Secretariat.
- A strategy document prepared by an inter-ministerial task force involving representatives from different central government ministries and departments has now been forwarded to an **Empowered Technology Group for consultation**.
- Once the process is through, the document will be placed before the Cabinet



Committee on Security for deliberations and approval.

- Hackers targeting critical infrastructure is not a new trend but experts believe that **propensity for damage is more than ever**, especially with countries investing in cyber offensive capabilities.
- In 2015, in what was the first known successful cyber attack on a power grid, **hackers compromised systems of three energy distribution companies in Ukraine** thereby disrupting electricity supply.

LOW LEVEL OF PREPAREDNESS:

- Critical infrastructure is getting digitised in a very fast way — this includes financial services, banks, power, manufacturing, nuclear power plants, etc. Because of these a lot of security issues arise.
- The SolarWinds hack impacted national critical infrastructure in the US.
- Most countries are **not prepared for combating the sophistication of attacks** that are happening.
- A lot of countries have started taking advantage of this. They're spending unprecedented amount of money and are building armies.
- **Israel is a good example**, they say that there is a fourth unit in the defence system, which is for defence and offence.
- Most countries though are not prepared, **India not being an exception** but there is a need for **high level of preparedness** because an attack can have a great impact on the economy, safety, etc.
- For the Mumbai incident, while the **Centre has denied that the outage was a result of cyber attack** by Chinese group Red Echo, the Maharashtra government — citing an analysis of Maharashtra Cyber Police's report by Maharashtra State Electricity Board's (MSEB) Supervisory Control and Data Acquisition system — said "**there is some evidence to point at probable cyber sabotage on MSEB servers**".
- In addition to the Mumbai incident, Chinese actors are also said to be involved in the **attack on IT systems of vaccine makers Serum Institute of India and Bharat Biotech**.

NEED FOR AN UPDATED CYBERSECURITY POLICY:



- There were **6.97 lakh cyber security incidents** reported in the first eight months of 2020, nearly equivalent to the previous four years combined, according to information reported to and tracked by Indian Computer Emergency Response Team (CERT-In), suggesting a surge in cyber incidents.
- The surge in number is perceptible since 2018 – 2.08 lakh reported incidents – and 3.94 incidents reported in 2019. In 2017, the number was 53,117 and 50,362 in 2016.
- Consequently, there is also a need for an **updated cybersecurity policy in the country**, which the Ministry of Electronics & Information Technology is expected to come out with soon.
- The current cybersecurity framework put out by the government dates back to 2013.
- It is important for the corporates or the respective government departments to find the gaps in their organisations and address those gaps with the **help of next generation security solutions**.
- It is essential that there is a **layered security system**, wherein security threat intelligence sharing is happening between different layers.

6.5 14 Trojans found in servers, says Minister

- Recently, Maharashtra Home Minister submitted a report prepared by the State's **cyber cell on a possible cyberattack that caused the October 12 power outage** in Mumbai and parts of Mumbai Metropolitan Region (MMR),
- Power Minister of Maharashtra recently said the **report found 14 Trojan programs** that had entered the Maharashtra State Electricity Transmission Company (MahaTransco) servers.

WHAT IS A TROJAN VIRUS?

- A Trojan horse or Trojan is a **type of malware that is often disguised** as legitimate software. Trojans can be employed by cyber-thieves and hackers trying to gain access to users' systems.
- Users are typically tricked by **some form of social engineering** into loading and executing Trojans on their systems.
- Unlike computer viruses and worms, **Trojans are not able to self-replicate**.



- Once activated, Trojans can **enable cyber-criminals to spy on you**, steal your sensitive data, and gain backdoor access to your system. These actions can include:
 - Deleting data
 - Blocking data
 - Modifying data
 - Copying data
 - Disrupting the performance of computers or computer networks

REPORT:

- According to observations in the report, the **firewalls of the information technology [IT] and operational technology[OT]** servers, which are essential for power transmission, were affected by these Trojan horses.
- **Suspicious codes and software programs** that can affect the cybersecurity ecosystem at the State Load Dispatch Center [SLDC] at Kalva had found its way into the system.
- Similar **Trojan programs were part of bigger cyberattacks** in the past.
- Three alarms were sounded in a span of less than a minute, but were not given attention to show the **possibility of a cyberattack**.
- Repeated attempts were made from **blacklisted and suspicious IP addresses** to log in to the SLDC server, and to hack and disrupt the system.
- Credit rating agencies have **certified these IP addresses as suspicious and disruptive**. An attempt was made to either **insert or remove around 8 GB of data** from the server using the IP addresses.
- The report recommended a **separation of the IT and OT infrastructure** and an updation, password management, enhancement of the web application security and a strengthening of the cyber system of the SLDC.
- In addition to the probe conducted by the State cyber cell, a **technical committee**, which included experts from IIT-Bombay, VNIT- Nagpur, VJTI-Mumbai and senior officials from the Power Department, was formed.



6.6 Will handle national security projects: ISRO

- The Indian Space Research Organisation (ISRO) has said it will be in **charge of projects linked to “national security and advanced technology”**, such as the forthcoming **Chandrayaan-2 missions and the Gaganyaan mission** that plans to send Indian cosmonauts into space.
- However, the bulk of commercial activities would increasingly be handled by the newly formed New Space India Ltd (NSIL).

NEWSPACE INDIA LIMITED:

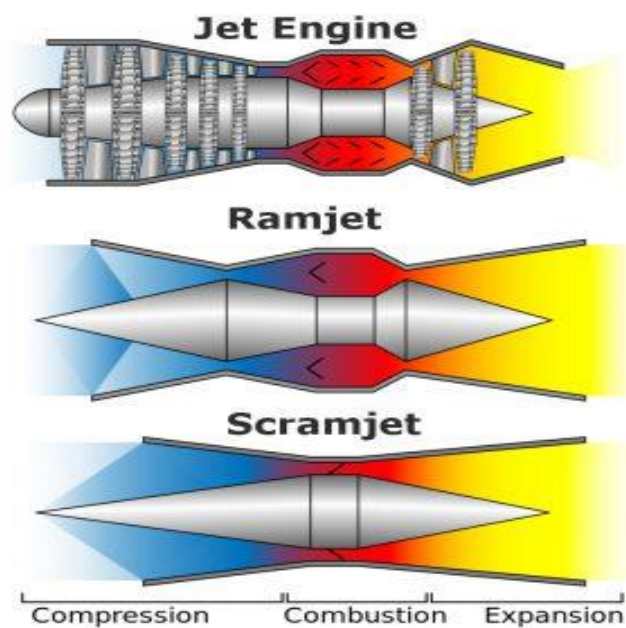
- NewSpace India Limited (NSIL) is a Public Sector Enterprise (PSE) of Government of India and commercial arm of Indian Space Research Organisation (ISRO).
- It was established on 6 March 2019 under the administrative control of Department of Space (DoS) and the Company Act 2013.
- The main objective of NSIL is to **scale up industry participation** in Indian space programmes.
- The NSIL recently coordinated the launch of the Amazonia satellite by Brazil on February 28, its first fully commercial mission that also saw 18 other satellites being launched.
- The NSIL was incorporated in March 2019 and in June 2020, its scope was “enhanced”.
- Its mandate, according to a standing committee report on space laid in the Rajya Sabha on Monday, **includes owning satellites for earth observation and communication applications.**

OBJECTIVES:

- **Transfer of Small Satellite technology to industry:** NSIL will obtain license from DoS/ISRO and sub-license the same to industry.
- **Manufacture of Small Satellite Launch Vehicle (SSLV)** in collaboration with private sector
- **Production of Polar Satellite Launch Vehicle (PSLV)** through Indian industry
- **Production and marketing of Space based products and services**, including launch and application.

- **Transfer of technology** developed by ISRO Centres and constituent units of DoS
- **Marketing of spin-off technologies and products/services**, both in India and abroad.

6.7 Solid Fuel Ducted Ramjet Technology



The **Defence Research and Development Organisation (DRDO)** has successfully conducted the test of the **Solid Fuel Ducted Ramjet (SFDR) technology**, which is crucial for the indigenous development of long range air-to-air missiles.

- **Solid Fuel Ducted Ramjet (SFDR) Technology:**
 - SFDR technology is a missile propulsion system based on the concept of **Ramjet Engine** principle.
 - The system utilises a **solid fuelled** air-breathing ramjet engine.
 - Unlike solid-propellant rockets, the Ramjet takes up oxygen from the atmosphere during flight. Thus, it is light in weight and can carry more fuel.
 - DRDO began developing SFDR first in 2017 and had conducted successful tests in 2018 and 2019 as well.



- **Significance:**

- Successful demonstration of SFDR technology will enable DRDO to **develop indigenous long range air-to-air missiles.**
- At present, such technology is available only with a **handful of countries in the world.**
- Air-to-air missiles which use SFDR technology can **achieve longer ranges** as they **do not require oxidisers** (take oxygen from the atmosphere).
- The missile based on SFDR **fly at supersonic speeds and high manoeuvrability ensures** the target aircraft cannot get away.

Defence Research and Development Organisation:

Cryogenic Engines	Scram jet Engines
No air intake is required in this engine	Air intake is required to operate this engine
Fuel needs to be stored at very low temperature	Fuel storage does not require low temp like cryogenic
It runs efficiently when low temperature fuel transforms and mixes correctly and ignites.	It runs efficiently at supersonic speed that forcefully compress air before combustion
India is the sixth nation apart from the US, Russia, France, Japan and China to possess cryogenic engine technology.	India is the fourth country apart from US, Russia and ESA to demonstrate the flight testing of a Scramjet Engine.
Its cost of payload is independent of oxidizer	Since oxidizer saves the cost, It can carry more payload

- Defence Research and Development Organisation (DRDO) works under the administrative control of the **Ministry of Defence, Government of India.**
- It is working to establish a world class science and technology base for India and provides Defence Services decisive edge by equipping them with internationally competitive systems and solutions.
- It was established in 1958 after combining **Technical Development Establishment (TDEs) of the Indian Army** and the **Directorate of**



Technical Development & Production (DTDP) with the Defence Science Organisation (DSO).

- It is responsible for carrying out **Integrated Guided Missile Development Programme (IGMDP)**.
- Some of the recent tests conducted by DRDO:
 - **Helina and Dhruvastra: Anti-tank Guided Missile**
 - **Smart Anti Airfield Weapon**
 - **Army Variant of MRSAM**
 - **Land-attack Version of BrahMos Missile**
 - **Quick Reaction Surface-to-Air Missile System**
 - **Enhanced Version of Pinaka Mk-1 Missile**
 - **NAG Missile: Anti Tank Guided Missile**

Ramjet

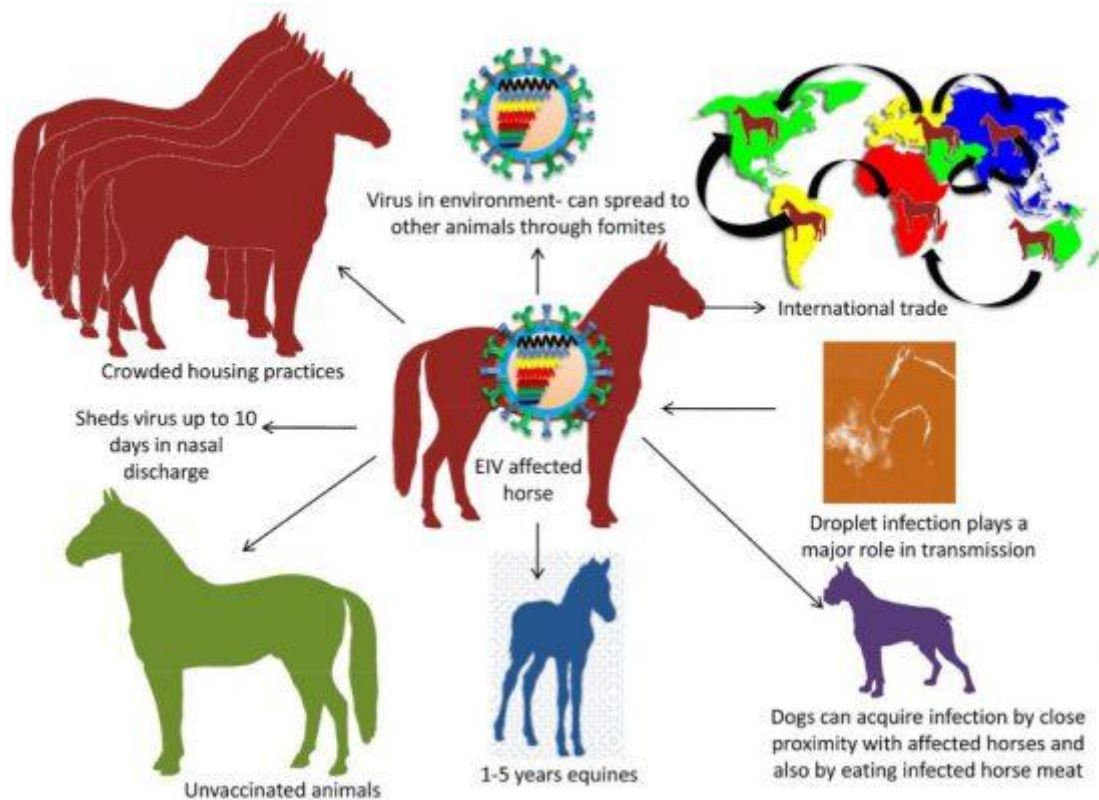
- A ramjet is a form of air-breathing jet engine that uses the vehicle's forward motion to compress incoming air for combustion without a rotating compressor.
- Ramjets work most efficiently at supersonic speeds but they are not efficient at hypersonic speeds.

