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ART AND CULTURE

Despite ASI attempts, a group once again forces entry into J&K Martand sun temple

- Martand Sun Temple is a Hindu temple located near the city of Anantnag in the Kashmir Valley of Jammu and Kashmir.
- It is dedicated to the Sun God. Martand is another Sanskrit synonym for Surya.
- It was built by King Lalitaditya Muktapida around the 8th Century CE. Lalitaditya Muktapida was the third ruler of the Karkota Dynasty.

Features:

- It has a unique architecture where the local Kashmiri style is blended with the architectural styles of Gupta, Chinese, Gandhara, Roman, and Greek.
- The temple is located on top of a plateau and has been constructed entirely out of stone.
- It stands in the middle of a large courtyard with 86 fluted columns. The courtyard is connected to the main shrine, where Sun God's idol was installed.
- The construction of the main shrine was such that during most of the days' time, especially during sunrise and sunset, the rays would directly fall on the idol.
- The central shrine, or vimana, stands tall at around 60 feet. It features intricate carvings and sculptures that depict various Hindu gods and goddesses.

- There are 84 smaller shrines around the main Sun Temple. They are lined along the perimeter of the complex.
- The temple is believed to have been demolished by Sultan Sikandar Shah Miri, who ruled Kashmir from 1389 to 1413.

Ajanta & Ellora now part of the Swadesh Darshan scheme

- The Ministry of Tourism included the UNESCO World Heritage sites of Ajanta and Ellora caves in Chhatrapati Sambhaji Nagar in its Swadesh Darshan Scheme II.
- Ajanta and Ellora caves, considered to be one of the finest examples of ancient rock-cut caves, are located in Chhatrapati Sambhaji Nagar (Aurangabad) in Maharashtra.
- The Ajanta and Ellora cave complex is adorned with beautiful sculptures, paintings, and frescoes and includes Buddhist monasteries and Hindu and Jain temples.
- The Ajanta caves are 29 in number and were built between the 2nd century BC and the 6th century AD, whereas the Ellora caves are more spread out and 34 in number and date to the period between the 6th and 11th Centuries AD.
- Ajanta Caves are mostly Buddhist sites and were used as a retreat by Buddhist monks.
- The caves consisted of cells for meditation, assembly halls for discussions, and stupas for rituals.
- Ellora has a better mix of Hindu, Jain, and Buddhist structures.

- The caves are adorned with sculptures that reflect the spiritual beliefs of the time.
- The sculptures range from depictions of deities, celestial beings, and mythological scenes to portraits of royalty and everyday life.
- The Kailash Temple in Ellora is an architectural marvel. It is one of the largest monolithic structures in the world.
- The structure is carved vertically from a single rock.

Key Facts about the Swadesh Darshan Scheme

- It was launched in 2015 by the Ministry of Tourism, Government of India, to develop sustainable and responsible tourism destinations in the country.
- It is a 100% centrally funded
- Under the scheme, the Ministry of Tourism provides financial assistance to State governments, Union Territory Administrations, or Central Agencies to develop tourism infrastructure in the country.
- Operation & Maintenance (O&M) of the projects sanctioned under the Swadesh Darshan Scheme is the responsibility of the respective State Government/UT Administration.

Swadesh Darshan 2.0:

- The Ministry of Tourism has revamped its Swadesh Darshan scheme as Swadesh Darshan 2.0 (SD2.0) for the development of sustainable and responsible tourist destinations, covering tourism and allied infrastructure, tourism services, human capital development, destination management, and promotion, backed by policy and institutional reforms.

- The objective of the Swadesh Darshan 2.0 scheme envisages an increase in private-sector investment in tourism and hospitality.
- It may help in increasing Public Private Partnerships (PPP) in the field of tourism and the operation and maintenance of the assets created under the scheme.

Sangeet Natak Akademi to have South India centre in Hyderabad

About Sangeet Natak Akademi:

- It is India's national academy of **music, dance and drama**.
- It was created by a resolution of the **Ministry of Education**, with P.V. Rajamannar as its first Chairman.
- It was set up in 1953 for the **preservation and promotion** of the vast **intangible heritage of India's** diverse culture expressed in forms of music, dance and drama.
- Presently, it is an Autonomous Body of the **Ministry of Culture**.
- The **Chairman** of the Akademi is **appointed by the President of India** for a term of five years.
- It is fully funded by the Government for the implementation of its schemes and programmes.

Aims and objectives:

- To **coordinate** the activities of regional or State Academies of dance, drama and music;
- **To promote research** in the fields of Indian dance, drama and music and for this purpose, to establish a library and museum, etc.;

- To **co-operate** with such similar academies as there may be and other institutions and associations for the furtherance of its objectives and for the enrichment of Indian culture as a whole;
- To **encourage the exchange of ideas** and enrichment of techniques between the different regions in regard to the arts of dance, drama and music;
- To encourage, where necessary, the establishment **of theatre centres**, on the basis of **regional languages**, and cooperation among different theatre centres;
- The **Sangeet Natak Akademi Awards** are the highest national recognition conferred on practising artists.
- The Akademi also confers Fellowships on eminent artists and scholars of music, dance and drama; and has in 2006 instituted annual awards to young artists – the **Ustad Bismillah Khan Yuva Puraskar**.

PM Narendra Modi to inaugurate the first Hindu temple in Abu Dhabi during his two-day visit starting Feb 13

About Bochasanwasi Akshar Purushottam Swaminarayan Sanstha (BAPS):

- BAPS is a **socio-spiritual Hindu faith** with its **roots in the Vedas**.
- It is **based on the Vedic teachings** propagated by **Bhagwan Swaminarayan** (1781-1830 CE).
- It was formally **established in 1907 CE by Brahmaswarup Shastriji Maharaj**.
- Founded on the pillars **of practical spirituality**, the BAPS reaches out far and wide to **address spiritual, moral and social challenges** and issues.

- **No Alcohol, No Addictions, No Adultery, No Meat, No Impurity of body** and mind are the **five-lifetime vows of BAPS followers**.
- Its **global network of mandirs and centres** hosts many moral, social, cultural, and spiritual activities.
- **Education and women development are other focus areas**, with many schools, hostels, and community development activities targeted at women being managed by BAPS.
- It is also **engaged in a variety of humanitarian activities** that include services **in times of natural calamities**, primary schools, students' hostels, hospitals, diagnostic camps, anti-addiction drives, environment-awareness programs, tribal uplift, and literacy campaigns.
- BAPS is an **NGO with a Consultative Status with the Economic and Social Council of the United Nations**.

Hastsal Minar: Shrouded in mystery, a Mughal-era symbol of glory is now a picture of neglect

About Hastsal Minar:

- **Location:** It is located in a small village in **western Delhi**.
- Its construction was finished in 1634 during the reign of Mughal emperor Shah Jahan.
- It is also known as **Mini Qutab Minar**.
- Among the locals, it is also known as Hastsal Ki Laat and Kaushal Minar.

Architecture

- It was constructed using **lakhori bricks and clad with red sandstone**.

- The minar is 17 metres (five storeys) tall, standing on a square platform and with an **octagonal body**.
- A staircase inside the five-storey tower led to the domed Chhatra pavilion at the top.
- It has three storeys, each with a reducing diameter, and is accessible through a narrow staircase
- Shah Jahan utilised Hastsal as one of his hunting lodges during the 17th century.

Present condition:

- In 2018, the minaret was deemed as **Grade A in heritage** value and was given permission to be conserved under Phase IV of the Delhi government's project to protect lesser-known monuments in the capital.

Dhokra Shilpkala: How Chhattisgarh's Ocher Studio is helping to preserve India's 4,000-year-old craft

About Dhokra Shilpkala:

- The word "Dhokra" is believed to be derived from the **Dhokra Damar tribes**, who are the traditional metal smiths of **Central India**.
- The origins of Dhokra Shilpkala can be traced back to the tribal communities residing in the regions of **Chhattisgarh, Jharkhand, West Bengal, and Odisha**, where it evolved as an integral part of their cultural and religious practices.
- **Technique and Process:** What sets Dhokra Shilpkala apart is its remarkable technique of **metal casting**, which involves using the **lost wax casting method**, also known as cire perdue.

Artistry and Designs:

- Its design has rustic charm and the organic nature of its designs.
- Artisans draw inspiration **from nature, mythology, and everyday life**, incorporating motifs such as **animals, birds, deities, and tribal symbols** into their creations.
- From miniature figurines and jewellery to larger-than-life sculptures and functional objects, Dhokra Shilpkala encompasses a wide range of artistic expressions.
- **Issues:** The rapid pace of **urbanisation**, coupled with the rise of **mechanised production techniques**, has threatened the livelihoods of traditional artisans and endangered this ancient craft.

What is the Lost wax method?

- The process begins with the creation of a **clay core**, which serves as the base for the final metal sculpture.
- Artisans then coat this clay core with **a layer of beeswax**, meticulously sculpting the intricate designs and patterns by hand.
- Once the wax model is complete, it is covered with layers of clay, forming a mould around the wax pattern.
- The entire structure is then **heated, allowing the wax to melt and drain out**, leaving behind a cavity in the shape of the original sculpture.
- Molten metal, typically a combination of brass and bronze, is poured into this cavity, filling the space left by the melted wax.
- After cooling and solidifying, the clay mould is broken away, revealing the final metal casting.

Kotravai sculpture from Pallava period unearthed near Ulundurpet

About Pallava Dynasty:

- The Pallava Dynasty was a famous power in **South India** that existed **between the 3rd and 9th Centuries**.
- They ruled the northern **parts of Tamil Nadu**, parts of **Karnataka, Andhra Pradesh, and Telangana**, with **Kanchipuram as their capital**.
- The Pallavas **supported Buddhism, Jainism, and the Brahminical faith** and were patrons of music, painting, and literature.
- **Origin:**
 - Pallava Dynasty was **earlier feudatories of Andhra Satavahanas**. Pallavas **grew to be autonomous** subsequent to their decline at Amaravati.
 - They progressively moved southward and **instituted their capital at Kanchipuram in the 4th century CE**.
 - The **rule of Mahendravarman I** (571 - 630 CE) and **Narasimhavarman I** (630 - 668 CE) **witnessed the augment in the wealth and vigour** of the Pallava realm.
- Chinese traveler Hiuen Tsang portrays Bodhidharma, the founder of the Chan (Zen) school of Buddhism in China, as a prince of the Pallava empire. Tsang traveled to Kanchipuram during the Pallava era and praised their benevolent decrees.
- **Architecture:**
 - The Pallava Dynasty was typically distinguished for their benefaction of **Dravidian architecture**.
 - They were the most **noted for temple architecture**. They were instrumental in the **transition from rock-cut architecture to stone temples**.

- The most noted architectural accomplishments of the Pallavas are at **Mahabalipuram**, which, under the Pallava reign, **became an important centre of art, architecture**, and literature.
- The **Kailasanatha Temple in Kanchipuram** and the **Shore Temple** were built by **Narasimhavarman II**.
- Of all the temples, **Kailasanatha and Vaikuntaperumal** are best known for their architectural virtues.
 - The **Vaikuntaperumal shrine** is a **multi-storied temple** built in the 8th century A.D and is acknowledged for the **sculptures illustrating the history of the Pallavas**.
- **Religion:** They adopted the **local religion Shaivism**, and became **Dravidians**.
- **Combats of the Pallava Dynasty:**
 - Throughout their supremacy, they were in **steady conflict with both the Chalukya Dynasty in the north and the Tamil kingdoms of Chola and Pandyas** in the south.
 - The Pallavas were occupied in **continuous combat with the Chalukyas of Badami** and lastly **concealed by the Chola kings in the 8th century CE**.
- **Decline:**
 - The **rise of Rashtrakutas** had seen the decline of the Pallava Dynasty.
 - **Vijayalaya**, the **Chola King**, **completely overpowered Aparajitavarman**, the **last Pallava King**, in 897 AD

After 30 years, Buddha relics travel to Thailand

About Kapilvastu Relics:

- The relics were excavated from Piprahwa in the Siddharthnagar District of **Uttar Pradesh**, an erstwhile part of the **ancient city of Kapilavastu**.
- A British colonial engineer and an estate manager **William Claxton Peppé** discovered an inscribed casket in 1898 at the stupa site in Piprahwa.

- The **inscription on the casket's lid refers** to the **relics of Buddha and his community, the Sakya.**
- **History:**
 - At the age of 80, according to Buddhist beliefs, **Buddha attained salvation** in Uttar Pradesh's **Kushinagar district.**
 - The Mallas of Kushinagar cremated his body with ceremonies befitting a universal king.
 - His relics from the funeral pyre were collected and **divided into eight shares** to be distributed among the Ajathsatrus of Magadha, the Licchavis of Vaishali, the **Sakyas of Kapilavastu**, Mallas of Kushinagar, Bullies of Allakappa, the Mallas of Pava, the Koliyas of Ramagrama and a Brahmana of Vethadipa.
 - The purpose was **to erect stupas over the sacred relics.**
 - Two more stupas came up — one **over the urn** in which the relics had been collected and the other **over the embers.**
 - Thus, stupas erected over the bodily relics of Buddha (Saririkastupas) are the earliest surviving Buddhist shrines.
 - It is stated that **Ashoka** (circa 272–232 BCE) being an ardent follower of Buddhism, opened -up seven of these eight stupas, and collected a major portion of the relics for enshrinement within innumerable (84000 stupas) built by him in an effort to **popularise Buddhism and spread the dharma.**

How Rani Chennamma's revolt against the British inspired a national campaign for women's rights

About Rani Chennamma:

- Chennamma was born **in Kakati**, a small village in today's **Belagavi district of Karnataka**.
- She became queen of Kittur (now in Karnataka) when she married **Raja Mallasarja** of the Desai family.
- After Mallasarja's death in 1816, his eldest son, **Shivalingarudra Sarja**, ascended the throne.
- Before his death in 1824, Shivalingarudra adopted a child, Shivalingappa, as the successor.
- However, the British East India Company refused to recognise Shivalingappa as the successor of the kingdom **under the 'doctrine of lapse'**.
- **Key facts about the Kittur Rebellion**
 - **John Thackery**, the British official at Dharwad, launched an attack on Kittur in October **1824**.
 - In this first battle British forces lost heavily and the Collector and political agent, St. John Thackeray was killed by the Kittur forces.
 - Two British officers, **Sir Walter Elliot and Mr. Stevenson**, were also taken as hostages.
 - However, the British army again attacked the Kittur Fort and captured it.
 - Rani Chennamma and her family were imprisoned and jailed at the fort in Bailhongal, where **she died in 1829**.
- **What was the doctrine of Lapse?**
- Under the doctrine of Lapse, any **princely state without a natural heir** would collapse and would be **annexed by the Company**.
- The princely state of Kittur was taken over by the British **East India Company in 1824** by imposing the "doctrine of lapse", even before it was officially

articulated by Lord Dalhousie, Governor General for the British East India Company, between 1848 and 1856.

Badami Chalukya temples, writing found in Nalgonda

About the Chalukya dynasty:

- The Chalukyas **ruled over** the central Indian plateau of the **Deccan between the sixth and twelfth centuries**.
- During that period, they **ruled as three closely related but individual dynasties**.
- The **Chalukyas of Badami**, who ruled **between the sixth and the eighth centuries**, and the two sibling dynasties of the **Chalukyas of Kalyani, or the Western Chalukyas**, and the **Chalukyas of Vengi, or the Eastern Chalukyas**.
- **Key Facts about Badami Chalukyas**
- **Origin:**
 - **Pulakesi I established the Chalukya dynasty in 550.**
 - Pulakesi I **took Vatapi (Badami in Bagalkot district, Karnataka) under his control and made it his capital.**
 - Historians refer to Pulakesi I and his descendants as the Chalukyas of Badami.
- They **ruled over an empire** that **comprised the entire state of Karnataka and most of Andhra Pradesh** in the Deccan.
- **Pulakesi II** had been perhaps the **greatest emperor of the Badami Chalukyas**.
 - Pulakesi II **extended the Chalukya Empire up to the northern extents of the Pallava kingdom** and **halted the southward march of Harsha by defeating him on the banks of the river Narmada.**
 - He then **defeated the Vishnukundins** in the southeastern Deccan.

- **Pallava Narasimhavarman reversed that victory** by attacking and **occupying the Chalukya capital, Vatapi (Badami).**
- **Hiuen-Tsiang, a Chinese traveller, had visited the court of Pulakesi II.**
- Later, **Persian emperor Khosrau II exchanged ambassadors with Pulakesi II.**
- The Badami Chalukya dynasty went into a **brief decline following the death of Pulakesi II** due to internal feuds.
- It **recovered during the reign of Vikramaditya I**, who succeeded in pushing the Pallavas out of Badami and restoring order to the empire.
- The empire **reached its peak during the rule of** the illustrious **Vikramaditya II**, who **defeated Pallava Nandivarman II and captured Kanchipuram.**
- The **Rashtrakuta Dantidurga overthrew the last Badami Chalukya king, Kirtivarman I, in 753.**
- At their peak, they ruled a vast empire stretching from the Kaveri to the Narmada.
- **Art and Architecture:**
 - It saw the evolution and proliferation of a **new style of architecture** known as **Vesara**, a combination of the South Indian and the North Indian building styles.
 - The **rock-cut temples of Pattadakal, a UNESCO World Heritage Site, Badami, and Aihole** constitute their most celebrated monuments.
- **Government:**
 - The **army consisted of infantry, cavalry, elephant corps**, and a powerful **navy**.
 - **Hiuen-Tsiang mentions** that the Chalukya **army had hundreds of elephants** intoxicated with liquor prior to the battle.

- **Rashtrakuta inscriptions use the term Karnatabalato refer to their powerful armies.**
- The government **levied taxes called Herjunka, Kirukula, Bilkode, and Pannaya.**
- The **empire was divided into Maharashtra**(provinces), then into smaller **Rashtrakutas** (Mandala), **Vishaya** (district), and **Bhoga** (group of ten villages).
- Many **autonomous regions existed, ruled by feudatories** like Alupas, Gangas, Banas, and Sendrakas.
- **Local assemblies looked after local issues.**
- **Groups of mahajanas(learned brahmins) looked after agraharas** (like Ghatika, a place of higher learning), like the ones at Badami (2000 mahajans) and Aihole (500 mahajanas).
- **Coinage:**
 - The Badami Chalukyas minted coins of a **different standard compared to the northern kingdoms.**
 - The coins **had Nagari and Kannada legends.** They minted coins with **symbols of temples, lion or boar facing right, and the lotus.**
- **Religion:**
 - They **initially followed Vedic Hinduism.**
 - Later, **from the time of Vikramaditya I**, the people took an **inclination towards Shaivism**, and sects like Pashupata, Kapalikas, and Kalamukhas existed.
 - They actively **encouraged Jainism**, as attested to by one of the Badami cave temples and other Jain temples in the Aihole complex.

Nihang Sikh Warriors Join Farmers Protest, Spotted Practising With Spears and Shields

About Nihang Sikhs:

- Nihangs, originally known as **Akalis or Akali Nihangs**, are a distinct **warrior order within the Sikh community**, known for their **martial traditions, unique attire**, and adherence to a **specific code of conduct**.
- They have a rich history **dating back to the times of Guru Gobind Singh**, the 10th Sikh Guru.
- They are easily **recognizable by their distinctive blue attire**, which includes blue robes, and high turbans adorned with steel quoits (chakrams), and they **often carry traditional weapons like swords, spears**, and daggers.
- They are **highly skilled in Gatka martial arts** and have historically **served as a dedicated and elite force to protect Sikh shrines** and communities.
- Nihangs had a **major role in defending the Sikh Panth after** the fall of the first Sikh rule (1710-15) **when Mughal governors were killing Sikhs and** during the **onslaught of Afghan invader Ahmed Shah Durrani** (1748-65).
- **Current Status:**
 - Nihangs are today divided into **several groups**, each **with its own “chhaoni” (cantonment)**, but are **loosely organised into two “dals” (forces)—Buddha Dal and Taruna Dal**, names initially given to the two sections into which the ‘Khalsa’ army was divided in 1733.
 - The Buddha Dal has its headquarters at Talvandi Sabo, in Bathinda district, while the principal cantonment of the Taruna Dal Nihangs is at Baba Bakala in Amritsar district.
 - **Anandpur Sahib**, the birthplace of the Khalsa, **remains the main centre of Nihang gatherings**.
 - They **assemble there** in the thousands **in March every year to celebrate Hola Mahalla**, a Sikh festival introduced by Guru Gobind Singh.

- On that occasion, they **hold tournaments of military skills**, including mock battles.

By adopting the messages of Guru Ravidas, India moving rapidly on the path of development: PM Modi

About Guru Ravidas:

- Guru Ravidas (**1377-1528E.**) was a renowned saint known for his **contributions to the Bhakti movement**.
- His **devotional songs and verses** made a lasting impact upon the Bhakti Movement.
- Guru Ravidas is also known as **Raidas, Rohidas, and Ruhidas**.
- He was **born in a small village** called Seer Govardhanpur **in Uttar Pradesh**.
 - His birthplace is now **known as Shri Guru Ravidas Janam Asthan**, and it is a major place of pilgrimage for the followers of Guru Ravidas.
- Even though he was **born into a poor family**, Ravidas became **well-known for his teachings about human rights and equality**.
- He was the **disciple of** the revered **Brahmin bhakti poet Ramananda**.
- He **abandoned the saguna** (with attributes, image) forms of supreme beings and **focussed on the nirguna(without attributes, abstract) form of supreme beings**.
- Guru Ravidas was a **social reformer**, and his teachings were based on **gender equality, the abolition of the caste system, social justice, and equality**.

- He also became a symbol of **opposition to untouchability** in society by the higher caste people for the lower caste people.
- He emphasised the **philosophy of spiritual freedom**.
- He was a **well-known poet**. 41 of his devotional songs and poems are **included in the** Sikh Scriptures, **Guru Granth Sahib**.
- **Meera Bai**, a revered figure in Hindu spiritualism, is said to have **considered Guru Ravidas as her spiritual Guru**.
- The Guru's teachings now form the basis of the Ravidassia sect. **Ravidassis believe** that **Guru Ravidas should be treated as a saint** just like the other gurus, **as he lived before the first Sikh Guru** and his teachings were studied by the Sikh Gurus.
- **Guru Ravidas Jayanti** is a Hindu festival that **celebrates the birth anniversary** of Guru Ravidas.

MakhaBucha Ceremony organized at SanamLuang Pavilion where Holy Relics from India are Enshrined

About MakhaBucha:

- MakhaBucha Day (Magha Puja) is a religious celebration marking **Lord Buddha's teachings to his disciples**.
- It is celebrated according to the **traditional lunar calendar**, on the day of full moon of the third lunar month.
- The term makha comes from the word "**Magha**" in Pali and it refers to the **third lunar month**, while bucha can translate as "to worship," both of which are derived from the Pali language used in Buddhist scripture.

- The term MakhaBucha refers to a day intended for worshipping on the third lunar month.
- The aim of this day is to **purify one's mind and do only good**. Some celebrate by offering food to monks and also attend candle light processions in the evening.
- It is the **first important religious festival in the Buddhist calendar**, takes place in nations including Thailand, Laos and Cambodia, where the majority of Buddhists practice Theravada Buddhism, also known as “Buddhism of the south”.

DEFENCE AND SPACE

First, eROSITA sky-survey data release makes public the largest-ever catalogue of high-energy cosmic sources

- The German eROSITA consortium has released the data for its share of the first all-sky survey by the soft X-ray imaging telescope.
- The eROSITA (extended ROentgen Survey with an Imaging Telescope Array) is a wide-field X-ray telescope on board the Russian-German "Spectrum-Roentgen-Gamma" (SRG) observatory.
- It was developed under the leadership of the Max-Planck Institute for Extraterrestrial Physics in Germany (DE).
- It is a sensitive X-ray telescope capable of delivering deep, sharp images over very large areas of the sky.
- The eROSITA telescope consists of seven identical Wolter-1 mirror modules.

- SRG was successfully launched from Baikonur on July 13 2019, and placed in a halo orbit around the L2 point.

Functions

- It has been performing an all-sky survey, in which the whole celestial sphere is mapped once every six months. Eight such all-sky charts are planned until December 2023.
- It is also expected to yield a sample of several million Active Galactic Nuclei, providing a unique view of the evolution of supermassive black holes within the emerging cosmic structure.
- The survey will also provide new insights into a wide range of astrophysical phenomena, including accreting binaries, active stars and diffuse emission within the Galaxy, as well as solar system bodies that emit X-rays via the charge exchange process.

Astronomers Find Super-Earth Exoplanet in Habitable Zone of TOI-715

- Using data from NASA's Transiting Exoplanet Survey Satellite (TESS), astronomers have discovered and characterised a habitable zone planet named TOI-715b.
- Transiting Exoplanet Survey Satellite (TESS) is a NASA mission that's searching for planets orbiting the brightest stars in Earth's sky.
- The satellite is a follow-up to NASA's highly successful Kepler space telescope, which found thousands of exoplanets during a decade of work after its launch in 2009.
- Launch: It was launched on April 18, 2018, aboard a SpaceX Falcon 9 rocket out of Cape Canaveral.

- Orbit: TESS circles Earth in a unique high Earth orbit of 12 to 15 days, which is inclined in such a way that the telescope's sky view is largely free from obstructions by our bright planet and the Moon.
- Over the course of its two-year primary mission, TESS' four sensitive cameras systematically scanned over 200,000 of the nearest and brightest stars, imaging 75% of the sky. It found 2,100 planetary candidates and 66 confirmed exoplanets.
- The prime mission ended on July 4, 2020, and TESS is now on an extended mission.
- TESS is finding planets ranging from small, rocky worlds to giant planets, showcasing the diversity of planets in the galaxy.

How does TESS find exoplanets?

- It uses the transit method to detect planets.
- It looks for periodic dips in stars' brightness as planets cross in front of them along our sightline.
- The larger the planet, the greater the drop in brightness during the transit.
- How long it takes a planet to pass in front of the star and come back tells us the shape of its orbit.
- This method reveals the diameter of the planet and the size of its orbit.
- Orbits within a certain range lie in the "habitable zone", where liquid water can exist on the surface of an Earth-like world.

IIA develops a new model of the internal thermal evolution of coronal mass ejections

- An Indian Institute of Astrophysics (IIA) team along with their international collaborators recently developed a new model of the internal thermal evolution of coronal mass ejections (CMEs), as they travel from the sun toward the Earth.
- CMEs are large expulsions of plasma and magnetic field from the sun's atmosphere—the corona, that propagate outward into interplanetary space.
- During a CME, the sun releases a colossal amount of material, including electrons, protons, and heavier ions, as well as magnetic fields.
- CMEs travel outward from the sun at speeds ranging from slower than 250 kilometres per second (km/s) to as fast as 3000 km/s.
- The fastest Earth-directed CMEs can reach our planet in as little as 15-18 hours.
- They expand in size as they propagate away from the Sun, and larger CMEs can reach a size comprising nearly a quarter of the space between Earth and the Sun by the time they reach our planet.
- CMEs, like solar flares, are most common during the solar maximum, a period in the sun's 11-year cycle of activity when the star is at its most active.

How are they formed?

- They form similarly to solar flares—a result of the twisting and realignment of the sun's magnetic field, known as magnetic reconnection.
- When magnetic field lines "tangle" they produce strong localised magnetic fields which can break through the surface of the sun at active regions, subsequently generating CMEs.
- CMEs usually take place around sunspot groups and are often accompanied by a solar flare, though the two don't always occur in tandem.

Impact on Earth:

- **Geomagnetic Storms:** The interaction between the CME's magnetic fields and Earth's magnetosphere can lead to geomagnetic storms. These can disrupt satellite communications, navigation systems, and even power grids.
- **Auroras:** CMEs can cause spectacular displays of the Northern and Southern Lights, also known as auroras, by energising particles in Earth's atmosphere.
- **Radiation Hazards:** Astronauts in space or passengers on high-altitude flights can be exposed to elevated levels of radiation during a CME event.

Hidden ocean beneath Saturn's moon Mimas discovered by NASA's Cassini spacecraft

About Cassini Spacecraft:

- Cassini-Huygens was a **joint NASA/European Space Agency (ESA)/Italian Space Agency (ASI) space mission to Saturn.**
- It was launched on **October 15, 1997.**
- The mission consisted of **NASA's Cassini orbiter**, which was the **first space probe to orbit Saturn**, and the **ESA's Huygens probe**, which **landed on Titan, Saturn's largest moon.**
- **Spacecraft:**
 - It was **one of the largest interplanetary spacecraft.**
 - The Cassini orbiter weighed 2,125 kg (4,685 pounds) and was 6.7 metres (22 feet) long and 4 metres (13 feet) wide.
 - The instruments on board Cassini included **radar to map the cloud-covered surface of Titan** and a **magnetometer to study Saturn's magnetic field.**

- The disk-shaped **Huygens probe** was **mounted on the side of Cassini**. It weighed 349 kg (769 pounds), was 2.7 metres (8.9 feet) across, and carried six instruments designed **to study the atmosphere and surface of Titan**.
- **Highlights:**
 - It **orbited Saturn from 2004 to 2017**, circling the planet 294 times and teaching us almost everything we know about Saturn.
 - It **measured the structure of Saturn's atmosphere and rings**, as well as how they interact with the planet's moons.
 - It also **discovered six named moons** and revealed Enceladus and Titan as promising locations to search for extraterrestrial life.
- **Key Facts about Mimas:**
- It is the **smallest and innermost of the major regular moons of Saturn**.
- The **surface is icy and heavily cratered**.
- The **most striking feature** of this small moon is a **gigantic crater known as Herschel**. This crater measures 80 miles (130 km) across.
 - A **central peak in the center of the crater** rises to a height of 4 miles, almost as **high as Mount Everest** on Earth.
 - Herschel is **one of the largest impact structures**, relative to the size of the body, **known in the solar system**.
- The low density of Mimas indicates that it is **composed almost entirely of water ice**.

ISRO to Launch Weather Monitoring Satellite INSAT-3DS Today

About INSAT-3DS:

- INSAT-3DS Satellite is a **follow-on mission of Third Generation Meteorological Satellite** from Geostationary Orbit.

- Presently, meteorologists make extensive use of data generated by satellites like the INSAT-3D and INSAT-3DR (launched in September 2016, still operational).
- It is fully funded by the **Ministry of Earth Sciences (MoES)**.
- The **primary objectives** of the mission are:
 - To monitor Earth's surface, carry out **Oceanic observations** and its environment in various spectral channels of meteorological importance.
 - To provide the vertical profile of various meteorological parameters of the Atmosphere.
 - To provide the Data Collection and Data Dissemination capabilities from the Data Collection Platforms (DCPs).
 - To provide Satellite Aided **Search and Rescue services**.
- **Weight:** 2,274 kg.
- **Orbit:** Geosynchronous Transfer Orbit (GTO).
- It will be launched by using the **Geosynchronous Launch Vehicle (GSLV-F14)**.
- **What is GSLV-F14?**
- It is a more advanced rocket **utilising liquid propellant**.
- It is a **three-stage 51.7 m long launch** vehicle having a liftoff mass of 420 tonnes.
- The third stage (GS3) is a **cryogenic stage** with a 15-ton propellant loading of liquid oxygen (LOX) and liquid hydrogen (LH2).

Water detected on the surface of an asteroid for the 1st time ever

About SOFIA (Stratospheric Observatory for Infrared Astronomy):

- SOFIA was a **telescope mounted on a Boeing 747 SP aircraft** that **studied infrared light**, essentially heat, emitted by objects in the universe.
- SOFIA was **operated jointly by NASA and the German space agency**.
- It is the **world's largest airborne astronomical observatory**, complementing NASA's space telescopes as well as major Earth-based telescopes.
- The observatory, fitted with an **8.9-foot-wide (2.7 metre) telescope** with a nearly 20-ton mirror, used a door in the side of the aircraft to peer at the sky.
- **Flying into the stratosphere** at 38,000-45,000 feet put SOFIA **above 99 percent of Earth's infrared-blocking atmosphere**, allowing astronomers to study the solar system and beyond in ways that are not possible with ground-based telescopes.
- SOFIA could **observe the universe in the widest range of infrared light**.
- The aeroplane is capable of ten-hour flights, with **flight paths chosen to keep ahead of the sunrise** and maximise the amount of darkness.
- The observatory's mobility **allowed researchers to observe from almost anywhere** in the world and **enabled studies of transient events** that often take place over oceans, where there are no telescopes.
 - For example, astronomers on SOFIA studied eclipse-like events of Pluto, Saturn's moon Titan, and Kuiper Belt Object MU69, the next flyby target for NASA's New Horizons spacecraft, to study the objects' atmospheres and surroundings.
- The SOFIA **project prematurely ended in 2022** after operating for 12 years.

