

# ASTRA

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### Why in news?

- In a recent census conducted at Kashmir's Dachigam National Park, it was found that the population of Hangul or Kashmiri Stag has gradually increased over time at the national park.

### About Kashmiri Stag

- The Kashmiri Stag, also known as the Hangul, is a subspecies of Central Asian red deer that is unique to the Kashmir region and its surrounding areas. Here are some facts about the Kashmiri Stag:
  - Habitat: It is typically found in dense riverine forests located in the high valleys and mountains of Jammu and Kashmir and northern Himachal Pradesh.
  - Population: The Kashmiri Stag population is primarily concentrated in the Dachigam National Park in Kashmir, where it is provided with protection. However, a small population has also been observed in the Overa-Aru Wildlife Sanctuary in south Kashmir.
  - Conservation status: The Kashmiri Stag is considered to be critically endangered according to the International Union for Conservation of Nature (IUCN). Additionally, it is listed under Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

### Key Facts About Dachigam National Park

- Dachigam National Park is a protected area located in Jammu and Kashmir, India. Here are some key facts about the park:
- Geographical features: The park is renowned for its stunning natural beauty, which includes deep valleys, rocky outcrops, steep wooded slopes, and rolling alpine pastures.
- Altitude variation: Due to its mountainous location, Dachigam National Park experiences a wide range of altitudes, ranging from 1600 meters to 4200 meters above sea level. This altitude variation categorizes the park into two regions: the upper region and the lower region.
- Flora: The park is home to a rich variety of flora, which includes Wild Cherry, Pear, Plum, Peach, Apple, Apricot, Walnut, Chestnut, Oak, Willow, Poplar, Chinar, Birch, Pine, and Elm.
- Fauna: Dachigam National Park is also home to a diverse range of fauna, including the endangered Hangul or Kashmir Stag, Musk deer, Brown Bear, Leopards, Jungle Cats, Himalayan black bear, and several species of wild goats such as the markhor and ibex.

## Great Seahorse

## Geography & Environment

### Context:

- A study indicated that extensive fishing off the Coromandel coast could be forcing the great seahorse to migrate towards Odisha.
- Relevance: GS Iii: Environment and Ecology, Facts for Prelims

### Dimensions of the Article:

- About Seahorse
- Reasons for Decline and Migration of Great Seahorse
- What are the Challenges with Migration?

### About Seahorse

- Shape and Classification:
- Seahorses are a type of tiny fish named after the shape of their head resembling a tiny horse. They are classified as fish, in the genus Hippocampus.
- There are 46 species of seahorses worldwide, and India is home to 9 out of 12 species found in the Indo-Pacific.

### Distribution:

- Seahorses are found in shallow coastal waters between latitudes of about 52° N to 45° S.
- In India, these 9 species are distributed along the coasts of eight states and five Union Territories from Gujarat to Odisha, including Lakshadweep and the Andaman and Nicobar Islands.

- Seahorse populations in India are distributed across diverse ecosystems such as seagrass, mangroves, macroalgal beds, and coral reefs.

#### **Swimming and Migration:**

- When swimming, seahorses maintain a vertical position and propel themselves forward using a soft-rayed dorsal fin.
- They migrate by rafting, clinging to floating substrata such as macroalgae or plastic debris for dispersal by ocean currents.

#### **Reproductive Habits:**

- Seahorses have unique reproductive habits where the male gives birth to offspring. The female uses an ovipositor (egg duct) to place her eggs into a brood pouch located at the base of the male's tail where the eggs are later fertilized.

#### **Conservation Status:**

- Seahorses are classified as vulnerable by the IUCN.
- They are listed in Appendix II of CITES, which regulates their international trade to ensure their survival.

#### **Reasons for Decline and Migration of Great Seahorse**

- The population of the Great seahorse is declining due to various factors such as overexploitation for traditional Chinese medicines, ornamental fish, general destructive fishing, and fisheries bycatch.
- These activities put immense pressure on seahorse populations that depend on local habitats to maintain their long-life history traits.
- The Great seahorse migrates approximately 1,300 km northward from Palk Bay and the Gulf of Mannar to Odisha.
- This migration is believed to be a response to extensive fishing activities around the southern coast of India. Around 13 million seahorses are caught every year on the Coromandel coast.

#### **What are the Challenges with Migration? Lack of Suitable Habitats:**

- The Odisha coast lacks the necessary seagrass meadows or coral reefs that are essential habitats for seahorses, except for the Chilika region.
- Without these habitats, the seahorses may find it difficult to survive and thrive during their migration.

#### **Lack of Conservation Measures:**

- The migration of seahorses from Palk Bay and the Gulf of Mannar to Odisha highlights the lack of conservation and management measures in the coastal ecosystems of India's east coast.
- The absence of proper monitoring makes it challenging to safeguard the remaining seahorse populations.
- Therefore, there is a need for better conservation and management practices to protect seahorses during their migration.

## **Olive Ridley Sea Turtles**

## **Geography & Environment**

#### **Context:**

- Nearly 6.37 lakh Olive Ridley turtles have arrived for mass nesting on the Rushikulya coast this year, setting a new record for the beach in Ganjam district of Odisha.
- **Relevance:** Prelims, GS-III: Environment and Ecology

#### **Dimensions of the Article:**

- Olive Ridley Sea Turtle
- Breeding Grounds of the Olive Ridley Sea Turtle in India
- Threats to the Olive Ridley Sea Turtle
- Turtles and Turtle conservation in India

### Olive Ridley Sea Turtle

- The olive ridley sea turtle (*Lepidochelys olivacea*), also known commonly as the Pacific ridley sea turtle, is a species of turtle in the family Cheloniidae.
- The species is the second smallest and most abundant of all sea turtles found in the world.
- This turtle and the related Kemp's ridley turtle are best known for their unique mass nesting called arribada, where thousands of females come together on the same beach to lay eggs.
- The species is listed as Vulnerable in the IUCN Red List, Appendix 1 in CITES, and Schedule 1 in Wildlife Protection Act, 1972.
- Olive-ridleys face serious threats across their migratory route, habitat and nesting beaches, due to human activities such as unfriendly turtle fishing practices, development, and exploitation of nesting beaches for ports, and tourist centres.

### Breeding Grounds of the Olive Ridley Sea Turtle in India

- The Gahirmatha Beach in Kendrapara district of Odisha (India), which is now a part of the Bhitarkanika Wildlife Sanctuary, is the largest breeding ground for these turtles.
- The Gahirmatha Marine Wildlife Sanctuary, which bounds the Bhitarkanika Wildlife Sanctuary to the east, was created in September 1997, and encompasses Gahirmatha Beach and an adjacent portion of the Bay of Bengal.
- Bhitarkanika mangroves were designated a Ramsar Wetland of International Importance in 2002. It is the world's largest known rookery of olive ridley sea turtles.
- Apart from Gahirmatha rookery, two other mass nesting beaches have been located, which are on the mouth of rivers Rushikulya and Devi.
- The spectacular site of mass congregation of olive ridley sea turtles for mating and nesting enthralls both the scientists and the nature lovers throughout the world.

### Threats to the Olive Ridley Sea Turtle

- Known predators of olive ridley eggs include raccoons, coyotes, feral dogs and pigs, opossums, coatimundi, caimans, ghost crabs, and the sunbeam snake.
- Hatchlings are preyed upon as they travel across the beach to the water by vultures, frigate birds, crabs, raccoons, coyotes, iguanas, and snakes. In the water, hatchling predators most likely include oceanic fishes, sharks, and crocodiles.
- Adults have relatively few known predators, other than sharks, and killer whales are responsible for occasional attacks. On land, nesting females may be attacked by jaguars. Notably, the jaguar is the only cat with a strong enough bite to penetrate a sea turtle's shell, thought to be an evolutionary adaptation from the Holocene extinction event.
- In recent years, increased predation on turtles by jaguars has been noted, perhaps due to habitat loss and fewer alternative food sources. Sea turtles are comparatively defenseless in this situation, as they cannot pull their heads into their shells like freshwater and terrestrial turtles.
- Humans are still listed as the leading threat to *L. olivacea*, responsible for unsustainable egg collection, slaughtering nesting females on the beach, and direct harvesting adults at sea for commercial sale of both the meat and hides.

### Turtles and Turtle conservation in India

- There are five turtle species in Indian waters — Leatherback, Loggerhead, Hawksbill, Green and Olive Ridley.
- In India sea turtles are protected under the Indian Wildlife Protection Act of 1972, under the Schedule I Part II.
- Every year, thousands of sea turtles are accidentally captured, injured or killed by mechanised boats, trawl nets and gill nets operated and used by commercial fishermen.
- The turtle breeding season is usually between November and December. In Tamil Nadu, for example, the Olive Ridley nests between December and April along the Chennai-Kancheepuram coastline.
- Sea turtles, especially the leatherback, keep jellyfish under control, thereby helping to maintain healthy fish stocks in the oceans.
- The Green turtle feeds on sea grass beds and by cropping the grass provide a nursery for numerous species of fish, shellfish and crustaceans.

**Context:**

- Two researchers from Tamil Nadu have spotted a rare moth species for the first time in India in the buffer zone of the Kalakkad–Mundanthurai Tiger Reserve (KMTR) after it was last sighted 127 years ago — at Trincomalee in Sri Lanka in 1893.

**Relevance:**

- GS III: Environment and Ecology

**About Mimeusemia Ceylonica**

- *Mimeusemia ceylonica* is a moth species that was first described in 1893 by George Hampson, an English entomologist.
- The species was rediscovered in 2020 during a moth survey conducted in the buffer zone of KMTR in Tirunelveli district, India.
- The moth was then spotted in the same area in 2021 and later in the Vallanaadu Blackbuck Sanctuary in Thoothukudi district in 2022.
- There is limited data available about the history of this species, and further studies are needed to understand its characteristics.
- The discovery of this species in Tirunelveli and Thoothukudi districts highlights the rich biodiversity of the region and the need for more research on moths.

**Context:**

- The Kochi landfill site around Brahmapuram that caught fire earlier this month is a stark reminder that Indian cities need to be prepared for more such incidents as summer approaches.
- Relevance: GS III: Environment and Ecology

**Dimensions of the Article:**

- What are Landfills?
- How do landfills catch fire?
- Managing Landfill Fires: Permanent Solutions
- Immediate Measures for Landfill Management

**What are Landfills?**

- Landfills are designated areas where waste materials are buried and left to decompose over time.
- They are essentially large pits or excavated areas in the ground that are lined with a protective layer to prevent contamination of the soil and groundwater.
- The waste materials are then deposited in the landfill and compacted to reduce the volume of the waste and make space for additional waste.
- Once a section of the landfill is full, it is covered with a layer of soil or other materials to prevent odors and litter.

**How do landfills catch fire?**

- India's municipalities have been collecting more than 95% of the waste generated in cities but the efficiency of waste-processing is 30-40% at best.
- Municipal solid waste consists of about 60% biodegradable material, 25% non-biodegradable material and 15% inert materials, like silt and stone.
- Municipalities are expected to process the wet and dry waste separately and to have the recovered by-products recycled.
- Unfortunately, the rate of processing in India's cities is far lower than the rate of waste generation, so unprocessed waste remains in open landfills for long periods of time.

- This openly disposed waste includes flammable material like low-quality plastics, which have a relatively higher calorific value of about 2,500-3,000 kcal/kg, and rags and clothes.
- In summer, the biodegradable fraction composts much faster, increasing the temperature of the heap to beyond 70-80°C.
- A higher temperature coupled with flammable materials is the perfect situation for a landfill to catch fire. Some fires go on for months.