Integrated Guided Missile Development Programme

- IGMDP was the brainchild of renowned scientist **Dr. APJ Abdul Kalam**.
- It was intended to **attain self-sufficiency** in the field of missile technology.
- After keeping in mind the requirements of various types of missiles by the defense forces, the program recognized the need to develop five missile systems.
- The IGMDP formally got the approval of Indian government on 26th July, 1983.
- The missiles developed under IGMDP are:
 - Short-range surface-to-surface ballistic missile – **Prithvi**
 - Intermediate-range surface-to-surface ballistic missile – **Agni**
 - Short-range low-level surface-to-air missile – **Trishul**

- Medium-range surface-to-air missile – **Akash**
- Third generation anti-tank missile – **Nag**

6.8 Equine Herpes Virus Outbreak in Europe



Recently, there has been an outbreak of **Equine Herpes Virus (EHV-1) among horses in Europe.**

- So far seven countries have confirmed EHV-1 cases: Spain, Belgium, France, Germany, Italy, Sweden and Qatar.
- **Equine Herpes Virus (EHV):**
 - Equine Herpes Virus is a common **DNA virus** that occurs in horse populations worldwide.
 - EHV is a family of viruses which are named by numbers such as **EHV 1, 2, 3, 4 and 5.**
 - There are more viruses in this family, but **EHV 1, 3, and 4 pose the most serious health risks for domestic horses.**

- **Health Risks:**

- **EHV1** can cause manifestations of disease in horses, including **respiratory disease, abortion and neonatal death.**
- This strain can also cause **neurological problems**, leading to **paralysis** and in some cases, **death.** Horses that contract this virus can develop a **lack of coordination, weakness, loss of appetite and are unable to stand.**

- **Spread of EHV-1 Virus:**

- It is **contagious** and spread by **direct horse-to-horse contact** via the respiratory tract through nasal secretions.
- This virus can **also be spread indirectly** through **contact with physical objects** that are contaminated with the virus.

- **Equine Herpesvirus Myeloencephalopathy (EHM)** is another name for the neurologic disease associated with Equine Herpes Virus (EHV) infections.

- **Precautions and Treatment:**



- As the infection has a high transmission rate, **keeping a diseased horse in isolation** is required.
- Treatments may include **anti-inflammatory drugs.**

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6.9 Most Distant Quasar P172+18

Recently, an international team of astronomers has discovered the most distant ‘**Radio-Loud**’ Quasar with the help of **European Southern Observatory’s Very Large Telescope (ESO’s VLT).**

- **Quasars:**

- Quasars are very **luminous objects** in faraway galaxies that **emit jets at radio frequencies.**
- The word quasar is short for “**quasi-stellar radio source**”.
 - The name, which means star-like emitters of radio waves, was given in the 1960s when quasars were first detected.

- The name is retained today, even though astronomers now know most quasars are faint radio emitters. In addition to radio waves and visible light, quasars also emit ultraviolet rays, infrared waves, X-rays, and gamma-rays.
- Most quasars are larger than our solar system. A quasar is **approximately 1 kiloparsec in width.**
- They are **only found in galaxies that have supermassive blackholes** which power these bright discs.
 - **Black hole** refers to a point in space where **matter is so compressed** as to create a **gravity field** from which **even light cannot escape.**
- Most **active galaxies have a supermassive black hole** at the centre which sucks in surrounding objects.
- Quasars are **formed by the energy emitted by materials swirling around a blackhole** right before being sucked into it.
- They are further categorised into the “**radio-loud**” and the “**radio-quiet**” classes.
 - **Radio-loud:**
 - They are with powerful jets that are **strong sources of radio-wavelength emission.**
 - These make up about **10%** of the overall quasar population.
 - **Radio-quiet :**
 - They are those quasars lacking powerful jets, with relatively **weaker radio emission** than the radio-loud population.
 - The majority of quasars (about 90%) are radio-quiet.
- **Recently Discovered Quasar/P172+18:**
 - Named P172+18, the quasar emitted wavelengths which had a **redshift** of 6.8.
 - It took **13 billion years** for the quasar’s light to reach earth.



- This particular quasar appears to the scientists as it was when the universe was just around **780 million years old**.
- The glowing disc around a blackhole is **300 million times more massive than our Sun**.
- It is also **one of the fastest accreting quasars**, which means it is accumulating objects from the galaxy at an enormous speed.
- Only **three other 'radio-loud' sources with redshift greater than six have been discovered** so far and the **most distant one had a redshift of 6.18**.
 - The **higher the redshift** of the radio wavelength, the **farther away is the source**.

- **Inference:**

- **Ka** The **blackhole at its centre is consuming from its galaxy** at a stunning rate.

- **Significance:**

- A detailed study of these 'radio-loud' super bright objects can lead astronomers to **understanding how the supermassive blackholes in their core grew to be as big** so rapidly since the Big Bang.
- It also **holds clues about the ancient star systems and astronomical bodies**.

- **About the ESO's VLT:**

- The **Very Large Telescope** used to observe the **P172+18** is located at Paranal Observatory in the **Atacama Desert**.
 - The four Unit Telescopes boast 8.2-meter (27 feet) mirrors.
 - Just one of these instruments **can spot objects that are 4 billion times fainter than what can be seen with the unaided eye**.
 - According to the **European Southern Observatory**, the **Very Large Telescope** is the **world's most advanced optical telescope**.

Redshift



- Gravitational redshift occurs as particles of light (photons) climb out of a gravitational well like a black hole and the light's wavelength gets drawn out. This shifts the wavelength to the red part of the light spectrum – hence “redshift”.
- In order to escape intense gravity, particles of light (photons) must expend energy.
- However, at the same time, these photons must travel at a constant speed – the speed of light.
- Therefore, the photons can't lose energy by slowing down but must expend it in another way.
- This lost energy manifests itself as a shift towards the red end of the light spectrum.

6.10 Novel Coronavirus and its Key Variants

Recently, the cases of infection with new variants of the coronavirus SARS-CoV-2 have been rising.

- The first detected respectively in the UK, South Africa and Brazil and they are defined as **variants of interest (VOIs)**.

SARS-CoV-2 VOI

- The World Health Organization (WHO) has given a **working definition for SARS-CoV-2** that it will be considered as a VOI if:
 - It is **phenotypically changed compared to a reference isolate**, or has a genome with mutations that lead to amino acid changes associated with phenotypic implications; and
 - It has been known to **cause community transmission/multiple Covid-19 cases** or has been detected in multiple countries.
 - The WHO has specified three types of phenotypic changes associated with a VOI:
 - **Increase in transmissibility or detrimental change** in Covid-19 epidemiology;
 - **Increase in virulence or change** in clinical disease presentation; and



- **Decrease in the effectiveness** of available vaccines and treatment.

First variant detected in UK

- It is known as **B.1.1.7 or VOC 202012/01**.
- In the B.1.1.7 variant are **multiple mutations** in the spike protein.
- One mutation, called **N501Y**, makes the variant more effective at **binding to the ACE2 receptor**
- The other significant spike protein mutations are **D614G, A570D, P681H, H69/V70 deletion, and Y144 deletion**.

Detection of UK Variant across the globe

- According to the WHO, **106 countries across all six WHO regions** have reported cases of this variant.
- The **community transmission** has been reported in at least **42 countries** across four regions.
- In India, **only 280 cases of infection with the UK strain** have been detected during genomic surveillance.

South African Variant

- It was **first detected in South Africa** October 2020.
- It is called **501Y.V2 or B1.351** (VOC202012/02 in the UK).
- It is defined by nine changes in the spike protein in comparison to the reference the **“Wuhan-1 D614G spike mutant”** that previously dominated in South Africa.
- It is considered **highly transmissible**.
- The concerns associated with it are that the spike mutations could lead to **antigenic changes** that are detrimental to monoclonal antibody therapies and vaccine protection.

Detection of South African Variant across the globe

- According to WHO, this variant has now been reported from **56 countries across all six WHO regions**.
- The **community transmission** has been reported in **eight countries** across three



regions, and transmission classification is currently incomplete for 42 countries reporting this variant.

- In India, **only 11 cases of this variant** have been detected during surveillance.

Variant from Brazil

- It is called **P.1**, a branch of the **B.1.1.28 lineage**.
- It was first reported by the **National Institute of Infectious Diseases in Japan** in four travellers from Brazil.
- According to the WHO, this variant is reported in **29 countries across all six regions**.
- The **community transmission** has been reported in **at least three countries** in one WHO region.
- In India, **only one case** of this variant have been detected during surveillance.

6.11 Mapping Genomes in the Indian Ocean

Recently, a team of researchers from the **National Institute of Oceanography (NIO)** and crew members will sail **10,000 nautical miles** in the Indian Ocean to map its genomes.

Indian Ocean Genome Mapping Project

- It is **first-of-its-kind** research project in India.
- It is a project of **National Institute of Oceanography (NIO)** in Panaji.
- The project has been undertaken at a **cost of Rs 25 crore** and will take three years to complete.
- The vessel **Sindhu Sadhana** will course the Indian Ocean from **India's east coast, to Australia, then towards Port Louis in Mauritius** and up to the **border of Pakistan**.

Objectives of Indian Ocean Genome Mapping Project

- The project is aimed at **gathering samples for genome mapping of microorganisms** in the Indian Ocean.



- The mapping of the **Deoxyribonucleic acid (DNA)** and **Ribonucleic acid (RNA)** will show the nutrients present in the bacteria, microbes found in the ocean.
- It is aimed at **understanding the biochemistry** and the response of the ocean to climate change, nutrient stress and increasing pollution.

Learning from Indian Ocean Genome Mapping Project

- The project will help scientists understand the **internal working of the ecosystem** of the Indian Ocean.
- The research will **enable scientists to identify the factors controlling the changes in RNA, DNA** in the oceans, and various stressors impacting them.
- The genome mapping will show the **presence of which the microbes have adapted to**, in addition to their reaction to atmospheric carbon dioxide.
- The ocean has several micronutrients like **nitrites, sulphates and silicates, minerals like iron ore and zinc**, and trace metals like cadmium or copper.
- The project will help in identifying which part of the ocean has a **greater concentration of which mineral or element**.
- The **large pool of RNA, DNA library of the oceans** will be utilised for using the Indian Ocean to human benefit in the future.
- It will enable an increase in the **growing number of commercial biotechnology applications**, extending from multiple anticancer treatments to cosmetics and industrial enzymes.
- It will result in **new insights into taxonomy and adaptive capacity** that can help optimize conservation efforts.

6.12 Mobile Integrated Network Terminal (MINT)

Recently, the Ministry of Defence has announced that it is in the process of procuring **Mobile Integrated Network Terminal (MINT)**.

Mobile Integrated Network Terminal (MINT)

- The **Indian Army** is in the process of procuring MINT systems under **Make II**



Category of Defence Acquisition Procedure (DAP) 2020.

- It is envisaged as a **lightweight, portable, state of art integrated communication solution** with satellite backhaul.
- It is equipped with a **wireless access system** to support voice, video and data.
- It creates a **dedicated high-speed 4G network bubble**, with on-request support for interoperability between LTE handsets and other existing tactical networks.
- It is capable of supporting all or at least one of **CDMA, GSM and TETRA connectivity** in the proposed defence band.
- It is meant for **use in the mountains and high altitude terrain** for seamless communication.

Need for Mobile Integrated Network Terminal (MINT)

- The **robust communication** support has always been a key enabler of combat potential of the field army.
- The advancements in communication technologies have **facilitated solutions which can be adapted and customised** as per operational requirements to give a distinctive winning edge.
- The MINT systems will **enhance the operational communication capability of the field army** in consonance to the self-reliance vision of “Aatmanirbhar Bharat” for Defence production.

6.13 Asteroid 2001 FO32

Recently, the scientists at the **National Aeronautics and Space Administration (NASA)** have informed that the **largest asteroid predicted to pass by Earth** in 2021 will be at its closest on March 21st.

2001 FO32

- It is a **near-Earth asteroid** will make its closest approach at a distance of about 1.25 million miles (2 million kilometers).
- It has been designated a **“potentially hazardous asteroid”**.
- The reason for the asteroid’s unusually speedy close approach is its **highly inclined**

and elongated (or eccentric) orbit around the Sun.

Astronomical Geology of 2001 FO32

- It was **discovered in March 2001** by the **Lincoln Near-Earth Asteroid Research (LINEAR) program** in Socorro, New Mexico.
- It appears to be **faint when observed in infrared wavelengths**, which suggests the object is likely less than 1 kilometer in diameter.

Significance of studying 2001 FO32

- It will provide an opportunity for astronomers to get a **more precise understanding of the asteroid's size and albedo**.
- The astronomers can measure the **chemical "fingerprints" of the minerals** on the surface of the asteroid by studying the spectrum of light reflecting off the surface.
- If 2001 FO32 is identified as iron-rich then it would mean it's **denser and therefore more massive than a stony asteroid** of a similar size.
- The observations **showing a surface with low albedo** (meaning that it's dark) may indicate the **asteroid contains a lot of carbon**, suggesting it could be the nucleus of a long-dead comet.

6.14 Diatom Test

Recently, the **Maharashtra Anti-Terrorist Squad (ATS)** has relied on a forensic test known as **diatom tests** for leads in the alleged murder case of Mansukh Hiran.

What is a Diatom Test?

- A number of tests have been developed to confirm the cause of such deaths (death by drowning) with the **diatom test emerging as one of the most important tests**.
- The test entails findings if there are **diatoms in the body being tested**.

What are Diatoms?