Air Force's Chinook Helicopter Makes Emergency Landing In Punjab

About Chinook Helicopter:

- Chinook/CH-47F is the **S. Army's primary heavy troop and supply transport aircraft**.

- It is an advanced **multi-mission helicopter**.
- It is **manufactured by** the American aerospace and defence firm **Boeing for the US Army** and international defence forces.
- It is used for the **transportation of troops, artillery, supplies**, and equipment to the battlefield.
- **India has about 15 CH-47 Chinook helicopters.**
- **Features:**
 - It is a **twin-engine, tandem-rotor heavy-lift helicopter**.
 - It contains a fully **integrated digital cockpit** management system.
 - It has advanced cargo-handling capabilities that complement the aircraft's mission performance and handling characteristics.
 - It has a **monolithic airframe** with vibration reduction.
 - **Maximum Speed: 160 knots (296 kmph).**
 - It has a **triple hook system**, which **provides stability for large external loads** or the capacity for multiple external loads.
 - It can carry up to 55 troops or approximately **10 tonnes of mixed cargo**.

Galaxy gobbler feasting on Sun-size stars: Fastest-growing black hole powering distant quasar

About Quasar:

- A quasar is an **extremely active and luminous** type of **active galactic nucleus** (AGN).

- An **AGN** is nothing more than a **supermassive black hole** that is **active and feeding at the centre of a galaxy**.
- **All quasars are AGNs**, but **not all AGNs are quasars**.
- Quasars are thought to **form in regions** of the universe where the large-scale **density of matter is much higher** than average.
- They are **among the most luminous**, powerful, and vibrant **objects known** in the universe.
- **How are they formed?**
 - An active galaxy is one in which the central supermassive black hole is consuming large amounts of matter.
 - The **infall of matter** into the black hole is **so great that all the material can't enter the black hole** at the same time, so it **forms a queue as a spiralling accretion disk**.
 - **The matter—in the form of huge clouds—falls into the disk**, with the **inner parts of the cloud** closer to the black hole **orbiting faster than the outer parts** (just like planets closer to the sun orbit faster than those farther away).
 - This **creates a shear force that twists the clouds**, causing them to **bump into their neighbours** as they move around the black hole at velocities ranging from 10% of the speed of light up to over 80%.
 - **This friction** from fast-moving gas clouds **generates heat, and the disk becomes so hot**—millions of degrees—that it **shines brightly**.
 - **Some of the material** in the disk is also **funnelled away from the black hole** in a highly **luminous, magnetically collimated jet**.

- The **hot accretion disk and the jet combine to make the nucleus** of the active galaxy **shine so brightly** that it can be seen far across the universe.
- The brightest quasars **can outshine all of the stars in the galaxies in which they reside**, which makes them visible even at distances of billions of light-years.
- Most quasars have been **found billions of light-years away**.

Is Russia testing a new anti-satellite weapon?

About Anti-Satellite Weapon:

- It is **designed to debilitate or destroy satellites** that are already in orbit and operational.
- **Types of Anti-Satellite Weapons:** ASATs are broadly classified into two types namely
 - **Kinetic energy methods:** This **involves launching a missile** that intercepts and physically collides with the target satellite to destroy it. The kinetic energy ASATs physically collide with satellites and can reach altitudes. These ASATs can be ballistic missiles, drones, and other satellites.
 - **Non-kinetic methods:** They use **non-physical attacks** such as cyber-attacks, jamming, and even lasers to blind satellites without physically destroying them.
- All of these attacks can be launched from the **air, low orbit, or even ground installations**.
- These can even undertake **pellet cloud attacks** on the enemy's low-orbit satellites.

- Other ASAT capabilities include cyber-attacks on space systems, Electro-Magnetic Pulse (EMP) explosion devices, directed energy (laser-based) weapons and targeted missiles for the destruction of satellites to sabotage the enemy's military operations.
- There are many countries which have this capability, but only **four countries** — including India — have demonstrated their ASAT capabilities.
- **Issues:**
 - These weapons generate a tremendous amount of **space debris**, which poses a hazard to all space operations, including civilian and commercial satellites.

See the sun's surface rage as solar maximum approaches

About Solar Maximum:

- The sun is a huge ball of electrically charged hot gas. This charged gas moves, generating a powerful magnetic field.
- The **sun goes through a natural solar cycle** approximately **every 11 years**.
- Over the course of 11 years, the **magnetic field between the Sun's northern and southern hemispheres winds up until** it becomes so dense that **the hemispheres flip**. The north hemisphere becomes the south, and vice versa.
- **This flipping point marks the Solar Maximum**. It **occurs approximately halfway** through the solar cycle.
- It's **associated with a greater number of sunspots** observable on the surface of the sun.
- By contrast, the **Solar Minimum**, which **marks the beginning and end of each Solar Cycle**, **has fewer sunspots**.
- As the sun approaches the solar maximum, we see **more brilliant explosions**, dark **sunspots, loops of plasma**, and swirls of super-hot gas.

- **Impacts:**
 - This increased solar activity can cause **extreme space weather events**, including **solar flares** and eruptions.
 - It can also **disrupt radio communications and the power grid** and have serious health **consequences for astronauts**.
- **What are Sunspots?**
- Sunspots are **dark, planet-size regions of strong magnetic fields** on the surface of the sun.
- Sunspots **form when concentrations of the magnetic field from deep** within the sun **well up to the surface**.
- They consist of a **central darker region**, known as the **umbra**, and a **surrounding region**, known as **the penumbra**.
- They **can spawn** eruptive disturbances such as **solar flares and coronal mass ejections (CMEs)**.
- These regions of the sun **appear darker** because they are **cooler than their surroundings**.
- The frequency and intensity of sunspots visible on the surface indicate the level of solar activity during the 11-year solar cycle, that is driven by the sun's magnetic field.

Trilateral Coast Guard Exercise "Dosti 16" Kicks Off in Maldives Amid Security Concerns

About Exercise Dosti:

- It is a **trilateral coast guard exercise** between **India, Sri Lanka**, and the **Maldives**.
- It is a **biennial exercise**.

- It was **first conducted in 1991 between the Indian and Maldives** Coast Guards. **Sri Lanka joined** the exercise for the first time **in 2012**.
- The exercises have focused on **exercises and drills** on providing assistance in sea accidents, eliminating sea pollution, and the Coast Guard's procedures and conduct during situations such as oil spills.
- The aim of the exercise is to **further fortify the friendship, enhance mutual operational capability**, exercise **interoperability** and build cooperation between the Coast Guards of India, Sri Lanka, and the Maldives.
- **Dosti 16:**
 - It is the 16th edition of the exercise.
 - The Coast Guards of the Maldives, India, and Sri Lanka, along with **observers from Bangladesh**, are participating in Dosti 16 to enhance collaboration between the forces.
 - India is sending ICGS Samarth, ICGS Abhinav, and ICG Dornier for the exercise.

Putin Boards Russian Nuclear Bomber; Inspects Cockpit As Moscow Upgrades TU-160M Bombers

About Tupolev Tu-160M:

- The Tu-160M, is a **modernised version of a Cold War-era bomber** that the former Soviet Union would have deployed in the event of nuclear war to deliver weapons at long distances.
- It is a **Russian supersonic variable-sweep wing** strategic **missile-carrying bomber**.
- It is **called "White Swan" in Russia** and is code-named **"Blackjacks" by NATO**.

- Russia claims it is the **world's fastest-flying supersonic and heaviest payload-carrying bomber.**
- It is designed to hit targets in remote areas with **nuclear and conventional weapons.**
- **Features:**
 - The Tu-160M, which has a **crew of four**, is capable of **carrying 12 cruise missiles or 12 short-range nuclear missiles.**
 - It can **fly 12,000 km** (7,500 miles) **non-stop**, without refuelling.
 - It is powered by four afterburning **turbofan engines.**
 - It has a maximum speed of 2,220 kilometres per hour and ascends to heights of 16,000 metres.
 - It showcases features like an innovative navigation system, an upgraded radar, and even a **refuelling probe for in-flight refuelling**, which further extends its range.

INDIA-JAPAN JOINT EXERCISE 'DHARMA GUARDIAN' COMMENCES IN RAJASTHAN

About Exercise Dharma Guardian:

- It is an annual exercise and is conducted **alternatively in India and Japan.**
- It is the **5th edition of joint military exercise** between **India and Japan.**
- The aim of the Exercise is to **foster Military Cooperation** and enhance combined capabilities to execute joint operations in the **semi-urban environment** under Chapter VII of the United Nations Charter.
- The Exercise would focus on a high degree of physical fitness, joint planning, joint tactical drills and basics of special arms skills.
- **Significance**

- It will enable the two sides to share their best practices in Tactics, Techniques and Procedures for conducting tactical operations.
- The Exercise will also facilitate developing interoperability, bonhomie and camaraderie between troops of both sides.
- This will **enhance the level of defence cooperation**, further fostering bilateral relations between the two friendly nations.
- **Other Exercises between India and Japan:**
- **Malabar:** It is a multinational naval exercise in which India, Japan, the United States and Australia participate.
- **JIMEX**(naval)
- **SHINYUU Maitri** (Air Force)

DRDO hands over 23 Licensing Agreements for Transfer of Technology to industries during Maharashtra MSME Defence Expo 2024

About SAMAR Assessment Certificates:

- **System for Advance Manufacturing Assessment and Rating (SAMAR)** certificate is a benchmark to measure the competency of **defence manufacturing enterprises**.
- It is an outcome of the collaboration between **DRDO and the Quality Council of India (QCI)** to strengthen the defence manufacturing ecosystem in the country to further the vision of making India self-reliant in defence manufacturing.
- **Objective:**
 - Provide an objective **assessment of the manufacturing capability** of Defence Manufacturing Enterprises

- Enable enterprises to benchmark their performance across a range of business capabilities to enhance quality, reliability and competitiveness
- Create a **credible database** of Defence manufacturers for ease in vendor selection and development
- Strengthen the Defence manufacturing ecosystem in the country with an objective to realise the vision of making India self-reliant in Defence manufacturing
- **Eligibility:** All defence manufacturing enterprises, **both MSME and Large enterprises**, are eligible to apply for this certification.
- **Validity:** It is **valid for a period of 2 years** from the date of issuance of the certificate.
- The certification is based on a **maturity assessment model** developed by QCI and is applicable to all defence manufacturing enterprises i.e., micro, small, medium and large enterprises.

3 new moons discovered around Uranus and Neptune will be named after Shakespeare characters and Greek goddesses

About the International Astronomical Union (IAU):

- The IAU is a senior **body governing international professional astronomical activities worldwide.**
- It was **established in 1919** as the **first of a series of international unions** for the advancement of **specific branches of science.**
- Its mission is to promote and **safeguard the science of astronomy** in all its aspects, including **research, communication, education,** and development, **through international cooperation.**

- The IAU is **made up of various divisions, commissions, and working groups** representing the various areas of astronomical research, teaching, and other endeavours.
- **Membership:**
 - Its **individual members are professional astronomers** from all over the world, **at the Ph.D. level** and beyond, who are active in professional research, education, and outreach in astronomy.
 - The IAU **also has junior members**.
 - IAU **membership spans 92 countries**. Out of those countries, **85 are National Members**.
- IAU **activities range from the definition of fundamental astronomical and dynamical constants and unambiguous astronomical nomenclature, rapid dissemination of new discoveries, organization of international observing campaigns, and promotion of educational activities** in astronomy to **early informal discussions** of possible future international large-scale facilities.
- It is the **only organization recognized professionally for the naming of astronomical bodies**, which it does solely on the basis of merit, history, or discoverer's privilege.
- The IAU **holds a general assembly every three years** in varying parts of the world at which professional astronomers meet to discuss research, new cooperative ventures, and similar matters of professional interest.
- The IAU also works to **promote research, education, and public outreach activities** in astronomy for the public.
- **Headquarters: Paris, France.**

ECONOMY

RBI bars Paytm Payments Bank from accepting deposits in any customer account from next month

- The Reserve Bank of India (RBI) imposed restrictions on Paytm Payments Bank Ltd (PPBL), following a system audit report and subsequent compliance validation report of external auditors.
- A payments bank is like any other bank but operates on a smaller scale without involving any credit risk.
- It was set up based on the recommendations of the Nachiket Mor Committee.
- Objective: To advance financial inclusion by offering banking and financial services to the unbanked and underbanked areas, helping the migrant labour force, low-income households, small entrepreneurs, etc.
- It is registered as a public limited company under the Companies Act 2013 and licensed under Section 22 of the Banking Regulation Act 1949.
- It is governed by a host of legislation, such as the Banking Regulation Act, 1949; RBI Act, 1934; Foreign Exchange Management Act, 1999, etc.

Features:

- They are differentiated, and not universal banks.
- These operate on a smaller scale.
- The minimum paid-up equity capital for payments banks shall be 100 crores.

- The minimum initial contribution of the promoter to the Payment Bank to the paid-up equity capital shall be at least 40% for the first five years from the commencement of its business.
- Activities that can be performed:
- It can take deposits up to Rs. 2,00,000. It can accept demand deposits in the form of savings and current accounts.
- The money received as deposits can be invested in secure government securities only in the form of a Statutory Liquidity Ratio (SLR). This must amount to 75% of the demand deposit balance.
- The remaining 25% is to be placed as time deposits with other scheduled commercial banks.
- It can offer remittance services, mobile payments/transfers/purchases, and other banking services like ATM/debit cards, net banking, and third-party fund transfers.
- It can become a banking correspondent (BC) of another bank for credit and other services which it cannot offer.
- Activities that can be performed:
- It cannot issue loans and credit cards.
- It cannot accept time deposits or NRI deposits.
- It cannot set up subsidiaries to undertake non-banking financial activities.

SAMARTH Centres providing assistance to the MSMEs to train the workforce and make them aware about Industry 4.0 technologies

- The Minister of State for Heavy Industries informed the Lok Sabha about SAMARTH Centres.
- The Smart Advanced Manufacturing and Rapid Transformation Hub (SAMARTH) centres are set up under the Scheme for “Enhancement of Competitiveness in the Indian Capital Goods Sector.

These centres have been providing assistance to the MSMEs to train the workforce and make them aware of Industry 4.0 technologies in the following ways:

- Organizing Seminars/ Workshops and knowledge-sharing events on Industry 4.0;
- Training industries to create awareness about Industry 4.0;
- Providing consultancy (in areas such as IOT Hardware, Software development, and data analytics) and incubation support to start-ups including MSMEs.

Key facts about the Enhancement of Competitiveness in the Indian Capital Goods Sector scheme:

- It has been launched by the Ministry of Heavy Industries to address technological obsolescence and limited access to quality industrial infrastructure and common facilities.
- In order to address the skill gaps and infrastructure development and technology needs for the Capital Goods Sector, Phase I of the Capital Goods scheme was rolled out in November 2014.
- Phase I of the scheme fostered partnerships between Academia and Industry for engendering technology development with Government support.

- The objective of Phase II (on January 25, 2022) is to expand and enlarge the impact created by the Phase I pilot scheme, thereby providing greater impetus through the creation of a strong and globally competitive capital goods sector that contributes at least 25% to the manufacturing sector.

Components of the Scheme

- Identification of Technologies through Technology Innovation Portals
- Setting up of four New Advanced Centres of Excellence and augmentation of Existing Centres of Excellence
- Promotion of skilling in the Capital Goods Sector–the creation of Qualification packages for skill levels 6 and above
- Setting up of four Common Engineering Facility Centres (CEFCs) and augmentation of existing CEFCs
- Augmentation of Existing Testing and Certification Centres
- Setting up of ten Industry Accelerators for Technology Development

No delay in disbursal of sops under PLI scheme for white goods: DPIIT

- An official statement said that applications of certain companies for claiming incentives under the Production-linked Incentive (PLI) scheme for white goods (Air Conditioners and LED Lights) are under examination and there is no delay in disbursement.
- PLI scheme for White Goods is designed to create a complete component ecosystem for the Air Conditioners and LED Lights industry in India and make India an integral part of the global supply chains.

- The scheme was notified by the Department for Promotion of Industry and Internal Trade (DPIIT) in 2021.
- The scheme will be implemented as a pan-India scheme and is not specific to any location, area or segment of population.
- Objectives: It proposes a financial incentive to boost domestic manufacturing and attract large investments in the White Goods manufacturing value chain.
- Its prime objectives include removing sectoral disabilities, creating economies of scale, enhancing exports, and creating a robust component ecosystem and employment generation.
- Incentives: The scheme will extend an incentive of 4-6% on incremental turnover over the base year (2019-20) of goods sold in India and exported to global markets, to eligible companies for a period of 5 years.

Eligibility:

- Applicant can be any company that should be incorporated in India under the provisions of the Company Act, 2013.
- Eligibility shall be subject to the achievement of thresholds of net incremental sales of Eligible Products for the respective financial year over the base year and cumulative incremental investment in the preceding financial year.
- Any entity availing benefits under any other PLI Scheme of Govt. of India will not be eligible under this scheme for the same products.

**Quality Council of India and Open Network for Digital Commerce launch
DigiReady Certification Portal to empower MSMEs and small retailers**

About DigiReady Certification:

- In this initiative, QCI, in conjunction with ONDC, aims to **assess and certify digital readiness** of **Micro, Small, and Medium Enterprises** (MSME) entities.
- By leveraging this **online self-assessment tool**, MSMEs can evaluate their preparedness to seamlessly onboard as sellers on the ONDC platform, thereby expanding their digital capabilities and business potential.
- The portal is meticulously designed to facilitate a **streamlined seller journey**, ensuring that MSMEs and small retailers can integrate seamlessly into existing digitised workflows.
- The certification process evaluates various **aspects of digital readiness**, including the presence of necessary documentation for online operations, proficiency in using software and technology, integration with existing digitised workflows, and efficient management of orders and catalogue offerings.
- **Significance:** This initiative presents additional business prospects for sellers, allowing them to become integral to the digital ecosystem.
- **Key points about Quality Council of India**
- It was established in 1997 jointly by the **Department for Promotion of Industry & Internal Trade** (DPIIT), the Ministry of Commerce & Industry, and **the Indian industry**.
- It is registered as a non-profit organisation under the **Societies Registration Act XXI of 1860**.
- It is operated through the constituent Boards of QCI, primarily the National Accreditation Board for Certification Bodies (NABCB), and the National Accreditation Board for Testing & Calibration Laboratories (NABL),
- **Composition**
 - It is governed by a Council of 38 members with equal representations of government, industry and consumers.

- The **Chairman of QCI** is appointed by the **Prime Minister** on the recommendation of the industry to the government.

Will the new BoT model bring back private developers?

About Build-Operate-Transfer (BOT) Model:

- It is a **type of agreement** often **used in infrastructure projects**, particularly in the construction and operation of public facilities or utilities.
- It is a **conventional public-private partnership (PPP) model in which a private entity** (usually a company or consortium) **is granted the rights and responsibilities to design, finance, construct, operate, and maintain a specific project or facility for a defined period** of time.
- **The private entity**, known as the "concessionaire" or "developer," **bears the financial and operational risks** associated with the project **during the contract period**.
- The **typical lifecycle** of a BOT contract **involves three phases**:
 - **Build**: The **concessionaire is responsible for financing, designing, and constructing** the infrastructure project. This phase usually **includes obtaining the necessary permits and approvals**.
 - **Operate**: After the construction is completed,
 - **specified duration**. This can involve providing **services, managing operations, and generating revenue** from the facility (e.g., tolls, fees, or user charges).
 - **Transfer**: **At the end of the contract period**, the **ownership and control** of the facility are **transferred back to the government** or

public authority, which may have been the original owner. The transfer is **often accompanied by a predetermined valuation** or compensation mechanism.

- The private company gains revenue during the concession period, while the government benefits from infrastructure development without upfront investment.
- However, the specifics of the financial arrangements and incentives **vary depending on the individual BOT contract**.
- BOT is particularly **well-suited for greenfield projects** (new projects without prior work) and large-scale, capital-intensive projects.

Sovereign Gold Bond price fixed at Rs 6,263/gm; issues open Monday

About Sovereign Gold Bond (SGB) Scheme:

- SGBs are **government securities denominated in grams of gold**.
- The SGB Scheme was first **launched by the Government of India (GOI)** on October 30, 2015.
- They are **substitutes for holding physical gold**. Investors have to pay the issue price, and the bonds will be redeemed upon maturity.
- The bond is **issued by the Reserve Bank on behalf of the GOI**.
- **Who is eligible to invest** in the SGBs? The bonds will be restricted for sale to **resident Indian entities, including individuals** (in their capacity as individuals, or on behalf of the minor child, or jointly with any other individual), **Hindu Undivided Family (HUF), Trusts, Universities and Charitable Institutions**.
- **What are the minimum and maximum limits for investment?**

- The bonds are issued in denominations of one gram of gold and in multiples thereof.
- **The minimum** investment in the bond **shall be one gram**, with a **maximum** subscription **limit of 4 kg for individuals, 4 kg for HUFs, and 20 kg for trusts** and similar entities notified by the government from time to time per fiscal year.
- In the case of joint holding, the investment limit of 4 KG will be applied to the first applicant only.
- **Tenor:** The tenor of the bond will be for a period of **8 years, with an exit option in the 5th, 6th, and 7th years**, to be exercised on the interest payment dates.
- Who are the **authorised agencies selling the SGBs**? Bonds are sold through offices or branches of **Nationalised Banks, Scheduled Private Banks, Scheduled Foreign Banks, designated Post Offices, Stock Holding Corporation of India (SHCIL)**, and the authorised stock exchanges either directly or through their agents.
- **Other Features:**
 - **Payment** for the Bonds **will be through cash payment** (up to a maximum of Rs. 20,000/-), **or demand draft, or cheque, or electronic banking.**
 - Investors are assured of the market value of gold at the time of maturity and periodical interest.
 - These securities are **eligible to be used as collateral for loans** from banks, financial Institutions, and Non-Banking Financial Companies (NBFCs).

- Bonds will be **tradable on stock exchanges** within a fortnight of the issuance on a date as notified by the RBI.
- The bonds can **also be sold and transferred** as per the provisions of the Government Securities Act, 2006.
- **Interest** on the bonds **will be taxable** as per the provisions of the Income-tax Act, 1961.
- The **capital gains tax** arising **on the redemption of SGB** to an **individual has been exempted**.

Govt's Fund of Funds for Startups scheme: Rs 17,534 crore invested in 938 startups, says Crisil-SIDBI report

About Fund of Funds Scheme:

- The Fund of Funds **for Startups** (FFS) Scheme was approved and established in 2016 with a corpus of **Rs 10,000 crore**,
- **Funding to startups:** Under FFS, the **Scheme does not directly invest in startups**, instead provides **capital to SEBI-registered AIFs**, known as daughter funds, who in turn invest money in growing Indian startups through equity and equity-linked instruments.
- **Small Industries Development Bank of India** (SIDBI) has been given the mandate of **operating this Fund** through selection of suitable daughter funds and overseeing the disbursement of committed capital.
- AIFs supported under FFS are required to invest at least 2 times of the amount committed under FFS in startups.
- **Key facts about the Small Industries Development Bank of India (SIDBI)**

- It was established under an **Act of Parliament in 1990**.
- It is the Principal Financial Institution engaged in the **promotion, financing & development of the Micro, Small and Medium Enterprises (MSMEs)** sector and the coordination of the functions of the various institutions engaged in similar activities.
- **Objective:** To offer loans (both direct and indirect) to MSMEs to help in addressing the development and financial gaps in the ecosystem of MSMEs.
- It helps MSMEs in acquiring the funds they require to grow the market, develop and commercialise their technologies and innovative products.
- It was made responsible for administering the **Small Industries Development Fund and National Equity Fund**.

UPI services to be launched in Sri Lanka, Mauritius on Monday

About Unified Payments Interface (UPI):

- The UPI is a **digital and real-time payment system developed by the National Payments Corporation of India (NPCI) and regulated by the Reserve Bank of India (RBI)**.
- It was launched on April 11, 2016.
- It is designed to **enable peer-to-peer inter-bank transfers** through a **single two-click factor authentication process**.
- **Features:**
 - Unlike traditional methods, UPI **simplifies transfers using the recipient's UPI ID**, be it a mobile number, QR code, or Virtual Payment Address, **eliminating account numbers**.
 - It **eliminates the need to enter bank details** or other sensitive information each time a customer initiates a transaction.

- A **consistent UPI transaction PIN across apps** enhances cross-operability, enabling 24/7 transactions.
- UPI operates as a **digital public infrastructure**, allowing seamless interactions for all players, including merchants and customers, without transaction costs.
- UPI **uses technologies like the Immediate Payment Service (IMPS) and the Aadhaar-Enabled Payment System (AEPS) to ensure that payments** between accounts **go smoothly**.
- It **facilitates push (pay) and pull (receive) transactions** and **even works for over-the-counter or barcode payments**, as well as for **multiple recurring payments such as utility bills**, school fees, and other subscriptions.
- It also **works with "Peer-to-Peer" requests**, which can be scheduled and paid for based on need and convenience.

2024 brings a breather on inflation but food prices are still sticky

About Retail Inflation:

- Retail inflation, **also known as Consumer Price Index (CPI)**inflation, **tracks the change in retail prices of goods and services** which households purchase **for their daily consumption**.
- CPI is **calculated for a fixed basket of goods and services** that may or may not be altered by the government from time to time.
- The change in the price index over a period of time is referred to as CPI-based inflation or retail inflation.
- **What Does the CPI tell?** Following are a few things that the CPI index interprets:
 - **Cost of living**
 - The **purchasing power** of consumers

- The **expensiveness of different articles** that consumers buy and services that are availed
- **Value of the Indian rupee**
- **How is CPI calculated?**
 - CPI is **calculated as a percentage**. It is a **comparison of** the general **price level** in the markets **in a particular time period from a time frame in the past**. This is **known as the base year**.
 - CPI, therefore, is calculated by referring to a base year, which is a benchmark. **Currently, the base year is 2012**.
 - The **National Statistical Office (NSO)**, Ministry of Statistics and Programme Implementation (**MoSPI**) **compiles All India as well as state-wise CPI** for Rural, Urban, and Combined sectors **and releases the CPI numbers every month**.
- **How is the Consumer Price Index (CPI) Used?**
 - It is used as a **macroeconomic indicator** of inflation, as a tool by the central bank and government for **inflation targeting** and for **inspecting price stability**, and as a **deflator in the national accounts**.
 - CPI also **helps understand the real value of salaries, wages, and pensions**, the **purchasing power of the nation's currency**, and regulating rates.

Equal access. Personal guarantors' insolvency: IBBI mandates Resolution Professionals to provide reports to both debtor and creditor for enhanced transparency

About the Insolvency and Bankruptcy Board of India (IBBI):

- The IBBI was **established on October 1, 2016, in accordance with** the provisions of the **‘Insolvency and Bankruptcy Code, 2016’**.
- It is responsible **for the implementation of the IBC**. The IBC amends and consolidates the laws relating to the insolvency resolution of individuals, partnership firms, and corporate persons in a time-bound manner.
 - The IBBI **regulates professionals as well as processes**.
 - It has **regulatory oversight over insolvency professional agencies, insolvency professional entities, insolvency professionals, and information utilities**.
 - It **enforces rules for processes of corporate insolvency resolution**, individual insolvency resolution, corporate liquidation, and individual bankruptcy under the IBC.
- It has also **been designated as the ‘Authority’** under the Companies (Registered Valuers and Valuation Rules), 2017 **for the regulation and development of the profession of valuers** in the country.
- **Constitution of the Board:** The Board consists of the following members who are appointed by the Central Government:
 - A **Chairperson**.
 - **Three members from** among the **officers of the Central Government** equivalent or not below the rank of a Joint Secretary. Out of the three members, **each will represent the Ministry of Finance, the Ministry of Corporate Affairs, and the Ministry of Law, ex-officio**.

- **One member nominated by the RBI** (Reserve Bank of India), ex-officio.
- **Five other members are nominated by the Central Government**, out of which at least **three should be whole-time members**.
- **The term** of office of the Chairperson and members (other than ex-officio members) **is five years or until they attain sixty-five years**, whichever is earlier, and they are **eligible for re-appointment**.

Bond Yields To Soften With Moderating Inflation, Says RBI Governor

What is a Bond?

- A bond is a **fixed-income instrument** that represents a **loan made by an investor to a borrower** (typically corporate or governmental) **for a set period of time** in **return for regular interest payments**.
- The **time from** when the **bond is issued to when the borrower has agreed to pay the loan back** is called its '**term to maturity**'.
- The bond issuer uses the money raised from bonds to undertake various activities, such as funding expansion projects, refinancing existing debt, undertaking welfare activities, etc.
- **What is Bond Yield?**
- It is the **return an investor expects to receive each year over its term to maturity**.
- It partially **depends on coupon payments**, which **refer to the periodic interest income** obtained as a reward for holding bonds.
- The **bondholders receive the bond's face value at the end of the bond's life**. However, **one may buy bonds at par value, discount** (at a price lower

than par value), **or premium**(at a price higher than par value) **as they trade in the secondary market.**

- Therefore, the **prevailing market price** of **bonds also affects the bond yield.**
- It is calculated by using the following **formula:**
 - **Bond Yield= Coupon Amount/ Price**
- **Bond Yield vs. Price:**
 - Price and yield are **inversely related.**
 - As the price of a bond goes up, its yield goes down, and as yield goes up, the price of the bond goes down.
 - **Example: Suppose interest rates fall. New bonds** that are issued will **now offer lower interest payments.** This **makes existing bonds** that were issued before the fall in interest rates **more valuable to investors** because they offer higher interest payments compared to new bonds. As a result, **the price of existing bonds will increase.**
 - However, if a bond's price increases, it is now more expensive for a potential new investor to buy. The bond's yield will then fall because the return an investor expects from purchasing this bond is now lower.

Reliance becomes first Indian company to hit Rs 20 lakh crore valuation

About Market Capitalisation:

- Market Capitalization, or **Market Cap**, is a term used to **represent the market value of a company** based on its current share price and the total number of its outstanding shares.
- It can be **calculated by multiplying the number of outstanding shares** of a company **by the current price of its shares.**

- It **represents the market's perception of a company's worth** and indicates its size and significance in the financial markets.
- On the basis of market cap, companies may be classified as large-cap, mid-cap, or small-cap companies.
 - **Large-cap companies** are usually stable, reputable, and well-established businesses that have a significant market share. They have **market caps of INR 20,000 crore or more.**
 - **Mid-cap companies** have a market cap ranging from **INR 5,000 crore to INR 20,000 crore.**
 - **Small-cap companies** operate at a smaller scale than large-cap and mid-cap companies. Consequently, their market cap is also lower (**less than INR 5,000 crore**).
- **Why is market capitalization important?**
 - It **allows potential** investors to understand the true value of companies and the size of one company in relation to another.
 - It **helps investors predict the future performance of the stock** of a company because it reflects what the market is willing to pay for the stock.
- **What is Free float market capitalisation?**
- While calculating the total market capitalization of a company, all the shares, including the ones publicly traded as well as those held by promoters, government, or other private parties, are multiplied by the stock price.
- But in **the free-float market capitalisation, we exclude shares held by private parties** like promoters, trusts, or the government.
- We **only consider shares held and traded by the public and multiply them by the share price** to arrive at the free-float market capitalisation of a company.