### **Managing Landfill Fires: Permanent Solutions**

- There are two possible permanent solutions for managing landfill fires:

#### **Complete Capping and Closure**

- This solution involves capping the landfill material using soil and closing the landfill in a scientific manner.
- However, this approach may not be suitable in the Indian context as the land cannot be used again for other purposes.
- Closed landfills have specific standard operating procedures, including managing methane emissions.

#### **Bioremediation**

- The second solution involves clearing piles of waste through bioremediation.
- This process involves excavating old waste and using automated sieving machines to segregate flammable refuse-derived fuel (RDF) from biodegradable material.
- The RDF can be sent to cement kilns as fuel, while the bio-soil can be distributed to farmers to enrich soil. The inert fraction will have to be landfilled.
- However, implementing a bioremediation project usually takes up to two or three years, which necessitates a short-term solution for summertime landfill fires.

#### **Immediate Measures for Landfill Management**

- When faced with the challenge of managing landfill sites, there are immediate measures that can be taken to mitigate the risk of fires. These measures include:

##### **Dividing the site into Blocks**

- Divide the landfill site into blocks based on the nature of the waste.
- Separate fresh waste blocks from blocks with flammable material, and those that have already been capped with soil.

##### **Cap Vulnerable Portions with Soil**

- Cap vulnerable portions of the landfill, such as areas with lots of plastics and cloth, with soil.
- Provide enough moisture to the fresh-waste block by sprinkling water, and turn the material regularly for aeration to cool the waste heap.

##### **Classify Incoming Waste and Dispose of in Designated Blocks**

- Classify incoming waste upon arrival and dispose of it in designated blocks instead of dumping mixed fractions.
- Send already segregated non-recyclable and non-biodegradable waste to cement kilns instead of allowing it to accumulate.

##### **Clear Dry Grass Material and Trees**

- Clear dry grass material and dry trees from the site immediately.
- While these measures can help reduce the damage caused by fires, they are not long-term solutions. The permanent solution is to ensure cities have a systematic waste-processing system where wet and dry waste are processed separately, and their byproducts treated accordingly.

### Context:

- According to the Global Wind Energy Report 2023 of the Global Wind Energy Council, India has the potential to develop into a major hub for wind energy manufacturing worldwide. (GWEC).

### Relevance:

- GS Paper-3: Economic Development, Biodiversity, Environment

### Mains Question

- Discuss the obstacles that must be overcome in order to overcome the potential for growth in the Indian wind energy sector. (250 Words)

### Major highlights

- According to the report, India needs to develop a plan for a dependable raw material supply chain in order to strengthen its position in the wind energy manufacturing industry.
- India is the world's second-largest market for gearbox manufacturing and the second-largest supplier of blades and generators in the Asia-Pacific (APAC) region, with an annual manufacturing capacity of 10–12 GW for wind turbine generators.
- As a result of recent global events, such as the diversification of supply chains by American and European turbine OEMs to ensure supply security in the wake of COVID-19, India has taken a more significant position in the world's wind supply chain.
- India needs a dependable raw material supply chain, including rare earth metals and non-standard steel, as well as for specialised tasks like casting and forging, in order to maintain its leadership position in the wind energy manufacturing industry.
- The report urges maintaining the current import duty exemption for machinery and parts made of non-Indian materials like balsa wood and pultruded carbon fibre.
- The report also emphasises the significant function that MSMEs, or micro, small, and medium-sized enterprises, play in the Indian wind manufacturing industry.
- For businesses involved in the onshore wind industry and those looking to enter the offshore wind manufacturing industry, the government should take into account targeted production-linked incentives.

### Note:

- Wind turbines built and positioned on the land are referred to as onshore wind power.
- Offshore wind power is the term used to describe wind farms constructed on shallow water, typically in the ocean.

### Favorable conditions for the generation of wind energy in India:

- Ample land is available: India has a sizable landmass with a lot of room for open space, which makes it a good location for large-scale wind power projects.
- Favorable wind conditions: India is perfect for wind power generation due to its high wind speeds in coastal regions and some interior regions.
- Government support: Through a number of policies and programs, the Indian government has actively promoted renewable energy, including wind power.
- Growing demand: Economic expansion, urbanization, and industrialization are all contributing factors to India's rising demand for electricity. In order to meet the rising demand for electricity, wind power can be used.
- Cost competitiveness: Wind energy is becoming more and more affordable in India, making it a viable alternative to more conventional energy sources.

### Issues Associated:

- Land Acquisition: Land acquisition for wind power projects can be difficult, particularly in densely populated areas where land is expensive and scarce.
- Financing: Because of their high upfront costs and lack of long-term financing options, renewable energy projects can be difficult to finance.

- Grid integration: Due to the intermittent nature of wind, which can affect the grid's stability, integrating wind power into the national grid can be difficult.
- Infrastructure: Building the transmission lines and other wind power-related infrastructure in remote and inhospitable locations can be difficult.
- Changes in government regulations and policies may leave investors uncertain, which could discourage investment in the industry.
- Technological developments: Due to the wind energy industry's rapid technological development, it may be challenging for current projects to maintain their competitiveness.
- Another significant issue facing the Indian wind energy sector is the high cost of capital. Due to India's high borrowing costs, wind power project financing may be prohibitively expensive.

#### **The government has taken a number of initiatives to support wind energy:**

- National Wind Energy Mission: The National Wind Energy Mission was established by the Indian government in 2014 to hasten the growth of wind energy in the nation. By 2022, the mission hopes to generate 60 GW of wind energy.
- Competitive Bidding: To lower the cost of wind power generation, the Indian government has instituted competitive bidding for wind power projects. As a result, the price of wind energy in India has decreased.
- Generation-Based Incentives: To promote the production of renewable energy, the Indian government offers generation-based incentives (GBIs) to wind power developers. Developers receive GBIs based on the volume of electricity produced.
- Grid Connectivity: To enhance grid connectivity for wind power projects, the Indian government has been working. To ensure the smooth transfer of renewable energy to the grid, the government has created a designated green energy corridor.
- Research and development: In order to advance technology and lower costs, the Indian government has been spending money on research and development in the wind power industry. The National Institute of Wind Energy (NIWE) was established by the government to advance industry research and development.

#### **Steps to Take:**

- To increase the effectiveness of wind turbines and lower costs, there is a need for ongoing research and development. The Indian government ought to keep funding the field of wind energy research and development.
- India's offshore wind energy potential is substantial and largely unrealized. To capitalise on this potential, the Indian government needs to develop offshore wind energy projects.
- The reliability and consistency of the power supply can be increased by using hybrid energy systems, which combine wind power with other renewable energy sources like solar power or energy storage. The development of hybrid energy systems in India should be encouraged by the government.
- For wind power to expand in India, grid connectivity and stability must be improved. To ensure the seamless integration of wind power into the grid, the Indian government should continue to invest in the development of transmission infrastructure and energy storage systems.

## **Nano Fertilisers**

## **Geography & Environment**

#### **Context:**

- The Department of Fertilisers conducted an audit which revealed a variation of 25-50% in the reduction of nitrogen use after the application of nano urea.
- The use of nano urea can help the government save approximately USD 3 billion (around Rs 24,687 crore) in subsidy bills annually and reduce India's dependence on urea imports.

#### **Relevance: GS III: Environment and Ecology**

- Dimensions of the Article:
  - About Nano Fertilisers
  - Significance of Nano Fertilisers in Agriculture
  - Challenges Associated with Nano Fertilizers

#### **About Nano Fertilisers:**

- Nano fertilisers are highly efficient fertilisers that provide nutrients like nitrogen to crops through fine granules.
- These fertilisers have a smaller particle size, which makes them more effective than traditional fertilisers.



### Nano Urea Liquid:

- Nano urea liquid is a type of nano fertiliser that was developed in 2022 by the Indian Farmers and Fertiliser Cooperative (IFFCO).
- The liquid is made up of urea and other micronutrients, which are encapsulated in nano-sized polymer coatings.
- The coating helps in the controlled release of the nutrients, ensuring that the crops receive a steady supply of nutrients over time.
- The primary benefit of using nano urea liquid is that it can replace conventional urea and reduce its requirement by 50%.
- This is because nano urea liquid is more efficient, and the crops require a smaller quantity of it to meet their nutrient requirements.

### Significance of Nano Fertilisers in Agriculture:

- Nano fertilisers have the potential to revolutionize the agriculture industry with their numerous benefits, some of which are listed below:
- Reduce Losses: Nano fertilisers use nanoscale porous domains on plant surfaces to deliver nutrients, which improves the effectiveness of nitrogen delivery and reduces losses to the environment. This leads to a more efficient use of fertilisers and helps in reducing environmental pollution.
- Increase Farmers' Income: Nano fertilisers are cost-effective and easy on the pocket of farmers, which can significantly increase their income. It can also reduce the cost of logistics and warehousing. For example, a small bottle of 500 millilitres of nano urea spray is said to be a substitute for a full bag of 45 kilogrammes of conventional urea.
- Making Crops Stronger: Nano fertilisers reduce the excess use of conventional fertilisers and make crops stronger and healthier. They also protect crops from the lodging effect, which is the bending over of the stems near ground level of grain crops, making them very difficult to harvest and can dramatically reduce yield.

### Challenges Associated with Nano Fertilizers:

- High Cost: The advanced technology and production methods used for producing nano-fertilizers make them expensive compared to conventional fertilizers. As a result, small farmers may find it unaffordable, limiting their access to this technology.
- Quality Control: Strict quality control measures are necessary to ensure the safety and effectiveness of nano-fertilizers. However, the absence of standardized regulations for their production and distribution has resulted in poor quality control and inconsistent outcomes.
- Environmental Concerns: The long-term effects of nano-fertilizers on soil health, water quality, and ecosystem balance raise environmental concerns. Proper testing and regulation are essential to ensure the sustainable use of these fertilizers.
- Regulatory Framework: The development and usage of nano-fertilizers require a comprehensive regulatory framework to ensure their safe and sustainable use. The lack of a robust regulatory framework has led to confusion and uncertainty among farmers and policymakers.
- Limited Research: The research on the long-term effects of nano-fertilizers is limited. More research is necessary to fully understand the impact of these fertilizers on the environment and human health.

### Context:

- According to a recent study, anthropogenic threats like illegal fishing and sand mining pose a threat to the mugger crocodiles (*Crocodylus plaustris*) of the Rapti River flowing along the Chitwan National Park.

### Relevance:

- Prelims, GS-III: Environment and Ecology (Species in News, Conservation of Ecology and Biodiversity)
- Dimensions of the Article:
- Crocodile Species Found in India
- Key Facts About the Rapti River

### Crocodile Species Found in India I- Marsh Crocodile/Mugger

- Restricted to the Indian subcontinent, Mugger or Marsh crocodiles are generally found in freshwater habitats including lakes, marshes and rivers. They may also be found in coastal saltwater lagoons and estuaries.
- They are listed as Vulnerable in the IUCN Red List. They are also Listed in the Appendix I of CITES and Schedule I of Wildlife Protection Act, 1972.
- They are an egg-laying and hole-nesting species which preys on fish, reptiles, birds and mammals.
- The main cause of their vulnerable status is habitat destruction, fragmentation, and transformation, fishing activities and use of crocodile parts for medicinal purposes.
- This species of crocodile are already extinct in Myanmar and Bhutan.

### Saltwater Crocodile

- The saltwater crocodiles, also known as the estuarine crocodile, are believed to be the largest crocodile species living on Earth.
- They are listed as Critically Endangered in the IUCN Red List. They are also Listed in the Appendix I of CITES and Schedule I of Wildlife Protection Act, 1972.
- In India, it inhabits Odisha's Bhitarkanika National Park, the Sundarbans in West Bengal and the Andamans and Nicobar Islands. They can also be found across Southeast Asia and northern Australia.
- It is capable of prevailing over almost any animal that enters its territory and ambushes most of its prey and then drowns or swallows it as a whole.
- Its reputation as a man-eater is one of the biggest reasons for its hunting and a threat to its existence. It is also hunted for its skin and another major cause of its decreasing population is loss of habitat.