- Diatoms are **photosynthesizing algae** which are found in almost **every aquatic environment** including fresh and marine waters, soils and almost anywhere that is moist.
- They are **unicellular, photosynthetic, autotrophic organisms** that have a



characteristic structure frustules, comprising two thecas i.e. silica cell walls.

- The diatoms are subdivided into two major orders i.e. **Centrales and Pennales** depending on the **shape of the frustule**.
 - The **Centrales are radially symmetric** and the **Pennales have bilateral symmetry**.

Science behind Diatom Test

- A body recovered from a water body **does not necessarily imply** that the death was due to drowning.
- If the person is **alive when he enters the water**, the **diatoms will enter the lungs** when the person inhales water while drowning.
 - These diatoms then get carried to various parts of the body, including the **brain, kidneys, lungs and bone marrow by blood circulation**.
- If a person is **dead** when is thrown in the water, then there is **no circulation and there is no transport of diatom cells** to various organs.
- The Diatom analysis is considered positive only when the **number of diatoms recovered from the body is more than a minimal established limit**.
- The result of a diatom test will be different if a **person is thrown in the water after he is dead**.

Reliability of Diatom Test

- It is reliable unless and until the **deceased person has been drinking water from the same source** of water before his death.
- The diatom test need **not be done if classical signs of drowning** like froth at mouth and nostrils, cadaveric spasm, presence of water from drowning medium is seen in stomach and oedema of lungs are present.

6.15 Stop TB Partnership Board

Dr. Harsh Vardhan, Union Minister for Health and Family Welfare, has been **appointed Chairman of the Stop TB Partnership Board**.

- He will serve a **three year term, commencing July 2021**, as the Chair of the



Board of Stop TB Partnership.

- **Stop TB Partnership Board:**

- It was **established in 2001** and is mandated to eliminate Tuberculosis as a public health problem.
- The organization was **conceived following the meeting of the First Session of the Ad Hoc Committee on the Tuberculosis Epidemic** held in London in March 1998.
- In its inaugural year itself, the Stop TB Partnership through the **Amsterdam Declaration** gave a call for collaborative action from ministerial delegations from 20 countries that bear the highest burden of TB.
- In 2019, it launched the updated **Global Plan to End TB 2018-2022**.
- The **Kochon Prize** is awarded annually by Stop TB Partnership to individuals and/or organizations that have made a significant contribution to combating TB.
 - The **Kochon Prize**, which is endowed by the Kochon Foundation, a non-profit foundation registered in the Republic of Korea, consists of a USD 65,000 award.
 - Its secretariat is based at **Geneva, Switzerland**.

- **High TB Burden Countries:**

- In 2019, the **30 high TB burden countries** accounted for 87% of new TB cases.
- Eight countries account for two thirds of the total, with **India leading the count**, followed by Indonesia, China, the Philippines, Pakistan, Nigeria, Bangladesh and South Africa (**Global Tuberculosis Report: WHO**)

- **Scenario in India:**

- With an **estimated 2.64 million TB patients**, India has the largest burden of TB globally in terms of absolute numbers.
- Recently, the “**Step Up for TB 2020**” report by the Stop TB Partnership and Médecins Sans Frontières/Doctors Without Borders (MSF) has **highlighted India’s conservative approach regarding the new**

medicines for Drug Resistant TB, putting lives of patients including children in danger.

- **Steps Taken by India:**

- India has **committed to eliminating TB in the country by 2025.**

- Five years ahead of the global deadline of 2030.

- **National Strategy Plan for TB Elimination 2017-2025:**

- The requirements for moving towards TB elimination in India have been arranged in **four strategic areas of Detect, Treat, Prevent & Build.**

- There is also across all four areas, an overarching theme of the **Private Sector**. Another overarching theme is that of **Key Populations.**

Rain

- **TB Harega Desh Jeetega Campaign, Nikshay Poshan Yojana, etc.**

- **Global Efforts:**



- The **End TB Strategy of WHO.**

- **World Tuberculosis (TB) Day is observed on 24th March** to raise public awareness about the devastating health, social and economic consequences of TB.

Tuberculosis

- **Tuberculosis is caused by bacteria (Mycobacterium tuberculosis)** that most often affect the lungs.
- **Transmission:** TB is spread from person to person through the air. When people with lung TB cough, sneeze or spit, they propel the TB germs into the air.
- **Symptoms:** Cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats.
- **Treatment:** TB is treatable and curable disease. It is treated with a standard 6 month course of 4 antimicrobial drugs that are provided with information, supervision and support to the patient by a health worker or trained volunteer.
- **Multidrug-resistant TB (MDR-TB)** is a form of TB caused by bacteria that do not respond to isoniazid and rifampicin, the 2 most powerful, first-line anti-TB drugs.

MDR-TB is treatable and curable by using second-line drugs.

- **Extensively drug resistant TB (XDR TB)** is a rare type of MDR TB that is resistant to isoniazid and rifampin, plus any fluoroquinolone and at least one of three injectable second-line drugs (i.e., amikacin, kanamycin, or capreomycin).

6.16 Refrigeration System Pusa-FSF

Scientists from the **ICAR-Indian Agricultural Research Institute (IARI)** have developed an **on-farm green energy refrigeration system (Pusa-FSF)** and a **technology for extraction of gluten from wheat dough and its regeneration in bajra (pearl-millet) and makka (maize) flour.**

- **Pusa-FSF:**

• **Pusa Farm Sun Fridge (Pusa-FSF)** is a **100% solar-powered battery-less cold store** that can preserve around **2 tonnes of freshly-harvested produce** at 3-4°C during the day and 8-12°C at nighttime.

• It has rooftop solar panels that **generate 5 kilowatt (KW) power**, which helps in running air conditioning.

• The panels **also power a 105-watt submersible pump** circulating about 1,000 litres of water from a tank through overhead PVC pipes.

• At night, there is **only passive evaporative cooling**, with the water chilled during the day acting as a natural heat sink.

• All **farmers with solar pumps are a potential market** for the Pusa-FSF. India has an **estimated four lakh-plus installed solar water pumps.**

• An average 5-horsepower pump costing Rs. 2.5 lakh **attracts 70-90% subsidy.**

- **Benefits:**

• Farmers can **store and preserve their own produce.** It can **avoid distress sales and help improve prices.**


• It will help **minimise post harvest losses.**

• **More room to grow perishable items** such as tomatoes, fruits, other than Paddy and Maize.

- **Technology for Extraction of Gluten from Wheat Dough:**

- **Need:** Bajra, maize, jowar (sorghum), ragi and other **millet**s contain **comparable levels of protein and more vitamins, minerals**, crude fibre and other nutrients than wheat. But **they don't have any gluten proteins**, which results in poor dough quality.
- **About the Technology:** The technology **imparts elasticity and structural strength to bajra and maize dough**, making their chapattis as soft as from regular wheat atta flour.
 - The proteins extracted and dried into powder have the capacity for regeneration or forming gluten networks in non-wheat dough.
 - Scientists have **developed gluten based 'Hallur' soft bajra flour**, with the help of technology.

- **Other Technological Developments in the Field of Agriculture:**

- 
- **Happy Seeder** – machine for in-situ management of paddy stubble (straw).
 - **Precision Agriculture Technologies** – Precision Agriculture (PA) is an approach to farm management that uses information technology to ensure that crops and soil receive exactly what they need for optimum health and productivity.

Gluten

- Gluten is a family of storage proteins — formally known as **prolamins** — that are naturally found in certain cereal grains, such as wheat, barley etc.
 - The **two main proteins** in gluten are **glutenin and gliadin**.
- Gluten offers a variety of functional culinary benefits and is responsible for the **soft, chewy texture** that is characteristic of many gluten-containing, grain based foods.
- When heated, gluten proteins form an elastic network that can stretch and trap gas, allowing for optimal leavening or rising and maintenance of moisture in breads, pasta, and other similar products.
- **Celiac disease**, also spelled as coeliac disease, is the **most severe form of gluten intolerance**.



6.17 International Pulsar Timing Array

Recently, the **International Pulsar Timing Array (IPTA)** approved **India's full membership** as the Indian Pulsar Timing Array (InPTA).

- The observations made by **upgraded Giant Metrewave Radio Telescope (uGMRT)** will be used along with the data gathered by some **large radio telescopes located in Europe, America and Australia.**
- India has become the **first Asian country to be a full member of IPTA consortium** comprising **European Pulsar Timing Array (EPTA), North American Nanohertz Observatory for Gravitational Waves (NANOGrav)** and **Parkes Pulsar Timing Array (PPTA) from Australia.**
- India will now be able to obtain **improved observations by an order of 5**, making the overall data more robust.
- The InPTA and the uGMRT are likely to play significant roles in the **detection of nano-hertz GWs and gravitational astronomy** with gravitational ways in the future.

What is International Pulsar Timing Array?

- It is the **elite league of international radio telescopes** that are involved in tracking **very low-frequency gravitational waves** emerging from two orbiting very large supermassive blackholes.
- Its goal is to **detect and characterize the low-frequency gravitational wave universe** through timing a global array of approximately 100 millisecond pulsars using the largest radio telescopes in the world.

Indian Pulsar Timing Array (InPTA)

- It was **formally set up 2019.**
- It has about 25 radio astronomers and research students from **Tata Institute of Fundamental Research (TIFR), NCRA, Raman Research Institute, IIT Hyderabad and Indian Institute of Mathematical Sciences.**
- It is an experiment aimed at **detection of Gravitational waves (GWs) in the sub-microHertz frequency range** by observing an ensemble of **millisecond pulsars (MSPs).**



- It aims to **contribute its data and its analysis results to an international effort**, called the International Pulsar Timing Array (IPTA), where three other experiments also contribute data.

What is upgraded Giant Metrewave Radio Telescope (uGMRT)?

- It is one of the **world's largest and highly sensitive instruments** offering a frequency range between 300 to 800 MHz.
 - It is the **only radio telescope in the world** offering this wide a frequency range and sensitivity.
- It is located in **Khodad village in Junnar in Pune**.
- It is operated by **TIFR – National Centre for Radio Astrophysics (NCRA)**.

6.18 Superbug Candida Auris

Recently, the researchers from the Vallabhbhai Patel Chest Institute in collaboration with the Department of Ocean Studies and Marine Biology, Pondicherry University have identified **Superbug Candida Auris**.

Superbug Candida Auris

- Candida Auris belongs to the **Superbug Candida Auris** of the **Metschnikowiaceae family** of the order **Saccharomycetales**.
- It is a **multidrug resistant pathogen** that presents “a serious global threat to human health.
- It has for the first time been identified in the environment, off the coast of **South Andaman district** in the Andaman and Nicobar islands.
- It was **first identified in 2009** in a patient in Japan.
- It is a **fungus** which has now **emerged in more than 40 countries** across five continents in the last decade.
- The C.auris' **thermal and salinity tolerance** is because of its **adaptation to global warming**, which makes the human body more susceptible as a host.
- The **closest known relative of C.auris is C. haemulonii**, which was first discovered in 1962 from the gut of a blue-striped grunt fish, the skin of dolphins,



and the seawater off the coast of Portugal.

- The institute has for the first time established that the **fungus is found in tropical marshes and marine environments**, outside hospital environments.
- The study sampled **coastal wetlands, including rocky shores, sandy beaches, tidal marshes, and mangrove swamps** around the Andaman group of islands.
 - The **two colonies** of *C.auris* were found at the **salt marsh** from the composite soil sediment and 22 colonies were found at the beach.
- The viable *C.auris* was detected in the **marine habitat confirms C.auris survival in harsh wetlands**.
- The *C.auris* can be **deadly for immunocompromised patients**.
- The fungus is **deadly when it enters the bloodstream, or inhabits the body of a patient** suffering from a serious disease such as cancer.

What are Superbugs?

- A superbug is **resistant to all known antibiotics** that can cause “severe” **infections** or even death is spreading undetected through hospital wards across the world.
- The WHO defines AMR as “**the ability of a microorganism** (like bacteria, viruses, and some parasites) **to stop an antimicrobial** (such as antibiotics, antivirals and antimalarials) from working against it.

6.19 Parosmia: Odor distortion associated with COVID-19

Recently, the researchers have revealed that while the **loss of smell (anosmia) and taste** is a well-known symptom of COVID-19, some people may experience **parosmia**, which is characterised by a change in perception of odours.

Parosmia

- According to Fifth Sense, **parosmia** is a medical term used to describe a condition in which **affected individuals experience “distortions of the sense of smell”**.
- A person with parosmia is **able to detect certain odours**, but they might experience the **smell of certain things as different and often unpleasant**.



- The Fifth Sense says that these **unpleasant smells are often described by people** as being similar to that of chemicals, burning, faeces, rotting flesh and mould.

Causes of Parosmia

- It is typically experienced by those people who are **recovering their sense of smell following loss from a virus or an injury.**
- It is a **temporary condition** and is **not harmful** in itself.
- It can **continue for several weeks**, which means that **affected individuals may have to change their eating patterns, diets and avoid foods** that trigger the certain odours.
- The common triggers of parosmia include **roasted, toasted or grilled foods, coffee, onions, chocolate, garlic and eggs.**
- It is likely that parosmia manifests itself due to the **damage caused to the olfactory neurons** when the delicate and complex structure in the nose is attacked by a virus.