Congress gets tax tribunal relief after bank accounts "frozen" by I-T department claim

About Income Tax Appellate Tribunal (ITAT):

- ITAT is a **quasi-judicial institution** set up **in January 1941**.
- It specialises in dealing with **appeals under the Direct Taxes Acts**.
- **Functions:**
 - It **hears income tax appeals from taxpayers** against orders passed by the Income Tax Authorities.
 - The orders **passed by the ITAT are final**, an appeal lies to the High Court only if a substantial question of law arises for determination.
- **Benches:**
 - Presently ITAT has **63 Benches in 27 different** states covering almost all the cities having a seat of the High Court.
 - **Strength: One President**, who is assisted by **ten (10) Zonal Vice Presidents** and **115 Members** (i.e. Accountant Members and Judicial Members).
 - The ITAT is **headed by a President**, who is **appointed by the Central Government**.
- **Monetary Limits set by the CBDT** are the following:
 - Before the ITAT – Rs 50 lakh.
 - Before the High Court – Rs 1 crore.
 - Before the Supreme Court – Rs 2 crore.
- ITAT is referred to as the **"Mother Tribunal"** being the oldest tribunal in the country.

Centre committed to increase farmers' income: Minister

About APEDA:

- The **Agricultural and Processed Food Products Export Development Authority** (APEDA) was established by the Government of India under the Agricultural and Processed Food Products Export Development Authority **Act, 1985**.
- This Authority replaced the Processed Food Export Promotion Council (PFEPCC).
- The Authority with its **headquarters at New Delhi**, is headed by a Chairman.
- In order to reach out to the exporters in different parts of the Country, APEDA **has set up 15 Regional Offices** in different cities like- Mumbai, Bengaluru, Kolkata etc.
- **Functions:** The following functions have been assigned to the Authority:
 - Registration of persons as exporters of the scheduled products on payment of such fees as may be prescribed;
 - Fixing of standards and specifications for the scheduled products for the purpose of exports;
 - Improving of packaging of the Scheduled products;
 - Improving marketing of the Scheduled products outside India;
 - Promotion of export-oriented production and development of the Scheduled products;
 - Training in various aspects of the industries connected with the scheduled products;

- APEDA also functions as **the Secretariat to the National Accreditation Board (NAB)** for the implementation of accreditation of the Certification Bodies under the **National Programme for Organic Production (NPOP) for Organic exports.**
- **Ministry:** Ministry of Commerce and Trade.

India initiates anti-dumping probe into imports of solar glass from China, Vietnam

About Anti-Dumping Duty:

- Anti-dumping duty is a **tariff imposed on imports manufactured in foreign countries** that are **priced below the fair market value of similar goods in the domestic market.**
- The government imposes anti-dumping duty on foreign imports when it believes that the goods are being “dumped” – through low pricing – in the domestic market.
- Anti-dumping duty is imposed **to protect local businesses** and markets from unfair competition by foreign imports.
- Thus, the purpose of anti-dumping duty is **to rectify the trade distortive effect of dumping** and re-establish fair trade.
- The use of anti-dumping measures as an instrument of fair competition is **permitted by the World Trade Organization (WTO).**
 - **The WTO allows** the government of the **affected country to take legal action** against the dumping country **as long as there is evidence of** genuine material injury to industries in the domestic market.
 - The government **must show that dumping took place**, the **extent of the dumping** in terms of costs, and the **injury or threat to** cause injury to the **domestic market.**

- While the intention of anti-dumping duties is to protect local businesses and markets, these tariffs **can also lead to higher prices for domestic consumers.**
- **What is Countervailing duty (CVD)?**
- It is a specific form of duty that the government **imposes to protect domestic producers by countering the negative impact of import subsidies.**
- CVD is thus an **import tax by the importing country on imported products.**
- **Why is CVD imposed?**
 - **Foreign governments** sometimes **provide subsidies to their producers to make their products cheaper** and boost their demand in other countries.
 - **To avoid flooding the market in the importing country** with these goods, the government of the importing country imposes CVD, charging a specific amount on the import of such goods.
- The duty nullifies and **eliminates the price advantage enjoyed by an imported product.**
- The **WTO permits** the imposition of CVD by its member countries.
- **Countervailing duty v/s Anti-dumping duty:**
- **Anti-dumping duty** is imposed to **prevent low-priced foreign goods** from damaging the local market. On the other hand, **CVD will apply to foreign products that have enjoyed government subsidies**, which eventually leads to very low prices.
- While the **Anti-dumping duty** amount **depends on the margin of dumping**, the **CVD** amount will completely **depend on the subsidy value** of the foreign goods.

SBI seeking lower CRR on green deposits says chairman Dinesh Khara

- **About Cash Reserve Ratio (CRR):**

- Under CRR, commercial banks have to hold a certain minimum amount of deposits as reserves with the RBI.
- The **percentage of cash required to be kept in reserves against the bank's total deposits is called** the CRR.
- The **RBI decides the amount** and is **kept with them** for financial security.
- The **bank cannot use this amount for lending** and investment purposes and **does not get any interest** from the RBI.
- The CRR **applies to scheduled commercial banks**, while **regional rural banks and NBFCs are excluded**.
- The following are the **critical objectives of the CRR**:
 - CRR helps **control inflation**. In a **high-inflation** environment, the **RBI can increase CRR** to prevent banks from lending more.
 - CRR also **ensures banks have** a minimum amount of **funds readily available** to customers, even **during huge demand**.
 - CRR serves as the **reference rate for loans**. Also known as the base rate for loans, banks cannot offer loans below this rate.
 - Since the CRR **regulates the money supply**, it boosts the economy whenever required by lowering the CRR.
- **How is the CRR Calculated?**
 - There is **no CRR formula**. In technical terms, CRR is **calculated as a percentage of Net Demand and Time Liabilities (NDTL)**.
 - **NDTL** for banking **refers to the aggregate savings account, current account, and fixed deposit balances** held by a bank.
- **In case a bank fails to maintain its CRR**, it will **have to pay fines** to the RBI because of that default. The fine is **charged for the shortfall**.

PMFME scheme awareness camp held in Srinagar

- **About Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PMFME) Scheme:**
- Launched on June 29, 2020, PMFMPE is a **Centrally Sponsored Scheme** by the **Ministry of Food Processing Industries**.
- It is designed to **address the challenges faced by micro-enterprises and to tap the potential of groups and cooperatives to support** the upgradation and formalisation of **these enterprises**.
- **Objectives:** To **build the capability** of microenterprises to enable:
 - **Increased access to credit** by existing micro food processing entrepreneurs, FPOs, self-help groups, and co-operatives.
 - **Integration with an organised supply chain** by strengthening branding & marketing.
 - **Support for the transition** of existing 2,00,000 enterprises **into a formal framework**.
 - **Increased access to common services** like common processing facilities, laboratories, storage, packaging, marketing, and incubation services.
 - **Strengthening of institutions, research, and training** in the food processing sector; and
 - Increased access for **enterprises, to professional and technical support**.
- **Outlay:**
 - The scheme envisages an outlay of ₹ 10,000 crores over a period of five years from 2020-21 to 2024-25.
 - The expenditure under the scheme would be shared in a **60:40 ratio between Central and State Governments**, a **90:10 ratio with the Northeastern and the Himalayan States**, a 60:40 ratio with UTs with the legislature and 100% by the Center for other UTs.

- **Coverage:**
 - Under the scheme, **2,00,000 micro food processing units** will be **directly assisted with credit-linked subsidies**.
 - Adequate, supportive **common infrastructure and institutional architecture** will be supported to accelerate the growth of the sector.
- **Benefits:** The program has **four broad components** addressing the needs of the sector:
 - **Support to individuals and groups** of micro-enterprises.
 - **Branding and Marketing support.**
 - Support the **strengthening of institutions.**
 - Setting up a robust project management framework.
- **Financial Support:**
 - **Support to Individual micro-units:**
 - Micro enterprises will get **credit-linked subsidies at 35% of the eligible project cost**, with a **ceiling of Rs.10 lakh**.
 - The **beneficiary contribution** will be a **minimum of 10%**, and the balance from the loan.
 - **Support to FPOs/SHGs/Cooperatives:**
 - **Seed capital** will be given **to SHGs (at Rs. 4 lakh per SHG) for loans** to members for working capital and small tools.
 - **Grant for backward/ forward linkages, common infrastructure**, packaging, marketing, and branding.
- **The Eligible Borrowers** for PMFMPE can be:
 - **Farmer Producer Organization (FPO)**
 - **Self-Help Groups**
 - **Co-operatives**

- **Existing Micro Food Processing Entrepreneurs**
- **New Units**, whether for individuals or groups, would only be supported for One District One Product (ODOP).

DFS Secretary chairs conference of heads of Debt Recovery Appellate Tribunals (DRATs) and Presiding Officers of Debt Recovery Tribunals (DRTs) in New Delhi

About the Debt Recovery Tribunal:

- The Debts Recovery Tribunals (DRTs) and Debts Recovery Appellate Tribunals (DRATs) were established under the **Recovery of Debts and Bankruptcy Act (RDB Act), 1993**.
- **Objective:** These are established to provide expeditious adjudication and recovery of **debts due to Banks and Financial Institutions**.
- At present, 39 Debts Recovery Tribunals (DRTs) and 5 Debts Recovery Appellate Tribunals (DRATs) are functioning across the country.
- Each DRT and DRAT are headed by a **Presiding Officer and a Chairperson respectively**.
- Under section 22(2) in the Recovery Of Debts Due To Banks And Financial Institutions Act, 1993 DRT has the **following powers**:
 - summoning and enforcing the attendance of any person and examining him on oath;
 - requiring the discovery and production of documents;
 - receiving evidence on affidavits;
 - issuing commissions for the examination of witnesses or documents;
 - reviewing its decisions;
 - dismissing an application for default or deciding it ex parte;

- setting aside any order of dismissal of any application for default or any order passed by it ex parte;
- any other matter which may be prescribed.
- **Composition:**
 - It is headed by the **Presiding Officer** to be appointed, by notification, by the **Central Government**.
 - **Qualification of Presiding Officer:** A person shall not be qualified for appointment as the Presiding Officer of a Tribunal unless he is, or has been, or is qualified to be, a **District Judge**.
 - **Tenure:** The Presiding Officer of a Tribunal shall hold office for a term of **five years** from the date on which he enters upon his office and **shall be eligible for reappointment**.

RBI alert on food prices with recurring food price shocks and renewed flash points on geopolitics

About Disinflation:

- Disinflation is a **decrease in inflation rates**.
- In simple terms, a **decline in the rate of increase in the general price level of goods and services in the gross domestic product (GDP) of a country over time** is called disinflation.
- Unlike inflation and deflation, which refer to the direction of prices, disinflation **refers to the rate of change in the rate of inflation**.

- Disinflation is not considered problematic because **prices do not actually drop**, and disinflation does not usually signal the onset of a slowing economy.
- A **healthy amount of disinflation is necessary** since it represents economic contraction and prevents the economy from overheating.
- Disinflation is **considered the opposite of reflation**, which occurs when a government stimulates an economy by increasing the money supply.
- **Causes of Disinflation:**
 - If a central bank wants to enforce a **tighter monetary policy** and the **government starts selling off some of its assets**, the **supply of money** in the economy **could be limited, causing a disinflationary effect**.
 - Similarly, disinflation can also be caused **by a contraction in the business cycle of recession**. For instance, companies may choose not to raise prices to gain a more significant market share, leading to disinflation.

EPFO data breached in 2018 ‘repackaged’ by Chinese cyber agency, probe finds

- **About the Employees’ Provident Fund Organisation (EPFO):**
- It is a **statutory body** that came into existence under the **Employees’ Provident Fund and Miscellaneous Provisions Act, 1952**.
- It is one **of the world's largest social security organisations** in terms of clientele and the volume of financial transactions undertaken.
- It is under the administrative control of the **Union Ministry of Labor and Employment**.
- **Structure of EPFO:**

- The Act and all its schemes are administered by a tripartite board called the **Central Board of Trustees**.
- The board **comprises representatives of the government (both central and state), employers, and employees**.
- The board is **chaired by the Union Minister of Labour and Employment**, Government of India.
- The Central Board of Trustees **administers a contributory provident fund, a pension scheme and an insurance scheme for the workforce engaged in the organised sector** in India, **namely the EPF Scheme 1952, the Pension Scheme 1995 (EPS), and the Insurance Scheme 1976 (EDLI)**.
- EPFO is also the **nodal agency for implementing Bilateral Social Security Agreements** with other countries on a reciprocal basis.
- **Coverage:** The schemes offered by EPFO cover **Indian workers and international workers (from countries with whom the EPFO has signed bilateral agreements)**.
- **Headquarters: New Delhi**

Centre increases Fair and Remunerative Price of sugarcane; will be in force from October 1

- **About Fair and Remunerative Price:**
- It is the price declared by the government, which mills are legally bound to pay to farmers for the cane procured from them.
- **Who determines it?** The FRP is fixed by the **Union government** (Cabinet Committee on Economic Affairs (CCEA)) on the basis of **recommendations of the Commission for Agricultural Costs and Prices (CACP)**.

- The payment of FRP across the country is governed by **the Sugarcane Control Order, 1966** which mandates payment within 14 days of the date of delivery of the cane.
- Mills have the option of signing an agreement with farmers, which would allow them to pay the FRP in instalments.
- **Delays** in payment can attract **an interest of up to 15 per cent per annum**, and the sugar commissioner can recover unpaid FRP as dues in revenue recovery by attaching properties of the mills.
- The amended provisions of the Sugarcane (Control) Order, 1966 provide for fixation of FRP of sugarcane having regard to the following factors: -
 - cost of production of sugarcane
 - return to the growers from alternative crops and the general trend of prices of agricultural commodities
 - availability of sugar to consumers at a fair price
 - price at which sugar produced from sugarcane is sold by sugar producers;
 - recovery of sugar from sugarcane;
 - the realisation made from the sale of by-products viz. molasses, bagasse and press mud or their imputed value
 - reasonable margins for the growers of sugarcane on account of risk and profits

Shri Dharmendra Pradhan inaugurates the Rashtriya Udyamita Vikas Pariyojana under the Skill India Mission

- **About Rashtriya Udyamita Vikas Pariyojana:**
- It is tailored specifically for beneficiaries of the **PM SVANidhi scheme**, this unique National Entrepreneurship Development Project underscores the government's steadfast commitment to nurturing job providers across the nation.
- **Aim:** It aims to equip individuals with **comprehensive entrepreneurship training**, creating job providers rather than job seekers.
- This initiative focuses on **reskilling and upskilling employees** to enhance their competitiveness and adaptability in an era of disruptive technology.
- It will offer comprehensive **entrepreneurship training over a period of 22 weeks**, combining theoretical knowledge with practical exposure through experiential learning.
- The training will be conducted through **offline, online and hybrid modes**, with certificates awarded upon completion, enhancing the course's credibility and value.
- The Government of India has **partnered with Flipkart** to skill street vendors and small shopkeepers.
- Under the pilot program, street vendors in 10 big cities of the country **will be given a stipend along with training to expand their businesses**.

After a 11-year gap, Centre discloses key consumption expenditure survey data

About Household Consumption Expenditure Survey:

- It is usually conducted by the **National Statistical Office (NSO)** every five years.
- This survey aims at generating estimates of household **Monthly Per Capita Consumption Expenditure (MPCE)** and its distribution separately for the

rural and urban sectors of the country, for States and Union Territories, and for different socio-economic groups.

- **Highlights of the survey**

- The average monthly per capita consumption expenditure (MPCE) in Indian households **rose by 33.5% since 2011-12 in urban households to ₹3,510**, with rural India's MPCE seeing a **40.42% increase** over the same period to hit ₹2,008.
 - The proportion of **spending on food has dropped** to 46.4% for rural households from 52.9% in 2011-12, while their urban peers spent just 39.2% of their overall monthly outgoes on food compared with 42.6% incurred 11 years earlier.
 - This reduction could translate into a lower weightage for food prices in the country's retail inflation calculations.
 - Among the States, the MPCE is the **highest in Sikkim for both rural** (₹7,731) and **urban areas** (₹12,105).
 - It is the **lowest in Chhattisgarh**, where it was ₹2,466 for rural households and ₹4,483 for urban household members.
- **Significance:** The data will play a key role in reviewing critical economic indicators, including the Gross Domestic Product (GDP), poverty levels, and the Consumer Price Inflation (CPI).

Union Minister Rajeev Chandrasekhar Launches 'Investor Information and Analytics Platform' Developed by IIT Madras

About the Investor Information and Analytics Platform:

- It acts as a one-stop shop for startups to **seamlessly access Venture Capitalists** (VCs) and **investor networks, Govt schemes** and several other components of the startup landscape for all stakeholders.
- By integrating information at different levels, the platform is also a one-stop shop for entrepreneurs to search for information on government agencies, incubators, investors, VCs and banks that invest in startups.
- This platform has been developed by the Researchers at the **Centre for Research on Start-ups and Risk Financing (CREST) of IIT Madras**.
- It will significantly help startup founders, entrepreneurs and Young Indians who intend to build their own devices, services and platforms for India and for the world.
- An important feature of this **unique platform is “StartupGPT”** which is an AI-based conversational platform whose function is to help ease information access for those who are navigating exhaustive data.
- A user will be able to ask queries in simple language to access the information they seek in real time.
- For the sustainability of the platform, full access will be provided at a very nominal cost so that maximum entrepreneurs can benefit from this resource.

Services pact with voluntary obligations comes into force

About General Agreement on Trade in Services (GATS)

- It is a treaty of the **World Trade Organization** (WTO).
- It was created to extend the multilateral **trading system to the service sector**, in the same way, the General Agreement on Tariffs and Trade (GATT) provides such a system for merchandise trade.

- It was **signed at the Uruguay Round** of Multilateral Trade Negotiations' conclusion and entered into force on January 1, 1995.
- **Members:** All WTO members are at the same time members of the GATS including India.
- Basic obligations under the GATS may be categorized into **two broad groups**:
 - **General obligations** that apply to all members and services sector.
 - **Specific commitments:** These are obligations that apply only to the sectors **inscribed in a member's schedule of commitments**. Such commitments are laid down in individual schedules whose scope may vary widely between members.
- The GATS applies in principle to all service sectors, with two exceptions.
 - **Services supplied in the exercise of governmental authority:** These are services that are **supplied neither on a commercial basis** nor in competition with other suppliers.
 - These include **social security schemes** and any other public service, such as health or education that is provided at non-market conditions.
 - **The Annex on Air Transport Services** exempts from coverage measures affecting air traffic rights and services directly related to the exercise of such rights.
- **New obligations**
- The new obligations under their schedules in GATS seek to mitigate the unintended trade-restrictive effects of measures related to **licensing requirements and procedures**, qualification requirements and procedures and technical standards among themselves.
- The disciplines will be applied on a “**most-favoured nation**” principle, meaning that they will benefit all WTO members.
- These disciplines have been named **Services Domestic Regulation (DSR)** and came into force in the 13th Ministerial Conference of the WTO.

SBI junks plans to raise Rs 12k cr via AT-1 bonds

About Additional Tier-1 (AT-1) Bonds:

- AT-1 bonds are **perpetual bonds** with **no maturity date**.
- **Investors** in these bonds **do not get their principal back**.
- However, the **interest continues forever**. AT-1 bonds have a **higher interest rate** than other bonds.
- **Due to the perpetual nature** of AT-1 bonds, these are often **treated and viewed as equity, not debt**.
- **How are AT-1 Bonds Issued?**
 - AT-1 bonds are **issued by banks** in accordance with the **directions of the Reserve Bank of India (RBI)**.
 - Financial institutions usually **issue such bonds to fulfil** their **capital adequacy requirements (CAR)**.
 - **CAR** is an **assessment of a bank's capital and its risk-weighted assets**.
 - Capital adequacy norms were **formulated under the Basel III accord of 2009** after the credit crisis of 2008.
 - The **money raised** through these bonds is **kept aside as a shock absorber by the bank**.
- These bonds are **contingent convertible bonds (CoCos)**, a type of **debt instrument** that the **bank can convert into equity if its capital levels fall** below the specified levels. This helps the bank **reduce debt while managing capital**.

- AT-1 bonds **have a call option**, which allows **the banks to buy back the bonds** from the investors.
- These bonds provide **high returns** but also **carry greater risk**.
 - If the **banking institution fails**, these **bonds are at risk**.
 - **Suppose the RBI finds a bank in an unstable condition**, under pressure, and in a situation where it demands rescue. In that case, it **can ask the bank to immediately withdraw their AT-1 Bonds without seeking permission from the investors**, therefore making **AT-1 Bonds risky**.
 - Further, the **issuer can also skip the interest payout** if it is under financial stress.
- **Investors cannot return their bonds to the bank** as there is **no put option** against these bonds. However, these **bonds are listed on the stock exchanges**, so the **investor can liquidate them** whenever needed.
- **Subordinate debt: In case of default**, these **bonds rank lower than the other debt**, which is why these are subordinate debts.

Financial Intelligence Unit to track money flow ahead of Lok Sabha polls

About Financial Intelligence Unit:

- It was set up by the Government of India in **November 2004**.
- It is the central national agency responsible for **receiving, processing, analyzing and disseminating information** relating to **suspect financial transactions**.

- It is also responsible for coordinating and strengthening efforts of national and international intelligence, investigation and enforcement agencies in pursuing global efforts against money laundering and financing of terrorism.
- It is an **independent body** reporting directly to **the Economic Intelligence Council (EIC) headed by the Union Finance Minister.**
- **Functions:**
 - **Collection of Information:** Act as the central reception point for receiving Cash Transaction reports (CTRs), Non-Profit Organisation Transaction Reports (NTRs), Cross Border Wire Transfer Reports (CBWTRs), Reports on the Purchase or Sale of Immovable Property (IPRs) and Suspicious Transaction Reports (STRs) from various reporting entities.
 - **Analysis of Information:** Analyze received information to uncover patterns of transactions suggesting suspicion of money laundering and related crimes.
 - **Sharing of Information:** Share information with national intelligence/law enforcement agencies, national regulatory authorities and foreign Financial Intelligence Units.
 - **Act as Central Repository:** Establish and maintain a national database based on reports received from reporting entities.
 - **Coordination:** Coordinate and strengthen the collection and sharing of financial intelligence through an effective national, regional and global network to combat money laundering and related crimes.
 - **Research and Analysis:** Monitor and identify strategic key areas on money laundering trends, typologies and developments.

ENVIRONMENT

Shri Bhupender Yadav says India increased its tally of Ramsar sites (Wetlands of International Importance) to 80 by adding Five more wetlands to the list on the eve of World Wetlands Day 2024 (2nd February)

- The Union Environment Minister said that five more Indian wetlands have been added to the global list of wetlands of international importance under the Ramsar Convention.
- Of the five wetlands added to the Ramsar list, Magadi Kere Conservation Reserve, Ankasamudra Bird Conservation Reserve, and Aghanashini Estuary are in Karnataka and Karaivetti Bird Sanctuary and Longwood Shola Reserve Forest are in Tamil Nadu.

Ankasamudra Bird Conservation Reserve

- It is a man-made Village Irrigation Tank built centuries back.
- It is an ecologically important wetland and rich in biodiversity.
- It supports more than 1% of the biogeographic population of Painted Stork and Black-headed Ibis.

Aghanashini Estuary

- It is formed at the confluence of the Aghanashini River with the Arabian Sea.
- The brackish water of the Estuary provides diverse ecosystem services including flood and erosion risk mitigation, biodiversity conservation and livelihood support.
- The wetland helps in traditional fish farming in the estuarine rice fields (locally known as Gazni rice fields), bivalve shell collection and salt production.

Magadi Kere Conservation Reserve

- It is a man-made wetland which was constructed to store rainwater for irrigation purposes.
- The wetland harbours two vulnerable species, namely the Common pochard and River tern and four near-threatened species, namely the Oriental Darter Black-headed Ibis Woolly-necked Stork and Painted Stork
- It is also one of the largest wintering grounds for the Bar-headed goose.

Karaivetti Bird Sanctuary

- It is one of the largest inland wetlands of Tamil Nadu and is a significant source of groundwater recharge for the area.

The Longwood Shola Reserve Forest

- It derives its name from the Tamil word, "Solai", which means a 'tropical rainforest'.
- The 'Sholas' are found in the upper reaches of the Nilgiris, Anamalais, Palni hills, Kalakadu, Mundanthurai and Kanyakumari in Tamil Nadu.
- These forested wetlands serve as habitats for the globally endangered Black-chinned Nilgiri Laughing thrush, Nilgiri Blue Robin and vulnerable Nilgiri Wood-pigeon.

China Identifies Tagging Station Of Migratory Bird "Heron" Found In Manipur

- A ringed juvenile black-crowned night heron, which landed at a local pond in Imphal and died later, was banded at the Weishan Bird Banding Station in China's Beijing.
- Black-crowned Night Heron is a medium-sized heron with a stocky build.

- Scientific Name: *Nycticorax nycticorax*
- Distribution: It is found across North America, as well as locally in Central America and the Caribbean.
- Habitat: Most colonies of black-crowned night herons are associated with large wetlands. They inhabit a variety of wetland habitats, such as swamps, streams, rivers, marshes, mud flats, and the edges of lakes.

Features:

- It has a stocky body with a comparatively short neck and legs.
- It has a black crown, a grey body, and bright, red eyes.
- Females and males look alike, but females are a little smaller.
- They are social at all times of the year, frequently associating with other species of herons.
- It is a migrating species.
- Diet: It is an opportunistic feeder. Its diet consists mainly of fish, though it is frequently rounded out by other items such as leeches, earthworms, and aquatic and terrestrial insects.

Conservation Status:

- IUCN Red List: Least Concern

Key Facts about Herons:

- These are any of about 60 species of long-legged wading birds.
- These are classified in the family Ardeidae (order Ciconiiformes) and generally include several species usually called egrets.

- The Ardeidae also include the bitterns (subfamily Botaurinae).
- These are widely distributed over the world but are most common in the tropics.
- They usually feed while wading quietly in the shallow waters of pools, marshes, and swamps, catching frogs, fishes, and other aquatic animals.
- They nest in rough platforms of sticks constructed in bushes or trees near water; the nests usually are grouped in colonies called heronries.

Rich in fungi soil could benefit green roofs: Study

- Green roofs treated with mycorrhizal fungi foster a more diverse soil community that is more likely to support long-term green roof sustainability.
- Green roofs, also known as 'vegetated roofs' or 'living roofs' — are ballasted roofs consisting of a waterproofing membrane, growing medium (soil), and vegetation (plants) overlying a traditional roof.
- The layers of green roof systems must, like any roof, accommodate drainage, and stormwater management, and protect the building from the elements with a waterproof membrane.
- But they also must create a growing area and potentially provide support, irrigation, and root protection barriers while staying as light as possible.
- Two types of green roofs exist: intensive and extensive.
- Intensive green roofs are essentially elevated parks. They can sustain shrubs, trees, walkways and benches with their complex structural support, irrigation, drainage, and root protection layers.

- Extensive green roofs are relatively light. They support hearty native ground cover that requires little maintenance. Extensive green roofs usually exist solely for their environmental benefits and don't function as accessible rooftop gardens.

Benefits:

- Green roofs last longer than conventional roofs, reduce energy costs with natural insulation, create peaceful retreats for people and animals, and absorb stormwater, potentially lessening the need for complex and expensive drainage systems.
- On a wider scale, green roofs improve air quality and help reduce the Urban Heat Island Effect, a condition in which city and suburban developments absorb and trap heat.

Madagascar: giant tortoises have returned 600 years after they were wiped out

- A six-year-old project to return giant tortoises to the wild in Madagascar could result in thousands of megaherbivores re-populating the island for the first time in 600 years.
- Aldabra giant tortoise is the second-largest species of land tortoise in the world, after the Galapagos giant tortoise (*Chelonoidis nigra*).
- It can live for 100 years and has a fascinating history.
- This tortoise evolved from ancestors of *Aldabrachelys abrupta*, one of two giant tortoises that inhabited Madagascar for 15 million years.
- Four million years ago, the *Aldabrachelys abrupta* lineage migrated, likely via a combination of drifting with floating vegetation and assisted by their natural buoyancy and good swimming abilities, to Seychelles.

- These are endemic to the Aldabra Atoll of the Seychelles, an archipelago nation in the western Indian Ocean about 930 miles east of Africa and northeast of Madagascar.
- **Habitat:**
- These are terrestrial and occur in a wide variety of habitats, including scrub forests, mangrove swamps, and coastal dunes and beaches, each with their respective vegetation.
- The largest populations of tortoises are found on grasslands called "platins."
- Due to prolonged periods of heavy grazing, a habitat known as "tortoise turf", consisting of a variety of grasses, has developed in certain areas.
- **Conservation status**
- IUCN: Vulnerable
- CITES: Appendix II

Invasive thrips caused 80% damage to chilli crops, Rajya Sabha told

- Union Agriculture Minister informed the Rajya Sabha that Thrips Parvispinus might have dominated or even replaced the native chilli thrips known as scirtothrips dorsalis in Telangana and Andhra Pradesh region.
- Thrips Parvispinus is an invasive pest species.
- It is a polyphagous pest, which can also grow and multiply on alternate hosts like drumstick, pigeon pea, chickpea, papaya, mango and weed species like Parthenium, Cleome viscosa, Prosopis sp., Lantana camara, Calotropis sp., Tecoma sp. and wild solanum plants.

- It has been reported from Thailand, Australia and Europe.
- The last two decades witnessed a drastic extension in the geographic distribution and it is now known to occur in France, Greece, Hawaii, Mauritius, Reunion, Spain, Tanzania and the Netherlands, besides India.
- In India, this species was first reported on Papaya from Bengaluru in 2015.
- Thrips parvispinus adults mainly colonise on flowers and the underside of leaves whereas larvae suck sap from the undersurface of the leaves.
- Infestation causes heavy flower drop thereby reducing fruit production.
- Its infestation increased during heavy rainfall of North East monsoon in contrast to other thrips species.
- **What are Thrips?**
- Thrips are an important group of sucking pests which cause significant economic losses both as pests and vectors of serious plant viruses in several horticultural crops.
- There are reports of the outbreak of sucking pests like thrips in different regions due to changes in crop production patterns, pesticide usage and climate change.

Black-necked Crane

- The Union Minister of State for Environment, Forest and Climate Change informed the Lok Sabha about the important steps taken to protect Black-necked Crane by the government.
- The Black-Necked Crane (*Grus nigricollis*) is classed as a medium-sized member of the crane family.

- **Habitat:** The high-altitude wetlands in the Tibetan plateau are the main breeding ground of the species. These wetlands with small mounds provide an excellent habitat for the birds to breed.
- **Distribution:** This species is found in India, China and Bhutan and breeds in high-altitude wetlands in the Tibetan plateau at elevations of 2950-4900 m above mean sea level.
- **Threats:** Habitat loss and degradation related to climate change, changes in agriculture practices, pollution and environmental contamination.
- **Conservation status**
- IUCN: Near Threatened
- The Wild Life (Protection) Act, 1972: Schedule I
- CITES: Appendix I
- **The important steps taken by the government of India to protect bird species include:**
- The important habitats of the Black-necked Crane have been notified as Protected Areas, for example, Changthang Sanctuary, Ladakh.
- The Tso Kar Wetlands Complex, an important foraging and breeding ground for Black-necked Crane, has been designated as a Ramsar Site in December 2020.
- The National Wildlife Action Plan (2017-2031) released by the Ministry in October 2017 provides for specific Chapters and priority actions on various aspects of wildlife conservation.
- The Central Government provides financial assistance to State/Union Territory Governments under the Centrally Sponsored Scheme 'Development of Wildlife Habitats' for the management of wildlife and its habitat in the country.

- The Government of India has initiated the Mission LiFE (Lifestyle for Environment) programme, which aims to generate public awareness about the environment, and conservation.

Hindu Kush Himalaya is a 'biosphere on the brink': ICIMOD

- Experts from the International Centre for Integrated Mountain Development (ICIMOD) declared the Hindu Kush Himalaya region a biosphere on the brink of collapse and called for bold action and urgent finance to prevent nature loss.
- The International Centre for Integrated Mountain Development is an intergovernmental knowledge and learning centre working on behalf of the people of the Hindu Kush Himalaya (HKH).
- It was formally established and inaugurated on 5 December 1983.
- Mission: To build and share knowledge that drives regional policy and action and attracts investment that enables the diverse countries and communities of the HKH to transition to greener, more inclusive, and climate-resilient development.
- Member countries – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan.
- **Governance**
 - The Board of Governors is the highest governing body of the centre.
 - It consists of one representative from each of the eight regional member countries and independent members who are nominated by the ICIMOD Support Group based on their recognized professional expertise and experience.