### Gharial

- The gharial, also known as the gavial is the longest of all living crocodilians and they have long and thin snouts which resemble an earthen pot (known as "Ghara" in Hindi"), and thus, are called gharial,
- They are listed as Critically Endangered in the IUCN Red List. They are also Listed in the Appendix I of CITES and Schedule I of Wildlife Protection Act, 1972.
- It currently inhabits rivers in the plains of the northern part of the Indian subcontinent and the Chambal river in the northern slopes of the Vindhya mountains is known as the primary habitat of gharials.
- The main causes of this decline include illegal sand mining, poaching, habitat destruction, floods and massive scale fishing operations.

### Key Facts About the Rapti River

- The Rapti River is a significant waterway in Nepal and India. Here are some key facts about the river:
- Origin: The Rapti River originates in the Mahabharat Hills and lower range of the Himalayas.
- Path: It flows westward along the northern border of the Chitwan National Park in Nepal and then through the Awadh and Purvanchal regions of Uttar Pradesh state in India.
- Drainage Area: The river drains the Rapti zone in Mid-Western Region of Nepal and parts of Uttar Pradesh in India.
- Tributaries: The Rapti River has several tributaries, including the Rohini, Babiya, and Karra rivers.
- Joining Point: The river meets the Ghaghara River, which is a major left- bank tributary of the Ganga River, in Uttar Pradesh, India.
- Importance: The Rapti River is essential for irrigation and agriculture in the regions it flows through. It is also an important source of water for the wildlife in the Chitwan National Park.
- Environmental Concerns: The Rapti River faces several environmental concerns, including pollution, deforestation, and climate change, which can impact the river's health and the communities that rely on it.

#### **Why in news?**

- India recently welcomed a new report by the Intergovernmental Panel on Climate Change, saying it endorses the country's call for equity and climate justice.

#### **Major Findings**

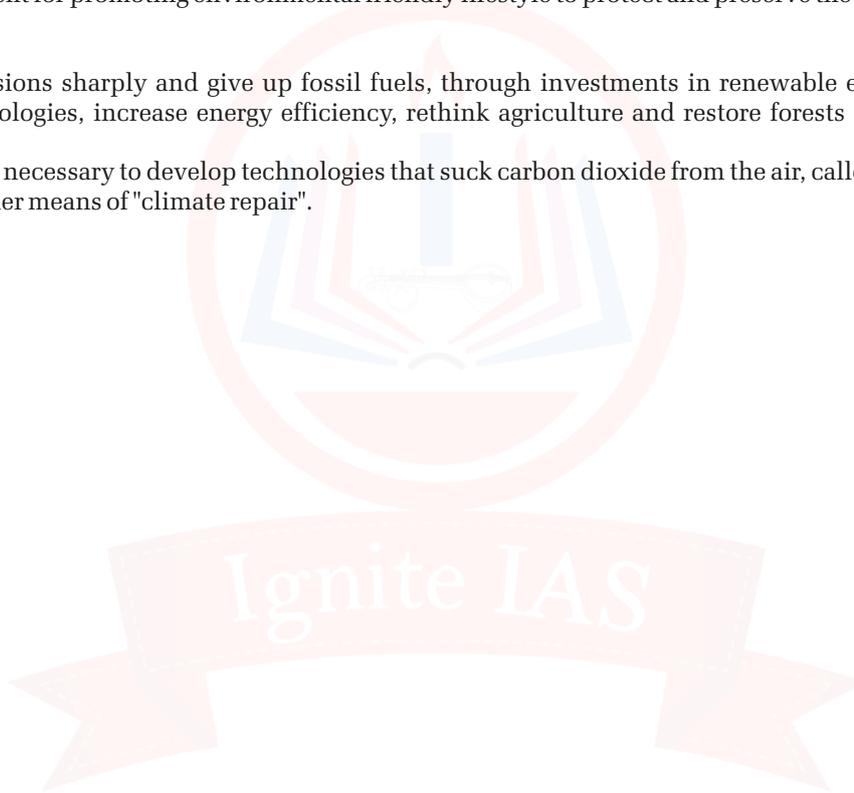
- The report recognizes the interdependence of climate, ecosystems and biodiversity, and human societies; the value of diverse forms of knowledge; and the close linkages between climate change adaptation, mitigation,

ecosystem health, human well-being and sustainable development, and reflects the increasing diversity of actors involved in climate action.

- The report reinforces the scientific view that CO<sub>2</sub> is the primary GHG and needs to be drastically reduced.
- The report mentions that for every 1000 GtCO<sub>2</sub> emitted by human activity, global surface temperature rises by 0.45°C (best estimate, with a likely range from 0.27 to 0.63°C).
- The remaining carbon budgets from the beginning of 2020 are 500 GtCO<sub>2</sub> for a 50% likelihood of limiting global warming to 1.5°C and 1150 GtCO<sub>2</sub> for a 67% likelihood of limiting warming to below 2°C. Reaching net zero CO<sub>2</sub> or GHG emissions primarily requires deep and rapid reductions in gross emissions of CO<sub>2</sub>, as well as substantial reductions of non-CO<sub>2</sub> GHG emissions.
- The Report notes that Climate change has caused widespread adverse impacts and related losses and damages to nature and people that are unequally distributed across systems, regions and sectors.
- The Report also notes that without urgent, effective, and equitable mitigation and adaptation actions, climate change increasingly threatens ecosystems, biodiversity, and the health and wellbeing of current and future generations.
- Accelerated mitigation and implementation of adaptation actions in the near-term would reduce projected losses and damages for humans and ecosystems.
- The Synthesis Report echoes Prime Minister's vision for "LiFE", or Lifestyle for Environment, which is a global mass movement for promoting environmental friendly lifestyle to protect and preserve the environment.

### Suggestions

- Reduce emissions sharply and give up fossil fuels, through investments in renewable energy and other low-carbon technologies, increase energy efficiency, rethink agriculture and restore forests and degraded natural landscapes.
- It may also be necessary to develop technologies that suck carbon dioxide from the air, called "direct air capture", or explore other means of "climate repair".



**Why in news?**

- A day after the Chief Judicial Magistrate's court in Surat convicted former Congress president Rahul Gandhi in a criminal defamation case over his Modi surname remark, the Lok Sabha Secretariat issued a notification to disqualify Mr. Gandhi as the Lok Sabha member from Wayanad.

**About Defamation law**

- **Section 499 of IPC:**
  - It defines defamation as an act of harming a person's reputation through spoken or written words, signs, or visible representations.
  - Such words or representations can be made with the intention to cause harm to the reputation of that person or with the knowledge that the imputation will harm their reputation.
- **Section 500 of IPC:**
  - It stipulates that a person found guilty of criminal defamation can face imprisonment for up to two years.
  - The convicted person can also be ordered to pay a fine, in addition to or in lieu of imprisonment.
- **Defamation Law in India:**
  - Article 19 of the Indian Constitution grants freedom of speech to its citizens, subject to certain reasonable restrictions.
  - Defamation is one of the exemptions to this freedom, along with contempt of court & incitement to an offense.
  - In India, defamation can be both a civil wrong and a criminal offense, depending on the objective of the legal action.
  - A civil suit seeks monetary compensation for the wrong done, while a criminal case seeks to punish the wrongdoer with a jail term and send a message to others not to commit such acts.
  - In a criminal case, defamation must be established beyond a reasonable doubt, but in a civil case, damages can be awarded based on probabilities.
- **Free Speech VS Defamation Laws**
  - There is an ongoing debate about whether defamation laws violate the fundamental rights guaranteed under Article 19 of the Indian Constitution, which grants freedom of speech and expression to all citizens.
  - However, the Supreme Court of India has ruled that the criminal provisions of defamation are constitutionally valid and do not conflict with the right to free speech.
  - The Court has also held that defamation can be treated as a public wrong, and criminal defamation is not a disproportionate restriction on free speech since protecting one's reputation is a fundamental and human right.
  - The Supreme Court relied on judgments from other countries and affirmed the right to reputation as part of the right to life under Article 21 of the Indian Constitution.
  - Using the principle of 'balancing of fundamental rights', the Court held that the right to freedom of speech and expression cannot be given so much leeway that even an individual's reputation, which is a component of Article 21, is ignored.

**Defamation Judgements in India**

- **Mahendra Ram Vs. Harnandan Prasad (1958):**
  - In this case, the defendant had written a letter in Urdu, which the plaintiff could not understand.
  - The defendant was aware that the plaintiff required assistance to read the letter, yet he sent it to him anyway.
  - The court held that this act of the defendant amounted to defamation.
- **Ram Jethmalani Vs. Subramanian Swamy (2006):**
  - Dr. Swamy was held liable for defamation by the High Court of Delhi for making a statement that Ram Jethmalani had received money from a banned organization to protect the then Chief Minister of Tamil Nadu from the case of assassination of Rajiv Gandhi.
- **Shreya Singhal Vs. Union of India (2015):**
  - This landmark judgement dealt with internet defamation.
  - It held unconstitutional Section 66A of the Information Technology Act, 2000 which punishes for sending offensive messages through communication services for punishing individuals for sending offensive messages through communication services.

### Why in news?

- Recently, the Supreme Court rejected some applications for 'compassionate appointment' that were filed by the dependents of deceased government employees in West Bengal.

### About compassionate appointments

- The concept of compassionate appointments can be traced to the Indian Constitution's Article 39, which is under the Directive Principles of State Policy and talks about the right to livelihood.
- It aims to provide employment on compassionate grounds to the dependent family members of a government servant who dies in harness or retires on medical grounds, leaving the family without any source of sustenance.
- Multiple factors are looked at while assessing a request for compassionate appointments, such as the financial condition of the family, the presence of earning members, family size, children's ages, and the essential needs of the family.
- According to the DoPT's office memorandum dated January 16, 2023, these appointments can only be made for "Group 'C' posts against the direct recruitment quota."

### Applying for compassionate appointments

- According to instructions on "Compassionate Appointment under Central Government" given by the DoPT, Ministry of Personnel, Public Grievances & Pensions on August 2, 2022, compassionate appointments can extend to dependent family members of a government servant who:
- Dies while in service (including death by suicide)
- Retired on medical grounds under Rule 2 of the CCS (Medical Examination) Rules 1957 or the corresponding provision in the Central Civil Service Regulations before 55 years of age (57 years for erstwhile Group 'D' Government servants);
- Retired on medical grounds under Rule 38 of the CCS(Pension) Rules, 1972 or the corresponding provision in the Central Civil Service Regulations before attaining the age of 55 years (57 years for erstwhile Group 'D' Government servants).

### The measure can also extend to the family members of an Armed Forces employee who:

- Dies during service;
- Is killed in action; or
- Is medically boarded out and is unfit for civil employment.

### Government servant must have been appointed on a "regular basis"

- They are not appointed on a daily wage, casual, apprentice, ad-hoc, contract, or reemployment basis.
- Moreover, the deceased's dependents can only be first-degree relations such as their spouse, son or daughter (including adopted ones), brother or sister in the case of an unmarried Government servant or member of the Armed Forces, who was wholly dependent on the government servant at the time of their death in harness or retirement on medical grounds.
- To be eligible for this, the deceased's family must be "indigent" or needy and deserving of "immediate assistance for relief from financial destitution". The applicant should also be eligible and suitable for the post in all respects under the provisions of the relevant Recruitment Rules.