COVID-19 and Parosmia

- The parosmia has been associated with a **high proportion of patients** with post-infectious loss.
- The study reported that **nearly half of its COVID-19 cohort reported parosmia**, which was persistent at least till six months in the majority of the cases.
- The study says that parosmia might be a **positive sign and may reflect the recovery of the olfactory sensory neurons.**

6.20 Cats & Dogs infected by UK Variant of Coronavirus

Recently, the first few cases have been reported of **cats and dogs being infected** with the so-called **“UK variant” of the coronavirus.**

- It is of great concern that some of the infected animals have also been diagnosed with a heart condition known as **myocarditis.**

Myocarditis

- It is an **inflammation of the heart muscle**
- It **decreases the ability of the heart** to pump blood normally.
 - The myocardium muscle is responsible for **contracting and relaxing to pump blood in and out of the heart** and to the rest of the body.
- It can be caused by a number of factors, **including a viral infection.**
- The severity of symptoms varies i.e. in extreme cases, the patients of myocarditis can **suddenly lose consciousness or show signs of heart failure.**
- The **potential culprits** of causing Myocarditis are:
 - **Viruses:** They are one of the most common causes of infectious myocarditis.
 - The most common viruses to cause myocarditis include Coxsackievirus group B (an enterovirus), Human Herpes Virus 6, and Parvovirus B19 (which causes fifth disease).
 - **Bacteria:** It can also result from infection with Staphylococcus aureus or Corynebacterium diphtheriae.
 - Staphylococcus aureus is the bacterium that can cause impetigo and be a methicillin resistant strain (MRSA).
 - Corynebacterium diphtheriae is the bacterium that causes diphtheria, an acute infection that destroys tonsils and throat cells.
 - **Fungi:** Yeast infections, molds, and other fungi can sometimes cause myocarditis.

Connection between Myocarditis and COVID-19

- The UK paper **does not establish the coronavirus infection** as the cause for myocarditis in the animals.
- It notes that among people, **myocarditis associated with multisystem inflammatory syndrome** is a well-recognised **complication of Covid-19.**
- The UK animals were **diagnosed with myocarditis first, and the virus infection later.**



6.21 NISAR: Earth-Observing mission of NASA and ISRO

NASA and ISRO are collaborating on developing a satellite called **NISAR (NASA-ISRO Synthetic Aperture Radar)**.

What is NISAR?

- It's an **SUV-sized satellite** that is being jointly developed by the space agencies of the US and India.
- The **partnership agreement for NISAR** was signed between NASA and ISRO in 2014.
- Under the agreement, NASA will provide one of the **radars for the satellite, a high-rate communication subsystem for science data, GPS receivers and a payload data subsystem**.
- The ISRO will provide the **spacecraft bus, the second type of radar (called the S-band radar), the launch vehicle** and associated launch services.
- It is an **all-weather satellite** that's going to give us an unprecedented ability to look at how Earth's surface is changing.

Objectives of NISAR

- The NISAR will be equipped with the **largest reflector antenna** ever launched by NASA whose primary goals are:
 - **Tracking subtle changes** in the Earth's surface,
 - **Spotting warning signs** of imminent volcanic eruptions,
 - Helping to **monitor groundwater supplies** and
 - Tracking the rate at which **ice sheets are melting**.
- The synthetic aperture radar that NASA will use to **measure changes in the surface** of the Earth.
 - The SAR refers to a technique for **producing high-resolution images**.
 - The radar can **penetrate clouds and darkness**, which means that it can collect data day and night in any weather.



Significance of NISAR

- The images will allow scientists to **track changes in croplands, hazard sites** and will help them to **monitor crises such as volcanic eruptions**.
- The images will be detailed enough to **show local changes and broad enough to measure regional trends**.
- The data will allow for better understanding of the **causes and consequences of land surface changes, increasing our ability to manage resources and prepare for and cope with global change**.

6.22 Double Mutant Covid-19 Variant

Recently, a **new double mutant coronavirus variant** has been detected in several Indian states, triggering fear that India's "second wave" could be more dangerous than the first.

- The **Indian SARS-CoV-2 Consortium on Genomics (INSACOG)** is carrying out genomic sequencing on the latest samples of the double mutant variant.
- A total of **736 cases of the variant first discovered in the UK**, 34 of the one from South Africa and one case of the variant from Brazil have been traced in the country.

What is a double mutant variant?

- The authorities say that an analysis of samples collected from the **western state of Maharashtra shows a rise in E484Q and L452R mutations**.
- The **double mutation** happens when **two mutated variants of a virus come together** to form a third variant.
- The health experts say the **L452R variant was first found in the US**, whereas the E484Q variant is indigenous.

Concerns associated with Double Mutant Variant

- The mutations in the spike gene can make the virus **inherently "better" at infecting people**.
- The scientists say reinfections will be very **mild compared to primary infections in people** who are vaccinated or who recovered already from an earlier case of



Covid-19.

- The health experts worry that the **double mutation could allow the virus to escape the body's immune system**, making itself more resistant to antibodies.
- There is also a possibility that it can **reinfect patients** who have already recovered from Covid-19.

6.23 Asteroid Apophis

Recently, the USA's NASA space agency has ruled out the possibility of the **dreaded asteroid Apophis** causing any damage to the Earth for the next 100 years.

Asteroid Apophis

- It is named after the **ancient Egyptian god of chaos and darkness**.
- It was **discovered in 2004**, after which NASA had said that it was **one of the asteroids that posed the greatest threat to Earth**.
- It measures 340 metre across which is **comparable to the size of the huge ship** that has currently blocked the Suez Canal.
- The astronomers used the **70-metre radio antenna at the Deep Space Network's Goldstone Deep Space Communications Complex** near Barstow, California in order to track Apophis' motion.
 - They also used the **100-metre Green Bank Telescope in West Virginia** which showed imaging of Apophis.
- The two systems were used together in a "**bistatic**" experiment that doubled the strength of the received signal.
- Apophis is categorised as a **potentially hazardous asteroids (PHAs)**.

What are asteroids?

- Asteroids are **rocky objects that orbit the Sun, much smaller than planets**. They are also called minor planets.
- Asteroids are divided into **three classes**.
 - First, those found in the main **asteroid belt between Mars and Jupiter**,



which is estimated to contain somewhere between 1.1-1.9 million asteroids.

- The second group is that of **trojans**, which are asteroids that share an orbit with a larger planet.
 - NASA reports the presence of **Jupiter, Neptune and Mars trojans**.
 - In 2011, they reported an **Earth Trojan** as well.
- The third classification is **Near-Earth Asteroids (NEA)**, which have orbits that pass close by the Earth.

SOCIAL ISSUES AND DEVELOPMENT

7.1 Rural engg. colleges to lose 1,200 teachers

- A World Bank-funded project to **take graduates from elite institutions to rural and remote engineering colleges in poorer States** is coming to an end in March, leaving more than 1,200 assistant professors out of a job and some rural colleges bereft of half their faculty.
- The Centre is **preparing its own MERITE project** with some similar objectives to improve technical education, but that may be too late for the faculty employed under the current project.

EXAMPLE:

- Tanmay Rath holds a Ph.D. in polymer chemistry from IIT, Kharagpur, with post-doctoral experience in nanomaterials research in eastern Asia.
- However, for the past three years, he has been engaged in a project teaching chemistry to undergraduate engineering students in Motihari, a small town in East Champaran district of Bihar.
- Tanmay was hired under the **TEQIP [Technical Education Quality Improvement Programme] project** along with other NIT and IIT graduates and recruited to teach in some of the poorest and most remote areas.
- In Motihari Engineering College, there are 52 faculty but 20 are from TEQIP.
- Students have transformed the teaching system here. There were no practical lab classes being conducted at all until students under TEQIP came and now they don't



know how they will manage to teach the classes once our contract ends on March 31.

- In the Chemistry Department, the only other faculty is also retiring at the end of the month.
- Students have been appealing to the State and Central governments, **but no one is willing to take the responsibility for the fate of these faculty or the students.**

PHASES

- Three phases of the Rs3, 600-crore TEQIP project have been completed since it was launched in December 2002.
- The third phase focused on improving quality and equity in engineering institutions in seven low-income, eight northeastern and three hilly States.
- Among the initiatives was a bid to recruit more than 1,500 faculty from top institutions and send them to colleges that could never have afforded them. They were paid salaries in accordance with the Seventh Pay Commission. Now, neither the States nor the Centre is willing to commit to funding.
- What is the government talking about a new National Education Policy when it cannot even sustain the gains of an existing project,” asked a computer science faculty hired under TEQIP at the University College of Engineering and Technology in Hazaribagh, Jharkhand.
- **About 300 faculty have already quit TEQIP for other jobs**, but 250 of those remaining have filed cases in the Delhi High Court. The next hearing is on March 15.

7.2 Phase 2 of Swachh Bharat Mission to focus on waste segregation at source

The Ministry of Housing and Urban Affairs (MoHUA), which is currently awaiting Cabinet approval for financial proposals for the second phase of Swachh Bharat Mission (SBM) recently launched the **sixth edition of the annual Swachh Survekshan.**

SEGREGATION:

- The second phase of the SBM, announced in the Union Budget, will be responsible



for **sewage management in all cities that have less than 1 lakh population.**

- Highly-placed government officials said that a major focus will be the **segregation of waste at the source.**
- We are not even letting the urban local bodies bring in segregation waste technology. It is a regressive step. **We need to segregate at the home-level.** It will also reduce the cost
- However, sources said the **Centre will not be contributing funds** for the sewage system component of this phase.
- The other mandates of the second phase of SBM will **target legacy landfills, single-use plastic, and construction and demolition waste.**

SWACHH SURVEKSHAN:

- As for the Swachh Survekshan, **the survey assesses waste segregation**, wet waste processing capacity, dry waste recycling, construction and demolition waste processing, and landfill waste.
- Over 2,000 surveyors organised by the Quality Council of India will randomly visit 4,321 cities across the country throughout March to assess them according to sanitation parameters.
- For its state rankings, **the survey will weigh which cities are Open Defecation Free (ODF), ODF+ (when the toilets are maintained), ODF++ (when sewage systems operate) as well as their garbage-free rating.**
- They will also be given Prerak Dauur Samman awards of **divya (platinum), anupam (gold), ujjwal (silver), udit (bronze), and aarohi (copper / aspiring).**
- For the first time, **districts** (subsuming municipal corporations, municipalities, and town areas) will also be assessed on the basis of their underlying urban local bodies.
- The Mission is working around election dates to ensure their survey does not have any violations. Mission is planning on **creating uniforms “like policemen” for “safaimitras”**, adding that “they played an important role in Covid-19.”
- **Mysuru won the first Swachh Survekshan** while Indore has won the last three, as the survey expanded from 73 cities in 2016 to 4,242 cities in 2020. The 2020 winner will be announced soon.
- The Mission is currently framing the guidelines for Swachh Survekshan



2022, which will be more “citizen centric” and have more importance on technological solutions.

7.3 Closure of schools due to Covid impacted 247 mn children in India: UNICEF

As many as **1.5 million schools remained shut during 2020** due to the pandemic and lockdowns, **impacting 247 million children** enrolled in elementary and secondary schools in India, according to data released by UNICEF.

REPORT:

- **Online education is not an option for all** as only one in four children has access to digital devices and Internet connectivity.
- Pre-Covid, only a quarter of households (24 per cent) in India had access to the Internet and there is a **large rural-urban and gender divide**.
- It raised concerns on a **higher dropout rate** in schools once classes recommence.
- The data released by UNICEF notes that more than **888 million children worldwide continue to face disruptions** to their education due to full and partial school closures.
- The analysis of school closure reports notes that 14 countries worldwide have remained largely closed since March 2020 to February 2021.
- Two-thirds of those countries are in **Latin America and the Caribbean**, affecting nearly 98 million schoolchildren.
- UNICEF has said that even before the Covid-19 crisis began, over **six million girls and boys were already out of school** in the country.

UNICEF:

- UNICEF, also greatly known as the United Nations International Children’s Emergency Fund,[a] is a **United Nations agency responsible** for providing humanitarian and developmental aid to children worldwide.
- The agency is among the **most widespread and recognizable social welfare** organizations in the world, with a presence in 192 countries and territories.
- UNICEF’s activities include **providing immunizations and disease prevention**, administering treatment for children and mothers with HIV, enhancing childhood



and maternal nutrition, improving sanitation, promoting education, and providing emergency relief in response to disasters.

- UNICEF is the **successor of the International Children's Emergency Fund (ICEF)**, created on December 10, 1946, in New York, by the U.N. Relief Rehabilitation Administration to provide immediate relief to children and mothers affected by World War II.
- UNICEF relies entirely on contributions from **governments and private donors**.
- The board is made up of **government representatives elected by the United Nations Economic and Social Council**, usually for three-year terms.
- UNICEF's programs emphasize **developing community-level services** to promote the health and well-being of children.
- UNICEF has received recognition for its work, including the Nobel Peace Prize in 1965, the **Indira Gandhi Prize in 1989** and the Princess of Asturias Award in 2006.

7.4 Ease of Living Index 2020 and Municipal Performance Index (MPI) 2020:

- Minister of Housing and Urban Affairs announced the final rankings of Ease of Living Index (EoLI) 2020 and the Municipal Performance Index (MPI) 2020.

Ease of Living Index 2020:

- The rankings were announced for cities with a population of more than a million, and cities with less than a million people.
- **111 cities participated in the assessment.**
- Bengaluru emerged as the top performer in the Million+ category, followed by Pune, Ahmedabad, Chennai, Surat, Navi Mumbai, Coimbatore, Vadodara, Indore, and Greater Mumbai.
- In the Less than Million category, Shimla was ranked the highest in ease of living, followed by Bhubaneshwar, Silvassa, Kakinada, Salem, Vellore, Gandhinagar, Gurugram, Davangere, and Tiruchirappalli.