- **Functions**

- It serves the region through information and knowledge generation and sharing to find innovative solutions to critical mountain problems.
- It bridges science with policies and on-the-ground practices.
- It provides a regional platform where experts, planners, policymakers, and practitioners can exchange ideas and perspectives towards the achievement of sustainable mountain development.
- Headquarters: Kathmandu, Nepal

- **Key facts about Hindu Kush Himalaya**

- The HKH region extends 3,500 km over all or part of eight countries from Afghanistan in the west to Myanmar in the east.
- It is the source of ten large Asian river systems – the Amu Darya, Indus, Ganga, Brahmaputra (Yarlungtsanpo), Irrawaddy, Salween (Nu), Mekong (Lancang), Yangtse (Jinsha), Yellow River (Huanghe), and Tarim (Dayan).
- It provides water, ecosystem services, and the basis for livelihoods to people in the region.

Cameroon adopts Nagoya Protocol to benefit from its rich biodiversity

- The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation (the Protocol) is a legally binding global agreement that implements the access and benefit-sharing obligations of the Convention on Biological Diversity (CBD).

- It was adopted by the CBD in Nagoya, Japan, in October 2010 and entered into force on October 12, 2014, 90 days after the deposit of the fiftieth instrument of ratification.
- It provides a transparent legal framework for the effective implementation of one of the three objectives of the CBD: the fair and equitable sharing of benefits arising out of the utilisation of genetic resources.
- **What are the benefits?**
- It establishes a framework that helps researchers access genetic resources for biotechnology research, development, and other activities, in return for a fair share of any benefits from their use.
- This provides the research and development sector with the certainty they need to invest in biodiversity-based research.
- Indigenous and local communities may receive benefits through a legal framework that respects the value of traditional knowledge associated with genetic resources.
- **What does the Nagoya Protocol cover?**
- It applies to genetic resources that are covered by the CBD, and to the benefits arising from their utilisation.
- It also covers traditional knowledge (TK) associated with genetic resources that are covered by the CBD and the benefits arising from their utilisation.
- **Key Facts about the Convention on Biological Diversity (CBD):**
- CBD, with 196 contracting parties, is the most comprehensive binding international agreement in the field of nature conservation and the sustainable use of natural resources.

- It was opened for signing at the UN Conference on Environment and Development in Rio de Janeiro in 1992.
- It has three overarching objectives:
- The conservation of biological diversity (genetic diversity, species diversity, and habitat diversity).
- The sustainable use of biological diversity.
- The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.
- It covers biodiversity at all levels: ecosystems, species, and genetic resources.
- The Conference of the Parties (COP) is the highest political decision-making body of the Convention.
- The Secretariat is based in Montreal, Canada.
- To support the implementation of the CBD objectives, two internationally binding agreements were adopted within the framework of the Convention on Biological Diversity.
- The Cartagena Protocol, which was adopted in 2000 and entered into force in 2003, regulates the transboundary movement of living modified organisms (LMOs).

The Nagoya Protocol, adopted in 2010, establishes a legally binding framework for access to genetic resources and the fair and equitable sharing of the benefits arising from their use.

Tripura's Sepahijala Wildlife Sanctuary gets a new batch of animals including two tigers

- The Sepahijala Wildlife Sanctuary(SWL) of Tripura welcomed a new batch of animals, which include two Royal Bengal tigers, two leopards, four golden pigeons, a silver pigeon, two peafowls, and four hill mynas.
- Location: It is located around 25 km from Agartala, Tripura.
- It is spread over 18.5 sq. km and is home to migratory birds and animals.
- The wildlife sanctuary is divided into five sections, basically to segregate the different types of animals living here. They are the carnivore section, primate section, ungulate section, reptile section, and aviary section.
- It also has two natural lakes, namely Abasarika and Amrit Sagar.
- Clouded Leopard National Park, established in 2007, is a part of SWL.
- Vegetation: Moist deciduous forest
- **History:**
 - To conserve and propagate the biodiversity of the area, the Sepahijala bio-complex came into existence in 1972.
 - With the addition of a botanical garden, a deer park, and a zoo, the bio-complex was subsequently attributed to the status of Sepahijala Wildlife Sanctuary in early 1987.
- **Flora:**
 - The sanctuary has no less than 456 plant species; many kinds of bamboo and a variety of grasses and medicinal plants also grow in the sanctuary.
- **Fauna:**
 - It is the habitat of different species of primates like Rhesus macaque, Pigtailed macaque, Capped langur, Spectacled monkey, Slow loris and several other wild

animals like Leopard, Clouded leopard, Jungle fowl, Civets, Barking, Deer, Wild pig, etc.

- The crab-eating mongoose (which was last seen in the 1930s) has also been revived here.
- The avian population of the sanctuary is also rich, with a variety of winged storks, Whistling teal, and the White ibis.

Vice-President Jagdeep Dhankhar inaugurates World Sustainable Development Summit in Delhi

- The Vice-President inaugurated the World Sustainable Development Summit in New Delhi
- The World Sustainable Development (WSDS) Summit is the annual flagship event of the Energy and Resources Institute (TERI).
- Instituted in 2001, the Summit series has a legacy of over two decades of making 'sustainable development' a globally shared goal.
- It is the only independently convened international summit on sustainable development and environment, based in the Global South.
- WSDS strives to provide long-term solutions for the benefit of global communities by assembling the world's most enlightened leaders and thinkers on a single platform.
- WSDS 2024 is the 23rd edition of the summit.
- It is headquartered in New Delhi.
- WSDS 2024 will take place on the theme 'Leadership for the Sustainable Development and Climate Justice'.

- **Key Facts about The Energy and Resources Institute (TERI):**
- TERI is a leading think tank dedicated to conducting research for the sustainable development of India and the Global South.
- It is an independent, multi-dimensional organisation, with capabilities in research, policy, consultancy, and implementation.
- **History:**
- TERI was established in 1974 as an information centre on energy issues.
- Research activities, initiated towards the end of 1982, were rooted in TERI's firm conviction that efficient utilisation of energy and sustainable use of natural resources would propel the process of development.
- **Its work across sectors is focused on:**
- Promoting efficient use of resources
- Increasing access to and uptake of sustainable inputs and practices
- Reducing the impact on the environment and climate.

Over 600 rescued turtles released in Gomti river

About Gomti River:

- It is a **tributary of the Ganges River.**
- **Course:**
 - **Origin:** It is an **alluvial river** that **originates from the Gomat Taal**, otherwise called **Fulhaar Jheel**, found near the Madho Tanda in **Pilibhit district in Uttar Pradesh**, India.

- After **flowing through an incised valley southwards through** the districts of **Sitapur, Lucknow**, Barabanki, Sultanpur, and **Jaunpur**, it **joins River Ganga near Varanasi**.
- The river extends to about **900 km**.
- The total drainage area of the river is 30,437 sq. km.
- It is a **perennial river**. The river is characterised by **sluggish flow throughout the year, except during the monsoon** season, when heavy rainfall causes a manifold increase in the runoff.
- **Major Cities**: There are various cities that are situated on the banks of the River Gomti, such as **Sultanpur, Lucknow, Jaunpur**, and **Lakhimpur Kheri**.
- **Tributaries**: **Kathina, Bhainsi, Sarayan, Gon, Reth, Sai**, Pili, and Kalyani.

Lone tiger walks back to its natural habitat of Papikonda National Park with good health

About Papikonda National Park:

- It is located in **Andhra Pradesh**.
- The area plays a key role in high precipitation and the consequent origin of various small streams and rivulets which drain and enrich the **perennial River Godavari**.
- A unique dwarf **breed of goat** known locally as the “**kanchu mekha**” originates in this region.
- The national park has been recognized as an Important **Bird and Biodiversity Area by BirdLife International**.
- **Vegetation**:
 - **Dry Mixed Teak Forests**, Southern dry mixed deciduous forests and Southern moist mixed deciduous forests.

- The predominant and most extensive forest type found in the park is **Southern Tropical Dry Deciduous type** and the species found in this type are mainly dry deciduous species.
- **Flora:** Some species of flora include Albizia Amara, Latifolia, Albizia Lebbeck, Terminalias, Tectona Grandis, Lagerstroemia Lanceolata, Tomentosa, Arundinacea, Bambusa, Albizzia Amara, Dendrocalamus Strictus, Pterocarpus among others.
- **Fauna:** Tiger, Leopard, Hyena and vulnerable bovidae the Indian gaur area. It has species like sambar, barking deer, chowsinga, spotted deer etc.

Maoists and security forces exchange fire in Sunabeda Wildlife Sanctuary

About the Sunabeda Wildlife Sanctuary:

- **Location:** It is located in the Nuapada district of **Odisha**, adjoining Chhattisgarh.
- It is spread over a sprawling area of 600 sq. km. It was declared a sanctuary in 1983.
- It **adjoins the Sitanadi and Udanti sanctuaries of Chhattisgarh.**
- The sanctuary harbours a great diversity of wildlife habitats, with **a vast plateau, canyons, and 11 waterfalls.**
- It also forms the **catchment area of the Jonk River** (a **tributary of the Mahanadi River**), over which a dam has been constructed to facilitate irrigation.
- **Vegetation:** The important vegetation of this sanctuary comprises **dry deciduous tropical forests.**

- **Flora:** Bija, Teak, Sisoo, Asan, Dharua, Mahul, Char, **Sandalwood, Sidha, etc.**
- **Fauna:**
 - It is an ideal habitat for the **Barasingha (swamp deer)**.
 - Other important animals found are **tigers, Leopards, hyenas, Barking Deer**, Chital, Gaur, Sambar, Sloth Bear, Hill Myna, etc.
 - It also works as a **migration link for rare wild Buffaloes between** the states of **Orissa and Chhattisgarh**.

Is the Great Indian Bustard on the verge of local extinction?

About Rollapadu Wildlife Sanctuary:

- It is located in the state of **Andhra Pradesh**.
- It lies between the **Nallamala and Yerramalla hill ranges** of the **Eastern Ghats**.
- It was declared a sanctuary in 1988 to protect the dwindling populations of the critically endangered Great Indian Bustard.
- **Uniqueness:** It is the only GIB Sanctuary in Andhra Pradesh.
- It owes its genesis to the discovery of the endangered Great Indian Bustard (GIB).
- **Flora:** About 32 species of grasses like *Aristida funiculata*, *Chrysopogon fulvus*, *Heteropogon contortus*, like *Cassia fistula* (Golden shower tree), *Butea monosperma* (Flame of the forest), *Acacia* spp, *Ziziphus mauritiana*, etc.
- **Fauna:**

- The grassland Sanctuary is rich in invertebrate fauna particularly the insects that form a major part of the diet of most of the birds.
- **Land monitor lizards**, Geckos, Skinks, Saw-scaled vipers; etc. So far about 6 species of amphibians have been recorded here.
- There are about 124 bird species like the Lesser florican, Demoiselle crane, Black stork, White stork, Harriers, etc;
- These plains are also home to endangered mammals like the **Golden jackal, Indian wolf, Blackbuck, Chinkara**, etc.

Six Forest Staff Suspended For Negligence

About Kawal Tiger Reserve:

- **Location:**
 - It is located in the northeastern part of **Telangana**(Old Adilabad district), with the **Godavari River on one side** and the **Maharashtra border on the other**.
 - It forms **part of the Deccan peninsula-central highlands**.
- The government of India declared Kawal Wildlife Sanctuary a Tiger Reserve in 2012.
- **Rivers:** The reserve is the catchment for the rivers **Godavari and Kadam**, which flow towards the south of the sanctuary.
- Geographically, the reserve is **situated at the southernmost tip of the Central Indian Tiger Landscape**, having **linkages with the Tadoba-Andhari** (Maharashtra) **and Indravati** (Chhattisgarh) **tiger reserves**.
- **Habitat:** It has **diverse habitats** comprising **dense forests, grasslands, open areas**, rivers, streams and **water bodies**.

- **Vegetation: Southern Tropical Dry Deciduous Forest.**
- **Flora:**
 - **Teak is found extensively, along with Bamboo.**
 - As many as 673 plant species have been recorded, and the important ones are *Anogeissus latifolia*, *Mitragyna parviflora*, *Terminalia crenulata*, *Terminalia arjuna*, *Boswellia serrata*, etc.
- **Fauna:**
 - It has a faunal diversity which is **typical of the Deccan Plateau.**
 - The major wild animals include **nilgai, chousingha, chinkara, black buck**, sambar, spotted deer, **wild dog**, wolf, jackal, fox, **tiger, leopard**, and jungle cat.

Bor seeks ₹1 crore for tourism development at Hingni, Bangdapur

About Bor Tiger Reserve:

- It is a wildlife sanctuary which was declared a tiger reserve in July 2014.
- **Location:** It is located in the Wardha District of **Maharashtra.**
- It is the **smallest tiger reserve in India** by area.
- The reserve covers an area of 138.12 sq. km, which **includes the drainage basin of the Bor Dam.**
- It is **centrally located among** several **other Bengal Tiger habitats.**
 - Towards the northeast lies the **Pench Tiger Reserve**, towards the east is **Nagzira Navegaon Tiger Reserve**, and to the southeast is **Karhandla Wildlife Sanctuary.**
 - The **Tadoba Andhari Tiger Reserve** is located to the southeast, **Melghat Tiger Reserve** stands to the west; **Satpura Tiger Reserve** lies to the north-west.
- **Vegetation:** The area is populated by **Dry Deciduous Forest type.**

- **Flora:** Teak, tendu, bamboo, tarot, and gokhru are some of the abundant species.
- **Fauna:** Apart from tigers, the reserve is home to several other mammals like **leopards, sloth bears, sambar deer**, Indian bison (gaur), chital, wild boars, and more.

Can India secure the top spot in reported bird species this year?

About Great Backyard Bird Count (GBBC):

- It is an **annual, four-day event** that **engages bird enthusiasts** of all ages around the world **in counting birds to create a real-time snapshot of where the birds are.**
- It was **launched in 1998 by the Cornell Lab of Ornithology and the National Audubon Society.**
- It was established to **help researchers learn more about how birds are doing** and how to protect them and the environment.
- **How is it done? Participants count birds for as little as 15 minutes** (or as long as they wish) on one or more days of the four-day event **and report their sightings online.**
- **Who can participate? Anyone can take part** in the Great Backyard Bird Count, from beginner **bird watchers to experts.** One **can participate from** his/her backyard, or **anywhere in the world.**
- **Significance:** Each checklist submitted during the GBBC **helps researchers** at the Cornell Lab of Ornithology and the National Audubon Society **learn more about how birds are distributed** across the country **and how they are affected by changes in habitat** and weather.
- **India and GBBC:**
 - Indian birders have **participated in the GBBC since 2013.**

- In India, GBBC is **coordinated by the Bird Count India (BCI) collective**, a coming-together of a number of groups and organisations that are interested in birds, nature, and conservation.

Andhra Pradesh government bans fishing within a 5 km radius of Hope Island to check the death of Olive Ridley turtles

About Olive Ridley Turtles:

- They are the **smallest and most abundant of all sea turtles** found in the world.
- It gets its **name from the olive-green colouration of its carapace (shell)**.
- **Scientific Name: Lepidochelys olivacea**
- They are best **known for their unique mass nesting, called Arribada**, where thousands of females come together on the same beach to lay eggs.
- **Distribution:**
 - They are mainly found in the **warm waters of the Pacific, Atlantic, and Indian oceans**.
 - **Odisha's Gahirmatha Marine Sanctuary** is known as the **world's largest rookery** (a colony of breeding animals) **of sea turtles**.
- **Features:**
 - An adult typically measures between 62 and 70 cm in length and weighs about 35-45 kg.
 - They have **one to two visible claws** on each of their paddle-like flippers.
 - They are **omnivorous**, meaning they feed on both plants and animals.
 - They are **solitary**, preferring the open ocean.

- These turtles **spend their entire lives in the ocean** and **migrate thousands of kilometres** between feeding and mating grounds in the course of a year.
- **Conservation Status:**
 - **IUCN Red List: Vulnerable**
 - Wildlife Protection Act, 1972: Schedule 1
 - CITES: Appendix I
- **Key Facts about Hope Island:**
- It is a **tadpole-shaped island**, located **off the coast of Kakinada**, Andhra Pradesh, **in the Bay of Bengal**.
- Hope Island is so **named for providing a natural haven to sailors** against the forces of wind and tide against the weary traveller.
- This **island is young**, as it was **formed in the late 18th century**, by the **waters of the Koringa River**, which is a **tributary of the River Godavari**.
- The area between Kakinada coast and Hope Island is known as **Kakinada Bay**.
- It acts as a **natural barrier from storm surges** and is a natural breakwater for the Kakinada coast.

Parasitic creeper preys on Chengalpet forests, Vedanthangal Bird Sanctuary

About Cuscuta Dodder:

- It is native to **North America**.
- It is a **parasitic vine without roots**, has already infested acres of trees in the reserve forests and has begun to spread inside India's oldest bird sanctuary.
- It is the **holoparasitic plant** that builds a canopy on the host plant and casts thousands of tendrils to form a dense spectacle before it strangles and eventually kills it.

- As per a technical paper published by the National Research Centre for Weed Science, in India, Cuscuta poses a serious **problem in oilseeds, pulses and fodder crops** in the states of Andhra Pradesh, Chhattisgarh, Gujarat, Orissa, West Bengal and parts of Madhya Pradesh under **rain fed as well as irrigated conditions**.
- Legislation in 25 countries has listed the dodder as a '**declared noxious weed**' with seeds and plant material denied entrance. In the United States, it is the only weed seed whose movement is prohibited in every state.
- The seeds of Cuscuta are spheroid and have a hard coat, which aids them to **survive up to 50 years** in dry storage and at least 10 years in the field.
- Unlike root parasites, Cuscuta seeds **do not require** a specific **stimulant to induce germination**.

Fourteenth Meeting of the Conference of the Parties

About the Convention on the Conservation of Migratory Species:

- It also known as the **Bonn Convention**, is an environmental treaty under the aegis of the **United Nations Environment Programme**.
- It provides a global platform for the **conservation and sustainable** use of migratory animals and their habitats.
- It was signed in Bonn, Germany, on 23 June 1979.
- It is the only global and UN-based intergovernmental organisation established exclusively for the conservation and management of terrestrial, aquatic and avian migratory species throughout their range.
- The parties to the convention acknowledge the importance of conserving migratory species, and the need to pay special attention to species whose conservation status is unfavourable.

- Activities by CMS Parties may range from **legally binding treaties**(called Agreements) to less formal instruments, such as Memoranda of Understanding.
- The **Conference of Parties** (COP) is the **decision-making organ** of this convention.
- **It has two Appendices.**
 - **Appendix I** lists **endangered migratory species** and includes prohibitions regarding the take of these species.
 - **Appendix II** lists species that have an **‘unfavourable conservation status’** (as per the conditions set out in the Convention) and encourages range states to draft range-wide agreements for the conservation and management of these species

From restoring forests to river basins, seven conservation initiatives across continents recognised by UN

About UN World Restoration Flagships:

- The World Restoration Flagship are part of the **UN Decade on Ecosystem Restoration** – led by the **UN Environment Programme** (UNEP) and the **Food and Agriculture Organization**.
- It aims to **prevent, halt, and reverse** the **degradation of ecosystems** on every continent and in every ocean.
- The award conferred by the UNEP and FAO of the UN makes the initiatives **eligible for technical and financial support** from the organisation.
- The awards track notable initiatives that provide support to global commitments in order to restore one billion hectares.
- The seven initiatives are

- **The Restoring Mediterranean Forests Initiative:** It involves the countries of Lebanon, Morocco, Tunisia and Türkiye.
- It consists of a novel approach said to have protected and restored natural habitats and vulnerable ecosystems. It is also said to have led to around two million hectares of forests restored across the region since 2017.
- **The Living Indus initiative** received approval from the Pakistan parliament in the wake of the devastating 2022 climate change-induced floods.
- Its official launch took place at the 27th Conference of Parties to the UN Framework Convention on Climate Change in Sharm el-Sheikh.
- It designates the **Indus River as a living entity with rights** — a measure taken to protect rivers elsewhere as well.
- The **Acción Andina social movement** led by **Peruvian conservation** non-profit ECOAN aims to protect and restore a forest area of one million hectares.
- The **Sri Lanka Mangrove Regeneration initiative:** It is a science-driven programme co-led by local communities. It focuses on the restoration of natural balance in the ecosystem
- **The Terai Arc Landscape initiative:** It is aimed to restore the forests of critical corridors of the Terai Arc Landscape in collaboration with local communities working as citizen scientists, community-based anti-poaching units, forest guards, among others.
- “It also supported the tiger population in the landscape shared by India and Nepal, which increased today to 1,174.
- **Regreening Africa's agriculture:** It is expected to benefit over 6,00,000 households.
- **Growing forests in Africa's drylands initiative:** It aims to expand from 41,000 restored hectares today to 229,000 hectares by 2030.

Bihar: Families Affected by Kosi River Floods March 12 Days to Patna to Lodge Protest

About Kosi River:

- It is a **transboundary river** which flows through **China, Nepal, and India**.
- It is a prominent **tributary of the Ganges**.
- **Origin:** The river Kosi is **formed by the confluence of three streams**, namely the **Sun Kosi, the Arun Kosi**, and the **Tamur Kosi**, all of which have their origin in the **Himalayan region of Nepal and Tibet**.
- **Course:**
 - About 30 miles (48 km) north of the Indian-Nepalese frontier, the Kosi is joined by several major tributaries and **breaks southward through the Siwalik Hills at the narrow Chatra Gorge**.
 - The river **then emerges on the great plain of northern India in Bihar** state on its way to the **Ganges River, which it enters south of Patna** after a course of about **450 miles (724 km)**.
- The **Kosi drains an area of 74,500 sq. km**, of which **only 11,070 sq. km lie within Indian Territory**.
- The Kosi River valley is **bounded by steep margins** that **disconnect it from the Yarlung Zangbo River** to the north, the **Mahananda River** to the east, the **Gandaki** to the west, and the **Ganga** to the south.
- It is well known for its **tendency to change course** generally in the westward direction. During the last 200 years, the river has shifted westwards for a distance of about 112 km and has laid waste large tracts of agricultural land.
- Kosi is **known as the "sorrow of Bihar"**, as it has **caused widespread human suffering** in the past **due to flooding** and very frequent changes in course when it flows from Nepal to Bihar.

- **Tributaries:** It has **seven major tributaries: Sun Koshi, Tama Koshi or Tamba Koshi, Dudh Koshi, Indravati, Likhu, Arun, and Tamore** or Tamar.

CMS COP14: Draft resolution for conservation of hawksbill turtle & angel shark adopted

About the International Single Species Action Plan:

- It is the key instrument developed under the **Agreement on the Conservation of African-Eurasian Migratory Waterbirds** (AEWA).
- **Purpose:** It is for the purpose of implementing coordinated measures to restore migratory waterbird species to a favourable conservation status.
- International cooperation among the species' range states is essential for the implementation of these action plans.
- **What is the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)?**
- It is an **intergovernmental treaty** dedicated to the conservation of migratory waterbirds and their habitats across Africa, Europe, the Middle East, Central Asia, Greenland and the Canadian Archipelago.
- It is developed **under the framework of the Convention on Migratory Species** (CMS) and administered by the **United Nations Environment Programme** (UNEP).
- It brings together countries and the wider international conservation community in an effort to establish coordinated conservation and management of migratory waterbirds throughout their entire migratory range.
- It covers 255 species of migratory waterbirds that are ecologically dependent on wetlands for at least part of their annual cycle.

- The Agreement area stretches from the northern reaches of Canada and the Russian Federation to the southernmost tip of Africa, covering 119 Range States from Africa, Europe, the Middle East and parts of Asia and Canada
- The Agreement has three main bodies:
 - **Meeting of the Parties** (MOP), the governing body of AEWA;
 - **Standing Committee** (StC), responsible for steering the operations between sessions of the MOP;
 - **Technical Committee** (TC), responsible for providing scientific and technical advice.

The Agreement's Secretariat (UNEP/AEWA Secretariat) based in **Bonn, Germany**, supports the Parties and services the bodies of the Agreement.

New species of damselfly discovered in Kerala's Ponmudi hills

About Ponmudi Hills:

- Ponmudi translates to '**Golden Hill**' or '**Golden Peak**' is located in the **state of Kerala**.
- It is part of the **Western Ghats mountain range** that runs parallel to the Arabian Sea and is at an altitude of 1100 metres above sea level.
- The hills are a **part of the Agasthyamalai landscape**, at the southernmost tip of the Western Ghats.
- **Key facts about the new species of damselfly:**
- It is named **Cliffside Bambootail** (*Phylloneura rupestris*).
- It belongs to a group called bambootails, so named because of their long abdomen that resembles bamboo stalks.
- It lays eggs in the moss beds in seasonal rills that flow over rock cliffs.

- The discovery is significant because, for over 160 years, the genus *Phylloneura* was considered monotypic, with a single described species, the **Myristica Bambootail**
 - **Myristica Bambootail's** population is associated with myristica swamps and hence is known by its common name Myristica Bambootail.
 - It has remained the sole described species of the genus *Phylloneura* and is considered **near-threatened** as per the **IUCN Red List** of Threatened Species.
 - It is **endemic to the Western Ghats** and has been recorded only in the area between the **Nilgiris Hills and Sharavathi Valley**, north of the Palghat Gap.

Will reclaim 'char' areas from encroachers: Assam CM

About Char Area:

- The riverine areas (island) of the **river Brahmaputra**, locally known as "**Char/Chapori**".
- The chars follow a peculiar pattern of migration.
- They are subjected to **erosion on their upstream** and deposition on the downstream, due to which they migrate downstream.
- This affects the geometry and location of the chars during floods almost every year.
- **Issues with the Char area:**
 - The physical, sociological and institutional constraints on the development of Char Areas are many and complex.

- Such as the virtual **absence of all-weather communication** with the main banks, reliable means of intra- and inter-char mobility, inadequate growth of transport and basic infrastructure like surface roads, health and drinking water, delivery systems for farm inputs, marketing, agro-services electricity and education.
- The problems in the Char Areas are unique in nature, due to the constant threat from flood and erosion during the rainy season.
- The land mass is segregated and cut off from each other, making it very difficult to take any major scheme for road communication, irrigation, Power supply or set of educational institutions.

The Forest Department's sporting gesture aims at saving tigers and preventing forest fires

About Melghat Tiger Reserve (MTR):

- **Location:**
 - It is located in the Amaravati district of **Maharashtra**.
 - It is located on the southern **offshoot of the Satpura Hill Range** in Central India, called **Gawilgarh Hill**.
- It was established as a wildlife sanctuary in 1967 and was declared a tiger reserve in 1974.
- It was the **first tiger reserve in Maharashtra**.
- It was among the first nine tiger reserves notified in 1973-74 under Project Tiger.
- The name "Melghat" means the confluence of various "ghats" or valleys, as is typical of the landscape of this Tiger Reserve.

- **Vegetation:** The forest is **tropical dry deciduous** in nature, and **dominated by teak**.
- **Rivers:** The reserve is a catchment area for **five major rivers: the Khandu, Khapra, Sipna, Gadga, and Dolar**, all of which are **tributaries of the river Tapti**.
- The **Tapti River and the Gawilgarh ridge** of the Satpura Range **form the boundaries of the reserve**.
- **Tribes:** The **Korkus** are the largest tribal community in Melghat. Other communities include the **Gawli community**, the **Gond tribe**, and several other smaller tribal communities.
- **Flora:** Some of the common species are **teak, Lagerstroemia Parviflora, Terminalia Tomentosa, Ougeinia Oojeinensis, Emblica Officinalis, Bamboo**, etc.
- **Fauna:**
 - Apart from Tigers the other prominent animals are **Sloth Bear, Indian Gaur, Sambar deer, Leopard**, Nilgais, dhole, hyena, jungle cat, langur, etc.
 - It is considered a stronghold of the **critically endangered forest owlet**.

Bull shark that attacked fisherman was first sighting in Vaitarna river

About Vaitarna River:

- It is one of the **west flowing rivers** in the region North of Mumbai and South of the Tapi River.
- It originates in the **Trimbakeshwar Hills** of Nasik district of Maharashtra.

- It receives most of the rainfall from the South West monsoon during June to October. Almost 98% of the annual rainfall of the basin is received during this period.
- **Tributaries:** The main tributaries are **Pinjal, Ganjai, Surya, Daharji and Tansa.**
- The catchment area of Vaitarna basin completely lies in Thane and Nasik districts of Maharashtra.
- It drains an area of 2019 sq. km before it falls into the Gulf of **Khambhat.**
- **Key facts about Bull Shark**
- They're known to be aggressive towards humans and are thought to be one of the most dangerous shark species in the world.
- **Habitat:** These are frequently spotted in tropical coastal areas worldwide, including shallower waters along coastlines.
- Bull sharks have a unique ability to **tolerate freshwater and saltwater habitats**, meaning they can sometimes be found venturing into rivers and travelling great distances upstream.
- It **reproduces through viviparity**, the process in which the embryo develops within the mother's body, leading to live birth.
- **Conservation status**
 - **IUCN: Vulnerable**

The new protocol can reduce the breeding cycle of pigeon pea by 3-5 years, important for nutritional security in drylands

About Pigeon pea:

- It is also called **arhar and tur in India.**

- It is an **important legume crop** and **protein-rich food** which is primarily consumed as dal in India.
- It is predominantly a crop of **tropical areas** mainly cultivated in semi-arid regions of India.
- **Climatic conditions**
 - **Rain:** It **requires 600-650 mm** of annual rainfall along with moist conditions for the initial eight weeks and dry conditions during its flowering and pod development phase.
 - **Temperature:** It can be grown with a temperature ranging from 26°C to 30°C in the rainy season and 17°C to 22°C in the post-rainy (November to March) season.
 - **Soil:** It can be grown on all types of soil; however, **sandy loam or loam soil** is most suitable for its cultivation.
 - It is very **sensitive to low radiation** at pod development, therefore flowering during the monsoon and cloudy weather, leads to poor pod formation.
- It is **commonly intercropped** with a wide range of crops. In India, it was estimated that 80 - 90 % of the pigeon pea were intercropped.
- The important diseases of Pigeon pea are Wilt, Sterility mosaic disease, Phytophthora blight, Alternaria blight and Powdery mildew etc.
- **Concern:** The Pigeon pea's long growth cycle and **sensitivity to day length have hindered breeding efforts**, with only about 250 varieties released globally over six decades.
- **Health benefits:** It has a **low glycaemic index** and is rich in thiamine, riboflavin, niacin, vitamin B-6, folate, vitamin A, calcium, zinc, iron, magnesium and phosphorus.
- **Major Pigeon pea-producing states:** Uttar Pradesh, Madhya Pradesh, West Bengal, Bihar and Jharkhand.

- **New protocols of ICRISAT**
- The new convention promises to substantially cut the time required to develop new Pigeon pea lines with desirable traits, effectively bringing food to dryland communities faster.
- The new protocol **shortens the breeding** and control over factors like photoperiod, temperature, humidity, and breeding **cycle to 2 to 4 years** while the traditional Pigeon pea breeding takes up to 13 years.

The driest place in North America has been home to a lake for 6 months

About Badwater Basin:

- It is **endorheic in nature** meaning water flows into it but not out, typically resulting in rapid evaporation and ephemeral lakes.
- It is the **lowest point in North America** at 282 ft (86 m) below sea level.
- However, increased precipitation over the past six months has disrupted this pattern.
- It is nestled within the Death Valley in **North America**.
- Manly Lake was formed in August 2023 after Hurricane Hilary.
- While the lake initially shrank as expected, it surprisingly persisted through the fall and winter months.
- Its resurgence came in February 2024, when a powerful atmospheric river replenished its waters.
- Death Valley's average annual rainfall of only 51 millimetres, received a remarkable 125 mm in the last six months.
- **Key facts about Death Valley**
- It is located in southeastern California **in the United States**.

- It lies near the undefined border between the **Great Basin and the Mojave Desert**.
- Most rainfall is blocked by the mountains to the west, so Death Valley is extremely arid.
- It is the **lowest, hottest, and driest** portion of North America, noted for its extremes of temperature and aridity.