### Who can make these appointments

- Compassionate appointments are made by either the Joint Secretary in charge of administration in the Ministry or Department concerned or the "Head of the Department under the Supplementary Rule 2(10) in the case of attached and subordinate offices."
- They can also be made by the Secretary of a Ministry or Department in special cases.

### Court's Decision and Reasoning:

- The apex court cited its previous rulings from 2008 and 2014 to highlight that the existence of a policy issued by the State Government is a must for making appointments on compassionate grounds.
- The court observed the absence of a policy in West Bengal governing compassionate appointments to posts under local authorities and thus refused to grant the same.

- Even if the policy existed, the court stated that it would not be useful to consider applications filed several years ago.
- The court referred to its earlier rulings from 1989 and 1994, emphasizing that there should be no delay in compassionate appointments and they should be "provided immediately to redeem the family in distress" if the government or public authority examines the financial condition of the
- deceased's family and is satisfied that the family will not be able to meet the crisis without employment.

## Deputy Speaker

## Polity

### Why in news?

- Constitutional experts and opposition parties have termed the 'non-election for the post of deputy speaker' as unprecedented and unconstitutional.

### Constitution say about the Deputy Speaker

- Article 93 : The House of the People shall, as soon as may be, choose two member to be Speaker and Deputy Speaker and, so often as the office of Speaker or Deputy Speaker becomes vacant, the House shall choose another member
- Article 178: It contains the corresponding position for Speaker and Deputy Speaker of the Legislative Assembly of a state.
- Constitutional experts point out that both Articles 93 and 178 use the word "shall", indicating that the election of Speaker and Deputy Speaker is mandatory under the Constitution.

### Election of Deputy Speaker

- Articles 93 and 178 require Deputy Speaker election "as soon as may be" but don't specify time frame
- In Lok Sabha and state Assemblies, Speaker is usually elected during first session, while Deputy Speaker is elected in second session
- Election of Deputy Speaker not delayed unless there are genuine and unavoidable constraints
- Rule 8 of The Rules of Procedure and Conduct of Business in Lok Sabha allows Speaker to fix date for Deputy Speaker election

### Tenure of Deputy Speaker

- Once elected, Deputy Speaker usually continues in office for entire duration of House
- According to Article 94 (Article 179 for state legislatures), Deputy Speaker must vacate office if they cease to be a member of the House
- Deputy Speaker may also resign or be removed from office by House resolution passed by majority of all members

### What is the historical context and role of Deputy Speaker in the Indian parliamentary system?

- Historical Context of Deputy Speaker
  - In 1941, H V Kamath argued that if Speaker resigns, resignation should be addressed to President and not Deputy Speaker because latter holds a subordinate office
  - Dr B R Ambedkar disagreed and said Speaker and Deputy Speaker are chosen by House, so resignations should be addressed to House
- Role of Deputy Speaker
  - If Speaker resigns, resignation addressed to either Speaker or Deputy Speaker as they represent the House
  - When Neelam Sanjiva Reddy resigned as Speaker in 1969, he addressed resignation to Deputy Speaker
  - If Deputy Speaker post is vacant, House is informed of Speaker's resignation by Deputy Speaker or Secretary-General
  - Resignation is notified in Gazette and Bulletin per Rules for Presiding Officers of Lok Sabha

### Do the powers of the Speaker extend to the Deputy Speaker as well?

- Article 95(1) says: "While the office of Speaker is vacant, the duties of the office shall be performed by the Deputy Speaker".
- In general, the Deputy Speaker has the same powers as the Speaker when presiding over a sitting of the House.

- All references to the Speaker in the Rules are deemed to be references to the Deputy Speaker when he presides.
- It has been repeatedly held that no appeal lies to the Speaker against a ruling given by the Deputy Speaker or any person presiding over the House in the absence of the Speaker.

## SC Verdict on ECI Appointments

Polity

### Why in news?

- Recently, A five-judge Constitution Bench of the Supreme Court unanimously ruled that a high-power committee consisting of the Prime Minister, Leader of Opposition in Lok Sabha and the Chief Justice of India must pick the Chief Election Commissioner (CEC) and Election Commissioners (ECs).

### Appointment of CEC and ECs

- There are just five Articles (324-329) in Part XV (Elections) of the
- Constitution. Article 324 of the Constitution vests the "superintendence, direction and control of elections" in an Election Commission consisting "of the Chief Election Commissioner and such number of other Election
- Commissioners, if any, as the President may from time to time fix".
- The Constitution does not lay down a specific legislative process for the appointment of the CEC and ECs. The President makes the appointment on the advice of the Union Council of Ministers headed by the Prime Minister.

### About Election Commission of India

- The Election Commission of India is an autonomous constitutional authority responsible for administering Union and State election processes in India.
- The body administers elections to the Lok Sabha, Rajya Sabha, and State Legislative Assemblies in India, and the offices of the President and Vice President in the country.
- It is the Commission that decides the election schedules for the conduct of elections, whether general elections or by-elections.
- ECI decides on the location of polling stations, assignment of voters to the polling stations, location of counting centers, arrangements to be made in and around polling stations & counting centres and all allied matters.
- In the performance of its functions, the Election Commission is insulated from executive interference.
- Part XV of the Indian constitution deals with elections, and establishes a commission for these matters.
- The Election Commission was established in accordance with the Constitution on 25th January 1950, hence it is a constitutional body. Article 324 to 329 of the constitution deals with powers, function, tenure, eligibility, etc., of the commission and the member.

### Litigations against EC

- The decisions of the Commission can be challenged in the High Court and the Supreme Court of India by appropriate petitions.
- By long-standing convention and several judicial pronouncements, once the actual process of elections has started, the judiciary does not intervene in the actual conduct of the polls.

### Structure of the Election Commission

- Originally the commission had only one election commissioner but after the Election Commissioner Amendment Act 1989, it has been made a multi- member body.
- The commission consists of one Chief Election Commissioner and two Election Commissioners.
- The secretariat of the commission is located in New Delhi.
- At the state level election commission is helped by Chief Electoral Officer who is an IAS rank Officer.
- The President appoints Chief Election Commissioner and Election Commissioners.
- They have a fixed tenure of six years, or up to the age of 65 years, whichever is earlier.
- They enjoy the same status and receive salary and perks as available to Judges of the Supreme Court of India.
- The Chief Election Commissioner can be removed from office only through a process of removal similar to that of a Supreme Court judge for by Parliament.

### Issues with ECI

- Flaws in the composition: The Constitution doesn't prescribe qualifications for members of the EC. They are not debarred from future appointments after retiring or resigning.
- No security of tenure: Election commissioners aren't constitutionally protected with security of tenure.

- **Partisan role:** The EC has come under the scanner like never before, with increasing incidents of breach of the Model Code of Conduct in the 2019 general elections.
- **Political favor:** The opposition alleged that the ECI was favoring the ruling party by giving clean chit to the model code of conduct violations made by the PM.
- **Non-competence:** Increased violence and electoral malpractices under influence of money have resulted in political criminalization, which ECI is unable to arrest.

#### **Some Powers:**

- The Election Commission of India is considered the guardian of free and reasonable elections.
- It issues the Model Code of Conduct in every election for political parties and candidates so that the decorum of democracy is maintained.
- It regulates political parties and registers them for being eligible to contest elections.
- It publishes the allowed limits of campaign expenditure per candidate to all the political parties, and also monitors the same.
- The political parties must submit their annual reports to the ECI for getting tax benefit on contributions.
- It guarantees that all the political parties regularly submit their audited financial reports.

#### **Other powers handled by the Election Commission of India are as follows:**

- The Commission can repress the results of opinion polls if it deems such an action fit for the cause of democracy.
- The Commission can recommend for disqualification of members after the elections if it thinks they have violated certain guidelines.
- In case, a candidate is found guilty of dishonest practices during the elections, the Supreme Court and High Courts consult the Commission.
- The Commission can postpone candidates who fail to submit their election expense accounts timely.

## **Foreign Contribution (Regulation) Act (FCRA)**

## **Polity**

### **Why in news?**

- Recently, The Centre suspended the Foreign Contribution Regulation Act (FCRA) licence of the Centre for Policy Research (CPR).

### **About FCRA**

- The FCRA was enacted during the Emergency in 1976 amid apprehensions that foreign powers were interfering in India's affairs by pumping money into the country through independent organisations.
- These concerns were, in fact, even older — they had been expressed in Parliament as early as in 1969.
- The law sought to regulate foreign donations to individuals and associations so that they functioned "in a manner consistent with the values of a sovereign democratic republic".

### **Foreign Contribution (Regulation) Act, 2010**

- The Foreign Contribution (regulation) Act, 2010 is a consolidating act whose scope is to regulate the acceptance and utilisation of foreign contribution or foreign hospitality by certain individuals or associations or companies and to prohibit acceptance and utilisation of foreign contribution or foreign hospitality for any activities detrimental to the national interest and for matters connected therewith or incidental thereto.

### **Key Points regarding FCRA**

- Foreign funding of voluntary organizations in India is regulated under FCRA act and is implemented by the Ministry of Home Affairs.
- The FCRA regulates the receipt of funding from sources outside of India to NGOs working in India.
- It prohibits the receipt of foreign contribution "for any activities detrimental to the national interest".
- The Act held that the government can refuse permission if it believes that the donation to the NGO will adversely affect "public interest" or the "economic interest of the state". However, there is no clear guidance on what constitutes "public interest".
- The Acts ensures that the recipients of foreign contributions adhere to the stated purpose for which such contribution has been obtained.
- Under the Act, organisations require to register themselves every five years.

### Foreign Contribution (Regulation) Amendment Act, 2020

- The Act bars public servants from receiving foreign contributions. Public servant includes any person who is in service or pay of the government, or remunerated by the government for the performance of any public duty.
- The Act prohibits the transfer of foreign contribution to any other person not registered to accept foreign contributions.
- The Act makes Aadhaar number mandatory for all office bearers, directors or key functionaries of a person receiving foreign contribution, as an identification document.
- The Act states that foreign contribution must be received only in an account designated by the bank as FCRA account in such branches of the State Bank of India, New Delhi.
- The Act proposes that not more than 20% of the total foreign funds received could be defrayed for administrative expenses. In FCRA 2010 the limit was 50%.
- The Act allows the central government to permit a person to surrender their registration certificate.

## Anti-Defection Law

## Polity

### Why in news?

- The anti-defection law applies even if a faction splits from a political party and manages to cobble up a majority within the party itself, the Supreme Court observed in a hearing in the political dispute between former Maharashtra Chief Minister Uddhav Thackeray and incumbent Eknath Shinde.

### Anti Defection laws

- Defection' has been defined as, "To abandon a position or association, often to join an opposing group".
- A legislator is deemed to have defected if he either voluntarily gives up the membership of his party or disobeys the directives of the party leadership on a vote. This implies that a legislator defying (abstaining or voting against) the party whip on any issue can lose his membership of the House.
- The law applies to both Parliament and state assemblies.
- The anti-defection law sought to prevent such political defections which may be due to reward of office or other similar considerations.

### 10th Schedule of the Indian Constitution (Anti-Defection Law)

- The Tenth Schedule was inserted in the Constitution in 1985 by the 52nd Amendment Act and technically the Tenth Schedule to the Indian Constitution is the anti-defection law in India.
- It is designed to prevent political defections prompted by the lure of office or material benefits or other like considerations.
- It lays down the process by which legislators may be disqualified on grounds of defection by the Presiding Officer of a legislature based on a petition by any other member of the House.
- The law applies to both Parliament and State Assemblies.