The Ease of Living Index (EoLI) is an assessment tool that evaluates the quality of life and various initiatives for urban development. It provides a comprehensive understanding of par



across India based on quality of life, economic-ability of a city, and its sustainability and resilience

Municipal Performance Index 2020:

- The assessment framework has classified municipalities based on their population- **Million+** (municipalities having over a million population) and **Less than Million Population**.
- In the Million+ category, Indore has emerged as the highest ranked municipality, followed by Surat and Bhopal.
- In the Less than Million category, New Delhi Municipal Council has emerged as the leader, followed by Tirupati and Gandhinagar.
- The MPI examined the sectoral performance of 111 municipalities (**with Delhi being assessed separately for NDMC**) across five verticals which comprise of 20 sectors and 100 indicators in all totality.
- The five verticals under MPI are Services, Finance, Policy, Technology and Governance.

A Municipal Performance Index assessment was undertaken for the first time in the country to examine local government practice in municipalities across areas of services, finance, policy, governance. It seeks to simplify and evaluate the complexities in local governance practice and an ethos of transparency and accountability.

Features of MPI:

- The Municipal Performance Index provides a granular understanding of a municipalities' functionalities and the extent of their development and capabilities. Through the index, citizens can better understand their local government administration, which in turn builds transparency and generates trust among key stakeholders.
- The framework covers 20 varied sectors vis. Education, Health, Water & Wastewater, SWM & Sanitation, Registration & Permits, Infrastructure, Revenue Management, Expenditure Management, Fiscal Responsibility, Fiscal Decentralisation, Digital Governance, Digital Access, Digital Literacy, Plan Preparation, Plan Implementation, Plan Enforcement, Transparency & Accountability, Human Resource, Participation and Effectiveness.



7.5 All-women crew of MT Swarna Krishna makes history

- 1. Union Minister Mansukh Mandaviya has flagged off an all-woman crew onboard Shipping Corporation of India (SCI) vessel m.t. Swarna Krishna, the Ministry of Ports, Shipping and Waterways said.
- It is the first time in maritime history that a ship is being sailed by only women officers
- T. SWARNA KRISHNA is an Oil Products Tanker that was built in 2010 and is being operated by Shipping Corporation of India (SCI).
- The move demonstrated the gradual shift in the perception of seafaring as a male-oriented profession and the principles of Diversity & Inclusion that SCI upholds.
- **SCI has been a pioneer in employing** women seafarers onboard its vessels and has implemented various initiatives including age relaxations and fee concessions to aspiring female cadets through its Maritime Training Institute to promote their integration into the maritime sector.
- **The first women officers in the Indian Navy as part of ship's crew:**
- **In 1956, Ram Dass Katari** became the first Indian flag officer, and was appointed the first Indian Commander of the Fleet on 2 October. On 22 April 1958, Vice Admiral Katari assumed the command of the Indian Navy from Carlill as the first Indian Chief of Staff of the Indian Navy.
- Recently two women officers have been selected to join as "Observers" (Airborne Tacticians) in the helicopter stream. Lieutenant Kumudini Tyagi and Sub Lieutenant Riti Singh will be the first women officers in the Indian Navy to embark on Navy warships as part of ship's crew.
- **Prior to 1992**, women officers were inducted in the Navy only in the medical stream from the Armed Forces Medical Service. From July 1992, the Navy started inducting women, initially through a special entry scheme and later through the Short Service Commission, in only select branches of the Navy.

MT Swarna Krishna:

- **All-women crew of MT Swarna Krishna becomes first to pilot ship in maritime history, is an Oil Products Tanker built in 2010 and currently sailing under the flag of India.**



- **International Women's Day 2021: Date, history, and why we celebrate it on March 8.**
- **International Women's Day 2021 is being celebrated on 8th of March with theme #ChooseToChallenge. It indicates that a "challenged world is an alert world, and from challenge comes change".**
- After the Socialist Party of America organized a Women's Day in New York City on February 28, 1909, German delegates Clara Zetkin, Käthe Duncker, Paula Thiede and others proposed at the 1910 International Socialist Woman's Conference that "a special Women's Day" be organized annually,
- IWD has occurred for well over a century, with the first IWD gathering in 1911 supported by over a million people in Austria, Denmark, Germany and Switzerland.
- Prior to this the Socialist Party of America, United Kingdom's Suffragists and Suffragettes, and further groups campaigned for women's equality.
- **The United Nations began celebrating the day in 1977.**

IWD 2021 campaign theme:

- A challenged world is an alert world. **Individually**, we're all responsible for our own thoughts and actions – all day, every day.
- We can all choose to challenge and call out gender bias and inequality. We can all choose to seek out and celebrate women's achievements. Collectively, we can all help create an inclusive world.
- From challenge comes change, so let's all "**#choose to challenge**".
- **Individual contribution:**
- Individuals and organizations are invited to send in their #ChooseToChallenge images as we share images from around the world in the lead up to International Women's Day 2021.
- So strike the **#ChooseToChallenge pose with your hand high to show your commitment to choose to challenge inequality**, call out bias, question stereotypes, and help forge an inclusive world.
- Submissions are photographs of individual or group compositions striking the #ChooseToChallenge hand up pose to potentially be shared on the IWD website and social media feeds – and are ideally 16:9 aspect ratio (landscape composition; max



3000 pixels width). All gender identities welcome.

- Please submit #ChooseToChallenge images as early as possible.

7.6 Cyber volunteer programme rolled out, MHA informs LS

- The Ministry of Home Affairs (MHA) informed the Lok Sabha that a “**cyber volunteer**” programme has been rolled out for “**cyber hygiene promotion**” and the services of volunteers would be utilised by the State police as per requirement.
- The MHA, through its cyber crime grievance portal- cybercrime.gov.in, aims to **raise a group of “cyber crime volunteers”** to flag “unlawful content” on the Internet.
- Various groups, including the **Internet Freedom Foundation (IFF)**, have expressed concern that the programme enables a **culture of surveillance** and could create potential social distrust by encouraging civilians to report the online activities of other citizens.

PRIVACY MATTERS:

- There are “**concerns of infringement of privacy due to surreptitious and malafide intrusion** into an individual’s online activities.
- The **challenges of cyber space** are many which flow from its vastness and borderless character.
- **Cyber Crime Volunteer Framework** has been rolled out as an initiative as a part of cyber hygiene promotion to bring together citizens to contribute in the fight against cybercrime in the country and assist State/UT LEAs (law enforcement agencies) in their endeavour to curb cyber crimes.
- The volunteers will be enrolled and their services utilized by the respective State/UT Police Authorities, as per their requirement.

GOVERNMENT RESPONSE:

- The MHA had operationalised the **National Cyber Crime Reporting Portal** to provide a centralised mechanism to the citizens for online reporting of all types of cyber crime incidents, with a special focus on cyber crimes against women and children.
- Since its inception, **3,17,439 cyber crime incidents** and 5,771 FIRs have been



registered up to February 28 in the country. The conversion of complaints received into FIRs stood at 1.81%.

- The government had approved the **setting up of 1,023 Fast Track Special Courts (FTSCs)**, including 389 exclusive POCSO Courts, for expeditious trial and disposal of cases related to rape and the Protection of Children from Sexual Offences (POCSO) Act.
- The conviction rate for the POCSO cases in 2019 was 34.9%.

7.7 Pradhan Mantri Swasthya Suraksha Nidhi (PMSSN)

Recently, the Union Cabinet has approved the **Pradhan Mantri Swasthya Suraksha Nidhi (PMSSN)** as a single non-lapsable reserve fund for share of Health from the **proceeds of Health and Education Cess** levied under Section 136-b of Finance Act, 2007.

- The **Health Outcomes depend substantially on public spending on health** because one extra year of population life expectancy raises GDP per capita by 4%.
- The investment in health creates **millions of jobs, largely for women**, through a much needed **expansion of the health workforce**.
- In the budget speech 2018, the Finance Minister while announcing Ayushman Bharat Scheme, also announced **replacement of existing 3% Education Cess by 4% Health and Education Cess**.
- The better health **improves productivity, and reduces losses** due to premature death, prolonged disability and early retirement.

Salient Features of Pradhan Mantri Swasthya Suraksha Nidhi (PMSSN)

- It is a **non-lapsable reserve fund** for Health in the Public Account.
- The proceeds of share of health in the **Health and Education Cess** will be credited into PMSSN.
- The **revenues earned from the PMSSN** will be utilized for the flagship schemes of the Ministry of Health & Family Welfare namely:
 - Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)



- Ayushman Bharat – Health and Wellness Centres (AB-HWCs)
- National Health Mission
- Pradhan Mantri Swasthya Suraksha Yojana (PMSSY)
- Emergency & disaster preparedness and responses during health emergencies
- Any future programme/scheme that targets to achieve progress towards SDGs and the targets set out in the National Health Policy (NHP) 2017.
- The administration and maintenance of the PMSSN is entrusted to **Ministry of Health & Family Welfare**.
- The expenditure on such schemes of the **MoHFW would be initially incurred from the PMSSN** in any financial year and thereafter, from Gross Budgetary Support (GBS).

Benefits of PMSSN

- It aims to ensure **enhanced access to universal & affordable health care** through availability of earmarked resources.
- The scheme aims to ensure that the **amount does not lapse** at the end of financial year.

7.8 Pong Dam Wildlife Sanctuary

Recently, the **Himachal Pradesh Forest minister** has tabled that nearly **40 per cent of the families displaced** during the construction of **Pong Dam in Himachal Pradesh** are yet to be settled

- The Pong Dam Sanctuary is also known as **Pong Dam Reservoir or Pong Dam Lake**.
- The Pong Dam Sanctuary is also a **national wetland**.
- The Pong Dam, also known as **Beas Dam**, is an **earth-fill embankment dam** built in 1975.
- It has been **constructed on the river Beas** in the wet land of **Shivalik hills of Kangra district of Himachal Pradesh**, which has been named as **Maharana**

Pratap Sagar.

- It was declared a **wildlife sanctuary in 1983**, and is now also a **Ramsar site**.
- The sanctuary area is covered with **tropical and sub-tropical forests**, which shelters a great number of Indian Wildlife animals.
- The lake is **fed by Beas River** and its numerous perennial tributaries such as **Gaj, Neogal, Binwa, Uhl, Bangana, and Baner**.
- The **migratory birds from all over Hindukush Himalayas** and also as far as Siberia come here during winter..



7.9 Transgenders to National Cadet Corps (NCC)

Recently, the Kerala High Court on Monday allowed a **transwoman to apply for enrolment into the National Cadet Corps (NCC)** in the senior girls division as per her self-perceived gender identity in a landmark judgment.

- In 2020, a student at the University College in Thiruvananthapuram has filed a **writ petition opposing her exclusion from the NCC unit** at the college on the basis of her gender.
- The petition challenged **Section 6 of the National Cadet Corps Act, 1948** which only allows either 'male' or 'female' cadets.



Argument in favour of Transgenders to National Cadet Corps (NCC)

- The petitioner argued that the **'inclusion of sexual minorities like transgender persons'** is important to address the **'rampant marginalisation and discrimination'** that they face.
- The Kerala High Court took exception to the position and stressed that **exclusion of transgenders from NCC goes contrary to Kerala's Transgender Policy** and other applicable statutes.
- The bench held that the integration of persons of the third gender into the armed forces or the NCC **cannot be a justification to deny the petitioner's entry into the NCC.**
- The Judgement highlighted that the **provisions of the NCC Act, 1948 cannot preclude the operation of the Transgender Rights Act, 2019.**
- The High Court also ordered the NCC **to amend Section 6 of the Act within six months** so that the law offers equal opportunities for everyone.

Argument against Transgenders to National Cadet Corps (NCC)

- The NCC had submitted that as per the existing policy, there was **no provision for allowing transgender students** to get themselves enrolled in the NCC.
- The Centre argued that before constituting a new division for the third gender, the Centre **had to conduct a major exercise in terms of reviewing the infrastructure facilities, modules and facilities** for such a division.
- It also argued that any induction of a candidate from the transgender community without due deliberations by the authorities would have **far-reaching ramifications.**

Kerala's Transgender policy

- Kerala was one of the **first states** in the country to **formulate and implement a welfare policy for transgender persons** in 2015.
- The policy followed the Supreme Court verdict in 2014 in which the **right to equality and equal protection for transgender persons** under articles 14, 15 and 16 was upheld.
- The bracket of a **'third gender'** was allotted to transgender persons.



- The policy asked for all government offices and public functionaries to **extend non-discriminatory treatment to transgender.**
- The policy promised to provide:
 - Free legal aid to those fighting discrimination,
 - Recording statistics at the local police station level for crimes against transgenders;
 - A 24×7 helpline and crisis management centre;
 - A monthly pension scheme for destitute and those above the age of 55; and
 - Establishing shelter homes

National Cadet Corps (NCC)

- The **Cadet Corps Committee** under the chairmanship of **Pt HN Kunzru** recommended the establishment of NCC.
- It came into being by an **Act of the Parliament Act No. XXXI of 1948** designated '**The National Cadet Corps Act 1948**'.
- It aims at **developing character, comradeship, discipline, a secular outlook, the spirit of adventure and ideals of selfless service** amongst young citizens.
- It aims at creating a **pool of organized, trained and motivated youth** with leadership qualities in all walks of life.
- It is under the administrative control of **Ministry of Defence.**

7.10 VISHWAS Project

Recently, the Minister of State has informed that a total of **6,000 CCTV cameras** have already been installed under the state government's **VISHWAS Project.**

VISHWAS Project

- It is **Video Integration and State Wide Advanced Security (VISHWAS)** project.
- It is an initiative of **Gujarat Police** launched in January 2020.
- Under this project, there is a plan to **set up more than 60,000 cameras at 41**



locations, including six pilgrimage sites and Kevadiya Colony.