Earth's early evolution: Fresh insights from rocks formed 3.5 billion years ago

About Singhbhum Craton:

- It is a vast swathe of rocky land that stretches mainly across parts of **Jharkhand and Odisha**, between the **Chhota Nagpur plateau and the Eastern Ghats**.
- This ancient part of the Earth's crust has been found in previous research to date back to **3.5 billion years ago**.
- The craton's oldest rock assemblages are largely **volcanic and sedimentary rocks** also known as **greenstone successions**.
- Greenstones are rock assemblages made up mostly of submarine volcanic rocks with minor sedimentary rocks.
- The geology of this area shares stark similarities with the greenstone belts documented in **South Africa's Barberton** and Nondweni areas and the **Pilbara Craton** in **Western Australia**.
- All these areas experienced widespread **submarine mafic**— meaning high in magnesium oxide — volcanic eruptions between 3.5 and 3.3 billion years ago, preserved as pillowed lava and komatiites.
- **Significance**

- They offer a clearer picture of **Earth's early tectonic activities** during the Archaean times, contributing to our understanding of the planet's formative years.
 - The Singhbhum Craton's **unique geological features**, including its greenstone belts, provide invaluable information about Earth's surface and atmospheric processes.
 - This is crucial for hypothesising early habitable conditions and the emergence of life on Earth.
- **What are Cratons?**
 - Cratons are the **oldest and most stable parts** of the **Earth's crust**, acting as the bedrock of continents.
 - These are pieces of ancient continents that formed billions of years ago.
 - Studying them offers a window into how processes within and on the surface of Earth operated in the past.
 - They host a variety of different groups of rocks, including greenstones and granites.

First-ever nesting report of incredibly rare giant softshell turtle

About Cantor's Giant Softshell Turtle:

- It is also known as the **Asian giant softshell turtle** and the **frog-faced softshell turtle**.
- It is a species known for its rarity and secretive nature.
- It spends **most of its life buried and motionless**, with only its eyes and mouth protruding from the sand.

- It surfaces only twice a day to take a breath and capture its prey by sit-and-wait strategy using an element of surprise.
- These turtles are **primarily carnivores** (piscivores) feeding on fish, crustaceans, and molluscs.
- **Distribution:** It is found in **eastern and southern India**, Bangladesh, Burma, Thailand, Malaysia, Laos, Cambodia, Vietnam, eastern and southern China.
- **Habitat:** They inhabit inland, slow-moving, freshwater rivers, lakes, streams, and estuaries.
- **Conservation status**
 - **IUCN:** Critically endangered
 - **CITES:** Appendix II
 - **Wildlife Protection Act, 1972:** Schedule I
- **Threats:** Habitat destruction has made it disappear from much of its environment. They are also heavily harvested by locals for meat.

40 spotted deer translocated from Mysuru Zoo to Kali Tiger Reserve

About Spotted Deer:

- The spotted deer, or **chital/ cheetal** is a deer species **native to the Indian subcontinent**.
- It is the most **common deer species in Indian forests**.
- **Distribution:** It is widely distributed in Asia, especially in **India, Sri Lanka, Bangladesh, Bhutan**, and a small group in **Pakistan**.
- **Habitat:** **Subtropical grasslands** and forests
- **Features:**
 - With a **lifespan of about 20 to 30 years**, it stands at about 35 inches tall and weighs about 187 pounds.
 - It is a **slightly reddish brown** with **white spots** on its body.
 - **Only males have antlers**, and their **bodies are larger than females**.

- Spotted Deers are **social animals**. They commonly occur in herds of 10 to 50 individuals.
- They **mainly feed on grasses** throughout the year. Their diets include herbs, shrubs, foliage, and fruits.
- **Conservation Status:**
 - **IUCN Red List: Least Concern**
- **Key Facts about Kali Tiger Reserve (KTR)**
- **Location:** Kali Tiger Reserve, earlier known as Dandeli-Anshi Tiger Reserve, is located in the central portion of the Uttara Kannada (North Canara) district of **Karnataka state**.
- **It comprises two important protected areas** of the region, viz., **Dandeli Wildlife Sanctuary and Anshi National Park**.
- Dandeli Wildlife Sanctuary (475.018 sq. km) and Anshi National Park (339.866 sq. km) are **contiguous to each other and form a single tract of protected area** located in the biologically sensitive **Western Ghats**.
- **River:** The **Kali River**, which forms the major source of water for Uttara Kannada, flows through the tiger reserve, hence the name.
- **Vegetation:** Forests are primarily **moist deciduous and semi-evergreen**, with excellent patches of evergreen forests in the westernmost parts as well as in deep valleys.
- **Flora:** The complex floral tapestry comprises **hardwood trees like teak, silver oak, Malabar tamarind**, Jamba, lantana, bamboo, shrubbery, and **dense vegetative undergrowth** on the floor.
- **Fauna:** Prominent species are the **Asiatic elephant, tiger, leopard, gaur, chevrotain, spotted deer**, barking deer, sloth bear, dhole, jungle and leopard cat, Malabar civet, and giant civet.

38 exotic birds, animals died at the zoological park in the Statue of Unity complex in 2 years

About the Statue of Unity:

- It was created as a **tribute to the 'Iron Man of India', Sardar Vallabhbhai Patel.**
- **Location:** It is located in **Gujarat**, by the **banks of the River Narmada** on the **River Island of Sadhu Bet**, overlooking the **Narmada Dam.**
- **Height:** The statue, **182-metre tall**, is described as the **world's tallest** as it exceeds the height of China's Spring Temple Buddha by 177 feet.
 - The height of 182 metres is kept as the **Gujarat state has 182 seats in the Gujarat Legislative Assembly.**
- The statue was **built by Indian construction major Larsen & Toubro (L&T) and designed by** Padma Bhushan-winning **sculptor Ram V Sutar.**
- The **state government fully funded** the INR 3,050-crore project, covering an area of 20,000 square metres and is surrounded by a 12 square kilometre artificial lake.

Goa to be 1st state to get World Bank climate fund

About Sub-national Climate Fund:

- It is a global blended finance initiative to **develop mid-size climate-resilient infrastructure** & nature-based solutions.
- **Mission:** To invest **in subnational climate-smart infrastructure** and nature-based solutions delivering measurable and certified climate and sustainable development **impact at the local level.**

- The model is designed to attract **public and private investment** and to deliver certified climate and Sustainable Development impacts and Nature-based Solutions.
- **Structure:**
- **Fund Manager:** It is managed by **Pegasus Capital**.
- **Technical assistance: The International Union for Conservation of Nature (IUCN)** is responsible for the Technical Assistance component of SCF.
- **Anchor Investor of Concessional Capital:** The Green Climate Fund (GCF)
- **Governance**
- The governance of the Subnational Climate Fund (SCF) includes a **High-level Advisory Committee**.
- The role of the committee is to advise the SCF Consortium on the best opportunities to invest in regard to the SCF mission, and more widely on the theory of change encompassed by SCF.
- This Committee is composed of **well-known experts** in their field of expertise in climate science, finance/economies, sector/technical, biodiversity/nature-based solutions, and environmental/social management systems (ESMS).

A special fund to save Purple Frog, a 'living fossil', in the Western Ghats

About Purple Frog:

- It is also known as the **Maveli frog or Pignose Frog**.
- It is believed to have coexisted with dinosaurs and has similarities to the Sooglossidae family of frogs in Seychelles.
- It is often called a **'living fossil'** which belongs to the **Nasikabatrachidae family**.

- **Appearance**

- It has a bloated body with short stout limbs and is dark purple to greyish in colour.
- It has **a small head in comparison to the body length**, and an unusually pointed snout.
- Its short and muscular forelimbs with hard palms help it to burrow underground.
- Unlike other frogs, it has **very short hind legs**, which do not allow it to leap from one spot to another.

- **Habitat:** This burrow-dwelling frog prefers loose, damp and well-aerated soil close to ponds, ditches or streams.

- **Distribution:** It is the soil-dwelling frog endemic to selected habitats in the **Western Ghats in Kerala and Tamil Nadu**.

- The **Anamalai hill** is one of its prime habitats in Tamil Nadu.

- Tamil Nadu is home to two types of Purple frogs: **Nasikabatrachus sahyadrensis and Nasikabatrachus bhupathi**.

- It **remains underground** most of the year except for 2-3 weeks during the monsoon when it comes out to mate.

- **Conservation status**

- **IUCN: Endangered**
- **Wildlife Protection (Amendment) Act, 2022:** Schedule I

- **Threats:** Habitat loss, road networks through their habitats, and climate change are some of the major threats to their survival.

India Halts Flow Of Ravi River To Pakistan, Say Reports: Here's What We Know So Far

About Shahpur Kandi Dam Project:

- It is located on the **Ravi River** in Pathankot district, **Punjab**, **downstream from** the existing **Ranjit Sagar Dam**.
- The **water released by Ranjit Sagar Dam** is **utilized for generating power from this project**.
- The main purpose behind the construction of this dam is **power generation and irrigation in Punjab and J&K States**.
- It is constructed by the **irrigation department of the Government of Punjab**.
- The project consists of a **55.5 m high concrete gravity dam**, a 7.70 km long hydel channel, two head regulators, and two powerhouses.
- The total output capacity of the project is **206 MW**.
- **Key Facts about Ravi River:**
 - It is a **trans-boundary river of India and Pakistan**.
 - It is one of **the five tributaries of the Indus River** that give the Punjab (meaning "Five Rivers") its name.
 - **Origin:** It originates in the western Himalayas in the Multhan tehsil of the Kangra district of Himachal Pradesh.
 - It then **flows through** the Indian state of **Punjab and enters Pakistan**, where it eventually **joins the Chenab River** in the province of Punjab.
 - **Length:** The total length of the Ravi River is approximately **720 kilometers**(447 miles). **Around 158 kilometers** (98 miles) of the river's course **lie in India**, and the remaining 562 kilometers (349 miles) flow through Pakistan.
 - It is also called "**The River of Lahore**" since that city is situated on its eastern bank.

- **Tributaries:** The Ravi River is fed by several tributaries, including the **Bhadal**, the **Ujh**, the **Tarnah**, and the **Basantar** rivers **in India**, and the **Aik**, the **Bara**, and the **Beas** rivers **in Pakistan**.
- **Indus Water Treaty** of Ravi River: The water of the rivers **Ravi, Beas, and Sutlej is allocated to India** under the Indus Water Treaty between India and Pakistan.

PM Modi cites crocodiles in Ken River to hail tech use in saving wildlife

About Ken River:

- It is one of the **major rivers of the Bundelkhand region** of central India.
- It flows through two states, namely **Madhya Pradesh and Uttar Pradesh**.
- It is a **tributary of the Yamuna River**. The river is the **last tributary** of the Yamuna **before the Yamuna joins the Ganga**.
- **Course:**
 - The river **originates** near the village of Ahirgawan **on the northwest slopes of the Kaimur Range in** the district of Jabalpur, **Madhya Pradesh**.
 - **Crossing the Bijawar-Panna hills, the river cuts** a 60 km long, and 150- 180 m **deep gorge**. It is joined by several streams in this gorge, making waterfalls.
 - It travels a distance of **427 km** and then **merges with the Yamuna** at Chilla village, **near Fatehpur in Uttar Pradesh**.
- It is known for its rare **Sajhar or Dendritic Agate stone**.
- **Tributaries:** The major tributaries of the Ken River are **Bawas, Dewar, Kaith, Baink, Kopra, and Bearma**.

Critically endangered right whales are shrinking, with drastic consequences for their population

About North Atlantic right whales:

- These whales are migratory animals, spending the winter in warmer waters and migrating to the poles for cooler waters in late summer.
- These whales inhabit the **temperate and subpolar waters** of the North Atlantic and North Pacific oceans.
- **Habitat:** Depending on the time of year and which hemisphere they're found, right whales will spend much of their time near **bays and peninsulas and in shallow, coastal waters.**
- **Distribution:** These are generally restricted to the coastal waters of the East Coast of the United States and Canada.
- There are three recognized species of right whales that occur in different parts of the world. These are **Southern right whales** (*Eubalaena australis*), **North Atlantic right whales** (*Eubalaena glacialis*) and **North Pacific right whales.**
- These whales often skim feed at or just below the water surface, slowly swimming through clouds of plankton with their mouths half open and then straining the plankton through their long baleen plates.
- **Conservation status**
 - **IUCN:** Critically endangered
 - **CITES:** Appendix I

INTERNATIONAL RELATIONS

Scientists accidentally find a mysterious one-km-long wall in Baltic Sea

About Baltic Sea:

- It is a semi-enclosed inland sea located **in Northern Europe**.
- It is an **arm of the North Atlantic Ocean**, extending northward from the latitude of southern Denmark almost to the Arctic Circle and **separating the Scandinavian Peninsula from the rest of continental Europe**.
- It has a coastline of approximately 8,000 km, shared by several countries, including **Sweden, Poland, Lithuania, Latvia, Finland, Estonia, Germany, Denmark, and Russia**.
- It covers an area of approximately 377,000 [sq.km](#). The sea is approximately 1,600 km long and 193 km wide.
- It is **connected to the White Sea via the White Sea Canal** and to the **North Sea's German Bight via the Kiel Canal**.
- It **connects to the Atlantic Ocean through the Danish Straits**.
- The Baltic Sea **contains three major gulfs**: the **Gulf of Bothnia** to the north, the **Gulf of Finland** to the east, and the **Gulf of Riga** slightly to the south of that.
- It is often cited as the **world's largest brackish inland water body**.
- Its water **salinity levels are lower than** that of the **World Oceans** due to the inflow of fresh water from the surrounding land and the sea's shallowness.

- More than 250 rivers and streams empty their waters into the Baltic Sea. **Neva is the largest river that drains** into the Baltic Sea.
- **Islands:** It is home to over 20 islands and archipelagos. **Gotland**, located off the coast of Sweden, is the **largest island in the Baltic Sea**.

Munich Security Conference 2024: India is non-west but not anti-west, says EAM S Jaishankar

About the Munich Security Conference (MSC):

- It is the **world's leading forum** for **debating international security policy**.
- **Objective:** To build trust and **contribute to the peaceful resolution of conflicts** by sustaining a continuous, curated, and **informal dialogue within the international security community**.
- It has been **held in Munich**, Bavaria, **Germany**, **since 1963**.
- The conference is **held annually in February**.
- It brings together **security experts, politicians, military leaders**, and the defence industry from around the world.
- MSC regularly convenes high-profile events on particular topics and regions and **publishes the Munich Security Report**, an annual digest of relevant figures, maps, and research on crucial security challenges.
- **Key Facts about the North Atlantic Treaty Organization (NATO):**
- It is a **transatlantic security alliance** of **31 like-minded North American and European countries**.
- It was established by the **North Atlantic Treaty**(also called the **Washington Treaty**) on April 4, 1949.
- **Aim:** To **protect peace and to guarantee the territorial integrity**, political independence, and **security of the member states**.
- **Article Five of the treaty:** If an armed attack occurs against one of the member states, it should be **considered an attack against all members**,

and **other members shall assist the attacked member**, with armed forces if necessary.

- This article forms the core of the Alliance, a **promise of collective defence**.
- **Headquarters: Brussels, Belgium.**

WHO launches digital health platform agreed upon in India's G20 presidency

About Global Initiative on Digital Health (GIDH):

- It is a **WHO-managed network** aiming to amplify and align resources toward country-led digital health transformation through strengthened collaboration and knowledge exchange.
- It is a platform for **sharing knowledge and digital products among countries**.
- The initiative aims to achieve the **following objectives through collaborative efforts**:
 - **Assess and prioritise the country's needs** for sustainable digital health transformation.
 - **Increase the alignment of country-level digital health resources** and unfunded priorities.
 - Support the **accelerated achievement** of the strategic **objectives of the Global Strategy on Digital Health 2020-2025**.
 - **Build capacity and converge efforts** to encourage local development, maintenance, and adaptation of digital health technologies to continuously changing needs.
- The initiative **will be a network of networks with four main components**:
 - **country needs tracker**
 - **country resource portal** (a map of resources available in a country)
 - **transformation toolbox** that will share quality-assured digital tools
 - **knowledge exchange**.

- GIDH will support countries in three ways: by listening to their needs, by aligning resources to avoid fragmentation and overlap, and by providing quality-assured products.
- **Membership:** Membership is **open to all institutions engaged in digital health**.

Raisina Dialogue begins today: Everything you need to know about the conference

About Raisina Dialogue:

- It is an annual conference on **geopolitics and geoeconomics**, which aims to address the most challenging issues faced by the world.
- It is **held annually since 2016** in New Delhi.
- The conference is attended by people from political, business, media, and civil society backgrounds.
- The Dialogue is structured as a multi-stakeholder, cross-sectoral discussion, involving heads of state, cabinet ministers and local government officials, who are joined by thought leaders from the private sector, media and academia.
- It is organised by the **Observer Research Foundation (ORF)** in partnership with the **Ministry of External Affairs**, Government of India.
- The **theme of the 2024** edition is “**Chaturanga: Conflict, Contest, Cooperate, Create,**”
- During the three-day conference, the participants will engage with each other over six “thematic pillars”. These include:
 - Tech Frontiers: Regulations & Realities
 - Peace with the Planet: Invest & Innovate

- War & Peace: Armouries & Asymmetries
- Decolonising Multilateralism: Institutions & Inclusion
- The Post 2030 Agenda: People & Progress
- Defending Democracy: Society & Sovereignty,

Asia-Pacific region 32 years behind 2030 target on achieving SDGs: UNESCAP

About the United Nations Economic and Social Commission for Asia and the Pacific:

- It is the most inclusive **intergovernmental platform** in the Asia-Pacific region.
- It was **established in 1947**.
- **Mandate:** To **promote economic and social development** in the Asian and Pacific region by fostering cooperation between its members and associate members.
- The Commission promotes cooperation among its **53 member** States and 9 associate members in pursuit of solutions to sustainable development challenges.
- It is one of the five regional commissions of the **United Nations**.
- It carries out **work in areas** like Macroeconomic Policy, Poverty Reduction and Financing for Development, Trade, Investment and Innovation, Transport, Environment and Development, Information and Communications Technology, Disaster Risk Reduction and Social Development etc.
- **Headquarters:** Bangkok, Thailand
- **What are Sustainable Development Goals?**
- These were **adopted by the United Nations in 2015** as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

- The SDGs framework sets targets for **231 unique indicators across 17 SDG goals** related to economic development, social welfare, and environmental sustainability, to be met by 2030.
- The 17 SDGs are integrated; they recognise that action in one area will affect outcomes in others, and that development must balance social, economic, and environmental sustainability.

Armenia freezes participation in Russia-led security bloc - Prime Minister

About Collective Security Treaty Organisation:

- It is an **intergovernmental military alliance** in Eurasia, which was established in 2002.
- **Members of the organization at present are:** Russia, Armenia, Belarus, Kazakhstan, Kyrgyzstan, and Tajikistan.
- **Background**
 - The Collective Security Treaty (CST) was signed on May 15, 1992 in Tashkent by the Heads of six countries: **Armenia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan**. Subsequently, Azerbaijan, Georgia and Belarus joined it.
 - The treaty came into force on April 20, 1994.
 - On May 14, 2002, in Moscow, the Collective Security Council made a decision to grant the status of an international regional organization to the Collective Security Treaty.
- In 2004 the UN General Assembly adopted a resolution granting the Collective Security Treaty Organization (CSTO) an **observer status in the UN General Assembly**.

- The **statutory bodies of the Organization** are: the Collective Security Council (CSC), the Council of Foreign Ministers (COM), the Council of Ministers of Defense (CIO), the Committee of Secretaries of Security Council (CSSC).
- **The key objectives of the CSTO include**
 - The provision of national and collective security, intensive politico-military cooperation, foreign policy coordination on international and regional security issues, the establishment of multilateral cooperation mechanisms, including a military component, the development of cooperation in the counteraction to modern challenges and security threats.
- **Headquarter:** Moscow, Russia

UNCTAD raises alarm over disruptions in shipping routes for global trade

About the United Nations Conference on Trade and Development (UNCTAD):

- It is the **UN's leading institution** dealing with **trade and development**.
- It is a **permanent intergovernmental body established by the United Nations General Assembly** in 1964.
- Its objective is to **assist developing countries**, especially the **least developed countries**, and **countries with economies in transition**, to **integrate** beneficially **into the global economy**.
- It also seeks to help the international community **promote a global partnership for development**, **increase coherence in global economic policy-making**, and assure development gains for all from trade.
- It **provides economic and trade analysis**, **facilitates consensus-building**, and **offers technical assistance** to help developing countries use trade, investment, finance, and technology for inclusive and sustainable development.
- **Headquarters:** Geneva, Switzerland.

- UNCTAD membership consists of **195 states**.
- Its activities are advisory by nature.
- **Reports published by UNCTAD:**
 - **Trade and Development Report**
 - **World Investment Report**
 - **The Least Developed Countries Report**

G-33 countries call for permanent public stockholding solution for food security

About G-33:

- The G33 (or the **Friends of Special Products in Agriculture**) is a **coalition of developing and least-developed countries**.
- Despite the name, there are **currently 47 member nations**. Some of the main countries include **India, China, Indonesia, Pakistan, Nigeria, Philippines, Turkey, Tanzania, Kenya, and South Korea**.
- It was **established prior to the 2003 Cancun ministerial conference** that was **coordinated during the Doha Round of World Trade Organization (WTO) negotiations, specifically in regard to agriculture**.
- **Dominated by India**, the group **has "defensive" concerns regarding agriculture** in relation to WTO negotiations, and **seeks to limit the degree of market opening** required of developing countries.
- The group has **advocated the creation of a "special products" exemption**, which would **allow developing countries to exempt certain products from tariff exemptions**, and **also a "special safeguard mechanism"** which would permit tariff increases in response to import surges.

African leaders demand financial systems reform; launch 'Africa Club' at 37th African Union Summit

About Africa Club:

- **What it is?** It is the Alliance of African Multilateral Financial Institutions (which are African-owned and controlled) launched at the **African Union summit**.
- The initiative aims to **amplify Africa's influence in the global financial system** by aligning its functions with the SDGs and the African Union's Agenda 2063.
- It seeks to introduce innovative financial instruments, provide a venue for debt management discussions and foster collaborative efforts to address the specific needs of African countries.
- Its members include the African Export-Import Bank, Trade and Development Bank, Africa Finance Corporation, African Reinsurance Corporation, African Trade and Investment Development Insurance, Shelter Afrique Development Bank and ZEP – RE (PTA Reinsurance Co).
- **Key facts about the African Union:**
- The AU is an intergovernmental organization consisting of the **55 member** states that make up the countries of the African Continent.
- Basically, it is a continental union with a wide range of goals aimed at strengthening its member states both individually and collectively.
- It was officially launched in 2002 as a successor to the Organisation of African Unity (OAU, 1963-1999).
- **Headquarters:** Addis Ababa, Ethiopia

Why is NATO's Steadfast Defender 2024 military exercise significant? | Explained

About Steadfast Defender 2024:

- It is **NATO's most extensive military exercise since the Cold War era.**
- It involves 90,000 forces from **31 member countries and NATO partner Sweden** and is conducted across various NATO nations.
- The exercise will feature an impressive array of military hardware, including over 50 naval vessels ranging from aircraft carriers to destroyers, and a formidable air contingent of more than 80 units comprising fighter jets, helicopters, and drones.
- The ground forces are equally robust, with at least 1,100 combat vehicles, including 133 tanks and 533 infantry fighting vehicles, demonstrating NATO's ground capabilities.
- The purpose of Steadfast Defender 2024 is **to put NATO's new regional defense plans to the test.**
 - **These plans, the first of their kind in decades,** outline the **alliance's response mechanisms to potential threats**, notably addressing concerns regarding Russian aggression.
- **What is NATO?**
- **Formed in 1949** with the signing of the **Washington Treaty**, NATO is a **security alliance of 31 countries from North America and Europe.**
- NATO's **fundamental goal** is to **safeguard the Allies' freedom and security by political and military means.**
- It is a **system of collective defence** where independent **member states agree for mutual defence** in case of any attack by an external party.

- **Article 5** of the Washington Treaty states that **an attack against one ally is an attack against all**.
- This article forms the **core of the Alliance**, a **promise of collective defense**.
- **Headquarters: Brussels, Belgium.**
- **Functions:**
 - **Political:** NATO **promotes democratic values** and **enables members to consult** and cooperate **on defence and security-related issues** to solve problems, build trust, and, in the long run, prevent conflict.
 - **Military:** NATO is committed to the **peaceful resolution of disputes**. If diplomatic efforts fail, it has **the military power to undertake** crisis-management **operations**. These are carried out **under Article 5** of the Washington Treaty **or under a United Nations mandate, alone or in cooperation with other countries** and international organisations.

POLITY

Operation of Jan Aushadhi Kendra

- Primary Agricultural Credit Societies (PACS) have been allowed by the Government to operate Pradhan Mantri Bhartiya Jan Aushadhi Kendras (PMBJK) under the Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana.
- These are set up under Pradhan Mantri Bhartiya Janaushadhi Pariyojana, which was launched by the Department of Pharmaceuticals, Ministry of Chemicals and Fertilisers in November 2008.

- Objective: To provide quality medicines at affordable prices for all, particularly the poor, so as to reduce out-of-pocket expenses in healthcare.
- These Kendra's provide generic drugs, which are available at lesser prices but are equivalent in quality and efficacy to expensive branded drugs.
- All therapeutic medicines are made available from Jan Aushadhi Stores.
- Jan Aushadhi stores also sell allied medical products commonly sold in chemist shops so as to improve the viability of running the Jan Aushadhi store.
- Pharmaceutical & Medical Devices Bureau of India (PMBI) has been established under the Department of Pharmaceuticals, Govt. of India, with the support of all the CPSUs for coordinating procurement, supply, and marketing of generic drugs through the PMBKs.
- **Who is eligible to open a Jan Aushadhi Kendra?**
- State Governments or any organisation / reputed NGOs / Trusts / Private hospitals/ charitable institutions / Doctors / Unemployed pharmacists/ individual entrepreneurs are eligible to apply for the new Jan Aushadhi Kendra.
- The applicants shall have to employ one B Pharma / D Pharma degree holder as a Pharmacist in their proposed store.
- Primary Agricultural Credit Societies.

The Healthy Indian Project (THIP) Joins WHO's vaccine safety net

- The Healthy Indian Project (THIP), a health information platform in India, is included as a member of the World Health Organization's Vaccine Safety Net (VSN).

- Vaccine Safety Net is a global network of websites, established by the World Health Organization that provides reliable information on vaccine safety.
- It is a network of a diverse group of digital information resources (websites and social media), VSN members, located in countries around the world and providing scientifically based information on vaccine safety in various languages.
- A key player in the Project is the Global Advisory Committee on Vaccine Safety (GACVS), established by WHO in 1999, to respond promptly, efficiently, and with scientific rigour to vaccine safety issues of potential global importance.
- At the outset of the Project, GACVS developed three categories of criteria for good information practices - regarding credibility, content, accessibility and design to which digital resources providing information on vaccine safety should adhere.
- WHO evaluates those electronic resources for their adherence to these criteria.

It is continuously expanding and to date, 110 websites from 45 countries provide vaccine safety information in 43 languages

Cabinet approves "Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY)" a Central Sector Sub-scheme under the Pradhan Mantri Matsya Sampada for the fisheries sector micro and small enterprises and envisages an investment of over rupees six thousand crore in the next four years

About Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana:

- It will be implemented as a Central Sector Sub-scheme under the Central Sector Component of the PMMSY.
- **Funding:** Implemented at an estimated outlay **of Rs.6,000 crore** consisting of 50% i.e. Rs.3,000 crore **public finance** including the World Bank and the AFD

external financing, and rest 50% i.e. Rs.3,000 crore being the anticipated investment from the **beneficiaries/private sector leverage**.

- **Time period:** It will be implemented for 4 years from **FY 2023-24 to FY 2026-27** across all the States and UTs.
- **Intended Beneficiaries:**
 - **Fishers**, Fish (Aquaculture) Farmers, Fish workers, Fish Vendors or such other persons directly engaged in fisheries value chain.
 - **Micro and Small enterprises** in the form of Proprietary Firms, Partnership Firms and Companies registered in India, Societies, **Limited Liability Partnerships** (LLPs), Cooperatives, Federations, Village Level Organizations like Self Help Groups (SHGs), **Fish Farmers Producer Organizations** (FFPOs) and Startups engaged in fisheries and aquaculture value chains.
 - FFPOs also include Farmers Producer Organizations (FPOs).
 - Any other beneficiaries that may be included by the Department of Fisheries, GoI as targeted beneficiaries.
- **Aims and objectives:**
 - **Gradual Formalisation of the unorganised fisheries** sector through self-registration of fishers, fish farmers and supportive workers under a National Fisheries Sector Digital Platform including creation of work based digital identifies of fish workers for improved service delivery.
 - **Facilitating access to institutional financing** fisheries sector micro and small enterprises.

- Providing a one-time incentive to beneficiaries for purchasing aquaculture insurance.
- **incentivizing fisheries and aquaculture microenterprises** through performance grants for improving fisheries sector value-chain efficiencies including creation and maintenance of jobs.
- **Incentivising micro and small enterprises** through performance grants for adoption and expansion of fish and fishery product safety and quality assurance systems including creation and maintenance of jobs.

Could the Preamble have been amended without altering the Constitution's adoption date, SC asks

About the Preamble of the Indian Constitution:

- The preamble of the Indian Constitution **serves as a brief introductory statement** of the Constitution that **sets out the guiding purpose, principles, and philosophy** of the Indian Constitution.
- The Preamble is **based on the Objectives Resolution**, drafted and moved **by Jawaharlal Nehru**.
- The Preamble **reveals four ingredients or components**:
 - **Source of authority of the Constitution**: It is indicated by the Preamble that the source of authority of the Constitution **lies with the people of India**.
 - **Nature of the Indian State**: It declares India to be a **sovereign, socialist, secular, and democratic republic**.
 - **Objectives of the Constitution**: The objectives stated by the Preamble are to **secure justice, liberty, and equality** for all citizens and **promote fraternity to maintain the unity and integrity** of the nation.

- **Date of adoption of the Constitution:** It stipulates **November 26, 1949**, as the date.
- **Amendments:** By the **42nd Amendment** of 1976, the words **“Socialist” and “Secular” were inserted**; the Preamble now reads “Sovereign Socialist Secular Democratic Republic”.
- **Interpretation by the Supreme Court:**
 - **Berubari Union case:** In this case, it was held by the Supreme Court that the **Preamble is part of the Constitution**. However, it recognised that the Preamble **could be used as a guiding principle if a term in any article** of the Constitution **is ambiguous** or has more than one meaning.
 - **Keshvananda Bharti v. State of Kerala:** In this case, the Supreme Court overturned its earlier decision and **held that the Preamble is a part of the Constitution and can be amended** under Article 368 of the Constitution.
 - Again, in the **LIC of India case**, the Supreme Court held that the **Preamble is a part of the Constitution**.

Supreme Court Agrees to Hear Airports Authority's Curative Petition Against Judgment Upholding GMR's Rights Over Nagpur Airport

About the Airports Authority of India (AAI):

- It is a **statutory body under the Directorate General of Civil Aviation, Ministry of Civil Aviation**, Government of India.
- It was constituted by an Act of Parliament and came into being on 1st April 1995, by merging the erstwhile National Airports Authority and the International Airports Authority of India.

- The merger brought into existence a single Organisation entrusted with the **responsibility of creating, upgrading, maintaining, and managing civil aviation infrastructure both on the ground and in air space in the country.**
- AAI **manages 137 airports, which include 24 International Airports** (including 3 International Civil Enclaves), **10 Customs Airports** (including 4 Customs Civil Enclaves), **80 Domestic Airports**, and **23 Domestic Civil Enclaves** at Defence airfields.
- AAI also **provides Air Traffic Management Services (ATMS) over the entire Indian Air Space and adjoining oceanic areas**, with ground installations at all airports, and 25 other locations to ensure the safety of aircraft operations.
- **The functions of AAI are as follows:**
 - Design, **development, operation and maintenance of** international and domestic **airports and civil enclaves.**
 - **Control and management of the Indian airspace extending beyond the territorial limits** of the country, **as accepted by the International Civil Aviation Organization (ICAO).**
 - Construction, modification and **management of passenger terminals.**
 - **Development and Management of cargo terminals** at international and domestic airports.
 - **Provision of passenger facilities** and an information system at the passenger terminals at airports.
 - **Expansion and strengthening of the operation area**, viz. Runways, Aprons, Taxiway etc.
 - Provision of visual aids.