### Disqualification of legislators

- Disqualification of a legislator (member of the parliament or legislative assemblies) is possible when the member:
  - Gives up his membership of a political party voluntarily
  - Votes or abstains from voting in the House, contrary to any direction issued by his political party (Party Whip is an official of a political party who acts as the party's 'enforcer' inside the legislative assembly or house of parliament.)
  - Joins any party after being elected as independent candidate
  - Joins any political party after 6 months of being nominated as a legislative member
- The Supreme Court mandated that in the absence of a formal resignation, the giving up of membership can be determined by the conduct of a legislator, such as publicly expressing opposition to their party or support for another party, engaging in anti-party activities, criticizing the party on public forums on multiple occasions, and attending rallies organised by opposition parties.

### Exceptions:

- Legislators can change their party without the risk of disqualification to merge with or into another party provided that at least two-thirds of the legislators are in favour of the merger, neither the members who decide to merge, nor the ones who stay with the original party will face disqualification.

- Earlier, the law allowed parties to be split (this used to allow for legislators to hold their position while actually "defecting" to either of the split parties), but at present, this has been outlawed.
- Any person elected as chairman or speaker can resign from his party, and rejoin the party if he demits that post.

### Role of Speaker

- The decision on disqualification questions on the ground of defection is referred to the Speaker or the Chairman of the House, and his/her decision is final.
- The Presiding Officer has NO time limit to make his decision
- All proceedings in relation to disqualification under this Schedule are considered to be proceedings in Parliament or the Legislature of a state as is the case.
- The law initially stated that the decision of the Presiding Officer is not subject to judicial review. This condition was struck down by the Supreme Court in 1992, thereby allowing appeals against the Presiding Officer's decision in the High Court and Supreme Court.
- There is no time limit as per the law within which the Presiding Officers should decide on disqualification for defection.

## Higher Education Financing Agency(HEFA)

## Polity

### Why in news?

- Recently, a Parliamentary panel has asked the Ministry of Education to make more efforts to ensure the "speedy disbursal" of sanctioned loans by the Higher Education Financing Agency (HEFA).

### About Higher Education Financing Agency:

- HEFA was established on 31st May 2017.
- It is registered under Section 8 as a Not-for-profit under the Companies Act 2013 as a Union Govt company and as Non-deposit-taking Systemically Important (NBFC-ND-SI) with RBI.
- It is a joint venture of the Ministry of Education, GoI and Canara Bank with agreed equity participation in the ratio of 90.91% and 09.09% respectively.

### Objectives

- HEFA provides financial assistance for the creation of capital assets in premier educational institutions in India.
- The main aim is to improve the academic and infrastructure quality of India's top-ranked institutions like IITs, IIITs, NITs, IISCs, and AIIMS, and enable them to become globally top-ranking institutions.
- HEFA is particularly interested in financing the building of educational infrastructure and R&D infrastructure.

## National Company Law Appellate Tribunal (NCLAT)

## Polity

### Why in news?

- Recently, the National Company Law Appellate Tribunal (NCLAT) upheld the 1,337 crore fines imposed on Google by the Competition Commission of India (CCI).

### Google and NCLAT

- The National Company Law Appellate Tribunal (NCLAT) found Google guilty of abusing its market dominance in the Android ecosystem.
- The NCLAT's order largely confirmed the Competition Commission of India's (CCI) findings from October 2020.
- The order held that Google's mandating pre-installation of its Google Mobile Suite (GMS) amounted to imposing unfair conditions on Original Equipment Manufacturers (OEMs).
- Google's requirement of OEMs to sign various agreements, such as the Anti-fragmentation Agreement (AFA) and Android Compatibility Commitment Agreement (ACC), before pre-installing its GMS suite, was found to have reduced the ability and incentive of manufacturers to develop and sell self- device operating or alternative versions of Android and Android Forks.
- By bundling products like its search engine or the Chrome browser, Google perpetuated its dominant position, the NCLAT said.

- The NCLAT held that the CCI's order against Google did not violate the principles of "natural justice" and was based on relevant material submitted to it.
- It is unclear if Google will challenge the NCLAT order, but a Google spokesperson said that the company was evaluating its legal options.

#### **About National Company Law Appellate Tribunal (NCLAT):**

- The National Company Law Appellate Tribunal (NCLAT) is a judicial body established under Section 410 of the Companies Act, 2013.
- **Functions:**
- Hearing appeals: The primary function of NCLAT is to hear appeals against the orders of the National Company Law Tribunal(s) (NCLT) under Section 61 of the Insolvency and Bankruptcy Code, 2016 (IBC).
- Appeals against CCI: NCLAT also hears and disposes of appeals against any direction issued or decision made or order passed by the Competition Commission of India (CCI).
- Appeals against National Financial Reporting Authority: NCLAT is also responsible for hearing and disposing of appeals against the orders of the National Financial Reporting Authority.

#### **About competition commission of India:**

- **Nodal:** Ministry of Corporate affairs
- Competition Commission of India (CCI) is a statutory body of
- the Government of India responsible for enforcing the Competition Act, 2002.
- Competition Commission of India aims to establish a robust competitive environment.
- Through proactive engagement with all stakeholders, including consumers, industry, government and international jurisdictions.
- By being a knowledge intensive organization with high competence level.
- Through professionalism, transparency, resolve and wisdom in enforcement.

#### **Composition of CCI**

- The Commission consists of one Chairperson and six Members.
- The commission is a quasi-judicial body .

#### **Eligibility of members:**

- The Chairperson and every other Member shall be a person of ability, integrity and standing and who, has been, or is qualified to be a judge of a High Court, or, has special knowledge of, and professional experience of not less than fifteen years in international trade, economics, business, commerce, law, finance, accountancy, management, industry, public affairs, administration or in any other matter which, in the opinion of the Central Government, may be useful to the Commission.

## Sealed Cover Jurisprudence

Polity

### **Why in news?**

- The Supreme Court on Monday (March 20) said it would not accept a "confidential" submission from the Centre on the disbursement of arrears to retired defence personnel under the One Rank One Pension (OROP) scheme.

### **About sealed cover jurisprudence**

- It is a practice used by the Supreme Court and sometimes lower courts, of asking for or accepting information from government agencies in sealed envelopes that can only be accessed by judges.
- While a specific law does not define the doctrine of sealed cover, the Supreme Court derives its power to use it from Rule 7 of order XIII of the Supreme Court Rules and Section 123 of the Indian Evidence Act of 1872.
- It is stated under the said rule that if the Chief Justice or court directs certain information to be kept under sealed cover or considers it of confidential nature, no party would be allowed access to the contents of such information, except if the Chief Justice himself orders that the opposite party be allowed to access it.

### **It also mentions that information can be kept confidential if its**

- publication is not considered to be in the interest of the public.
- As for the Evidence Act, official unpublished documents relating to state affairs are protected and a public officer cannot be compelled to disclose such documents.

- Other instances where information may be sought in secrecy or confidence is when its publication impedes an ongoing investigation, such as details which are part of the police's case diary; or breaches the privacy of an individual.

### When has it been done in the past?

- Rafale fighter jet deal.
  - A Bench headed by Chief Justice Ranjan Gogoi in 2018, had asked the Centre to submit details related to deal's decision making and pricing in a sealed cover. T
  - his was done as the Centre had contended that such details were subject to the Official Secrets Act and Secrecy clauses in the deal.
- National Register of Citizens (NRC) in Assam.
  - The supreme court mandated coordinator of the NRC, Prateek Hajela, was asked by the apex court to submit period reports in sealed cover, which could neither be accessed by the government nor the petitioners.
- In the 2014 BCCI reforms case
  - The probe committee of the cricket body had submitted its report to the Supreme Court in a sealed envelope, asking it not to make public the names of nine cricketers who were suspected of a match and spot fixing scam.
- Bhima Koregaon case.
  - Activists were arrested under the Unlawful Activities Prevention Act, the Supreme Court had relied on information submitted by the Maharashtra police in a sealed cover.
- Criticism:
  - Critics of this practice contend that it is not favorable to the principles of transparency and accountability of the Indian justice system.
  - It stands in contrast to the idea of an open court, where decisions can be subjected to public scrutiny.
  - It is also said to enlarge the scope for arbitrariness in court decisions, as judges are supposed to lay down reasoning for their decisions.
  - Besides, it is argued that not providing access to such documents to the accused parties obstructs their passage to a fair trial and adjudication.

## Centre releases guidelines for celebrities, social media influencers

Polity

### Why in news?

- The Centre recently released a set of guidelines for celebrities, influencers, and virtual influencers on social media platforms to ensure that individuals do not mislead their audiences when endorsing products or services.

### Major Guidelines

- The guidelines called "Endorsements Know-hows!" state that endorsements must be made in simple, clear language, and terms such as "advertisement," "sponsored," "collaboration" or "paid promotion".
- Individuals must not endorse any product or service that they have not personally used or experienced or in which due diligence has not been done by them.
- The guidelines specify that individuals or groups who have access to an audience and the power to affect their audiences' purchasing decisions or opinions about a product, service, brand, or experience, because of the influencer's/celebrity's authority, knowledge, position, or relationship with their audience, must disclose.
- The guidelines state that the disclosure must be placed in the endorsement message in a manner that is clear, prominent, and extremely hard to miss.
- Disclosures should not be mixed with a group of hashtags or links.
- For endorsements in a picture, disclosures should be superimposed over the image enough for viewers to notice.
- For endorsements in a video or a live stream, disclosures should be made in both audio and video format and displayed continuously and prominently during the entire stream.
- The guidelines advise celebrities and influencers to always review and satisfy themselves that the advertiser is in a position to substantiate the claims made in the advertisement.

**Why in news?**

- World Consumer Rights Day is observed annually on 15 March. The day is recognised to create global awareness about the rights and needs of consumers
- **This year Theme-** "Empowering consumers through clean energy transitions".

**World Consumer Rights Day**

- The first ever World Consumer Rights Day was started by the Consumer International, a membership organisation for consumer groups around the world.
- It is a global organisation that ensures the protection and right use of consumer rights all around the world. Consumer International was founded in the year 1960 as an independent and influential voice for consumers.
- World Consumer Rights Day was first celebrated in the year 1983.
- Every year, we observe World Consumer Rights Day on 15 March because on the same date, US President John Fitzgerald Kennedy introduced four important consumer rights while delivering a speech to Congress.
- **These four important consumer rights are:**
  - Right to safety
  - Right to be informed
  - Right to choose
  - Right to be heard.

**E-Daakhil Portal**

- To facilitate online filing of consumer complaints, the E-Daakhil Portal has been set up which provides a hassle-free, speedy and inexpensive facility to conveniently approach the relevant consumer forum, dispensing the need to travel and be physically present to file their grievance.
- The objective is to digitize and make it easy for consumers to access justice with the help of technology.
- All formats for application, review, appeal, etc. will be digitized for bringing hassle free, speedy redressal of consumer complaints, in line with the e-courts project.
- Mediation, which is envisaged under the Act as an alternate dispute redressal mechanism, is also being considered through online mode.

**Why in News?**

- Recently, the Union Ministry of Consumer Affairs said that the sale of gold jewellery mandates a Hallmark Unique Identification (HUID) from April 1, 2023.

**Hallmark Unique Identification:**

- The Hallmark Unique Identification (HUID) is a 6-digit alphanumeric code that is given to every piece of jewellery during the hallmarking process.
- The code is unique for every piece of jewellery and is manually stamped on it at Assaying & Hallmarking centres.

**About HUID**

- The HUID consists of numbers and letters.
- The previous HUID used to be 4 digits, but now both 4 and 6-digit codes are used in the market.
- Starting from April 1st, 2023, only 6-digit alphanumeric codes will be allowed.
- The BIS Hallmark has three symbols - BIS logo, Purity/Fineness Grade, and a six-digit alphanumeric code, which includes the HUID.
- The authenticity of hallmarked jewellery can be checked using the 'verify HUID' feature on the BIS Care App.