- The camera footage will be **manned in a pyramid style structure** starting from a state command and control centre at the top, which will control 34 District Command and Control Centres.
- The CCTV cameras will be **synchronized in order to live watch CCTV feed** of Dang or Amreli from Gandhinagar Control Center.

Objectives of VISHWAS Project

- The police aim to use it for **crime detection with forensic analysis** of the evidence through a synchronised system of CCTV surveillance.
- The CCTV feed of crime incident or evidence can be **sent immediately to the Central Command and Control Centre** which in turn can submit the feed to Forensic Science Laboratory (FSL).
- The police also aim to achieve a **pro-active traffic management system by identifying the black spots** and bottleneck junctions of a city through CCTV feed.
- It will also **help the police in issuing e-challan in even Tier 2 and Tier 3 cities** by identifying the number plate of offending vehicles.

Features of CCTV used under VISHWAS Project

- The CCTVs are state of the art gadgets such as **fix cameras, pan-tilt zoom cameras, red-light violation detection cameras and automatic number plate recognition cameras**.
- The Gujarat Police is aiming at introducing CCTV surveillance system to **detect illegal parking, traffic violation, crowd detection, unattended bag detection, head counting, camera tampering and intrusion detection**.

7.11 National Commission for Scheduled Tribes (NCST)

Recently, the Minister of State for Tribal Affairs has informed the Lok Sabha regarding functioning of the **National Commission for Scheduled Tribes (NCST)**.
National Commission for Scheduled Tribes (NCST)

- It was established by **amending Article 338 and inserting a new Article 338A in**



the Constitution through the Constitution (89th Amendment) Act, 2003.

- The amendment has **bifurcated erstwhile National Commission for Scheduled Castes and Scheduled Tribes** two separate Commissions namely:
 - The National Commission for Scheduled Castes (NCSC), and
 - The National Commission for Scheduled Tribes (NCST)

Composition of National Commission for Scheduled Tribes (NCST)

- The **term of office of Chairperson, Vice-Chairperson and each member is three years** from the date of assumption of charge.
- The **Chairperson** has been given the **rank of Union Cabinet Minister**, and the **Vice-Chairperson** that of a **Minister of State** and other **Members** have the ranks of a **Secretary to the Government of India**.
- They are **appointed by the President** by warrant under his hand and seal.
- Their **conditions of service and tenure of office** are also determined by the **President**.

Functions of National Commission for Scheduled Tribes (NCST)

- To **investigate & monitor matters relating to safeguards provided for STs** under the Constitution or under other laws or under Govt. Order, to evaluate the working of such Safeguards.
- To **inquire into specific complaints** relating to Rights & Safeguards of STs;
- To **participate and advise in the Planning Process** relating to Socio-economic development of STs, and to evaluate the progress of their development under the Union and any State;
- To **submit report to the President annually** and at such other times as the Commission may deem fit, upon/ working of Safeguards, Measures required for effective implementation of Programmers/ Schemes relating to Welfare and Socio-economic development of STs; and
- To **discharge such other functions in relation to STs as the President may**, subject to the provisions of any law made by Parliament, by rule specify

Constitutional Safeguards for STs



Educational & Cultural Safeguards

- **Article 15(4):** Special provisions for advancement of other backward classes (which includes STs)
- **Article 29:** Protection of Interests of Minorities (which includes STs)
- **Article 46:** The State shall promote, with special care, the educational and economic interests of the weaker sections of the people, and in particular, of the Scheduled Castes, and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation etc. •
- **Article 350:** Right to conserve distinct Language, Script or Culture
- **Article 350:** Instruction in Mother Tongue.

Social Safeguard

- **Article 23:** Prohibition of traffic in human beings and beggar and other similar form of forced labour
- **Article 24:** Forbidding Child Labour.

Economic Safeguards

- **Article 244:** Clause(1) Provisions of Fifth Schedule shall apply to the administration & control of the Scheduled Areas and Scheduled Tribes in any State other than the states of Assam, Meghalaya, Mizoram and Tripura which are covered under Sixth Schedule.

Political Safeguards

- **Article 164(1):** Provides for Tribal Affairs Ministers in Bihar, MP and Orissa
- **Article 330:** Reservation of seats for STs in Lok Sabha
- **Article 337:** Reservation of seats for STs in State Legislatures
- **Article 334:** 10 years period for reservation (Amended several times to extend the period.)
- **Article 243:** Reservation of seats in Panchayats
- **Article 371:** Special provisions in respect of NE States and Sikkim



ENVIRONMENT

8.1 IIT-Delhi researchers develop technology to recycle e-waste

To deal with one of the fastest growing waste streams, researchers at Indian Institute of Technology, Delhi have **developed a zero-emission technology to manage and recycle e-waste to wealth.**

USING WASTE:

- Research group in the Catalytic Reaction Engineering Laboratory at Chemical Engineering Department have adopted a methodology that **uses e-waste as an “Urban Mine” for metal recovery and energy production.**
- Researchers said using their method, **e-waste is shredded and pyrolyzed to yield liquid** and gaseous fuels, leaving behind a metal-rich solid fraction.
- On further separation using a novel technique, **the leftover solid residue yields a 90-95% pure metal mixture** and some carbonaceous materials.
- The carbonaceous material is further **converted to aerogel for oil spillage cleaning**, dye removal, carbon dioxide capture, and use in supercapacitors.
- The technology is an outcome of a Department of Science and Technology, Government of India, funded project and developed technology will **cater to the need of “Smart Cities,” “Swachh Bharat Abhiyan,” and “Atmanirbhar Bharat” initiatives** of the government.

8.2 Himalayan serow spotted in Assam

- A Himalayan mammal, somewhere between a goat and an antelope, has been confirmed as the **newest creature to be spotted in Assam.**
- A couple of nature guides had spotted the **Himalayan serow**, a goat-antelope, in the 950-sq.km Manas Tiger Reserve on December 3.
- The animal — a high-altitude dweller usually **found 2,000-4,000 metres above sea level** — was seen being chased by wild dogs.

AUGURING WELL:

- Experts have confirmed the animal as the Himalayan serow, spotted close to the



border with Bhutan in **Manas's Bansbari-Mathanguri forest**. The sighting augurs well for the health of the tiger reserve.

- They said the serow has been **spotted for the first time in the tiger reserve** or anywhere else in Assam, but “this does not mean the animal never visited the forests before”.
- The sightings of rare animals and birds in Manas is an outcome **of better access to remote parts** of the protected area where extremists and hunters once ruled.
- There are **chances of more faunal species**, found in the higher reaches, being spotted in the park.

BLACK-NECKED CRANE:

- The Reserve is **contiguous with the 1,057-sq. km. Royal Manas National Park in Bhutan**. The black-necked crane was also recently sighted in Manas.
- A pair each of such cranes was sighted on January 10 and February 18. The Buddhists revere the bird that nests in the Tawang region.
- Officials in Manas said the **critically endangered white-bellied hero** was also seen a few weeks ago.
- In February, birders had sighted the **colourful Mandarin duck in the Maguri-Motapung wetland** near eastern Assam's Dibru-Saikhowa National Park.
- This duck was last spotted in Assam 118 years ago.

8.3 Similipal Biosphere Reserve.

- The Simlipal forest reserve (Mayurbhanj, Odisha) area frequently witnesses forest fires during dry weather conditions.

Similipal Biosphere Reserve:

- The Government of India declared Simlipal to be a biosphere reserve in 1994 and UNESCO added the national park to its list of biosphere reserves in 2009.
- It is in the Mayurbhanj district in the Indian state of Odisha.
- Similipal National Park is part of the Mayurbhanj Elephant Reserve, which includes three protected areas – Similipal Tiger Reserve, Hadgarh Wildlife Sanctuary and

Kuldiha Wildlife Sanctuary.

- Similipal derives its name from ‘Simul’ (silk cotton) tree.
- Two tribes, the Erenga Kharias and the Mankirdias, inhabit the reserve’s forests and practise traditional agricultural activities (the collection of seeds and timber).
- Similipal is the abode of 94 species of orchids and about 3,000 species of plants.
- The identified species of fauna include 12 species of amphibians, 29 species of reptiles, 264 species of birds and 42 species of mammals, all of which collectively highlight the biodiversity richness of Similipal. Sal is a dominant tree species.

The Forest Survey of India:

- **Forest Survey of India (FSI), founded in June 1981 in (Dehradun in Uttarakhand)** is a Government of India Ministry of Environment, Forest and Climate Change organisation for conducting forest surveys, **forest resources and present the data for national planning.**
- The Forest Survey of India released a report last year, analysing areas in India prone to fires. Out of the total 7,12,249 square km of forest cover, 1,52,421 square km (21.40 percent) is either highly or extremely fire prone.
- The forests of Mizoram, Chhattisgarh, Manipur, Odisha and Madhya Pradesh are most vulnerable.

Since 2005 — Feel the Pulse of IAS

8.4 Whale Shark

Recently, fishers in Odisha rescued a **whale shark**.

- Whale sharks are the **largest shark**, and indeed **largest of any fishes alive today** and they **travel large distances** to find enough food to sustain their huge size, and to reproduce.
- The whale shark is a **‘filter feeder shark’** which means it does not eat meat like other sharks. Whale sharks **filter sea water** and **feed on tiny planktons.**
- The maximum size of whale sharks is not known, but **could be as large as 20m.**
- **Scientific Name:**



- *Rhincodon typus*.

- **Habitat:**

- Whale sharks are **found in all the tropical oceans** of the world.

- **Threats:**

- **Oil & gas drilling, shipping lanes** etc.

- **Protection Status:**

- **IUCN Red List:** Endangered
- **CITES:** Appendix II
- **Indian Wildlife Protection Act, 1972:** Schedule I

8.5 Palamau Tiger Reserve

Recently, the Jharkhand government has been trying to convince the Centre to not lay the **third 'Broad Gauge (BG) Rail Line'** in the core **Palamu Tiger Reserve Area**.

- The state government has argued that the third rail line would lead to **permanent fragmentation of the wildlife habitat** in the state.
- The National Tiger Conservation Authority's (NTCA) data has said that **Jharkhand had just five tigers** and that too they were **not present in Palamau Tiger Reserve (PTR) area**.

Palamau Tiger Reserve

- It was **constituted in 1974** because of its "**rich and wide range of biological diversity**".
- It is spread over three districts i.e. **Latehaar, Garhwa and Lohardaga** with a total area of 1,026 square kilometres.
- It is surrounded by Daltonganj town on one side while the rest three sides are surrounded by "**rich forest**" of neighbouring forest division of **Jharkhand and Surguja district of Chhattisgarh**.
- The reserve forms a part of the **Betla National Park**.
- The vegetation in Palamau region comprises of **moist deciduous and dry**

deciduous forests to include Sal and bamboo as the major components.

- It is bounded by **North Koel River** in the west and **Auranga River** on its north.

8.6 Sangay Volcano



Recently, **Ecuador's emergency service** has said that the public and private activities in Chimborazo were suspended after five cantons received "significant" ash fall from **Sangay Volcano**.

Sangay Volcano

- It is one of the **highest active volcanoes in the world** and one of Ecuador's most active ones.
- It is located isolated **east of the Andean crest**.
- It was built within **horseshoe-shaped calderas of two previous edifices**, which were destroyed by collapse to the east, producing large debris avalanches that reached the Amazonian lowlands.
- It is an **active stratovolcano**.
- It is associated with the **subduction of the Nazca Plate under the South**



American Plate at the Peru–Chile Trench.

Sangay National Park

- It contains two **active volcanoes (Tungurahua and Sangay)** and ecosystems ranging from tropical rainforests to glaciers.
- It is home to the **endangered spectacled bear and mountain tapir** (both only found in the Northern Andes).
- It is located in the **central part of Ecuador** on the **Andes Mountains'** eastern side.
 - The park is located in the **Morona Santiago, Chimborazo and Tungurahua provinces** of Ecuador.
- It comprises **tropical rainforests, cloud forests, montane forests, mountains, valleys, grasslands, wetlands, and even glaciers.**
- It has been listed as a **UNESCO World Heritage Site** since 1983.

8.7 Project RE-HAB (Reducing Elephant – Human Attacks using Bees)

Recently, the Ministry of Micro, Small & Medium Enterprises has launched the **Project RE-HAB (Reducing Elephant – Human Attacks using Bees)**.

- The **National Honey Mission** is a programme to increase the **bee population, honey production and beekeepers' income** by setting up apiaries.
- **Nearly 500 people die every year due to elephant attacks in India** which is nearly 10 times more than the fatalities caused by big cats across the country.

Project RE-HAB (Reducing Elephant – Human Attacks using Bees)

- It is a **sub-mission under Khadi and Village Industries Commission's (KVIC) National Honey Mission.**
- It is aimed at creating **"bee-fences"** to mitigate human – elephant conflicts in the country.
- Its objective is to **thwart elephant attacks in human habitations** using honey bees and thus reducing loss of lives of both, humans as well as elephants.
- It is a **pilot project** launched at four locations around village Chelur in **Kodagu district of Karnataka.**



- The spots are located on the periphery of **Nagarhole National Park and Tiger Reserve** and prone to human-elephant conflicts.

Nagarhole National Park

- It is known as **Rajiv Gandhi National Park** located in Kodagu and Mysore District.
- It is declared as **37th Tiger Reserve** in India.
- It is considered as **World Heritage site** by UNESCO.
- The **Bandipur, Mudumalai & Wayanad Wildlife Sanctuary** are adjacent to the Nagarhole.
- **Bengal Tiger, Indian Leopard, Sloth Bear, Striped Hyena** are the predators that can be spotted in the park.

Raja Sir's

8.8 Supreme Court bats for Great Indian Bustard

Recently, the Supreme Court has intervened on behalf of the **Great Indian Bustards** over the birds falling dead after colliding with power lines running through their dwindling natural habitats in Gujarat and Rajasthan.