- Provision of communication and navigation aids, viz. ILS, DVOR, DME, Radar etc.

Implementation of Pradhan Mantri Kisan Sampada Yojana

About the Pradhan Mantri Kisan Sampada Yojana:

- The Central Sector Scheme - **SAMPADA** (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters) was approved by the cabinet in May 2017.
- The scheme has now been renamed as the "Pradhan Mantri Kisan Sampada Yojana (PMKSY)".
- It is a comprehensive package of component schemes, which is aimed at the creation of modern **infrastructure with efficient supply chain** management from farm gate to retail outlet.
- It provides a boost to the growth of the food processing sector in the country, helps in providing better prices to farmers, creates employment opportunities, especially in the rural areas, reduces wastage of agricultural produce, increases the processing level and enhances the export of processed foods.
- **Objective:** The objective of PMKSY is to supplement agriculture, modernise processing and decrease Agri-Waste.
- **Components:**
 - Mega Food Parks,
 - Integrated Cold Chain and Value Addition Infrastructure
 - Infrastructure for Agro-Processing Clusters,

- Creation of Backward and Forward Linkages,
 - Creation/Expansion of Food Processing & Preservation Capacities,
 - Food Safety and Quality Assurance Infrastructure and
 - Human Resources and Institutions
- **Nodal Ministry:** Ministry of Food Processing Industries

**If judges can go to the National Judicial Academy for training, why not lawyers:
Supreme Court**

About the National Judicial Academy (NJA):

- NJA, **established in 1993 under the Societies Registration Act, 1860**, is an **independent society, fully funded by the Government of India**, and **works under the directions of the Supreme Court** of India.
- **Mandate:** Strengthening the Administration of Justice through **Judicial Education, Research, and Policy Development**.
- It **organises training to aid the judges** in their judging roles and in the performance of court administration work.
- Its 63-acre **campus is located on the outskirts of Bhopal**. It also has a registered office in Delhi.
- The **Chief Justice of India (CJI)** is the **Chairman of the General Body** of NJA **as well as the** Chairman of the **Governing Council**, the **Executive Committee**, and the **Academic Council** of NJA.
- **Management:**
 - **The Director**, NJA is the Principal Executive Officer. The Director is **appointed by the Chairman**, the Hon"ble Chief Justice of India.

- NJA academic staff positions include, in addition to the Director, one position of Additional Director (Research), three positions of Professor, six positions of Assistant Professor, six positions of Research Fellow, and six positions of Law Associate.

Supreme Court quashes Andhra HC order expressing disapproval of Collegium and castigating Jagan

About Supreme Court Collegium:

- **It is a system** under which **appointments and transfers of judges are decided by a forum of the Chief Justice of India and the four senior-most judges** of the Supreme Court (SC).
- It is not **mentioned in the Indian Constitution**.
- **What does the Constitution actually prescribe?**
 - **Article 124** deals with the **appointment of SC judges**. It says the appointment should be **made by the President after consultation with such judges of the High Courts and the Supreme Court as the President may deem necessary**. The **CJI is to be consulted in all appointments, except his** or her own.
 - **Article 217** deals with the **appointment of High Court judges**. It says a judge should be appointed **by the President after consultation with the CJI and the Governor** of the state. The **Chief Justice of the High Court** concerned too **should be consulted**.
- **Evolution of the Collegium System:**
 - Since the **Constitution mandates consultation with the CJI** is necessary for appointments to the judiciary, the collegium model evolved.
 - It **has its genesis** in a series of three judgments that are now clubbed together as the **Three Judges Cases**.

- **First Judges Case (1982):**
 - **The SC held that "consultation" of judges does not mean concurrence.**
 - Hence, it **gave primacy in the appointment of judges to the Executive.**
- **Second Judges Case (1993):**
 - **The court reversed** its earlier ruling by changing the **meaning of "consultation" to concurrence.**
 - With this, the **advice tendered by CJI became binding.**
However, the CJI would **have to take into account** the **views of two of his senior most colleagues.**
- **Third Judges Case (1998):**
 - The court gave **primacy to the opinion of the CJI** in the matter of the appointment of Judges.
 - However, the CJI **must consult four senior-most judges** of SC.
 - **Opinions of all members** of the collegium **should be in writing.**
 - **In case of a difference of opinion, the majority view will prevail.**
 - **Even if two judges** in the collegium **give an adverse opinion** of a person for appointment as the SC judge, the **CJI should not send the recommendation** to the government.
- These three cases established that the collegium headed by the Chief Justice of India would have primacy in the appointment of judges to the higher judiciary.
- This **collegium makes recommendations** to the government **for the appointment of judges to the SC and of Chief Justices of High Courts, and the transfers of HC judges.**
- **Executive role:**

- Judges of the higher judiciary are thus appointed only through the collegium system, and the government has a **role only after names have been decided by the collegiums.**
- The government's role is **limited to getting an inquiry conducted by the Intelligence Bureau (IB)** if a lawyer is to be elevated as a judge in a High Court or the Supreme Court.
- The **government can also raise objections** and seek clarifications regarding the collegium's choices, but **if the collegium reiterates the same names**, the **government is bound to appoint them.**

AI integration in e-Jagriti portal to help reduce pending cases in consumer courts: Govt

About e-Jagriti Portal:

- It is an **initiative of the Department of Consumer Affairs**, Ministry of Consumer Affairs, Food, and Public Distribution.
- It is a **portal for consumer commissions.**
- This portal has been designed to further improve the customer experience.
- It provides a **simple, fast, and cost-effective consumer dispute redressal software** solution at all levels.
- It is envisaged to **integrate consumer grievance platforms, namely**, the Online Case Monitoring System (**OCMS**), E-Daakhil, the National Consumer Dispute Redressal Commission (**NCDRC**) Case Monitoring System, **CONFONET website**, mediation application, **on a single platform.**

- The e-Jagriti platform **has case filing, online fee payment, case monitoring modules** for seamless disposal of cases by all the Commissions, has **Smart search facility** on archived consumer complaints/cases/judgements using AI technology for metadata and keyword creation, **and Voice-to-text conversion of judgements**, case history and other details using AI / ML technology.
- The portal will **integrate a Virtual court facility** for a convenient and accessible resolution of consumer complaints, **reducing the time of disposal, multiple hearings, and physical court appearances**, bringing effective and fast decisions & disposals in all Consumer Commissions.

Key Facts about the National Consumer Dispute Redressal Commission (NCDRC):

- It is a **quasi-judicial commission** in India which was **set up in 1988 under the Consumer Protection Act of 1986**.
- Its **head office is in New Delhi**.
- The Commission is **headed by a sitting or retired Judge of the Supreme Court of India or a sitting or retired Chief Justice of the High Court**.
- Section 21 of the Consumer Protection Act, 1986, posits that the National Commission shall **have jurisdiction to entertain a complaint valued at more than two crores** and also have **appellate and revisional jurisdiction from the orders of State Commissions** or the District, as the case may be.
- **Any person aggrieved by an order** of NCDRC may prefer an **appeal against such an order to the Supreme Court** of India within 30 days.

PM Modi launches "Muft Bijli Yojana" to provide 300 units of electricity per month: Here's how to apply

About PM Surya Ghar Muft Bijli Yojana:

- In this scheme, the **central government** will provide **300 units of free electricity per month** to its beneficiaries by investing worth ₹75,000 crores.
- The free electricity scheme was earlier announced by the Finance Minister in an interim budget speech.
- **Target:** It aims to light up 1 crore households.
- Under the scheme, **Urban Local Bodies and Panchayats** shall be **incentivised** to promote **rooftop solar systems** in their jurisdictions.
- The Central Government will guarantee no financial burden on the people by providing significant **subsidies directly to their bank accounts** and offering highly **concessional bank loans**.
- **Expected benefits:**
 - Savings of up to **fifteen to eighteen thousand rupees** annually for households from free solar electricity and selling the surplus to the distribution companies;
 - Charging of electric vehicles;
 - Entrepreneurship opportunities for a large number of vendors for supply and installation;
 - Employment opportunities for the youth with technical skills in manufacturing, installation and maintenance.

Supreme Court calls electoral bonds "quid pro quo", asks SBI to stop issuing them 'immediately'

About Electoral Bonds (EBs):

- Electoral bonds are **interest-free bearer bonds** or money instruments that can be **purchased by companies and individuals in India from** authorised branches of the **State Bank of India (SBI)**.

- The bonds are similar to bank notes that are payable to the bearer on demand and are free of interest.
- These bonds are **sold in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh, and Rs 1 crore.**
- They can be purchased through a KYC-compliant account **to make donations to a political party.**
- EBs have **a life of only 15 days during which** it can be **used for making donations to political parties.**
- The name and other **information** of the donor are not entered on the instrument and thus electoral **bonds are said to be anonymous.**
- There is **no cap on the number of electoral bonds that a person or company can purchase.**
- Under the Income Tax act, one's electoral bond donations are **considered tax-exempt** under Section 80 GG and Section 80 GGB.
- **Who can receive funding via electoral bonds?**
 - **Only political parties registered under** Section 29A of the **Representation of the People Act, 1951** and which **secured not less than 1% of votes polled in the last general election to the House of the People or the Legislative Assembly** of the State, are eligible to receive electoral bonds.
 - The political parties **have to encash them within a stipulated time.**
 - The bond **can be encashed** by an eligible political party **only through a designated bank account** with the authorized bank.
 - The political parties **have to disclose the amount to the Election Commission.**

**Absconding murder convict with Interpol Red Notice brought back from UAE:
CBI**

About Interpol's Red Corner Notice:

- Criminals or suspects often flee a country to evade facing justice.
- A Red Corner Notice, also called a **Red Notice (RN)**, is a request to law enforcement worldwide to locate and provisionally arrest such fugitives.
- It alerts the police forces across the world about these fugitives who are wanted internationally.
- A red notice **contains information that helps identify the wanted person**, including name, date of birth, nationality, and physical attributes like colour of hair, eyes, etc., along with pictures and biometric information.
- It **also includes information about the crimes** that they are wanted for.
- Interpol **issues an RN at the request of a member country**.
- The **country which issues the request need not be the home country of the fugitive**.
- Interpol acts at the request of the country where the alleged crime is committed.
- An RN **request can also be raised by International Criminal courts and Tribunals**.
- It is **not an international arrest warrant**. It is a request to locate and provisionally arrest a person **pending extradition, surrender**, or similar legal action.
- **Interpol cannot compel the law enforcement authorities** in any of the countries to arrest someone who has an RN issued. Each member country determines on the legal value it gives to an RN.
- **Key Facts about Interpol:**

- The **International Criminal Police Organization** (ICPO), commonly known as Interpol, is an **intergovernmental organisation** that **facilitates international police cooperation** to control crime.
- It has **195 member countries**, with its **headquarters in Lyon, France**.
- **Each** of the **member countries has an Interpol National Central Bureau (NCB)**.
 - They **facilitate the respective country's national law enforcement** with other countries and with the General Secretariat, which is Interpol's body that coordinates its policing and administrative activities.
 - **CBI represents Interpol in India as the country's NCB.**
- Interpol helps coordinate police networks & experts in different crime areas to control crime.
- All the **member countries are connected through** Interpol's **communication system, called I-24/7**.
 - This secure network is **used by member countries to contact each other** and allows them to **access Interpol's databases**.
- Interpol **manages 19 databases**, which include information on varied crimes and criminals and are **available in real-time to countries**.
- It **offers investigative support, including** forensic analysis, locating fugitives across the world, etc.

Power Grid unfazed by proposed O&M norms changes by CERC

About Central Electricity Regulatory Commission (CERC):

- It is a **statutory body established** by the Government of India **under the provisions of the Electricity Regulatory Commissions Act, 1998**.
- CERC is the **Central Commission for the purposes of the Electricity Act, 2003**, which has **repealed the ERC Act, 1998**.

- The Commission **consists of a Chairperson and four other members** including the Chairperson, Central Electricity Authority, who is an ex-officio Member of the Commission.
- The Commission intends to **promote competition, efficiency, and economy in bulk power markets, improve the quality of supply, promote investments**, and **advise the government** on the removal of institutional barriers to bridge the demand supply gap and thus foster the interests of consumers.
- **Mandatory Functions:**
 - to **regulate the tariff of generating companies owned or controlled by the Central Government;**
 - to regulate the tariff of generating companies other than those owned or controlled by the Central Government specified in clause (a), if such generating companies enter into or otherwise have a composite scheme for generation and sale of electricity in more than one State;
 - to **regulate the inter-State transmission of electricity;**
 - to **determine tariff for inter-State transmission of electricity;**
 - to **issue licenses to persons to function as transmission licensee and electricity trader** with respect to their inter-State operations;
 - Improve access to information for all stakeholders.
 - to **adjudicate upon disputes involving generating companies or transmission licensee** in regard to matters connected with clauses (a) to (d) above and to refer any dispute for arbitration;
 - to levy fees for the purposes of the Act;
 - to **specify Grid Code having regard to Grid Standards;**

- to specify and enforce the standards with respect to quality, continuity, and reliability of service by licensees;
- to **fix the trading margin in the inter-state trading of electricity**, if considered, necessary;
- to discharge such other functions as may be assigned under the Act.

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"Didn't comply with provisions": Air India gets notice after 80-year-old flyer dies

About the Director General of Civil Aviation (DGCA):

- It is the **regulatory body in the field of civil aviation** primarily dealing with safety issues.
- It is an **attached office** of the **Ministry of Civil Aviation**.
- It is responsible for the **regulation of air transport services to/from/within India** and for the **enforcement of civil air regulations, air safety** and **airworthiness standards**.
- It also **coordinates all regulatory functions with the International Civil Aviation Organisation**.
- **Headquarters: New Delhi**
- **Functions and Responsibilities of the DGCA:**
 - One of the main functions of the DGCA is to **ensure the safety of passengers and crew members** on all flights operating in India.
 - The organisation **conducts regular safety inspections** of all airlines and aircraft to meet the required safety standards.
 - It also **investigates any incidents or accidents** that occur within the Indian airspace and **takes appropriate action to prevent similar incidents** from happening in the future.
 - In addition to safety, the DGCA also plays a crucial role in the growth and development of the Indian aviation industry. The organisation works

closely with airlines and airport operators to **promote the industry's growth and improve the overall travel experience for passengers.**

- The DGCA also plays a crucial role in **developing new airports and modernising existing facilities** to ensure that they can meet the growing demands of the aviation industry.
- The DGCA is also responsible for the **regulation of air traffic in India.** It works closely with the Airports Authority of India (AAI) to ensure air traffic is managed safely and efficiently.
- The DGCA also plays a key role in **developing new air traffic control systems** and technologies to improve the overall efficiency of Indian airspace.
- The DGCA is also **responsible for issuing licences and certificates to pilots, aircraft maintenance engineers, and other aviation personnel.**

NDPS | Courts Should Be Slow in Granting Bail to the Accused in Case of Recovery of Huge Quantity of Narcotic Substance From the Accused

About Narcotic Drugs and Psychotropic Substances (NPDS) Act, 1985:

- The NDPS Act **prohibits any individual from** engaging in any activity consisting of the **production, cultivation, sale, purchase, transport, storage, and/or consumption of any narcotic drug or psychotropic substance.**
- **Objectives:**
 - To **take measures for preventing, combating, and regulating operations relating to narcotic drugs and psychotropic substances.**
 - To **provide for the forfeiture of property** derived from or used in, illicit traffic in narcotic drugs and psychotropic substances.

- To **implement the provisions of the international conventions** on Narcotic Drugs and Psychotropic Substances and for all relevant matters.
- To **add or omit the list of psychotropic substances**.
- **What are Narcotic Drugs and Psychotropic Substances?**
 - **“Narcotic Drug”** means coca leaf, cannabis (hemp), opium, poppy straw, and **includes all manufactured drugs**.
 - **“Psychotropic substance”** means any **substance, natural or synthetic**, or any natural material or any salt or preparation of such substance or material included **in the list of psychotropic substances specified in the Schedule**.
- **Applicability:** The NDPS Act **prohibits a person from manufacture/production/cultivation/ possession/sale/purchase / transport / store / consume any narcotic drug or psychotropic substance without due permission** from the appropriate authorities.
- **Punishment under the NDPS Act:**
 - The Act follows a **graded system of punishment**, with the punishment varying and the quantum of punishment being **dependent upon whether the offence pertains to small, commercial, and intermediate quantities** of narcotic drugs and psychotropic substances.
 - **For offences involving commercial quantities** of drugs, a **minimum penalty of ten years** of rigorous imprisonment is prescribed, which **may extend to twenty years**.
 - **Repeat offences attract one and a half times the penalty** and, in a few cases, even the death penalty.
 - By amendment to the Act in 1989, due to the serious nature of the offence, the **sentence awarded under the NDPS Act became non-**

commutable except for the sentence awarded **for the consumption of drugs.**

- Alongside these stringent provisions, the **Act has procedural safeguards as follows:**
 - **Personal search:** Any person being searched has a **right to be searched before a Gazetted Officer or a Magistrate** (Section 50).
 - **Searches: Gazetted Officers** of the empowered Departments **can authorise** Such authorization has to be **based on information taken down in writing.**
 - Searches **can be made under certain circumstances without a warrant** (from a magistrate) or authorization (from a Gazetted Officer).
 - **Arrests:** The **person who is arrested should be informed**, as soon as may be, of the grounds of his arrest [Section 52(1)].
 - If the arrest or seizure is based on a warrant issued by a magistrate, the person or the seized article should be forwarded to that magistrate.
 - The officer who arrests a person has to make a full report to his official superior within 48 hours.
- **Immunities:**
 - **Officers:** Officers acting in the discharge of their duties in good faith under the Act are **immune from suits, prosecution, and other legal proceedings.**
 - **Addicts:** Addicts charged with the consumption of drugs or with offences involving **small quantities** will be **immune from prosecution if they volunteer for de-addiction.** This immunity may be withdrawn if the addict does not undergo complete treatment.

- **Offenders: Central or state governments can tender immunity** to an offender in order **to obtain his evidence in the case**. This immunity is **granted by the government and not by the court**.
- **Juvenile offenders:** Juvenile offenders (below 18 years of age) will be **governed by the Juvenile Justice (Care and Protection of Children) Act, 2000**.
- **Immunities to diplomats** as applicable.

Last-ditch effort: Indian delegation heads to London for FTA talks before Model Code of Conduct (MCC) kicks in UK

About Model Code of Conduct (MCC):

- MCC is a **set of guidelines** intended **to regulate political parties and candidates during elections to ensure that the conduct of polls** by the Election Commission of India (ECI) **is free and fair**.
- This is something **political parties and candidates voluntarily agree to**.
- Divided into eight parts, the guidelines **cover dos and don'ts for electioneering** as well as **on publication of advertisements** at the cost of the exchequer, among other things.
- The ECI ensures observance of the MCC by a political party in power and contesting candidates for conducting free and fair elections under Article 324 of the Constitution of India.
- The salient features of the Model Code of Conduct lay down how political parties, contesting candidates and party(s) in power should conduct themselves during the process of elections i.e. on their **general conduct during electioneering, holding meetings and processions, poll day activities and functioning of the party in power etc**.

- MCC also **ensures that official machinery for electoral purposes is not misused**. Further, it is also **ensured that electoral offences, malpractices, and corrupt practices are prevented** by all means. In case of violation, appropriate measures are taken.
- The code **comes into effect from the time the EC announces the schedule of elections and will be in force till the results are announced**.
- **Applicability:**
 - During general **elections to the Lok Sabha, the code is applicable throughout the country**.
 - During general **elections to the Legislative Assembly** of the state, the code is **applicable in the entire State**.
 - **During bye-elections**, the MCC would be **applicable in the area** of the concerned Constituency only.
- **Is MCC Legally Enforceable?**
 - The MCC by itself is **not legally enforceable** but **certain provisions** of the MCC may be **enforced through** invoking corresponding provisions in **other statutes such as the Representation of the People Act, 1951, IPC and CrPC**.

Supreme Court Stays Lok Sabha Privileges Committee Proceedings Against West Bengal Officials On BJP MP's Complaint Over Sandeshkhali Protest

What is the meaning of Parliamentary Privileges?

- **Each House** of Parliament **and its Committees collectively and members** of each House individually **enjoy certain rights, privileges, and immunities** without which they cannot perform their functions efficiently and effectively.

- The object of parliamentary privilege is **to safeguard the freedom, authority and dignity of Parliament.**
- They are **enjoyed by individual members** because the House cannot perform its functions without unimpeded use of the services of its members, **and by each House collectively** for the protection of its members and the vindication of its own authority and dignity.
- But they are **available to individual members only insofar as they are necessary for the House to perform its functions freely** without any let or hindrance.
- They **do not exempt the members from the obligations to the society** which apply to other citizens.
- When **any of these rights and immunities**, both of the members, individually, and of the assembly in its collective capacity, **are disregarded or denied** by any individual or authority, the offence is **called a breach of privilege** and is **punishable under the law of Parliament.**
- **Articles 105 and 194** of the Constitution **deal with the powers, privileges, and immunities of Members of Parliament and State Legislatures, and their House, Members, and Committees.**
- **Each House also claims the right to punish actions which**, while not breaches of any specific privilege, **are offences against its authority or dignity**, such as disobedience to its legitimate commands or libels upon itself, its officers, or its members. **Such actions, though called ‘breaches of privilege’, are aptly distinguished as ‘contempt’.**
- **About the Committee of Privileges in Parliament:**

- This committee consists of **15 members in Lok Sabha(10 in the case of Rajya Sabha) nominated by the Speaker** (Chairman in the case of Rajya Sabha).
- In the **Rajya Sabha, the deputy chairperson heads** the committee of privileges.
- **Powers and Functions:**
 - The committee **examines every question involving a breach of privilege** of the House, or of the members, or of any Committee thereof **referred to it by the House or by the Speaker/Chairman**.
 - It **also determines**, with reference to the facts of each case, **whether a breach of privilege is involved** and **makes suitable recommendations** in its report.
 - It also **states the procedure to be followed** by the House **in giving effect to its recommendations**.
 - **When a question of privilege is referred to the Committee by the House**, the **report of the Committee is presented to the House by the Chairman** or, in his absence, by any member of the Committee.
 - **Where a question of privilege is referred to the Committee by the Speaker**, the **report of the Committee is presented to the Speaker, who may pass final orders** thereon or direct that it be laid on the table of the House.
 - The **Speaker/Chairman may refer to the Committee any petition regarding the disqualification of a member on the grounds of defection for making a preliminary inquiry** and submitting a report to him.

- The procedure to be followed by the Committee in these cases is, so far as may be, the same as that applicable to questions of breach of privilege.

Cabinet Committee on Security approves ₹19,000 crore mega Navy deal for BrahMos missiles

What are Cabinet Committees?

- Cabinet Committees are **extra-constitutional**, meaning, they are not mentioned in the Indian Constitution.
- They are partly designed **to reduce the burden on the Union Cabinet** by **allowing smaller** groups of ministers to make decisions on specific policy areas.
- They are **constituted or reconstituted when a new government takes over** or the Cabinet undergoes a reshuffle.
- The **Prime Minister constitutes** the Standing Committees of the Cabinet **and sets out the specific functions** assigned to them.
 - The composition of cabinet committees in India can range from **three to eight members**, which **typically consist of only Cabinet Ministers**.
 - However, **non-cabinet ministers may also be appointed** as members.
 - All cabinet committees are **chaired by the prime minister or a senior cabinet minister** and will have a number of cabinet ministers as members. However, **if the Prime Minister is a committee member**, he **will be the head** of the committee.
- There are a **total of eight cabinet committees**, which are listed below:
- Appointments Committee of the Cabinet.
 - Cabinet Committee **on Economic Affairs**.
 - Cabinet Committee **on Political Affairs**.

- Cabinet Committee **on Investment and Growth.**
- Cabinet Committee **on Security.**
- Cabinet Committee **on Parliamentary Affairs.**
- Cabinet Committee **on Employment and Skill Development.**
- Cabinet Committee **on Accommodation.**
- Appointments Committee of the Cabinet
- **Presently, all committees except the Cabinet Committee on Accommodation and the Cabinet Committee on Parliamentary Affairs are headed by the Prime Minister.**
- **About Cabinet Committee on Security (CCS):**
- **CCS is headed by the Prime Minister.**
- **The Committee discusses, debates, and is the apex body when it comes to the appointments of the officials in the national security bodies.**
- **It also makes all the important decisions on defence policy and expenditure and, generally, all matters of India's security.**
- **Members:**
 - **Prime Minister** of India
 - **Union Minister of Defence**
 - **Union Minister of Home Affairs**
 - **Union Minister of Finance and Corporate Affairs**
 - **Union Minister of External Affairs**
- **Functions:**
 - **The CCS deals with all the issues related to the defence and security of India.**
 - **The CCS deals with all issues related to the law and order of our country and national security.**

- It discusses different initiatives to take to enhance the national security of India.
- It also deals with **policy matters of foreign affairs which may have a bearing on internal or external security** implications, including cases relating to **agreements with other countries on security**-related issues.
- The Committee discusses the **political issues which can impact the security** of our nation.
- It **reviews the conditions and the manpower of the national security bodies and makes the required changes** to increase national security.
- The CCS **considers each case that involves a capital expenditure of more than Rs 1,000 crore in** respect of the **Department of Defence Production and Department of Defence Research and Development.**
- It also deals with every **issue related to atomic energy** and also considers cases of an increase in the firmed-up cost estimates or revised cost estimates.

Injunction Suit To Protect Possession Not Maintainable When Plaintiff's Title Is Disputed: Supreme Court

About Injunction:

- In India, an injunction is a **legal remedy** available to parties who wish to **prevent the other party from carrying out a certain action or behaviour.**
- Injunctions can be granted in a variety of situations, such as in **cases of intellectual property infringement, breach of contract, or defamation.**
- An injunction is a powerful legal tool that acts as a **court order requiring a party to do or cease doing specific actions.**
- It plays a crucial role in many legal battles, serving as a **preventive measure to stop legal wrongs** or as a **remedy to enforce rights.**

- Injunctions are a **discretionary remedy**, and the **court will consider various factors** before deciding whether to grant an injunction. These factors may include the urgency of the matter, the balance of convenience, and the likelihood of success in the underlying lawsuit.
- **Types of Injunctions in India:**
 - **Temporary Injunctions:** They are granted to **preserve the status quo until a final decision** can be reached. These are usually granted at the start of a case and can last for the duration of the legal proceedings.
 - **Permanent Injunctions:** They are **granted after** the court has made a **final determination in the case**. They **prohibit** the defendant **from continuing a particular action** or behaviour.
 - **Mandatory Injunctions:** They **require** the defendant **to carry out a particular action**. They are often granted in **cases of breach of contract**, where the plaintiff requires the defendant to **fulfil their contractual obligations**.
 - **Prohibitory Injunctions:** They **prohibit** the defendant from **carrying out a particular action** or behaviour. They are often granted in **cases of intellectual property infringement or defamation**.
- **Provision of Injunction in Indian Law:**
 - Under Indian law, injunctions are governed by the **Specific Relief Act, 1963**. The act provides for two types of injunctions – temporary injunctions and perpetual injunctions.
 - In addition to the Specific Relief Act, injunctions are also governed by the **Civil Procedure Code, 1908**.
- **What happens if the party violates the injunction?** If a party violates the injunction, they may be **held in contempt of court** and could face **penalties such as fines or imprisonment**.

Govt forms panel headed by T V Somanathan to finalise uniform KYC norms

About the Know Your Customer:

- It is a **comprehensive process** that **financial and non-financial institutions** follow to verify the authenticity and identity of their customers.
- The KYC process is mandatory for every customer before investing in any instruments or starting a bank account.
- In India at present, **separate KYCs are needed for different financial products** such as opening a bank account, investing in mutual funds, buying a life cover or investing in retirement-savings funds.
- Multiple KYCs, regular updates and even the exact specifications often prove to be a deterrent for new investors.
- To **eliminate the need to do repeated KYC** for investing across financial assets, the central government launched the **Central KYC Records Registry**.
- **What is the Central KYC Records Registry?**
 - It was launched by the central government of **India in 2016**.
 - It has been **limited only** to the **capital markets**.
 - In fact, while dealing in securities markets, once KYC is done through a Securities and Exchange Board of India (SEBI) registered intermediary such as a broker, depository participant or mutual fund, customers do not have to undergo the same process again for fresh investments.
 - The government authorised the **Central Registry of Securitisation Asset Reconstruction and Security Interest of India (CERSAI)** to perform the functions of the CKYCR.
 - This centralised registry receives, stores, safeguards and retrieves the KYC records of a customer in a digitally secure electronic format.
 - Customers have to submit their KYC details only once with any of the reporting entities of the Reserve Bank of India, Sebi, Insurance Regulatory and Development Authority of India, Pension Fund

Regulatory and Development Authority at the time of opening an account.

- Once the information is registered, customers will **receive a 14-digit KYC Identification Number** that can be used at any financial institution registered with CERSAI.
- Financial institutions can access the CKYCR database to retrieve the KYC records of customers while onboarding them.
- In case of any changes in the details of a customer, the reporting entity will initiate a centralised KYC (CKYC) update after taking the latest KYC record of the customer.

Ex-SC judge Justice A M Khanwilkar appointed Lokpal chairperson

About Lokpal:

- It is a **statutory body** established under the **Lokpal and Lokayuktas Act 2013**.
- **Mandate:** To **inquire into allegations of corruption against** certain **public functionaries** and for related matters.
- **Organisational Structure:**
 - The Lokpal will consist of a **chairperson** and a **maximum of eight members**.
 - **The Chairperson** should be either the **former Chief Justice of India, or a former Judge of the Supreme Court, or an eminent person** who fulfils the eligibility criteria as specified.
 - **Out of the maximum eight members, half will be judicial members.** The judicial member of the Lokpal should be **either a former Judge of the Supreme Court or a former Chief Justice of a High Court**.
 - **A minimum of fifty per cent** of the Members will be **from SC / ST / OBC / Minorities and women**.
- **How are members appointed?**

- The Chairperson and the Members are **appointed by the President** of India on the **recommendation of a selection committee composed of the Prime Minister** as the Chairperson, the **Speaker of Lok Sabha**, the **Leader of Opposition in Lok Sabha**, the **Chief Justice of India** or a **Judge nominated by him/her**, and **one eminent jurist**.
- They **hold office for a term of five years** from the date on which they enter upon the office **or until they attain the age of 70 years**, whichever is earlier.
- The **salary, allowances, and other conditions of services of the Chairperson** are the **same as that of the Chief Justice of India**.
- The salary, allowances, and other **conditions of services of the members** are the **same as that of a Judge of the Supreme Court**.
- **Jurisdiction:**
 - It has jurisdiction to **inquire into allegations of corruption against anyone who is or has been Prime Minister**, a **Minister** in the Union government, or a **Member of Parliament**, as well as **officials of the Union Government under Groups A, B, C, and D**.
 - It covers **chairpersons, members, officers, and directors of any board, corporation, society, trust, or autonomous body** either **established by an Act of Parliament** or **wholly or partly funded by the Union or State government**.
 - It **also covers any society, trust, or body that receives a foreign contribution above Rs 10 lakh**.
- **Exceptions for Prime Minister:**
 - Lokpal **cannot inquire into allegations** against the PM **relating to international relations, external and internal security, public order, atomic energy, and space**.