**Bureau of Indian Standards:**

- The Bureau of Indian Standards (BIS) is the National Standards Body of India established under the BIS Act 2016.
- Its primary objective is to ensure the harmonious development of standardisation and quality assurance of goods and articles.
- BIS works under the Ministry of Consumer Affairs, Food & Public Distribution.
- It represents India in international standardisation bodies

**Why in News?**

- The Department of Social Justice and Empowerment is implementing Integrated Programme for Senior Citizens (IPSrC), a component of Atal Vayo Abhyuday Yojana.

**Atal Vayo Abhyuday Yojana:**

- Ministry of Social Justice and Empowerment is the nodal ministry
- It is a Central Sector Scheme previously known as National Action Plan for Senior Citizens.
- Its vision is to create a society where senior citizens can live a healthy, happy, and empowered life.
- It has two components:
- Integrated Program for Senior Citizens (IPSrC): It includes setting up homes to improve the quality of life of senior citizens, especially indigent senior citizens who lack basic amenities.
- State Action Plan for Senior Citizens (SAPSrC): Each state/union territory is expected to frame its own action plan for the welfare of senior citizens.
- Under IPSrC component, grant in aid is provided to NGOs/Voluntary Organisations (VOs) for running and maintenance of old age homes and Continuous Care Homes.
- Five schemes have been launched under this umbrella scheme:
- Poshan Abhiyan for the elderly
- Livelihood and skilling initiatives for senior citizens
- Scheme on promoting the silver economy
- Awareness generation and capacity building for the welfare of senior citizens
- Channelising CSR funds for elderly care.

**Why in news?**

- The Gujarat government recently informed about high court about strengthening 'One Nation One Challan' initiative.

**About One Nation, One Challan initiative**

- One Nation, One Challan is an initiative of the Ministry of Road Transport and Highways to bring all related agencies, such as the traffic police and the Regional Transport Office (RTO), on one platform, to enable seamless collection of challans as well as data transfer.
- The integrated system involves detection of traffic violations through the CCTV network and getting the registration number of the erring vehicle from applications like VAHAN (detecting the vehicle's ownership details) and SARATHI (compilation of driving licenses).
- An e-challan is then generated with the relevant penalty amount, and sent to the mobile number linked with the vehicle.

**Virtual Traffic courts**

- If a challan amount is not paid within 90 days, it will be automatically forwarded to a virtual court and proceedings will begin.
- The accused will receive a summons on their mobile phone.
- The virtual court aims to eliminate the physical presence of litigants.
- The accused can search for their case on the virtual court's website and pay the fine.
- Upon successful payment of the fine, the case will be marked as disposed of.
- Currently, court number 16 of Ahmedabad city sessions court is being designated as a virtual court for the whole of Gujarat to deal with 'One Nation, One Challan' cases.
- More jurisdictional courts may be added in the future.
- A petition filed before the Gujarat High Court highlights that in Surat city alone, over 49 lakh e-challans were issued between April 2013 and August 2020, with an accumulated fine of Rs. 136 crore, of which Rs. 122 crore is yet to be recovered.

**Why in News?**

- The Ministry of Women and Child Development will celebrate the fifth Poshan Pakhwada from 20th March 2022 to 3rd April 2023 with various activities nationwide.

**About Poshan Pakhwada**

- The Poshan Pakhwada is an annual event in India aimed at raising awareness about the importance of nutrition and promoting healthy eating habits through Jan Andolan and Jan Bhagidari.
- The theme for this year's Poshan Pakhwada 2023 is "Nutrition for All: Together Towards a Healthy India".

**About Poshan Abhiyaan**

- The term 'POSHAN' in the name of the programme stands for 'Prime Minister's Overarching Scheme for Holistic Nutrition'.
- POSHAN Abhiyaan launched in 2018 aims at improving the nutritional status of Children from 0-6 years, Adolescent Girls, Pregnant Women and Lactating Mothers.
- According to 'Mission 25 by 2020', the National Nutrition Mission aims to achieve a reduction in stunting from 38.4% to 25% by 2022.
- POSHAN Abhiyaan focuses on convergence among partner Ministries leveraging technology and Jan Andolan among other things, to address issue of malnutrition comprehensively.

**Why in news?**

- Recently, Women and Child Development Minister introduced about NIPUN BHARAT in Rajysabha.

**About NIPUN Bharat Programme:**

- The Department of School Education & Literacy, Ministry of Education acts as the nodal ministry
- It has been launched as a National Mission called "National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat)" in 2021.
- This Mission was launched under the aegis of the centrally sponsored scheme of Samagra Shiksha.
- It will focus on providing access and retaining children in foundational years of schooling; teacher capacity building; development of high quality and diversified Student and Teacher Resources/Learning Materials; and tracking the progress of each child in achieving learning outcomes.
- It aims to cover the learning needs of children in the age group of 3 to 9 years.
- It emphasizes to focus on every child for developing basic language; literacy and numeracy skills which will help them develop into better readers and writers.
- It envisages making the experience of learning at the foundational stage Holistic, Integrated, Inclusive, Enjoyable, and Engaging.
- The unique feature is that the goals of the Mission are set in the form of Lakshya Soochi or Targets for Foundational Literacy and Numeracy.
- The success of NIPUN Bharat will primarily depend on teachers, so, there will be a special emphasis on capacity building of teachers.
- A special package for foundational literacy and Numeracy under NISHTHA is being developed by NCERT and around 25 lakh teachers teaching at pre- primary to primary grade will be trained this year.

## 7 States to get Textile Parks

## Social Justice

**Why in news?**

- A year and a half after the PM Mega Integrated Textile Regions and Apparel (PM MITRA) scheme was unveiled, the Centre has chosen locations in Tamil Nadu, Telangana, Karnataka, Maharashtra, Gujarat, Madhya Pradesh, and Uttar Pradesh to establish new textile parks.

**PM Mitra**

- It will offer the opportunity to **create an Integrated Textiles Value Chain** right from spinning, weaving, processing/dyeing and printing to garment manufacturing etc. at one location and will reduce the logistics cost of the Industry.
- A **Special Purpose Vehicle** owned by the Centre and State Government will be set up for each park which will oversee **the implementation of the project**.

**Funding**

- The Ministry of Textiles will provide financial support in the form of **Development Capital Support up to Rs. 500 crores** per park to the Park SPV.
- A Competitive Incentive Support (CIS) of up to Rs 300 crore per park to the units in PM MITRA Park shall also be provided to incentivise speedy implementation.
- State governments will provide a **contiguous and encumbrance-free land** parcel of at least 1000 acres of land.

## LaQshya Programme

## Social Justice

**Why in News?**

- Recently, the Union Minister of State for Health and Family Welfare informed Lok Sabha about the LaQshya Programme.

**About LaQshya Programme:**

- LaQshya is a program that focuses on ensuring the quality of care during intrapartum and immediate post-partum periods in Labour Room and Maternity Operation Theatre.

- It covers various healthcare facilities, including government medical college hospitals, district hospitals, and high case load CHCs, with the aim of reducing preventable maternal and newborn mortality, morbidity, and stillbirths.
- The program targets a 5% or less Surgical Site Infection Rate in Maternity OT, with a minimum reduction of 30% from the baseline.
- Compliance with the program's requirements is verified by independent NQAS assessors at the time of LaQshya certification.
- The program is under the purview of the Ministry of Health and Family Welfare.

## Pradhan Mantri Ujjwala Yojana

## Social Justice

### Why in news?

- The government extended the subsidy of 200 per 14.2 kg LPG cylinder under the Pradhan Mantri Ujjwala Yojana (PMUY) for a year, in view of the high prices of petroleum products in the international market. The decision will benefit 9.6 crore women.

### About Pradhan Mantri Ujjwala Yojana (PMUY) – 1

- The Pradhan Mantri Ujjwala Yojana (PMUY) is a government scheme launched in 2016 which envisages the distribution of 50 million LPG connections to women below the poverty line.
- PMUY is a scheme of the Ministry of Petroleum & Natural Gas.
- There are 27.87 cr active LPG consumers in the country, with the PMUY beneficiaries accounting for over 8 crores.

### Advantages of PMUY:

- Providing LPG connections to BPL households will ensure universal coverage of cooking gas in the country.
- This measure will empower women and protect their health.
- It will reduce drudgery and the time spent on cooking.
- It will also provide employment for rural youth in the supply chain of cooking gas.

### About PMUY-II

- The PMUY-II is aimed to provide maximum benefit to the migrants who live in other states and find it difficult to submit address proof.
- Now they will only have to give "Self Declaration" to avail the benefit.
- The scheme provides a financial support of Rs 1600 for each LPG connection to the BPL households.
- Along with a deposit-free LPG connection, Ujjwala 2.0 will provide the first refill and a hotplate free of cost to the beneficiaries.
- Under Ujjwala 2.0, an additional 10 million LPG connections will be provided to the beneficiaries. Government has also fixed a target of providing piped gas to 21 lakh homes in 50 districts.

## ADIP Scheme

## Social Justice

### Why in News?

- Samajik Adhikarita Shivar' for distribution of aids and assistive devices to 'Divyangjan' under the ADIP Scheme of the Ministry of Social Justice & Empowerment, Govt. of India organized distribution camps across the country in 17 locations covering 9 States under for providing various types of aids and assistive devices to more than 13500 Divyangjan.

### ADIP Scheme- the Assistance to Disabled persons for purchasing/fitting of aids/appliances (ADIP) scheme:

- **Nodal:** Ministry of Social Justice & Empowerment.
- **Objective:** to assist the needy disabled persons in procuring durable, sophisticated and scientifically manufactured, modern, standard aids and appliances that can promote their physical, social and psychological rehabilitation, by reducing the effects of disabilities and enhance their economic potential.
- The aids and appliances supplied under the Scheme shall conform to BIS specifications to the extent possible.
- **The aim** is to promote physical, social, psychological rehabilitation of Persons with Disabilities by reducing the effects of disabilities and at the same time enhance their economic potential.

- Grant-in-aid under the Scheme will Not be given for commercial supply of aids/appliances.
- Implementation: The scheme is implemented through implementing agencies such as NGOs, National Institutes under the Ministry of Social Justice & Empowerment and ALIMCO (a PSU that manufactures artificial limbs).

### Eligibility

- He/she should be an Indian citizen of any age.
- Should be certified by a Registered Medical Practitioner that he/she is disabled and fit to use prescribed aid/appliance. Holds a 40% Disablement Certificate.
- Person who is employed/self-employed or getting pension and
- whose monthly income from all sources does not exceed Rs. 20,000/- per month.
- In case of dependents, the income of parents/guardians should not exceed Rs. 20,000/- per month.
- Persons who have not received assistance from the Government, local bodies and Non-Official Organisations during the last 3 years for the same purpose. However, for children below 12 years of age this limit would be 1 year.

## REACHOUT scheme

## Social Justice

### Why in News?

- Recently, the Union Minister of Earth Sciences, Dr Jitendra Singh said that an umbrella scheme Research, Education and Training Outreach (REACHOUT) is being implemented by the Ministry of Earth Sciences for capacity building.

### About REACHOUT scheme

- The REACHOUT scheme is a program that aims to support research, education, and training in Earth System Science in India. The scheme includes the following sub- schemes:
- R&D in Earth System Science (RDESS)
- International Training Centre for Operational Oceanography (ITCOcean)
- Program for Development of Skilled manpower in Earth System Sciences (DESK)

### Some key points about the REACHOUT scheme include:

- The scheme is implemented for the entire country, not on a State/UT-wise basis.
- The main objectives of the sub-schemes are
- To support R&D activities in Earth System Science,
  - Develop collaborations with international organizations for knowledge transfer,
  - Develop skilled manpower in Earth Sciences.
  - R&D activities are focused on different components of Earth System Science that are theme and need-based, helping to attain national goals set up for MoES.
- Collaboration with international organizations allows for the mutual transfer of advanced knowledge in science and technology in Earth Sciences and provides services to developing countries.
- Skilled manpower in Earth Sciences is developed with the support of academic institutions in India and abroad.