- The Supreme Court bench will examine on a priority basis whether **overhead power cables can be replaced with underground ones** to save one of the heaviest flying birds on the planet.
- The Attorney General gave an argument that **only low voltage lines can go underground** but not the high voltage ones.
- The court has recommended for **installing flight bird divertors** around high voltage power lines.

Constitutional Provisions for protection of environment

- **Fundamental Rights:** The constitution of India under **Article 19 (1) (a)** read with **Article 21** of the constitution guarantees right to decent environment and right to live peacefully.
- **Directive Principles of State Policy: Article 48A** provides that the State shall endeavour to protect and improve the environment and to safeguard the forests and



wild life of the country.

- **Fundamental Duties: Article 51A** provides that it shall be duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life and to have compassion for living creatures.

Great Indian Bustard

- **Characteristics:** It can easily be distinguished by its black crown on the forehead contrasting with the pale neck and head.
 - They breed mostly during the monsoon season when females lay a single egg on open ground.
 - They avoid grasses taller than themselves and dense scrub like thickets.
- **Distribution:** It was distributed throughout Western India, spanning 11 states, as well as parts of Pakistan.
 - It is found scattered throughout the Indian states of Rajasthan, Gujarat, Maharashtra, Andhra Pradesh, Karnataka and Madhya Pradesh.
- **Protection:** It is listed in Schedule I of the Indian Wildlife (Protection) Act, 1972.
 - It is categorized as Critically Endangered under the IUCN Red List of Threatened Species.
- **Habitat and Ecology:** They inhabit dry and semi-dry grasslands with dispersed bushes and patches of scrub.
 - The Breeding tends to occur in undisturbed or less degraded grassland sites.
 - They are omnivores, feeding on insects, grass seeds, berries, rodents and reptiles.

8.9 National Non-Ferrous Metal Scrap Recycling Framework, 2020

Recently, the Centre has issued a **framework for scrap recycling of non-ferrous metals**, including aluminium and copper, in a bid to cut down the scrap imports.

- The **metal ores and minerals are non-renewable natural resources**, which have an ever growing demand at global level and across sectors.



- The National Mineral Policy 2019 of Ministry of Mines **envisages making efforts towards augmenting supply of metals** by developing processes for recovery of metal through recycling.
- The stated policy is in line with **SDG 12** which states that:
 - The current material needs **do not lead to over extraction of resources** or to degradation of environment.
- The framework seeks to **use life cycle management approach** for better efficiency in mineral value chain process.

Classification of Non-ferrous Metals

- The Non-ferrous metals can be classified in broad categories as:
 - **Base metals** (e.g. aluminium, copper, zinc, lead, nickel, tin);
 - **Precious metals** (e.g. silver, gold, palladium, other platinum group metals);
 - **Minor metals including refractory metals** (e.g. tungsten, molybdenum, tantalum, niobium, chromium); and
 - **Specialty metals** (e.g. cobalt, germanium, indium, tellurium, antimony, and gallium)
- Aluminium is the **second most used metal** in the world after iron.
 - India is **third largest consumer of aluminum** in the world with a consumption of 3.7 MT in FY 2020.
- Copper is the **third most important base metal** by value, accounting for roughly a \$130 billion industry annually at global level.
- Zinc is the **fourth most widely used** metal across the globe.
 - According to International Lead and Zinc Study Group, around **13 million tonnes of Zinc is produced and consumed every year** in the world.
- Lead is one of the **most recyclable metals** in the world.

Why Recycling of Metal is an important consideration?

- **Social benefits:** India's mineral rich areas are under dense forests and inhabited by indigenous communities.



- The extraction pressures have contributed significantly to conflicts due to displacement, loss of livelihood and have led to opposition by tribal and other local communities including fishermen in coastal areas.
- The recycling would put fewer burdens on the need of extraction thereby offsetting some of the risks arising out of social conflicts.
- **Environmental benefits:** The mineral rich areas overlap with heavily forested areas in the country.
 - The reduced pressures from mining will help to reduce this ecological degradation and the reduced waste generation will not only reduce pollution associated with disposal but also save related costs.
- **Economic benefits:** In manufacturing sector alone, Indian companies could save up to Rs. 60,855 million by implementing resource efficiency measures, thereby improving competitiveness and profitability.
- **Employment Generation Potential:** The recycling and adoption of related innovative methods may altogether give rise to the need of setting up of new industries that can contribute significantly to employment generation.

Challenges in implementing recycling of metals framework

- The material recycling in India faces **multifarious challenges**, some of which are:
 - Lack of an organized / systematic scrap recovery mechanism;
 - Lack of sustained implementation of existing regulations on waste collection and recycling;
 - Lack of standardization of recycled products adversely affecting market adoption;
 - Import barriers adversely affecting input cost of operations;
 - Lack of public awareness on the necessity of recycling;
 - Lack of specific skill sets on responsible methods and technologies; and
 - Highly skewed business share between the formal and informal recyclers

Objectives of National Non-Ferrous Metal Scrap Recycling Framework

- To promote a **formal and well organized recycling ecosystem** by adopting energy



efficient processes for recycling leading to lower carbon footprints;

- To minimize the **effect of end of life products on landfills and environmental pollution** by promoting an environmentally sound processing and recycling system for secondary industry;
- To work towards **economic wealth creation, job creation and increased contribution to GDP** through metal recycling;
- To adopt **data based analysis and policy making at all stages of recycling chain** to determine and utilize opportunities available for enhancing extraction of non-ferrous metals;
- To promote 6Rs principles of **Reduce, Reuse, Recycle, Recover, Redesign and Remanufacture**;
- To produce **high quality scrap for quality secondary production** thus minimizing the dependency on imports; and
- To shift towards a circular economy in the coming years for **base metals, critical raw materials and other essential materials**

8.10 World Air Quality Report 2020

Recently, the Swiss technology company IQAir has released the **World Air Quality Report 2020**.

- The data for the ranking was derived from **ground-based government and private monitoring stations** and **only PM 2.5 pollutant levels** were evaluated.
- The **average concentration of PM 2.5** in Delhi in 2020 was 84.1 $\mu\text{g}/\text{m}^3$, the highest among the capital cities of 92 countries.
 - Delhi was followed by **Dhaka** and **Ulaanbaatar in Mongolia**.
- **India, Iran, and Nepal** are still the **only South Asian countries** with domestic government monitoring networks reporting real-time data to the public.
- India emerged as the **world's third most polluted country** after Bangladesh and Pakistan.
 - China was ranked **11th in the latest report** which is a deterioration from the 14th in the previous edition of the report.



- The report underlined that out of the 106 monitored countries, **only 24 met the World Health Organization annual guidelines for PM 2.5.**
- In terms of cities, **Hotan in China was the most polluted**, with an average concentration of 110.2 $\mu\text{g}/\text{m}^3$, followed by **Ghaziabad in Uttar Pradesh at 106.**

Performance of India under World Air Quality Report 2020

- Delhi has been ranked as the **world's most polluted capital** which placed India as having the third worst air quality out of 106 countries in 2020.
- The report highlighted that **22 of the top 30 most polluted cities globally** are in India.
 - The **other Indian cities** among the 30 most polluted cities in the world are:
 - Ghaziabad, Bulandshahr, Birsakh Jalalpur, Noida, Greater Noida, Kanpur, Lucknow, Meerut, Agra and Muzaffarnagar in Uttar Pradesh;
 - Bhiwadi in Rajasthan;
 - Faridabad, Jind, Hisar, Fatehabad, Bandhwari, Gurugram, Yamuna Nagar, Rohtak and Dharuhera in Haryana; and
 - Muzaffarpur in Bihar
- India continues to **dominate annual PM 2.5 rankings** by city.
- The major sources of India's air pollution include **transportation, biomass burning for cooking, electricity generation, industry, construction, waste burning, and episodic agricultural burning.**
 - Delhi, the world's second most populous city, is located **southeast of India's agricultural breadbasket**, where open burning is common.
- **Delhi experienced average PM 2.5 levels** of 144 $\mu\text{g}/\text{m}^3$ in November and 157 $\mu\text{g}/\text{m}^3$ in December, **exceeding the WHO's annual exposure** guideline by more than 14 times.
 - The **annual exposure limit of PM2.5 set by WHO is 10 $\mu\text{g}/\text{m}^3$** , lower than 40 $\mu\text{g}/\text{m}^3$ set under the Indian National Ambient Air Quality Standards.
- Within South Asia, Indian cities of **Ghaziabad, Bulandshahr, Birsakh Jalalpur,**



Bhiwadi and Noida were cited as the top five most polluted regional cities.

- The **South Indian cities remained above the daily WHO limit of 25 µg/m³** for most of 2020 and registered a far better air quality than the cities situated in northern India.
- **None of the Indian cities** touched the WHO-accepted annual limit of 10 µg/m³.

What is World Air Quality Report?

- It is an **annual report** which is compiled by **Swiss technology company IQAir**.
- It **measures air quality levels** based on the concentration of lung-damaging airborne particles known as PM2.5.
- The IQAir is specialized in **protection against airborne pollutants**, and developing air quality monitoring and air cleaning products.

PM2.5

- It refers to the **ambient airborne particles of size 2.5 micrometres** that are emitted from various sources.
- PM2.5 is linked to **negative health effects** such as cardiovascular disease, respiratory illness and premature mortality.

8.11 Seabuckthorn Plantations in Himachal Pradesh

Recently, the Himachal Pradesh government has decided to **start planting seabuckthorn in the cold desert** areas of the state.

Seabuckthorn

- **Characteristics:** It is a **shrub** which produces an **orange-yellow coloured edible berry**.
 - It has the unique characteristic to **grow in marginally fertile soil of cold desert**.
 - The shrub can withstand **extreme temperature from – 43°C to +40°C** and is considered drought resistant.
- **Distribution:** In India, it is **found above the tree line in the Himalayan region**,

generally in dry areas such as the cold deserts of Ladakh and Spiti.

- In Himachal Pradesh, it is locally called '**chharma**' and grows in the wild in **Lahaul and Spiti and parts of Kinnaur**.
- According to the Seabuckthorn Association of India, around 15,000 hectares in **Himachal, Ladakh, Uttarakhand, Sikkim and Arunachal Pradesh** are covered by this plant.

Benefits of Seabuckthorn Plantations

- **Medicinal Properties:** It has been widely used for treating stomach, heart and skin problems.
 - Its fruit and leaves are rich in vitamins, carotenoids and omega fatty acids, among other substances.
 - It can help troops in acclimatizing to high-altitude.
- **Economic Benefits:** It is an important source of fuelwood and fodder.
 - It is used in making juices, jams, nutritional capsules etc. which adds to its commercial value.
- **Ecological Benefits:** It is a soil-binding plant which prevents soil-erosion, checks siltation in rivers and helps preserve floral biodiversity.
 - It is a good alternative for protecting the local ecology where willow trees are dying in large numbers due to pest attack.

8.12 Gregarious Bamboo Flowering in Wayanad Wildlife Sanctuary (WWS)

Recently, the '**gregarious flowering of bamboo**' inside the **Wayanad Wildlife Sanctuary (WWS)** may pose a threat to wildlife in the Nilgiri biosphere.

Why Gregarious Bamboo Flowering is a Threat to Wildlife?

- The bamboo groves in the Wayanad forest are the **mainstay of herbivores** in the Nilgiri biosphere during summer.
- The gregarious flowering may **adversely affect migration of lower herbivores** owing to the mass destruction of bamboo groves after the flowering.
- The farmers living near the sanctuary fear that the destruction of bamboo groves



may worsen the increasing man-animal conflict.

- **Thorny bamboo** (Bamboosa Bambos) is a **monocarpic (flowering only once)** plant belonging to the Poaceae family (grass family) and its flowering cycle varies from 40 to 60 years.
- Bamboos are **perennial grasses** classified under the sub-family bambusoideae.
- The bamboo flowering is considered a **bad omen in several northeastern states** of India, especially when accompanied by an increase in rodent population.

Wayanad Wildlife Sanctuary (WWS)

- It is contiguous to the **protected areas of Nagarhole and Bandipur of Karnataka** on the northeast and Mudumalai of Tamil Nadu on the southeast.
- It is an integral part of the **Nilgiri Biosphere Reserve**.
- It was **declared as a Sanctuary** in 1973.
- The highest peak of WWS is **Karottimala**.
- The forest types include **South Indian Moist Deciduous forests, West coast semi-evergreen forests and plantations of teak, eucalyptus and Grewelia**.
- **Kuruma, Paniya, Kattunaicka, Urali, Kurichiar and Adiyar** are some of the tribal communities that inhabit this area.

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8.13 Applications to predict Weather Phenomena

Recently, the **National Weather Forecasting Centre** of the India Meteorological Department (IMD) has provided that the **Western Himalayan Region** will witness **light to moderate scattered to widespread rainfall** under the influence of Western Disturbances.

Applications to predict Weather Phenomena

Mausam App

- It has been designed and developed jointly by the **International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)**, the **Indian Institute of Tropical Meteorology (IITM)**, Pune and the **India Meteorological Department (IMD)**.



- It will provide **city-wise weather forecasts, nowcasts and other warnings.**
- It will provide **current weather information**, including temperature, humidity, wind speed and direction, for 200 cities.
- It will also issue **nowcasts, three-hourly warnings, for local weather phenomena** and their intensity for about 800 stations and districts.
- It has a system which will **issue colour-coded alerts (red, yellow, orange) for all districts** twice a day for up to five days to warn people ahead of dangerous weather.