- Also, **complaints against the PM are not to be probed unless the full Lokpal bench considers the initiation of the inquiry and at least 2/3rds of the members approve it.**
- **Powers of Lokpal:**
 - It has powers **to superintendence over** and to **give direction to the CBI.**
 - **If it has referred a case to the CBI, the investigating officer in such a case cannot be transferred without the approval of Lokpal.**
 - **Powers to authorize CBI for search and seizure operations** connected to such cases.
 - The **Inquiry Wing of the Lokpal** has been vested with the **powers of a civil court.**
 - Lokpal has **powers of confiscation of assets, proceeds, receipts, and benefits** arising or **procured by means of corruption** in special circumstances.
 - Lokpal has the power to **recommend the transfer or suspension of public servants** connected with the allegation of corruption.
 - Lokpal has the power to **give directions to prevent the destruction of records** during the preliminary inquiry.
- In terms of Section 48 of the said Act, the Lokpal is **required to present annually to the President a report** on the work done by it, which is **caused to be laid in both the Houses of Parliament.**

General Diary Entry Cannot Precede Registration of FIR, Except Where Preliminary Inquiry Is Needed: Supreme Court

About General Diary (GD):

- **General Diary**, also called **Station Diary** or **Daily Diary** in some States, is **maintained under** the provisions of **Section 44 of the Police Act, 1861**, in

the States to which it applies, **or under the respective provisions of the Police Act(s) applicable to a State or under the Police Manual of a State**, as the case may be.

- Section 44 of the Police Act, 1861 **states that it shall be the duty of every officer in charge of a police station to keep a general diary** in such form as shall, from time to time, be prescribed by the State Government and to **record therein all complaints and charges preferred**, the **names of all persons arrested**, the **names of the complainants**, the **offences charged** against them, the **weapons or property that shall have been taken** from their possession or otherwise, and the **names of the witnesses** who shall have been examined.
- It is a **record of all important transactions/events taking place in a police station**, including the departure and arrival of police staff, the handing over or taking over of charges, the arrest of a person, details of law-and-order duties, the visit of senior officers, etc.
- Additionally, the GD **summarizes each First Information Report (FIR) registered** at the police station, as FIR registration is a significant event there.
- Simultaneously, the **GD entry reference is noted in the FIR Book**, while the **FIR number is mentioned in the GD entry**. This parallel documentation ensures that both records are kept up to date.
- The GD is **maintained in chronological order**, with a **new entry starting with number 1 each day**.
- **What is a First Information Report (FIR)?**

- It is a **written document prepared by a Police officer based on information given by an aggrieved person** or any other person, either **in writing or made orally, about the commission of a Cognizable Offence.**
- **The investigation is started only after the filing of the FIR.**
- **Who can lodge an FIR?**
 - **Anyone who knows about the commission of a cognizable offence** can file an FIR. It is not necessary that only the victim of the crime should file an FIR.
 - A police officer who comes to know about a cognizable offence can file an FIR himself/herself.
- An FIR **can only be lodged in cases of cognizable offences.**
- **General Diary (GD) vs. First Information Report (FIR):**
- **A copy of each FIR is sent to the superior officers and to the concerned Judicial Magistrate.**
- **A copy of GD is not sent to the Judicial Magistrate, though its copy is sent to a superior police officer.**
 - The **Magistrate** of the district shall be **at liberty to call for any inspection of such GD.**
- The **signature of the complainant** is **obtained in the FIR Book** as and when the complaint is given to the police station. On the other hand, there is **no such requirement** to obtain the signature of **the complainant in the general diary.**
- The **general diary is an internal police record**, while in **the case of F.I.R., a copy of these** will be **provided to the complainant.**

Right of Hindu public under Article 25 only to enter the temple for worship, no fundamental right to perform the role of a priest: Kerala High Court

About Article 25 of the Indian Constitution:

- Article 25 says that **all persons** are equally **entitled to freedom of conscience and the right to freely profess, practice, and propagate religion**. The implications of these are:
 - **Freedom of conscience:** Inner **freedom of an individual to mould his relation with God** or Creatures in whatever way he desires.
 - **Right to profess:** **Declaration of one's religious beliefs and faith openly** and freely.
 - **Right to practice:** **Performance of religious worship, rituals, ceremonies, and exhibition of beliefs and ideas.**
 - **Right to propagate:** Transmission and **dissemination of one's religious beliefs to others** or exposition of the tenets of one's religion. But it **does not include the right to convert another person** to one's religion. Forcible conversions impinge on the 'freedom of conscience' guaranteed to all persons alike.
- Thus, Article 25 **covers not only religious beliefs** (doctrines) **but also religious practices** (rituals).
- Moreover, these rights are **available to all persons—citizens as well as non-citizens**.
- However, these rights are **subject to public order, morality, health, and other provisions relating to fundamental rights**.
- Further, **nothing in this article** shall affect the operation of any existing law or **prevent the State from making any law to:**

- **regulate or restrict any economic, financial, political, or other secular activity associated with religious practice;**
- **provide for social welfare and reform, or throw open Hindu religious institutions of a public character to all classes and sections of Hindus;**
- Article 25 also contains **two explanations:** one, the **wearing and carrying of kirpans** is to be **included in the profession of the Sikh religion;** and **two, the Hindus,** in this context, **include Sikhs, Jains, and Buddhists.**

NCBC objects to Bengal demand to include 83 castes in OBC list

About National Commission for Backward Classes (NCBC):

- NCBC was **initially constituted** by the Central Government **by the National Commission for Backward Classes Act, 1993, under the Ministry of Social Justice and Empowerment.**
- It has been **accorded constitutional status through** “The Constitution (One Hundred and Second Amendment) Act, 2018”, whereby **Article 338B has been inserted,** forming a **Commission for the socially and educationally backward classes** to be known as the NCBC.
 - The amendment inserted Article 338B, Article 342A, and Clause 26C in Article 366.
- **Composition:** The Commission consists of a **Chairperson, a Vice-Chairperson, and three other Members** in the **rank and pay of Secretary to the Government of India.**
- The Chairperson, Vice-Chairperson and other Members of the Commission shall be **appointed by the President** by warrant under his hand and seal.

- **Functions: It shall be the duty of the Commission**
 - to **investigate and monitor all matters relating to the safeguards provided for the socially and educationally backward classes** under this Constitution or under any other law for the time being in force or under any order of the Government, and to **evaluate the working of such safeguards**;
 - to **inquire into specific complaints** with respect to the deprivation of rights and safeguards of the socially and educationally backward classes;
 - to **participate and advise on the socio-economic development** of the socially and educationally backward classes and to evaluate the progress of their development under the Union and any State;
 - to **present to the President, annually** and at such other times as the Commission may deem fit, **reports upon the working of those safeguards**;
 - to make **in such reports recommendations** as to the measures that should be taken by the Union or any State for the effective implementation of those safeguards and other measures for the protection, welfare, and socio-economic development of the socially and educationally backward classes;
 - to **discharge such other functions** in relation to the protection, welfare, and development and advancement of the socially and educationally backward classes **as the President may, subject to the provisions of any law made by Parliament, by rule specify**
- The **President shall** cause **all such reports to be laid before each House of Parliament** along with a **memorandum explaining the action taken or**

proposed to be taken on the recommendations relating to the Union and the **reasons for the non-acceptance, if any**, of any of such recommendations.

- **Powers:**

- **While inquiring into any complaint**, it will have all the **powers of a civil court**(it will be able to summon any person, ask for a document, and receive evidence on affidavits).
- The Union and every State **Government shall consult the Commission on all major policy matters affecting the socially and educationally backward classes**.
- The Commission shall have the **power to regulate its own procedures**.

SCIENCE AND TECHNOLOGY

China bans imports of ruminant animals from Iraq due to bluetongue disease

- China has banned the direct and indirect import of ruminants and its related products from Iraq due to an outbreak of bluetongue disease.
- Bluetongue disease (BT) is a non-contagious, viral disease affecting domestic and wild ruminants (primarily sheep and including cattle, goats, buffalo, antelope, deer, elk and camels).
- It is transmitted by insects, particularly biting midges of the Culicoides species.
- The virus which causes BT is identified as a member of the Reoviridae family.
- Twenty-four (24) different serotypes have been identified and the ability of each strain to cause disease varies considerably.

- Symptoms: The severity of the disease varies among different species with symptoms being most severe in sheep resulting in deaths, weight loss and disruption in wool growth.

Geographical distribution

- It has a significant global distribution in regions where the insect vector is present, including Africa, Asia, Australia, Europe, North America and several islands in the tropics and subtropics.
- The virus is maintained in areas where the climate will allow biting midges to survive over winter.

Transmission and spread

- The insect vector is the key to the transmission of the BT virus between animals.
- Vectors are infected with BT virus after ingesting blood from infected animals.
- Without the vector, the disease cannot spread from animal to animal.
- BT virus transmission can occur throughout the year, particularly during rainy periods.

IIT Kanpur breaks ground with India's first hypervelocity test facility

- The Indian Institute of Technology Kanpur (IIT-K) has successfully established and tested India's first Hypervelocity Expansion Tunnel Test Facility
- The S2, nicknamed "Jigarthanda", is a 24-metre-long facility located at IIT Kanpur's Hypersonic Experimental Aerodynamics Laboratory (HEAL) within the Department of Aerospace Engineering.
- It is India's first Hypervelocity Expansion Tunnel Test Facility.

- It was indigenously designed and developed over three years with funding and support from the Aeronautical Research and Development Board (ARDB), the Department of Science and Technology (DST), and IIT Kanpur.
- It is capable of generating flight speeds between 3-10 km/s, simulating the hypersonic conditions encountered during the atmospheric entry of vehicles, asteroid entry, scramjet flights, and ballistic missiles.
- It will be a critical asset for the Indian Space Research Organisation (ISRO) and the Defence Research and Development Organisation (DRDO).
- It will serve as a testing ground for ongoing missions of ISRO and DRDO like Gaganyaan, Reusable Launch Vehicles (RLV), and hypersonic cruise missiles, enabling the development of more advanced and reliable aerospace technologies.

MXene-coated devices can guide microwaves in space and lighten the payload

- Researchers reported on the potential of using MXene coatings that can guide microwaves in space and lighten satellite payloads.
- MXenes, first discovered in 2011, are ceramics that comprise one of the largest families of two-dimensional (2D) materials.
- Unlike most 2D ceramics, MXenes have inherently good conductivity and excellent volumetric capacitance because they are molecular sheets made from the carbides and nitrides of transition metals like titanium.
- They are made from a bulk crystal called MAX.
- Among various types of MXenes, titanium carbide ($\text{Ti}_3\text{C}_2\text{Tx}$) is the most widely used.

- Some potential applications of MXenes include energy storage (such as lithium-ion batteries and supercapacitors) due to their high conductivity and large surface area, electromagnetic interference shielding, catalysis, sensors, and water purification, among others.
- **What are Transition Metals?**
- A transition metal is any of various chemical elements that have valence electrons—i.e., electrons that can participate in the formation of chemical bonds—in two shells instead of only one.
- They occupy the middle portions of the long periods of the periodic table of elements between the groups on the left-hand side and the groups on the right.
- Compared to other metals, transition metals have high melting points and densities, and they (and their compounds) can act as catalysts.
- They are good conductors of heat and electricity.
- Many transition metals are technologically important, including titanium, iron, nickel, and copper.
- The most abundant transition metal in Earth's solid crust is iron.

Natural gas flare samples collected by aircraft reveal high variation in nitrogen oxide emission estimates

- Natural gas flare samples collected by aircraft in the USA regions revealed high variation in nitrogen oxide emission estimates.
- Gas flaring is the burning of the natural gas associated with oil extraction.

- Flaring persists to this day because it is a relatively safe, though wasteful and polluting, method of disposing of the associated gas that comes from oil production.
- Utilising associated gas often requires economically viable markets for companies to make the investments necessary to capture, transport, process, and sell the gas.
- Firms usually resort to flaring when they lack adequate infrastructure or financial incentives to bring the gas to market, or when it needs to be released for safety reasons to manage changes in pressure during crude oil extraction.
- Most flared gas, primarily associated gas, is very similar to the natural gas used worldwide for power generation, as feedstock for the manufacture of chemicals, distributed to homes, etc.
- However, it may require processing to remove contaminants before it can be used.
- Associated gas can also be used on-site for generating electricity, compressed or liquefied for transportation as compressed natural gas (CNG) or liquefied natural gas (LNG) respectively, or converted into liquid form (e.g., synthetic oil, diesel, methanol, DME) by using gas-to-liquid (GTL) technologies.
- **Impacts on the environment:**
- The flare's combustion converts hydrocarbons to carbon dioxide and water, which lessens the climate impact and reduces the safety concerns of the natural gas on site but also produces nitrogen oxides, or NOx.
- NOx—which includes the highly reactive gases nitric oxide and nitrogen dioxide—directly and indirectly impacts air quality.

- How to reduce gas flaring? Oil producers can either re-inject associated gas or use it for productive purposes.
- **What is associated gas?**
- It is a by-product of oil extraction and is often considered a waste product if there is not an easily accessible gas market. However, associated gas can be used in several productive ways, including to generate electricity.
- Its composition can vary widely at different locations, from almost pure methane with some ethane to gas that also contains heavier hydrocarbons like propane and butane.

Researchers unveil method to detect "forever chemicals" in under 3 minutes

About Forever Chemicals:

- **PFAS (Per- and polyfluorinated alkyl substances)**, also **known as the Forever Chemicals**, are a large chemical family of over 4,700 **highly persistent man-made chemicals**.
- These were first developed in the 1940s and are now **found in a variety of consumer products**, including nonstick pans, water-resistant textiles, and fire suppression foams, **due to their ability to repel both grease and water**.
- PFAS are the **most persistent synthetic chemicals** to date. They **hardly degrade in the natural environment** and have **been found in the blood of people and animals** all over the world, and are **present at low levels in a variety of food products**.
- The secret to PFAS's **indestructibility lies in its chemical bonds**. PFAS contains many **carbon-fluorine bonds**, which are the **strongest bonds in organic chemistry**.

- These chemicals also **cause pollution at every stage of production**. At the PFAS chemical manufacturing facilities and garment factories, they often contaminate **the air, water, and soil** of the surrounding environment.
- **Exposure to PFAS is linked to cancers, weakened immune systems** among children, weight gain, and a wide **range of other health problems**.

India developing a new Earth system model to improve forecasts, track climate crisis impacts

About the Earth System Model:

- It is **open-source software** that is designed to integrate the interactions of **atmosphere, ocean, land, ice, and biosphere** to estimate the state of **regional and global climate** under a wide variety of conditions.
- Since it is based on numerical weather prediction and data assimilation, it can be used for **accurate climate change predictions**.
- The **Indian Institute of Tropical Meteorology** along with the **Centre for Climate Change Research (CCCR)**, is developing this first-for-India Earth System Model.
- **Purpose:** To improve its forecasts, facilitate long-term climate studies, and predict climate impacts in the coming years.
- IITM-ESM incorporates earth system components in the Climate Forecast System (CFS) from National Center for Environmental Prediction (NCEP, USA), and transforms the CFS seasonal prediction model to a long-term climate mode,
- **Funding:** An amount of ₹192.28 crores has been sanctioned under the **Monsoon Convection, Clouds and Climate Change (MC4) sub-scheme** to develop the climate forecasting system

- The work on the model is currently underway and is expected to be completed by 2025.
- **Monsoon Convection, Clouds and Climate Change (MC4) sub-scheme**
- It was envisioned to improve the **observational database and climate models** for an enhanced predictive understanding of monsoonal precipitation changes and their impacts in a warming environment.
- The overarching goal of MC4 is to better describe and quantify interactions among monsoon dynamics, clouds, aerosols, precipitation, and the water cycle in a changing climate.
- **Nodal Ministry:** Ministry of Earth Sciences (MoES)

New niche base station solutions by TIH to realise government vision of affordable connectivity for all

About Open Radio Access Network:

- It is a key part of a **mobile network system** that **uses cellular radio connections** to link individual devices to other parts of a network.
- It comprises **antennae**, which transmits and receives signals to and from our smartphones or other compatible devices.
- The signal is then digitised in the RAN-base station and connected to the network.
- **ORAN base station**
 - ORAN base station solutions represent a pivotal element in the evolution of telecommunications infrastructure.

- This innovation aims to **deliver high-speed and dependable connectivity** at a feasible cost, particularly targeting underserved and remote regions, as per a recent press release.
- Its focus lies in creating **efficient wireless communication technology** for 5G and 5G-advanced radio networks, ensuring spectral and energy efficiency.
- **Significance**
 - A new niche technological solution for Open Radio Access Network (ORAN) base stations will help to **facilitate high-speed and reliable connectivity** at a cost that is viable for unconnected and far-flung areas.
 - It provides access to different components of the network infrastructure making it easier, efficient and more economically viable to provide internet in remote areas.
 - The breaking down of the Radio Access Network (RAN) functions help in **bringing down network cost and complexity**.
 - Open RAN removes vendor lock-in and can facilitate smooth interoperation between cellular network equipment provided by different vendors.
- COMET, one of the 25 **Technology Innovation Hubs** (TIH) set up under the **National Mission for Interdisciplinary Cyber Physical Systems (NM-ICPS)**, of the Department of Science and Technology (DST) for enhancing the nation's capabilities in Advanced Communication Systems.

- The ORAN base station radio unit developed at **IIT Hyderabad** (IITH) introduced a revolutionary ORAN technology harnessing a multitude of antennas on cell towers.

C-DOT and Indian Institute of Technology, Kharagpur (IIT-K) signed an agreement for 'Developing Prototypes for 10-Gigabit-capable symmetric passive optical Network (i.e., XGS-PON) Optical Line Terminal (OLT) and Optical Network Unit (ONU)

About the Telecom Technology Development Fund (TTDF) scheme:

- It has been **notified for domestic companies** and **institutions** involved in the technology design, development, and commercialization of telecommunication products and solutions to **enable affordable broadband and mobile services** in rural and remote areas.
- It was launched by the **Universal Service Obligation Fund (USOF)**, a body under the Department of Telecommunications.
- **Aims**
 - To **fund R&D in rural-specific communication technology** applications and form synergies among academia, start-ups, research institutes, and the industry to build and develop the telecom ecosystem.
 - To **promote technology ownership and indigenous manufacturing**, create a culture of technology co-innovation, reduce imports, boost export opportunities and creation of Intellectual Property.
- Under the scheme, USOF is also targeting to develop standards to meet countrywide requirements and create the ecosystem for research, design, prototyping, use cases, pilots, and proof of concept testing, among others.

- The scheme **entails grants to Indian entities** to encourage and induct indigenous technologies tailor-made to meet domestic needs.
- **Project Period:**
 - Project timelines are **generally up to two years**.
 - However, it may be decided project-wise in consultation with the applicant as per the terms and conditions of the agreement.
 - Extension of **six months** each at a time may be granted at the sole discretion of USOF/DoT.
- **What is OLT?**
- The Optical Line Terminal (OLT) is a key component in **passive optical network** (PON) architecture, serving as the central point that connects the optical network to the wider service provider network.
- In the context of XGS-PON, the OLT would be capable of handling symmetrical 10-gigabit speeds for both upstream and downstream data transmission.
- **What is ONU?**
- The Optical Network Unit (ONU) is located at the **customer premises**, connecting the customer's network equipment (such as routers or computers) to the wider optical network.

SWATI (Science for Women-A Technology & Innovation) Portal launched in New Delhi to create a single online portal representing Indian Women and Girls in STEMM (Science, Technology, Engineering, Mathematics & Medicine)

About SWATI Portal:

- It is aimed at creating a single online portal representing Indian Women and Girls in **STEMM (Science, Technology, Engineering, Mathematics & Medicine)**.
- The database of the SWATI Portal will serve in policy-making to address the challenges of Gender-gap.
- The Portal is a complete interactive database; and the first of its kind in India which is developed, hosted and **maintained by the National Institute of Plant Genome Research (NIPGR)**, New Delhi.
- **Objectives:**
 - To scale up the effort exponentially to include each and every Indian **woman in science (WiS)**, across all career stages and subjects, spanning both Academia and the Industry enabling reliable and statistically significant long-term research on the issues of equality, diversity and inclusivity in India;
 - Inclusion of each and every Indian WiS, career stages, and subjects, spanning both Academia and the Industry; Enabling reliable and statistically significant long-term research on the issues of equality, diversity and inclusivity in India, developing active search engine and searchable database (Name, Affiliation, Area of Interest).
- The various Sections in the portal include Icons - **Awardees** (Padma / Shanti Swarup Bhatnagar / Stree Shakti Science Samman) & Directors, Secretaries Academy Presidents; Faculty- Indian Universities, Autonomous organisations including S&T Ministry/ CSIR/ DBT/ DST/ CSIR/ MHRD/ UGC/ GATI/ KIRAN

What is micellar water and how does it work?

About Micellar water:

- Micellar water products contain something **called micelles** – clusters of molecules that are very effective at removing oily substances.
- The micelles in micellar water are formed by special molecules **known as surfactants**.
- These micelles have a **hydrophilic exterior**, meaning that they are very happy to remain mixed throughout water.
- It is a commonly used skin care product that helps remove impurities and makeup from your skin.
- It's a very gentle solution that contains a very mild detergent.
- **Working**
 - When you apply some micellar water to a cotton pad, another convenient interaction occurs.
 - The **wet cotton is hydrophilic** (loves water). Consequently, some of the micelles will unravel, with the hydrophilic heads being attracted to the wet cotton pad.
 - Now, sticking out from the surface will be a layer of **hydrophobic tail groups**.
 - These hydrophobic tails cannot wait to attract themselves to makeup, sunscreen, oils, dirt, grease and other contaminants on your face.
 - As you sweep the cotton pad across your skin, these contaminants bind to the hydrophobic tails and are removed from the skin.
 - Some contaminants will also find themselves encapsulated in the hydrophobic centres of the micelle.
 - Either way, a cleaner surface is left behind.

Anoxic marine basins are among the best candidates for deep-sea carbon sequestration, say scientists

About Anoxic Marine Basins:

- An anoxic basin is a **body of water without oxygen**.
- Permanent anoxic basins **form when there is a strong layering of the water column** created **in a cup-like formation** on the ocean floor.
 - The **layering is caused by density differences** due to salt concentration or temperature.
 - Once stratification occurs, **circulation with the rest of the ocean is minimised**, and **microorganisms consume the oxygen** in the water.
- In most anoxic basins, the **water is extremely stagnant** and can have **mixing times of many thousand years**.
- They range from a few hundred metres to **several kilometres across** and from 10 metres to 500 metres **deeper than the surrounding seafloor**.
- They **can't support animal life** and are **populated primarily by microbes** and some very **specialised fungi** with different metabolisms than creatures in oxygen-rich environments.
 - Some of them **rely on molecules such as nitrate for respiration**, and **some get their carbon from gases** like carbon dioxide (CO₂) and methane (CH₄) instead of eating other organisms or particles of organic matter.
- **Many anoxic basins also contain toxic chemicals**, which are **produced by geothermal activity or by microbes** living in the basins.
- Some **also contain salt domes**, big mounds of hardened salt.
- In some anoxic basins, **methane and other gases collect in reservoirs** beneath the seafloor.

- The **gases can percolate upward, pushing up domes of sediment** on the seafloor that are **called mud volcanoes**.
- The **gases can burst through** the soft sediments, **creating "mini-eruptions"** of wispy columns of **sediment-filled water**.

Tamil Nadu bans sale of cotton candy due to presence of "cancer-causing" chemical

About Rhodamine-B:

- It is a **water-soluble chemical compound**.
- While it **appears green in powder form**, it turns vivid fluorescent pink when it comes in contact with water.
- It is a chemical commonly used for **dyeing in the textile, paper, leather, and paint industries** as a colouring agent that helps in attaining the red and pink spectrum.
- "As per the Food Safety Standards Act, 2006, preparation, packaging, importing, selling and serving food items with Rhodamine-B in wedding ceremonies and other public events is **a punishable offence**."
- It is an **industrial dye** which is not allowed in food anywhere in the world as it is toxic.
- **Why is it harmful?**
- Researchers have identified that if food containing this chemical is consumed regularly, it can **cause damage to the cerebellum tissue** in the brain and to the brainstem that connects the brain to the spinal cord.
- These damages can lead to functional abnormalities and can **hinder human motor functioning**.
- The chemical is toxic to humans and can **cause oxidative stress** on cells and tissues if ingested.

- It becomes particularly hazardous when it is mixed with food products, **leading to cancer and tumours over time.**

The rise of smishing: How scammers are targeting your smartphone with deceptive texts

About Smishing:

- It is a form of phishing that targets individuals **through text messages or SMS.**
- It is just like phishing emails, smishing messages aim to trick you into **divulging personal information** or downloading malware onto your device.
- It is done in through following ways:
 - **Fake alerts and warnings:** Scammers send texts pretending to be from legitimate institutions like banks, government agencies, or delivery services. They'll claim there's a problem with your account or a package delivery, prompting you to click on a link for more information.
 - **Urgent requests:** Smishers play on your emotions by creating a sense of urgency. They might promise prizes, warn of impending legal action, or claim your account is compromised, pressuring you to act quickly without thinking.
 - **Exploiting current events:** During tax season, scammers might pose as the income tax officers, offering tax refunds or threatening penalties if you don't respond immediately. Similarly, they might capitalise on natural disasters or health crises to solicit donations or spread misinformation.
- **How to identify and stay safe from smishing?**

- **Poor grammar and spelling:** Many smishing messages contain grammatical errors or spelling mistakes, indicating that they may not be from a legitimate source.
- **Unsolicited requests for personal information:** Be wary of messages that request sensitive information like passwords, Social Security numbers, or banking details. Legitimate organisations typically won't ask for this information via text message.
- **Suspicious links:** Hover over any links in the message (without clicking them) to see the URL. If it looks suspicious or doesn't match the purported sender, it's likely a smishing attempt.
- **Verify the sender:** Before clicking on any links or providing sensitive information, verify the sender's identity. Contact the institution directly using official contact information to confirm the legitimacy of the message.
- **Keep software updated:** Ensure your smartphone's operating system and security software are up to date to protect against malware and other threats. Consider installing reputable antivirus apps for an added layer of protection.

Solving Crime: How a trial version VPN helped Mumbai cops trace student who sent 5 threat emails to Mukesh Ambani

About Virtual Private Network:

- VPN stands for virtual private network, which establishes a **digital connection** between your computer and a **remote server owned by a VPN provider**.
- It creates a point-to-point tunnel that **encrypts personal data, masks your IP address**, and lets you sidestep website blocks and firewalls on the internet.
- This ensures online experiences are private, protected, and more secure.
- It is
 - **Virtual** because no physical cables are involved in the connection process.
 - **Private** because through this connection, no one else can see your data or browsing activity.
 - **Networked** because multiple devices—your computer and the VPN server—work together to maintain an established link.
- **Advantages of VPN**
 - **Secure your data:** A VPN connection scrambles your data into code and renders it unreadable to anyone without an encryption key. It hides your browsing activity so that no one else can see it.
 - **Bypass censorship and surveillance:** Some regions may not have access to certain sites or services due to government restrictions, censorship, or surveillance. Location spoofing gives these users the ability to circumvent firewalls, view blocked websites, and move freely online.
 - **Prevent ISP and third-party tracking:** Internet service providers (ISPs) log and track your browsing history through your device's unique IP

address. By routing to a remote VPN server instead of your ISP's servers, a VPN masks your IP address, prevents ISP tracking, and keeps your personal data private.

BharatGPT group unveils 'Hanooman': Everything you need to know about the Indic AI model

About Hanooman:

- It is a series of **large language models** (LLMs) that can respond in 11 Indian languages like Hindi, Tamil, and Marathi, with plans to expand to more than 20 languages.
- **Capabilities:** It is a **multimodal AI tool**, which can generate text, speech, videos and more in multiple Indian languages.
- The size of these AI models ranges from 1.5 billion to a whopping 40 billion parameters.
- **Applications:** It has been designed to work in **four fields**, including **health care, governance, financial services, and education**.
- **What is the BharatGPT ecosystem?**
- It is a **research consortium led by IIT Bombay** with seven other IITs. It is backed by the Department of Science and Technology, SML and Reliance Jio.
- **Key facts about Large language models**
- Large language models use **deep learning techniques** to process **large amounts of text**.
- They work by processing vast amounts of text, understanding the structure and meaning, and learning from it.
- LLMs are 'trained' to identify meanings and relationships between words.

- The greater the amount of training data a model is fed, the smarter it gets at understanding and producing text.
- The training data is usually large datasets, such as **Wikipedia, OpenWebText, and the Common Crawl Corpus**.
- These contain large amounts of text data, which the models use to understand and generate natural language.

Wearable "PSiFI" AI tech device interprets emotions of any human nearby

About PSiFI System:

- The system, known as the **personalized skin-integrated facial interface (PSiFI)**, features a first-of-its-kind **bidirectional triboelectric strain and vibration sensor** that enables the **simultaneous sensing and integration of verbal and non-verbal expression data**.
- The PSiFI system is **self-powered, facile, stretchable, and transparent**.
- Coupled with a **sophisticated data processing circuit**, the system facilitates **seamless wireless data transfer**, enabling the **instantaneous recognition of emotions**.
- **Empowered by machine learning algorithms**, the technology showcases remarkable efficiency in **recognizing human emotions** accurately and promptly, even in scenarios **where individuals wear masks**.
- Its practical application has already been demonstrated in a digital concierge service within a virtual reality (VR) environment, where customised services based on users' emotions were provided.
- **Science behind the PSiFI technology:**

- The technology is based on the **phenomenon of "friction charging,"** where objects separate into positive and negative charges upon friction.
- Notably, the **system is self-generating, requiring no external power source** or complex measuring devices for data recognition.
- This innovative technology is poised to revolutionize various industries, including next-generation wearable systems that provide services based on emotions.

Thawing Arctic permafrost could release radioactive, cancer-causing radon

About Permafrost:

- Permafrost is **any ground**—from soil to sediment to rock—that has been **frozen continuously for a minimum of two years** and as many as hundreds of thousands of years.
- It can **extend down beneath the earth's surface** from a **few feet to more than a mile, covering entire regions**, such as the Arctic tundra, **or a single, isolated spot**, such as a mountaintop of alpine permafrost.
- Although the ground is frozen, permafrost regions **are not always covered in snow.**
- **Global Distribution:**
 - They can be **found on land and below the ocean floor.**
 - It is found in **areas where temperatures rarely rise above freezing point.**

- They are most common in regions with **high mountains and in Earth's higher latitudes**—near the North and South Poles.
- Permafrost is found almost exclusively in the **far northern reaches and high elevations of the Northern Hemisphere**, in places like **Siberia, Alaska, the Canadian Arctic, Greenland**, and the **Tibetan Plateau**.
- **Composition:**
 - Permafrost is made of a **combination of soil, rocks, and sand** that are **held together by ice**. The **soil and ice** in permafrost **stay frozen all year**.
 - **Near the surface, permafrost soils also contain** large quantities of **organic carbon**—a material leftover from dead plants that couldn't decompose or rot away due to the cold.
 - **Lower permafrost** layers **contain soils made mostly of minerals**.
 - **A layer of soil on top of the permafrost does not stay frozen** all year. This layer, **called the active layer, thaws during the warm summer** months and freezes again in the fall.
- **Key Facts about Radon:**
- It is a **radioactive** gas that **forms naturally when** uranium, thorium, or radium, which are **radioactive metals, break down in rocks, soil, and groundwater**.
- It is an **inert, colourless, and odourless gas**.
- Radon gas usually **exists at very low levels outdoors**, but the gas **can accumulate in areas without adequate ventilation**, such as underground mines.

- Radon can **get into homes and buildings** through small cracks or holes **and build up in the air.**
- Radon levels may be **higher in homes that are well insulated, tightly sealed, and/or built on soil rich in the element's uranium, thorium, and radium.**
- **As we breathe**, these particles are **deposited on the cells lining the airways**, where they **can damage DNA** and **potentially cause lung cancer.**
- It is the **second-most important cause of lung cancer after smoking** and the leading cause of lung cancer among non-smokers.

Researchers produce a 3D model of the ribosome and visualise how it is made

About Ribosomes:

- Ribosomes are **non-membrane-bound cell organelles made of RNA and proteins.**
- They are **found in both prokaryotic and eukaryotic cells.**
 - In eukaryotic organisms, ribosomes are found in the cytoplasm, mitochondria, and chloroplast.
 - All prokaryotic ribosomes are found free in the cytoplasm of the cell.
- Ribosomal structure and function are strikingly **similar in all organisms and organelles.**
- They are **made of two subunits**, the **large and the small subunit** which comprises **ribosomal RNA (rRNA) and proteins.**
- **Primary Function:**
 - They are complex molecular machines that **make proteins from amino acids** in a **process called** protein synthesis, or **translation.**
 - Every cell needs ribosomes to manufacture proteins.
 - The **ribosome reads** the messenger RNA (**mRNA**) **sequence** and **translates that genetic code into a specified string**

of amino acids, which grow into long chains that fold to form proteins.