## Star-rated Appliances Program

## Social Justice

### Why in news?

- Minister of Power and New & Renewable Energy Shri R K Singh, recently launched the Star- rated appliances program and also hailed the completion of a decade of PAT Scheme. Power Minister launches the iDEEKSHA Portal, a platform designed to serve as a one-stop-shop for all energy efficiency and decarbonisation needs of Indian energy-intensive industries.

### Star labelling Program

- This program is for multi-door refrigerators, table and wall-mounted fans, pedestal fans, and induction hobs.
- This program is expected to save approximately 11.2 billion units of electricity by 2030 and will enable the reduction of CO2 emission close to 9 million tonne by 2030 and shall support India to transition towards low carbon sustainable growth and achieve its ambition of net zero by 2070.

- To enhance the impact of PAT, a program namely DEEP (Demonstration of Energy Efficient Project) is being implemented.

#### **PAT Scheme**

- PAT is a cyclic scheme where certain notified energy intensive units having threshold energy consumption are given Specific Energy Consumption (SEC) reduction targets over a cycle of three years.
- PAT Scheme or the Perform, Achieve and Trade Scheme was launched by the Bureau of Energy Efficiency (BEE) in July 2012.
- The chief goal of the scheme is to make India's industrial sector energy efficient.
- The scheme sets energy efficiency targets for industries with those failing to achieve the targets having to pay a penalty. The penalty is based on what remains to be achieved in terms of the target.
- PAT scheme is a part of the BEE's National Mission for Enhanced Energy Efficiency (NMEEE).

#### **iDeeksha Portal**

- iDEEKSHA is designed to serve as one-stop shop for all energy efficiency and decarbonisation needs of Indian energy-intensive industries.
- It aims to facilitate the exchange of information, knowledge and experience and best practices related to the wide gamut of stakeholders such as industries, industrial associations, technology and service providers, and research institutions etc.

### **SMART-PDS**

### **Social Justice**

#### **Why in news?**

- SMART-PDS is a technological driven initiative and the need of hour, therefore, all states and union territories should make earnest efforts to implement it at the earliest.

#### **About Smart- PDS**

- The Department of Food and Public Distribution(DFPD) is envisaging a new and unified scheme to strengthen the PDS technology components by standardization of its operation and implementation of data driven decision making through the data analytics.
- This scheme aims to transform the entire PDS IT ecosystem by leveraging the usage of Cloud and new age technology which shall be named as Scheme for Modernization and Reforms through Technology in Public Distribution System -SMART-PDS.
- SMART-PDS is a system where smart ration cards are issued to beneficiaries of public distribution system, and ration is given through fair price shops on production of the smart ration card by any member of the beneficiary family.
- The fingerprint template of the beneficiary is recorded in these smart ration cards, which records all transactions.
- The aim of The SMART-PDS System is to build an automatic and convenient system to protect the interests of the public by countering the malpractices.
- The main purpose of the SMART-PDS System is to implement fingerprint matching algorithm for authentication of the user, which in turn reduces the widespread corruption, misuses of cards and to reduce the time complexity of the manual data entries.

### **MSME Competitive(LEAN) Scheme under MSME Champions Scheme**

### **Social Justice**

#### **Why in news?**

- Union Minister for MSME Shri Narayan Rane launched the MSME Competitive (LEAN) Scheme recently.

#### **About LEAN Scheme**

- Under the scheme, MSMEs will implement LEAN manufacturing tools like 5S, Kaizen, KANBAN, Visual workplace, Poka Yoka etc under the able guidance of trained and competent LEAN Consultants to attain LEAN levels like Basic, Intermediate and Advanced.
- Through the LEAN journey, MSMEs can reduce wastages substantially, increase productivity, improve quality, work safely, expanding their markets, and finally becoming competitive and profitable.

- This Scheme is an extensive drive to create awareness amongst MSMEs about LEAN Manufacturing practices and motivate and incentivize them to attain LEAN levels while also encouraging them to become MSME Champions.

### MSME Champions Scheme

- Ministry of Micro, Small and Medium Enterprises' (MSME's) CHAMPIONS stand for - Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength portal.
- As the name suggests it will aim at Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength.
- It is a Technology driven Control Room-Cum-Management Information System.
- The system utilising modern ICT tools is aimed at assisting Indian MSMEs march into big league as National and Global CHAMPIONS.
- This is basically for making the smaller units big by helping and handholding, in particular, by solving their problems and grievances.

## Gramin Krishi Mausam Sewa

## Social Justice

### Why in news?

- Agrometeorological Advisory Services (AAS) being rendered for the benefit of farmers in the country under the 'Gramin Krishi Mausam Sewa' (GKMS) scheme.

### About GKMS Scheme

- Aim- is to provide accurate crop specific advisories to the farmers
- The scheme is implemented by India Meteorological Department in collaboration with State Agricultural Universities/Indian Council of Agricultural Research etc.
- It issues crop and location specific weather based agro advisories for the benefit of farming community.
- The Agro-meteorological Advisory Services (AAS) under the GKMS is operated to prepare biweekly weather based bulletins.
- The information is transmitted through multimedia channels and SMS to help farmers plan farm operations accordingly.
- The main emphasis of the existing AAS system is to collect and organize climate/weather, soil and crop information, and to amalgamate them with weather forecast to assist farmers to take decisions on day-to-day farm operations, which can further optimize the application of input resources at farm level during deficient rainfall situation and extreme weather events to reduce monetary loss and to maximize crop yield.

## PM-DEVINE Scheme

## Social Justice

### Why in news?

- The Prime Minister's Development Initiative for North East Region (PM-DevINE) Scheme was announced as a new Central Sector Scheme in the Union Budget 2022-23.

### About PM-DevINE Scheme

- The Scheme with 100% Central funding, will have a total outlay of Rs. 6,600 crore for the 4 year period from 2022-23 to 2025-26.
- **PM-DevINE scheme** will be implemented by the Ministry of Development of North Eastern Region (MDoNER) through North Eastern Council or Central Ministries/agencies or State Government agencies.
- **The objectives** of PM-DevINE are to:
  - Fund infrastructure convergently, in the spirit of PM GatiShakti;
  - Support social development projects based on felt needs of the North Eastern Region (NER);
  - Enable livelihood activities for youth and women; and (iv) Fill the development gaps in various sectors.
  - PM-DevINE will not be a substitute for existing Central and State Schemes. It will lead to creation of infrastructure, support industries, social development projects and create livelihood activities for youth and women, thus leading to income and employment generation.

**Why in news?**

- The fourth phase of 'Sindi and facilitate their economic uplifting through various schemes -- will begin recently, covering three coastal districts of Karnataka.

**Sagar Parikrama**

- The phase-IV of Sagar Parikrama programme will take place from 18-19 March.
- It will cover the stretch of Uttara Kannada, Udupi and Dakshina Kannada districts.
- Sagar Parikrama is an evolutionary journey envisaged in the sea across the coastal belt demonstrating solidarity with all fisherfolk, fish farmers and concerned stakeholder's as a spirit of 75th Azadi Ka Amrit Mahotsav saluting our great freedom fighters, sailors, and fishers.
- It is an initiative of government, aiming to resolve the issues of the fishers and other stakeholders and facilitate their economic upliftment through various fisheries schemes and programs being implemented by the Government of India such as PMMSY.
- The journey of "Sagar Parikrama" has started with the theme of "KRANTI se SHANTI" as Phase-I on 5th March 2022 from Mandvi, Gujarat.

**Why in news?**

- Under Namami Gange Program, the development of river front on Narayani River in the district of Gopalganj, Bihar has been undertaken and two Ghats have been constructed at a total cost of Rs. 6.62 crore.

**Namami Gange program**

- It is an Integrated Conservation Mission, approved as a '**Flagship Programme**' by the Union Government in June 2014 with a budget outlay of Rs.20,000 Crore to accomplish the twin objectives of effective abatement of pollution, conservation, and rejuvenation of the National River Ganga.
- It is dynamic and evolving in nature to address the emerging needs and priorities for the rejuvenation of river Ganga & its tributaries.
- The main pillars of the Namami Gange Programme are-
  - Sewerage Treatment Infrastructure
  - River-Front Development
  - River-Surface Cleaning
  - Bio-Diversity
  - Afforestation
  - Public Awareness
  - Industrial Effluent Monitoring
  - Ganga Gram

**Narayani River**

- The Narayani River, also known as Gandaki River, is one of the major rivers in Nepal.
- It is a left bank tributary of the Ganges in India.
- The river's total catchment area amounts to 46,300 km<sup>2</sup> (17,900 sq mi), most of it in Nepal.
- In the Nepal Himalayas, it is notable for its deep canyon.
- The basin also contains three mountains over 8,000 m (26,000 ft), namely Dhaulagiri, Manaslu, & Annapurna I.
- Dhaulagiri is the highest point of the Gandaki basin.

**National Waterway-37**

- The Gandak River, also known as the Narayani and the Gandak, was declared as National Waterway-37 from Bhaialotan Barrage to Gandak and Ganga river confluence at Hajipur along with 111 NWs in the country vide National Waterways Act, 2016.
- Based on the findings of the study reports of Gandak River, the waterways was found feasible for development of shipping and navigation

**In News**

- Department of Animal Husbandry & Dairying (DAHD) is implementing National Programme for Dairy Development (NPDD) scheme across the country since Feb-2014.

**About NPDD Scheme**

- **Objective** -To create and strengthen dairy infrastructure for procurement, processing and marketing of milk and milk products by the State Implementing Agencies (SIAs) i.e. State Cooperative Dairy Federations/ District Cooperative Milk Producers' Union.
- **Aim:** The NPDD scheme is designed to provide technical and financial assistance for the dairy development and thereby creating any infrastructure related to the processing, production, marketing and procurement by the milk federation/unions while extending their activities by providing training facilities to the farmers.
- It aims to increase sale of milk and dairy products by increasing farmer's access to organized market, upgrading dairy processing facilities and marketing infrastructure and enhancing the capacity of producer owned institutions.

## National Rabies Control Programme (NRCP) for prevention and control of Rabies

**Why in news?**

- The Central Government has launched the National Rabies Control Programme (NRCP) for prevention and control of Rabies.

**About NRCP**

- Provision of rabies vaccine & rabies immunoglobulin through national free drug initiatives
- training on appropriate animal bite management, prevention and control of rabies, surveillance and intersectoral coordination
- strengthening surveillance of animal bites and rabies deaths reporting
- creating awareness about rabies prevention

**Rabies**

- Rabies is a vaccine-preventable, zoonotic, viral disease.
- It is caused by a Ribonucleic Acid (RNA) virus that is present in the saliva of a rabid animal (dog, cat, monkey, etc).
- It is invariably transmitted following a bite of an infected animal that leads to deposition of the saliva and the virus in the wound.
- Once clinical symptoms appear, rabies is virtually 100% fatal. The death invariably occurs in four days to two weeks due to cardio-respiratory failure.
- In up to 99% of cases, domestic dogs are responsible for rabies virus transmission to humans.
- Rabies can be prevented by vaccinating pets, staying away from wildlife, and seeking medical care after potential exposures before symptoms start.

## National Plan for Conservation of Aquatic Eco-systems (NPCA) scheme

**Why in news?**

- Ministry of Environment, Forest & Climate Change (MoEF&CC) provided financial assistance to the States/Union Territories under the National Wetlands Conservation Programme (NWCP) and National Lake Conservation Plan (NLCP).