Meghdoot App

- It gives out **weather forecast-based agro advisories to farmers** in different regions in their own languages.
 - The advisories include **wind speed, its direction, humidity and rainfall** every three hours.
- It provides **crop and livestock advisories for selected locations** every Tuesday and Friday.
- It is developed by the **India Meteorological Department, Indian Institute of Tropical Meteorology and Indian Council of Agricultural Research**
- The advisories come in **10 languages**, including Marathi, Bengali, Gujarati, Odia and Hindi.
- It also advises farmers on how to **keep the livestock healthy, detailing the preferable amount of fodder** that can be given.
- Another feature is '**Past weather**' using which one can track weather patterns in the selected region of the past seven days.

Damini App

- It is a Mobile App on **Lightning Location Network.**
- It has been developed by **Indian Institute of Tropical Meteorology.**
- It gives exact location of **current lightning strikes, probable locations of impending lightning** around area of 40 sq.km and movement and direction of thunderstorm.
- It also lists **precautionary steps to be taken during lightning** and some general



information on lightning.

8.14 India prepares to welcome cheetahs from Africa

Recently, the Ministry of Environment has announced that **India will receive its first batch of the large cats from Africa** by the end of December 2021.

- In 2019, the Supreme Court gave the **green signal to the Union Government** for the relocation cheetahs from Africa to India.
- The expert committee set up by the Ministry of Environment, Forests and Climate Change have completed the **assessment of the sites for relocation**.
- The **six sites**, which had previously been assessed in 2010, have now been re-assessed by WII i.e.

• **Mukundara Hills Tiger Reserve and Shergarh Wildlife Sanctuary** in Rajasthan; and

• **Gandhi Sagar Wildlife Sanctuary, Kuno National Park, Madhav National Park and Nauradehi Wildlife Sanctuary** in Madhya Pradesh

- The expert committee has identified **Kuno National Park as being ready for the relocation**.

Key Highlights

- **Namibia and South Africa** are the two countries with the **highest cheetah populations** in the world.
- It is the first time in the world that a **large carnivore will be relocated** from one continent to another.

Cheetah

- **Cheetah (Acinonyx jubatus)** is a large cat native to **Africa and Central Iran**.
- It is the **fastest land animal** which is capable of running at 80 to 128 km/h.
- The animal is believed to have disappeared from the country when **Maharaja Ramanuj Pratap Singh Deo of Koriya hunted and shot the last three recorded Asiatic cheetahs** in India in 1947.



- Cheetah was **declared extinct from India in 1952** and is considered the only large mammal that has gone extinct since the country's independence.
- According to the International Union for the Conservation of Nature's (IUCN) Red List, cheetah's population is '**vulnerable**'.
- Cheetah has been protected under **Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)** since 1 July 1975.

Kuno National Park

- It spans across 261 square kilometres and is a part of the **Kuno wildlife division** with an area of 1,235 square kilometres.
- It has a healthy population of **chital, sambar, nilgai, wild pig, chinkara and cattle**.
- The **leopard and striped hyena are the only larger carnivores within the National Park**, with the lone tiger having returned to Ranthambore earlier this year.

8.15 Eagle Shark

Recently, the scientists have discovered a new species of **Eagle Shark**.

- It is an **ancient winged shark** which **fed on plankton eons** before the emergence of giant manta rays.
- The species, **Aquilolamna milarcae**, which lived around 93 million years ago, was discovered in the **north east of Mexico**.
- The name '**Aquilolamna**' translates into "**eagle shark**" given it had slender pectoral fins, which "mainly acted as an effective stabilizer".
 - It displays many features similar to **modern manta rays**, notably **long, slender fins** and a mouth seemingly adapted to filter-feeding.
- It is now the **second known plankton eating fish discovered** from the last epoch when dinosaurs still stalked the Earth.
 - The first category of **large plankton feeders** in the Cretaceous period was a group of large bony fish known as **pachycormidae**.
 - **Pachycormidae died out in the extinction** event following the

Chicxulub meteor strike 66 million years ago.

- The eagle sharks were **little by little replaced by manta rays and devil rays**, which developed at the beginning of the Tertiary period” after the extinction.
- It measured around **1.65 metres (5.4 feet) in length** and has a fin span of **1.9 metres (6.3 feet)**.

Key Highlights of the study

- The researchers have highlighted that the “**bizarre**” creature probably swam very **slowly** and was unlikely to have been able to hunt for food.
- The report further notes that **Aquilolamna lived in the open ocean** at a time when it was populated with marine reptiles and squid relatives with large shells called ammonites.
- Aquilolamna is indeed a **perfect example of an extinct creature** revealing an unexpected new morphology.
- It strongly suggests that other **outstanding body shapes and morphological adaptations** may have existed through the evolutionary history of sharks.
- Aquilolamna is not the **only strange shark and many unique sharks** of all shapes and size have swum the Earth’s oceans.

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8.16 World Water Day

Recently, the **World Water Day** was observed globally on **March 22nd**.

- The resolution to observe World Water Day was **first adopted by the UN General Assembly** in 1992.
- The adoption of resolution **declared March 22 as World Water Day** and is celebrated around the world since 1993.

World Water Day

- Its purpose is to highlight the **importance of water and raising awareness about the water crisis** that the world faces.
- The main focus of the day is to “**support the achievement of sustainable**



development goal (SDG) 6: water and sanitation for all by 2030”.

- The theme of World Water Day 2021 is “**Valuing Water**” and has been chosen to highlight the value of water in our daily lives.

Water in the Indian Constitution

- In the Constitution, water is a matter included in **Entry 17 of List-II i.e. State List.**
 - It is subject to the **provision of Entry 56 of List-I i.e. Union List.**
- **Under Article 246**, the Indian Constitution allocates responsibilities of the States and the Centre into three lists i.e. Union List, State List, and Concurrent List.
- **Water is under Entry 17 of the State List**, which says that Water, water supplies, irrigation and canals, drainage and embankments, water storage and water power subject to the provisions of entry 56 of List I.

8.17 Failure of first inter-state tiger relocation project

Recently, a tigress shifted as part of **India’s first inter-state translocation project** in 2018 from Madhya Pradesh to Odisha has returned home after spending 28 months in Satkosia Tiger Reserve

What is Inter-state Tiger Relocation Project?

- It was **initiated in 2018** wherein two big cats, a **male (Mahavir) from Kanha Tiger Reserve** and a **female (Sundari) from Bandhavgarh** from Madhya Pradesh were relocated to **Satkosia Tiger Reserve in Odisha.**
- The relocation was meant to serve **two purposes**:
 - Reducing tiger population in areas with excess tigers to majorly reduce territorial disputes; and
 - To reintroduce tigers in areas where the population has considerably reduced due to various reasons
- It was started under the project of “**augmentation and recovery of tiger population in Satkosia tiger reserve**”.
- Under the project, **six tigers (three pairs) from different reserves of Madhya Pradesh** were to be sent to Odisha.



- The two **key factors** were considered for choosing the animal:
 - First, a **dispersing young animal** which is to find a new; and
 - Second, an **adult transient** which was yet to establish any territory

Outcome of Inter-state Tiger Relocation Project

- The arrival of the tigers was followed by **severe protests by villagers** living on the fringes of the reserve.
- The **forest department officials were attacked** and their offices burnt down by irate villagers.
- It was the **outcome of displacing tribals from Raigoda** in the core area to Saruali on the outskirts of the reserve.
- The villagers feared the **big cats would endanger their livelihoods, lives and livestock**s.
- They also alleged that they were **not consulted or informed prior to the translocation**.

Reasons for failure of Inter-state Tiger Relocation Project

- The major reason which contributed to the failure of the project was the **lack of confidence and trust building** between the forest department and the villagers.
- The **already existing female tigress in the core area** did not allow the presence of another tigress and chased her away.
- **Sundari's proximity to human habitations** which are in abundance even close to the core area in Satkosia could have led to the human-animal conflict.
- The field staff and tiger reserve management were **under-prepared for the translocation** of the big cats.
- The local communities were not taken into confidence nor conveyed the benefits from tourism that tigers could bring them.
- The **protection was not up to the mark** and the only undisturbed, prey rich habitat was already occupied by the old resident tigress causing Sundari to occupy human dominated, disturbed areas.

Satkosia Tiger Reserve



- It is comprised of two adjoining Sanctuaries of central Odisha named as **Satkosia Gorge Sanctuary** and **Baisipalli Sanctuary**.
 - The **Mahanadi River** is flowing through a gorge stretching 22 km.
- It **spreads across four districts of Odisha** and has as its core area 523 sq km.
- It was declared as a **Tiger Reserve in 2007**.
- It comes under **Gadjet hills sub-division of Chhotnagpur Plateau Biotic Provinces** and **Eastern Ghats Biotic Provinces** under **Deccan Peninsular Biogeographic zone**.
- Satkosia is the **meeting point of two bio-geographic regions** of India i.e. the **Deccan Peninsula and the Eastern Ghats**, contributing immense biodiversity.

8.18 National Clean Air Programme (NCAP)

Recently, a Memorandum of Understanding (MoU) was signed for 132 identified cities for implementation of city specific action plans under National Clean Air Programme (NCAP).

National Clean Air Programme (NCAP)

- It is a **long-term, time-bound, national level strategy** to tackle air pollution problem across the country in a comprehensive manner.
- The tentative national level target of **20%–30% reduction of PM2.5 and PM10 concentration by 2024** is proposed under the NCAP.
- The expansion of **ambient air quality network, source apportionment studies, public awareness, grievance redressal mechanism** and sector specific action points are part of city action plans.
- Under NCAP, **122 non-attainment cities have been identified** across the country based on the Air Quality data from 2014-2018.
- The air quality of cities is monitored by **State Pollution Control Boards** which publishes their results from time to time.

Objectives of National Clean Air Programme (NCAP)

- To **augment and evolve effective and proficient ambient air quality monitoring network** across the country for ensuring comprehensive and reliable



database;

- To have **efficient data dissemination and public outreach mechanism** for timely measures for prevention and mitigation of air pollution and for inclusive public participation in both planning and implementation of the programmes and policies of government on air pollution; and
- To have **feasible management plan** for prevention, control and abatement of air pollution

Significance of National Clean Air Programme (NCAP)

- The city action plans have been prepared to **control specific air pollution sources** through multidimensional actions by brining several implementation agencies together.
- The implementation of the city specific action plans are **regularly monitored by Committees at Central and State level** namely Steering Committee, Monitoring Committee and Implementation Committee.
- It aims at a **right mix with the existing policies and programmes** which include the National Action Plan on Climate Change (NAPCC) and other government initiatives related to climate change.
- It **emphasize on increasing number of monitoring stations** in the country including rural monitoring stations, technology support.

What does National Clean Air Programme (NCAP) need to be more effective?

- **Need stronger mandate:** It is necessary to create a firm mandate with a strong legal back up for cities and regions to implement NCAP in a time bound manner for effective reduction.
- **Higher ambitions:** It needs to be told with a clear rider that NCAP should not become only a top-down prescriptive approach.
 - The NCAP will have to create enough room for tighter action that can be even stronger than the common minimum national programme as defined by NCAP.
- **Need litmus test for effectiveness:** NCAP has certainly helped kick start the much-awaited good practice of setting air pollution reduction targets.
 - It is necessary to find and outline our very own regulatory and market-



based solutions without being draconian.

- **Need fiscal strategy:** NCAP cannot be sustainable nor can it gain strength or make a difference on a longer-term basis if it does not have a clear fiscal strategy.

8.19 African Elephant

Recently, the **International Union for Conservation of Nature (IUCN)** has found that the **forest elephant and savanna elephant** are threatened with extinction.

- The report stated that poaching and the “**silent killer**” of **human-driven habitat loss** have caused sharp declines.
- The IUCN highlights that **forest elephant numbers falling by 86%** in the past 31 years and **savanna elephants by about 60%** in the past half-century.
- The report has opted to assess the **African mammal as two separate species** following genetic studies of populations.
- The IUCN has found that the **forest and savanna elephants split from each other 5–6m years ago**, at about the same time humans separated from chimpanzees.
- The **forest elephant** has been classified by the IUCN as **critically endangered**, while the **savanna elephant is listed as endangered**.

- The African elephant had **previously been categorised as vulnerable**.

Forest and Savanna Elephants

- The majority of critically endangered forest elephants are in the **Congo basin in Gabon, West Africa**, while **Botswana has the largest population of savanna elephants**.
- The forest elephants are **generally smaller in size, have oval-shaped ears, straighter tusks and longer gestation periods**.
- The savanna elephants **live in larger family groups; have bigger ears and different-shaped skulls**, among other differences.
- The **habitat range of both species rarely crosses over in Africa**, with **savanna elephants preferring grasslands and deserts**, while the **forest elephant is mainly found in tropical rainforests**.

Range States for the Forest Elephant

- Benin, Burkina Faso, Cameroon, Central African Republic, Congo, Democratic Republic of Congo, C ôte d'Ivoire, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Nigeria, Niger, Senegal, Sierra



Leone, Togo, and Uganda.

Range States for the Savanna Elephant

- Angola, Botswana, Burundi, Chad, Eritrea, Ethiopia, Kenya, Malawi, Mozambique, Namibia, Rwanda, Somalia, South Africa, Sudan, Swaziland, Tanzania, Zambia, and Zimbabwe.

African Elephant

- African elephants are the **largest land animals on Earth**.
- They are **slightly larger than their Asian cousins** and can be identified by their larger ears that look somewhat like the continent of Africa.
- African elephants are a **keystone species**, meaning they play a critical role in their ecosystem as they are known as ecosystem engineers.
- African elephants are categorized into **savanna elephants and forest elephants**.
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) **banned the global commercial ivory trade in 1989**.



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