- The newly formed **proteins detach themselves from the ribosome** site and migrate to other parts of the cell for use.

What is mRNA?

- mRNA is a type of **single-stranded RNA involved in protein synthesis.**
- mRNA is **made from a DNA template during** the process of **transcription.**
- The role of mRNA is to **carry protein information from the DNA in a cell's nucleus to the cell's cytoplasm**(watery interior), where the **protein-making machinery reads the mRNA sequence and translates** each three-base codon into **its corresponding amino acid** in a growing **protein chain.**
- So, mRNA really is a **form of nucleic acid** which **helps the human genome,** which is coded in DNA, **to be read by the cellular machinery.**

Government of India approves interest-free Loan to FCV Tobacco growers in Andhra Pradesh

About the Flue-Cured Tobacco:

- Curing is a process by which the **harvested tobacco leaf** is made **ready for the market.**
- It is a well-standardised process especially in FCV tobacco to achieve the desirable qualities in the cured leaf along with the removal of moisture.
- There are three types of tobacco curing methods traditionally used: **Air-Cured, Fire-Cured, and Flue-Cured.**
- Each of the different curing methods results in a tobacco product that is distinguishable by both its nicotine content and its aroma.
- **Why is Tobacco cured?**

- To create smoking tobacco, the tobacco leaves need to be cured, or dried out.
- The wet, green tobacco leaves of a tobacco plant initially contain too much moisture to catch fire.
- They also have **higher chlorophyll content**. By releasing a certain amount of chlorophyll from the leaves during the drying-out process, the **natural tannins** come out giving the smoked tobacco its flavour and scent.
- **Key characteristics of Flue-Cured Tobacco:**
 - Produces primarily cigarette tobacco
 - Contains a high sugar content
 - Contains medium to high levels of nicotine
 - Rich in natural tannins which create its distinct mild and slightly sweet flavour and aroma
- In India Flue Cured Virginia (FCV) Tobacco is mainly produced in India in **2 states, Andhra Pradesh and Karnataka.**

Explained: What is an LLM, the backbone of AI chatbots like ChatGPT, and Gemini?

About Large Language Models (LLMs):

- A large language model (LLM) is a **type of artificial intelligence (AI) program** that can **recognize and generate text**, among other tasks.
- LLMs are **trained on huge sets of data**—hence the name "large."
- LLMs are **built on machine learning**: specifically, a type of neural network called a transformer model.

- In simpler terms, an **LLM is a computer program** that has **been fed enough examples** to be **able to recognize and interpret human language or other types of complex data**.
- Many LLMs are **trained on data** that has been **gathered from the Internet**—thousands or millions of gigabytes" worth of text.
- However, the **quality of the samples impacts how well LLMs will learn** natural language, so an LLM's programmers may use a more curated data set.
- LLMs **use a type of machine learning called deep learning** in order to understand how characters, words, and sentences function together.
 - Deep learning **involves the probabilistic analysis of unstructured data**, which **eventually enables** the deep learning model **to recognize distinctions** between pieces of content **without human intervention**.
- LLMs are then **further trained via tuning**: they are fine-tuned or prompt-tuned **to the particular task** that the programmer wants them to do, such as interpreting questions and generating responses, or translating text from one language to another.
- **What are LLMs used for?**
 - LLMs can be trained to do a number of tasks. One of the most well-known uses is their **application as generative AI**: when given a prompt or asked a question, they can produce text in reply.
 - The publicly available **LLM ChatGPT**, for instance, can generate essays, poems, and other textual forms in response to user inputs.
-

First, of its kind Micro Turbojet Engine made in India

About the INDRA RV25: 240N

- It is a **micro turbojet engine**.

- It is designed and **developed indigenously by Hyderabad-based firm Raghu Vamsi Machine Tools** with **support from IIT Hyderabad**.
- It has **primarily been developed for** unmanned aerial vehicles (UAVs) or **drones**.
- The engine has applications in UAVs, air taxis, jetpacks, auxiliary power units, range extenders, and power generation in the future.
- **What is a turbojet engine?**
- A turbojet engine is a jet engine which **produces all of its thrust by ejecting a high-energy gas stream from the engine exhaust nozzle**.
- In contrast to a turbofan or bypass engine, **100% of the air entering the intake of a turbojet engine goes through the engine core**.
- **Components:** The component parts of a turbojet engine are the **inlet**, the **gas turbine engine, consisting of a compressor, a combustion chamber and a turbine**, and the **exhaust nozzle**.
- **Working:**
 - **Air is drawn** into the engine **through the inlet and compressed and heated by the compressor**.
 - **Fuel is then added** to the combustion chamber **and ignited**.
 - The **burning fuel adds energy to the exhaust stream** by heating and expanding the air.
 - Sufficient **energy to drive the compressor** is **extracted from the exhaust stream** by the turbine.

- The **remainder of the exhaust energy** is **used to produce thrust**, a process which is enhanced by the geometry of the exhaust nozzle.
- **As the exhaust gas passes through the nozzle**, it is **accelerated to high speed** as it expands, thus **providing propulsion**.
- The thrust produced by the engine can be selectively increased by incorporating an afterburner or re-heat into the engine design.
- Turbojet aircraft **work on the principle of accelerating** a relatively **small mass of air to a high speed**.
- As **optimum efficiency** is achieved **when the speed of the accelerated air approximates that of the aircraft**, turbojet engines do not reach peak efficiency until speeds approach Mach 2.
- Thus, turbojets have **relatively poor propulsive efficiency at lower airspeeds**, limiting their usefulness to high-speed aircraft.

Climate impact: Water storage projected to decrease across wetter lands around Caspian, Mediterranean seas

About the Stratospheric Aerosol Intervention (SAI):

- Stratospheric Aerosol Intervention (SAI), also known as Stratospheric Aerosol Injection, is a **geoengineering or climate engineering approach** that **uses tiny reflective particles or aerosols to reflect sunlight into space** in order **to cool the planet** and reverse or stop global warming.
- It aims to **mimic the cooling effects of volcanic eruptions** by **injecting Sulphur dioxide (SO₂)** directly into the stratosphere, where **it forms sunlight-reflecting sulphate aerosols**.

- The 1991 eruption of **Mount Pinatubo** in the Philippines, often cited as the inspiration for this concept, deposited massive amounts of particulate matter and Sulphur dioxide (SO₂) into the atmosphere.
- This aerosol layer was reported to have lowered average temperatures around the world by about 0.5 °C (0.9 °F) over the following few years.
- It is believed that **as more radiation is scattered in the stratosphere** by aerosols, **less would be absorbed by the troposphere**, the lower level of the atmosphere **where weather primarily occurs**.
- The production of such an artificial aerosol layer could be **accomplished by shooting Sulphur particles** into the stratosphere **with cannons or dispersing them from balloons or other aircraft**.
- **Key Facts about Aerosols:**
- They are tiny **solid or liquid particles suspended in air or gas**.
- Aerosols can be **natural**, such as fog or gas from volcanic eruptions, **or artificial**, such as smoke from burning fossil fuels.
- Aerosol particles are **either emitted directly into the atmosphere (primary aerosols) or produced** in the atmosphere **from precursor gases (secondary aerosols)**.
- Aerosol particles **are tiny**, but numerous, and **often comprise** a number of **inorganic and organic substances**.
- Particles **with a diameter of less than 0.1 micrometre** are sometimes **referred to as Aitken nuclei**.
- **Visible forms** of atmospheric aerosol plumes **include smoke, smog, haze, and dust**.

Explained: Google DeepMind's Genie, an AI model that creates virtual worlds from image prompts

About Genie AI Model:

- It is a foundation world model that is **trained on videos sourced from the Internet.**
- The model can “**generate an endless variety of playable** (action-controllable) worlds from synthetic images, photographs, and **even sketches.**”
- It is the first generative interactive environment that has been trained in an unsupervised manner from unlabelled internet videos.
- **Specifications:** When it comes to size, Genie stands at **11B parameters** and consists of a **spatiotemporal video tokenizer**, an autoregressive dynamics model, and a simple and scalable latent action model.
- These technical specifications let Genie act in generated environments on a frame-by-frame basis **even in the absence of training, labels**, or any other domain-specific requirements.
- Genie can be prompted to generate a **diverse set of interactive and controllable environments** although it is trained on video-only data.
- It makes playable environments **from a single image prompt.**
- It can be prompted with images it has never seen. This includes real-world photographs, and sketches, allowing people to interact with their imagined virtual worlds.
- It is trained more on videos of **2D platformer games and robotics.**
- Genie is trained on a general method, allowing it to function on any type of domain, and it is **scalable to even larger Internet datasets.**
- The standout aspect of Genie is its ability to learn and reproduce controls for in-game characters exclusively from internet videos.
- This is noteworthy because internet videos do not have labels about the action that is performed in the video, or even which part of the image should be controlled.
- It allows you to create an entirely new interactive environment from a single image.

Turning mushrooms into gold? Goa researchers claim breakthrough in producing nanoparticles

About Roen olmi:

- It is a **mushroom** of the **Termitomyces species**.
- It grows on **termite hills** and is locally known as 'roen olmi' in Goa.
- It is an **edible wild mushroom** popular among Goans and consumed during the monsoons.
- These mushrooms have no independent existence. They grow only in association with termites.
- **Habitat:** It is endemic to the **Western Ghats**, where the thick forest cover and high humidity provide an ideal breeding ground.
- **Ecological significance:** It plays a very important role as a powerful **biodegrading fungus** in forest and grassland ecosystems converting 50% of dead plant material on the ground into rich soil.
- In fact, all Termitomyces species are edible and have unique food value attributed to their texture, flavour, nutrient content, and beneficial **mediational properties**.
- Additionally, Termito-myces have been recognized for their **ethno-medicinal importance** in various indigenous communities throughout Asia and Africa.
- Termitomyces species possess various beneficial antioxidant and antimicrobial properties

India conducted 1st human clinical trials for 'haemophilia A' gene therapy: Science and Technology minister

About Haemophilia A:

- It is a genetic disorder that **affects** the body's **ability to form blood clots**.

- It is a **rare disorder** in which the blood doesn't clot in the typical way because it doesn't have enough blood-clotting proteins.
- It is a sex linked disorder. The gene for haemophilia is carried on **the X chromosome**.
- **Causes:** It is caused by a mutation or change, in one of the genes, that provides instructions for making the clotting factor proteins needed to form a blood clot. This type is caused by a lack or decrease of **clotting factor VIII**.
- **Symptoms:** Signs and symptoms of haemophilia vary, depending on the level of clotting factors.
- **Males** are much **more likely to have haemophilia** than are females.
- **Treatment:**
 - It **involves replacement therapy**, which involves infusing clotting factor concentrates into the bloodstream to help the blood clot.
 - Other treatments may include medications to promote clotting or surgery to repair damage caused by bleeding.
- **What is Gene therapy?**
- It is a technique that **modifies a person's genes** to treat or cure disease.
- Gene therapies can work by several mechanisms:
 - **Replacing** a disease-causing gene with a healthy copy of the gene
 - **Inactivating** a disease-causing gene that is not functioning properly
 - **Introducing a new or modified gene** into the body to help treat a disease
- Gene therapy products are being studied to treat diseases including cancer, genetic diseases, and infectious diseases.

Kulasekarapattinam: A sweet spot for small rocket launches

About Kulasekarapattinam Spaceport:

- It is a **new spaceport** coming up at **Kulasekarapattinam**, a coastal hamlet near the temple town of Tiruchendur in **Thoothukudi district in southern Tamil Nadu**.
- It will be **second after** the space agency's **existing Satish Dhawan Space Centre**, founded in Andhra Pradesh's Sriharikota in 1971, with two launch pads.
- It will **focus on the launch of Small Satellite Launch Vehicles (SSLVs) on a commercial basis**.
- It will house 35 facilities, including a launch pad, rocket integration facilities, ground range and checkout facilities, and a mobile launch structure (MLS) with checkout computers.
- It would have the capacity to **launch 24 satellites per year using a mobile launch structure**.
- Spread over 2,350 acres, the Kulasekharapatnam spaceport will **help save fuel** for small rocket launches **as the port can launch rockets directly south over the Indian Ocean without requiring crossing landmasses**.
 - This is **unlike the existing launch site** at the Satish Dhawan Space Centre, **which adds more fuel requirements** for launching into a polar orbit **as rockets need to follow a curved path to the south to avoid Sri Lanka's landmass**.
- It is estimated to cost Rs. 986 crore.
- **Key Facts about Small Satellite Launch Vehicles (SSLVs):**
- SSLV is a **3-stage Launch Vehicle** configured with **three Solid Propulsion Stages** and a **liquid propulsion-based Velocity Trimming Module (VTM)** as a **terminal stage**.

- SSLV is 2m in diameter and 34m in length with a **lift-off weight of 120 tonnes.**
- SSLV is capable of **launching a 500kg satellite** in a **500 km planar orbit.**
- The key features of SSLV are **Low cost**, with **low turn-around time**, flexibility in **accommodating multiple satellites, Launch-on-demand feasibility, minimal launch infrastructure** requirements, etc.

SOCIETY

700 One Stop Centres set up across the country

- The Union Minister for Women and Child Development said that One Stop Centres to help women who have faced violence have been established in over 700 districts across the country.
- One Stop Centre scheme is a Centrally Sponsored Scheme formulated under the Union Ministry of Women and Child Development (MWCD).

Objectives:

- To provide integrated support and assistance to women affected by violence, both in private and public spaces under one roof.

- To facilitate immediate, emergency and non-emergency access to a range of services including medical, legal, psychological and counselling support under one roof to fight against any forms of violence against women.

Target group

- It supports all women including girls below 18 years of age affected by violence, irrespective of caste, class, religion, region, sexual orientation or marital status.
- For girls below 18 years of age, institutions and authorities established under the Juvenile Justice (Care and Protection of Children) Act, 2000 and the Protection of Children from Sexual Offences Act, 2012 linked with the OSC
- Funding: The Scheme will be funded through the Nirbhaya Fund. The Central Government will provide 100% financial assistance under the Scheme.
- Administration: The day-to-day implementation and administrative matters would be the responsibility of the District Collector/District Magistrate.
- The OSC will facilitate access to- Emergency Response and Rescue Services, Medical assistance, assistance to women in lodging FIR/ NCR/DIR, psycho-social support/counselling, legal aid and counselling, shelter and a Video Conferencing Facility.

MEERA GAON MERI DHAROHAR

- The Union Minister for Culture, Tourism And Development of North Eastern Region informed the Lok Sabha about the Mera Gaon Meri Dharohar programme.
- It is a pan-India initiative of the Ministry of Culture under the National Mission on Cultural Mapping and was launched on 27th July 2023.

- It seeks to compile comprehensive information detailing the life, history, and ethos of Indian villages and to make the same available to virtual and real-time visitors.
- **Under the MGMD, information is collected under seven broad categories as given below-**
- Arts and Crafts Village
- Ecologically Oriented Village
- Scholastic Village Linked with Textual and Scriptural Traditions of India
- Epic Village linked with Ramayana, Mahabharata and/or Puranic legends and oral epics
- Historical Village linked with Local and National History
- Architectural Heritage Village
- Any other characteristic that may need highlighting such as fishing village, horticulture village, shepherding village etc.
- Objective: The main objective of the project is to culturally map India's 6.5 lakh villages, spanning 29 States and 7 Union Territories, on a comprehensive virtual platform.
- Through MGMD, people will get an opportunity to immerse themselves in the diverse and vibrant cultural heritage of India.
- The core idea behind this project is to encourage appreciation for India's culture and traditions, paving the way for economic growth, social harmony, and artistic development in rural communities.

- **The financial outlay of Rs.353.46 Crore is approved under the scheme of Financial Assistance for Promotion of Art and Culture consisting of 08 scheme components namely;**
- Financial Assistance to Cultural organisations with National Presence
- Cultural Function & Production Grant (CFPG)
- Financial Assistance for the Preservation & Development of Cultural Heritage of the Himalayas
- Financial Assistance for the Preservation & Development of Buddhist/Tibetan Organization
- Financial Assistance for Building Grants including Studio Theatres
- Financial Assistance For Allied Cultural Activities
- Scheme for Safeguarding the Intangible Cultural Heritage

President Smt. Droupadi Murmu to Inaugurate Aadi Mahotsav at Major Dhyan Chand National Stadium in Delhi on 10th February 2024

About the Aadi Mahotsav:

- It is organised by **Tribal Cooperative Marketing Development Federation of India Limited (TRIFED)** under the aegis of **the Ministry of Tribal Affairs**, and will showcase the rich diversity of India's tribal heritage.
- It is not only a platform to exhibit the extraordinary talent and craftsmanship of tribal artisans but also an opportunity to interact, learn, and contribute to the empowerment of tribal communities.

- The festival will feature an expanded showcase with over 300 stalls, offering varied display of Tribal art, handicrafts, natural produce, and delectable tribal cuisine.
- **What is TRIFED?**
- It is a national-level organisation under the **Ministry of Tribal Affairs**.
- It is primarily engaged in **the development and marketing of tribal handicrafts** and natural products.
- It came into existence in 1987 and got registered under the Multi-State Cooperative Societies Act, 1984 (now the Multi-State Cooperative Societies Act, 2002).
- **Mandate:** Capability enhancement for Tribals, promotion of tribal products, and creation of marketing opportunities for the Tribals with a view to ensuring remunerative prices for their products and augmenting their income on a sustainable basis.
- It has been entrusted by the Government of India to implement its proposed Minimum Support Price Scheme for Minor Forest Produce.
- **Head Office:** New Delhi

PM SVANidhi restores the dignity of street vendors: Housing Minister Hardeep S Puri

About the PM SVANidhi Scheme:

- The **PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi)** was launched on **June 01, 2020**, for providing affordable Working Capital loans to street vendors to resume their livelihoods that have been adversely affected due to the Covid-19 lockdown.

- **Time duration:** Initially it was until March 2022. After that, it has **been extended till December 2024.**
- **Eligibility:** The Scheme is available for beneficiaries belonging to only those States/UTs which have notified Rules and Scheme under the **Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014.**
- **Benefits:** A micro-credit scheme, facilitating a working capital collateral-free loan of Rs. 10,000, with subsequent loans of Rs. 20,000 and 50,000 with 7% interest subsidy.
- **Implementation agency:** Small Industries Development Bank of India (SIDBI).
- **Ministry:** Ministry of Housing and Urban Affairs.

Sandeshkhali violence: Scheduled Caste Panel Recommends President's Rule in Bengal

About the National Commission for Scheduled Castes (NCSC):

- It is an Indian **constitutional body** established under the jurisdiction of the **Ministry of Social Justice and Empowerment**, Government of India.
- **Article 338** of the Indian Constitution deals with NCSC.
- It was established to **provide safeguards against the exploitation of Scheduled Castes** and Anglo-Indian communities to promote and protect their social, educational, economic, and cultural interests, special provisions were made in the Constitution.
- **History:**
 - The first **Commission for Scheduled Castes and Scheduled Tribes** was **set up in August 1978.**
 - Consequent to the **Constitution (Eighty-Ninth Amendment) Act, 2003**, the erstwhile National Commission for Scheduled Castes and Scheduled Tribes has **been replaced by: the National Commission for Scheduled Castes** and the **National Commission for Scheduled Tribes.**

- **Duties and Functions** of the Commission:
 - To **investigate and monitor** all **matters relating to the safeguards provided for the Scheduled Castes** under the Constitution or under any other law for the time being in force or under any order of the government, and to **evaluate the working of such safeguards**.
 - To **inquire into specific complaints** with respect to the **deprivation of rights** and safeguards of the Scheduled Castes.
 - To participate and **advise in the planning process of socio-economic development of the Scheduled Castes** and to evaluate the progress of their development under the Union and any state.
 - **To present to the President, annually** and at such other times as the Commission may deem fit, **reports upon the working** of those safeguards.
 - **To make such reports, recommendations** as to the measures that should be taken by the Union or any state for effective implementation of those safeguards and other measures for the protection, welfare, and socio-economic development of the Scheduled Castes.
 - To discharge such other functions in relation to the protection, welfare and development and advancement of the Scheduled Castes as the President may, subject to the provisions of any law made by Parliament, by rule specify.
- **The President shall cause** all **such reports to be laid before each House of Parliament along with a memorandum explaining the action taken** or proposed to be taken on the recommendations relating to the Union and the reasons for the non-acceptance, if any, of any of such recommendations.
- **Powers of the Commission:**
 - The Commission shall, while investigating any matter referred to it, have the **powers of a civil court trying a suit**.

- The Commission shall have **the power to regulate its own procedure.**
- The Union **and every State Government shall consult the Commission on all major policy matters affecting Scheduled Castes.**
- **Structure:**
 - The Commission shall consist of a **Chairperson, a Vice-Chairperson, and three other Members.**
 - The Chairperson, Vice-Chairperson, and other Members of the Commission shall be **appointed by the President** by warrant under his hand and seal.
 - The **conditions of service and tenure** of office of the Chairperson, Vice-Chairperson and other Members so appointed **shall be such as the President may, by rule, determine.**

Multilingualism is crucial, says Bharatiya Bhasha Samiti chairman

About Bharatiya Bhasha Samiti:

- It is a High-Powered Committee for the Promotion of Indian Languages.
- It has been **constituted by the Ministry of Education**, Government of India in 2021.
- **Mandate:** The mandate of this committee would be to explore and recommend pathways for the holistic and multidisciplinary growth of Indian languages as envisaged in the National Education Policy 2020.
- It has also been entrusted **to advise the Ministry** on all matters pertaining to the revitalization of existing language teaching and research and its extension in various institutions in the country.
- To perform the tasks assigned to it, the High-Powered Committee may appoint sub-committees/study groups.

- The committee may organise seminars, workshops, conferences, and webinars to highlight the need for the promotion of Indian languages.
- It may also interact and coordinate with any institution of the Central/State Government dealing with teaching, research, and extension/promotion of languages.
- **Shri Lal Bahadur Shastri National Sanskrit University** (SLBSNSU), New Delhi would provide **secretarial assistance** and space to house the High-Powered Committee and meet the related expenditure as per the Government of India rules, regulations and instructions from time to time.
- The SLBSNSU has been also entrusted to appoint consultants and experts/scholars/officials/young professionals on a short-term basis and to conduct seminars, workshops, webinars, etc. as per the recommendations of the Committee.
- Necessary finance towards the same would be provided by the Ministry of Education (MoE) to the University under relevant budget heads.

Great Nicobar: Indian president visits island as fears grow for tribe

About Shompen Tribe:

- The Shompen are one of the **most isolated tribes on Earth**.
- They reside in the **dense tropical rainforest of the Great Nicobar Island** of Andaman and Nicobar group of Islands.
- They are one of the least studied **Particularly Vulnerable Tribal Groups (PVTGs)** in India.
- Though according to the **Census (2011)**, the estimated **population of Shompen is 229**, the exact population of Shompen is unknown till today.
- Most of them **are uncontacted, refusing all interactions with outsiders**.

- They **live in small groups**, whose territories are identified by the rivers that crisscross the rainforest.
- They are **semi-nomadic hunter-gatherers**, and their main sources of livelihood are **hunting, gathering, fishing**, and a **little bit of horticultural activities** in a rudimentary form.
 - Primarily, they used to hunt wild pigs, python, monitor Lizard, crocodile, sea turtle etc.
 - They collect a wide variety of forest plants, but their **staple food is the pandanus fruit**, which they call **larop**.
- Shompen **speak their own language**, which has **many dialects**. Members of one band do not understand the dialect of the other.
- They are of **short to medium stature**, have a **round or nearly broad head shape, narrow nose**, and a broad facial profile, and **distinctly exhibit Mongoloid features** such as light brown to yellow-brown skin and oblique eye features.
- Shompen have **nuclear families** comprising **husband, wife, and their** unmarried **children**.
 - A Shompen family is **controlled by the eldest male member**, who controls all activities of the women and kids.
 - **Monogamy is the general rule**, although **polygamy is allowed too**.

Will the 'Paruveta Festival' celebrated in Andhra's Ahobilam get UNESCO recognition?

About Paruveta Festival:

- The festival, also known as the '**mock hunting festival**', is celebrated at the **Sri Narasimha Swamy temple** in the town of **Ahobilam, Andhra Pradesh**.
- It is **celebrated by all sections** of people, irrespective of their caste.

- It is a **festival of communal harmony**, as **devotees from other religious communities** like Muslims **also offer prayers** to the Lord.
- **Origin:**
 - According to folklore, **Lord Vishnu, upon his incarnation as a man-lion (Narasimha) in Ahobilam, married Maha Lakshmi, born as a tribal girl Chenchulakshmi.**
 - The Kurnool District Gazetteers, published by Government Press in 1881, record several beliefs of the **Chenchu tribes**, including their **reverence for Ahobila Narasimha as their brother-in-law** and **inviting him home for Makar Sankranti.**
- While Paruveta rituals are commonly **observed in many temples during Vijayadashami or Sankranti, at Ahobilam, it is conducted for a 'mandala' (forty days).**
- **Activities:**
 - During the festival, **the deity** from the temple's inner sanctum **is taken to the 32 Chenchu tribal villages** surrounding Ahobilam town **for a duration of 40 days.**
 - The spiritual sojourn **starts with the tribals aiming their bow and shooting two arrows at the palanquin**, not only as a **mark of reverence but also to show** that the **deity is under their protective cover.**
 - **Chenchus** take 'Narasimha Deeksha' by wearing yellow robes and 'Tulasi Mala' and **observe celibacy** during this period.
 - The **temple staff stay in these hamlets for the entire period, indicating the presence of a casteless society in the past** with no hint of untouchability.
- **Key Facts about Chenchu Tribes:**

- They live in the **hills of southern India, primarily in** the state of **Andhra Pradesh**.
- Other Chenchu communities can be found in the states of **Tamil Nadu, Karnataka, and Orissa**.
- Their **native language (also called Chenchu)** belongs to the **Dravidian language family**. Many also speak Telugu.
- Many Chenchu have been **forced out of their traditional wandering, food-gathering lives** by the growing number of peasant farmers. They **now work as farmers or forest labourers**.
- They live in **hive-shaped houses made of wattle thatch** (poles intertwined with twigs, reeds, or branches).
- Chenchu **society consists of clans** (extended family units), **local groups**, and families.
- They are **exogamous**, which means that they **do not allow marriage within the same clan**.
- They are **also patrilineal**, tracing the line of descent through the males.
-

Union Tribal Affairs Minister Shri Arjun Munda visits the country's largest Tribal festival, the Sammakka-Saralamma Jatara at Medaram in Telangana

About Sammakka-Saralamma Jatara:

- It is also known as **Medaram Jatara**.
- It is a tribal festival honouring the goddesses celebrated in the **state of Telangana**.
- The festival is a demonstration of tribal devotion, and people from all walks of life join together to **commemorate the revolt led by Sammakka and**

Saralamma, a mother-daughter duo, against imposing taxes on the tribal populace during a period of drought by the Kakatiya rulers in the 12th century.

- **Location:** Medaram is a remote place in the **Eturnagaram Wildlife Sanctuary**, a part of Dandakaranya, the largest surviving forest belt in Mulugu.
- It is held **every two years** (biannually). It is celebrated during the time the goddesses of the tribals are believed to visit them.
- **Ritual:** People offer **bangaram/gold** (jaggery) of a quantity equal to their weight to the goddesses and take a holy bath in **Jampanna Vagu, a tributary to River Godavari**.
- **Significance:** It serves as a platform for understanding and fostering harmony between the people and tribal communities, promoting the preservation of their unique traditions, culture, and heritage on a global scale.

FACTS FOR PRELIMS

Education Minister launches SWAYAM Plus platform

About SWAYAM Plus platform:

- It offers courses developed **collaboratively with the industry**.
- This platform aims to enhance the employability of both **college students and lifelong learners**.
- It will offer programmes in sectors like **Manufacturing, Energy, Computer Science** and Engineering/IT/ITES, Management Studies, **Healthcare, Hospitality** and Tourism besides Indian Knowledge Systems.
- **Objectives**

- It primarily focuses on building an ecosystem for all stakeholders in **professional and career development**, including learners, course providers, industry, academia, and strategic partners.
- It enables a mechanism that provides credit recognition for high-quality certifications and courses offered by the best industry and academia partners.
- Reaching a large learner base by catering to learning across the country, with a focus on reaching learners **from tiers 2 and 3 towns** and rural areas.
- It also envisions bringing in features such as **access to mentorship, scholarships and job placements** as value-added services in due course of time, thus building a digital ecosystem for learners to pursue **upskilling and re-skilling at all levels, namely certificate, diploma or degree.**
- It features innovative elements such as **multilingual content** (available in **12 major Indian languages** of the country), **AI-enabled guidance**, credit recognition, and pathways to employment.
- These employability and professional development-focused programmes have been developed with industry players including L&T, Microsoft and CISCO.
- The **Indian Institute of Technology Madras** (IIT Madras) will be operating this Platform.

Ministry launches 4 new media-related portals to streamline services

About NaViGate Bharat Portal:

- The **'National Video Gateway of Bharat'** (NaViGate Bharat) is developed by the New Media Wing of the **Ministry of Information and Broadcasting.**

- It is a **unified bilingual platform** which hosts videos on the entire gamut of Government's development-related and citizen welfare-oriented measures.
- It empowers citizens by providing a single platform with an interactive user interface to search, stream, share, and **download videos related to various Government schemes**, initiatives, and campaigns, with a filter-based advanced search option.
- The portal eliminates the hassle of searching for official and reliable information from multiple sources, providing a one-stop platform for media and the general public.
- **Key facts about Press Sewa Portal**
- It is developed under the **Press and Registration of Periodicals Act, 2023** (PRP Act, 2023) by the **Press Registrar General of India** (PRGI - erstwhile RNI).
- This portal aims to simplify the cumbersome registration procedures that were prevalent under the colonial PRB Act, 1867.
- **Key features**
 - **Online Application:** Publishers can file applications for title registration online, using Aadhar-based e-signatures.
 - **Probability Metre:** Indicates the likelihood of title availability.
 - **Real-time Tracking of application status:** Accessible through an intuitively designed dashboard.
 - **Dedicated DM Module:** Enables District Magistrates to manage applications received from publishers in a centralised dashboard.
- **Other portals:**
- **National Register for Local Cable Operators (LCOs):**

- It is the first step to bring registration of LCOs currently **with Post Offices** spread across the country under a Centralised Registration System.
- A web form has been designed to collect information from local cable operators for the purpose of the National Register.
- **Central Bureau of Communication (CBC):**
 - It is a vital unit within the Ministry of Information and Broadcasting, established on December 8, 2017, through the amalgamation of the erstwhile Directorate of Advertising and Visual Publicity (DAVP), Directorate of Field Publicity (DFP), and Song & Drama Division (S&DD).

HAM Operators from Cyclone Shelters of Nachugunta Island, Andhra Pradesh, excel in Island On The Air (IOTA) Expedition

About Island On The Air (IOTA) Programme:

- It is a pioneering programme that connects **radio amateurs worldwide** with stations on islands.
- It was established in 1964.
- It is managed by IOTA Ltd in collaboration with the **Radio Society of Great Britain** (RSGB), categorising islands into groups for communication.
- **Key Facts about Amateur Radio (HAM Radio)**
- Amateur radio is a popular hobby involving the **use of radio frequency spectrum** for non-commercial purposes.
- HAM radio operators communicate using designated radio frequencies, engaging in diverse activities like contests, emergency communication support, experimentation, technical learning, and community engagement.

- The hobby offers a unique blend of technical learning, community engagement, and global connectivity through radio waves, emphasising innovation and service.
- In India, as per the **Indian Wireless Telegraphs (Amateur Service) Amendment Rules, 1984**
 - ‘Amateur service’ means a service of self-training intercommunications and technical investigation carried on by Amateurs that is, by persons duly authorised under **these rules interested in radio technique** solely with a personal aim and without pecuniary interest.”
 - Any citizen of India **who is above 12 years of age** can become a ham by qualifying in the Amateurs Station Operators’ examination (ASO) and obtaining a valid Amateur wireless telegraph station licence.