**About NPCA**

- The NPCA is a conservation programme for both wetlands and lakes.

- It is a Centrally-sponsored scheme, currently being implemented by the MoEFCC, and was formulated by merging the National Lake Conservation Plan and the National Wetlands Conservation Programme.
- Under the NPCA scheme, the central assistance is based on proposals received from state governments, in conformity with the guidelines and budget availability.
- The scheme covers various activities such as interception, diversion and treatment of wastewater, shoreline protection, lakefront development, in-situ cleaning
- i.e. desilting and de-weeding, stormwater management, bioremediation, catchment area treatment, lake beautification, survey and demarcation, bio fencing, fisheries development, weed control, biodiversity conservation, education and awareness creation, community participation etc.
- It aims at holistic conservation and restoration of lakes & wetlands for achieving desired water quality enhancement besides improvement in biodiversity and ecosystem through an integrated and multidisciplinary approach with a common regulatory framework.
- The scheme would contribute to the reduction of pollution loads and improvement in biodiversity as also the goods and services provided by these water bodies to the stakeholders.

## Deen Dayal Upadhyaya Kaushalya Yojana (DDU-GKY)

## Social Justice

### Why in News

- Union Minister for Rural Development Sh. Giriraj Singh onboarded 19 Captive Employers, a unique initiative under the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) in New Delhi.

### About DDU- GKY

- Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) is a placement linked skilling program of the Ministry of Rural Development under the aegis of National Rural Livelihood Mission (NRLM).
- This program caters to the rural poor youth. It was launched on 25 September 2014 and is funded by MoRG, Govt of India.
- The program is currently being implemented in 27 States and 4 UTs for rural poor youth with an emphasis on placements.
- DDU-GKY 2.0 Guidelines are in the advance stage of finalisation in the ministry.
- This new version of the program aspires to improve by skilling ecosystem and make it more job oriented.

### Captive Employment

- 'Captive Employment', is a first of its kind initiative aimed at addressing the vision of a dynamic and demand-based skilling ecosystem catering to the requirements of industry partners assuring sustainable placements for rural poor youth.
- The initiative is a shot in the arm for the DDU-GKY programme, assuring post-training placement of candidates for a minimum of six months with a minimum CTC of Rs 10,000/-.
- This program will be a big boon for rural poor to augment their job needs and improve their standard of living.
- This program shall also contribute to sustainable development goals.

## Women and Men in India 2022 Report

## Social Justice

### Why in news?

- The Union Ministry of Statistics and Programme Implementation released the Women and Men in India 2022 report recently.

### Major Findings

- The report noted that the sex ratio at birth increased by three points to 907 in 2018-20 from 904 in 2017-19.
- The Women and Men in India 2022 report revealed that women are severely lagging behind men in labor force participation rates.
- The report showed that the Labor Force Participation Rate for those above 15 years of age has been increasing since 2017-2018.
- The low participation rates for women could be due to social factors, educational qualifications, and gender discrimination in terms of wages and opportunities at the workplace.

- The Women and Men in India 2022 report also features India's age and sex structure.
- The population growth, which has been on a downward trend since 1971, is projected to fall further to 0.58% in 2036.
- The report notes that the population pyramid will undergo a shift, with the base of the pyramid narrowing down while the middle is broadened.
- The age-specific fertility rate has improved, with the number of live births in the 20-24 years and 25-29 years age group between 2016 and 2020 reducing from 135.4 and 166.0 to 113.6 and 139.6, respectively.

## Nav Bharat Saaksharta Karyakram

## Social Justice

### Why in news?

- The (FLNAT) under Nav Bharat Saaksharta Karyakram (New India Literacy Programme ) was held recently across 10 States and UTs in the country to assess the basic Reading, Writing and Numeracy skills of the neo-literates.

### New India Literacy Programme

- It is a Centrally Sponsored Scheme approved by the Govt. of India for implementation during FYs 2022-27.
- The scheme is in alignment with the recommendations of National Education Policy (NEP) 2020.
- The scheme targets all non-literates of age 15 years and above in the country, with more focus on females and educationally backward states.
- It has five components, namely; i) Foundational Literacy and Numeracy, ii) Critical Life Skills, iii) Basic Education, iv) Vocational Skills, (v) Continuing Education.
- The scheme is to be implemented through volunteer teachers. NYKS volunteers, community, students of schools and Higher Education Institutions and Teacher Education Institution will be involved for teaching learning activities for its effective implementation in the country.

### Significance

- The learners are encouraged to access the learning content in local languages in online mode through DIKSHA platform of NCERT.
- Government/Aided schools registered under UDISE are the units of implementation of the scheme.
- Certification of learners will be done twice in a year by conducting Foundational Literacy and Numeracy Assessment Tests in collaboration with NIOS.

### Major Findings of the test

- More than 22.70 lakh learners participated in the event of Foundational Literacy and numeracy Assessment Test (FLNAT) so that they can be declared as literates on qualifying.
- Maximum number of learners 9,25,854 (female-5,91,421 male-3,34,433) appeared in Madhya Pradesh against the initial target of 5,35,000 learners.
- In Rajasthan 5,48,352 learners (female 3,98,418 and male 1,49,934) appeared in the assessment test.
- In other states Odisha 44,702, Jharkhand 48,691, Punjab 10,013, Meghalaya 3000 and Chandigarh (UT) 2,596 learners appeared in the FLNAT.

## National Youth Conclave 2023

## Social Justice

### Why in news?

- India's biggest youth summit- 'National Youth Conclave' is being organized by the Smart Cities Mission, MoHUA, Department of Youth Affairs and National Institute of Urban Affairs (NIUA).

### About Youth20

- Youth20 (Y20) engagement group, with its first Y20 conference held in 2010, provides a platform that allows youth to express their vision and ideas on the G20 priorities and comes up with a series of recommendations which are submitted to the G20 Leaders.
- The Y20 India summit in 2023 would exemplify India's youth-centric efforts and provide an opportunity to showcase its values & policy measures so that India's leadership of this summit can stand out among the youth cohort.

### Priority areas of Y20 are

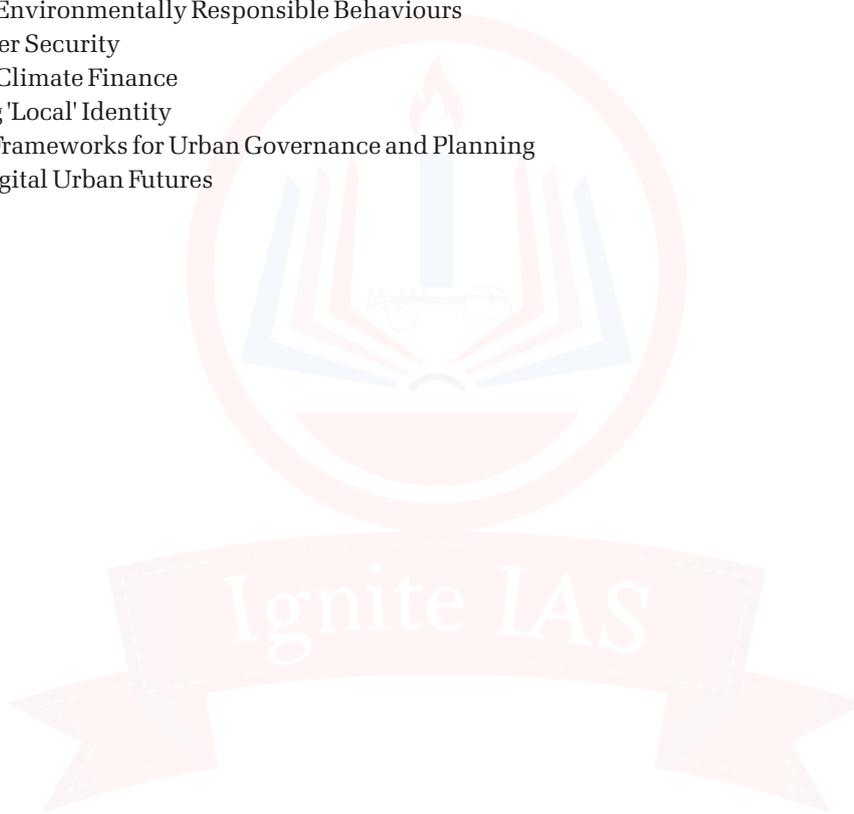
- Future of Work: Industry 4.0, Innovation, & 21st Century Skills
- Climate Change and Disaster Risk Reduction: Making Sustainability a Way of Life
- Peace building and Reconciliation: Ushering in an Era of No War
- Shared Future: Youth in Democracy and Governance
- Health, Wellbeing & Sports: Agenda for Youth

### About Urban20

- Urban 20 (U20), an Engagement Group under the G20, brings together mayors from major G20 cities to inform the discussions of national leaders at the G20, and establishes a platform for cities to collectively inform G20 negotiations.
- U20 dialogue this year will emphasize on the need for changing the urban sector to achieve long-term beneficial results for the globe and set the way for coordinated city-level activities.

### Priority Areas of U20 are

- Encouraging Environmentally Responsible Behaviours
- Ensuring Water Security
- Accelerating Climate Finance
- Championing 'Local' Identity
- Reinventing Frameworks for Urban Governance and Planning
- Catalyzing Digital Urban Futures



- Lok Sabha has recently passed Finance Bill, 2023 with 64 amendments, including one that seeks to set up the much-awaited GST Appellate Tribunal (GSTAT).

### About GSTAT

- It will deal with tax disputes, and also lessen the burden on the higher judiciary, which has repeatedly sought the institution of such a body.
- The constitution of GSTAT has been pending since the new indirect tax regime was launched in July 1, 2017.
- The amended Finance Bill, 2023 proposed substitution of section 109 of the Central GST Act in order to facilitate creation of the GSTAT and its benches.
- As per the bill, the Government shall, on the recommendations of the Council, by notification, establish with effect from such date as may be specified therein, an Appellate Tribunal known as the Goods and Services Tax Appellate Tribunal for hearing appeals against the orders passed by the Appellate Authority or the Revisional Authority.
- According to the legislation, GSTAT will have a "Principal Bench" in New Delhi, with the President, a judicial member, a technical member (centre) and a technical member (state). It will also have state benches.
- The Principal Bench and each state Bench would have two judicial members and two technical members each, with equal representation from the Centre and states in the case of technical members.
- According to the proposed changes, the cases involving the issue of the place of supply would be heard by the Principal Bench only.
- A single member of a Bench would hear appeals below Rs 5 million related to tax or input tax credit or fee or penalty determined in an order of any appellate authority or revisional authority if no question of law is involved.
- In all other cases, matters would be heard together by one Judicial member and one technical member.
- The tribunal will help quickly resolve disputes relating to the key indirect tax and boost tax collections, addressing concerns of both industry and tax authorities.
- A four-member search and selection committee, headed by either the Chief Justice of the Supreme Court or his representative judge from the SC, will be tasked with the appointment of members (except for technical members from states) to the Benches.
- The panel will include the President of the GSTAT (one of the judicial members of the Principal Bench), a union government secretary and a state chief secretary nominated by the Council. The chairperson will have a casting vote.

### Why in News?

- Recently, the Union Minister for MSME launched the MSME Competitive (LEAN) Scheme.

### About the scheme

- The MSME (LEAN) Scheme aims to transform Micro, Small and Medium Enterprises (MSMEs) into world-class manufacturers by improving their quality, productivity, performance and capability to change mindsets.
- Through the LEAN journey, MSMEs can reduce wastages substantially, increase productivity, improve quality, work safely, expand their markets, and finally become competitive and profitable.
- Under the scheme, MSMEs will implement LEAN manufacturing tools like 5S, Kaizen, KANBAN, Visual workplace, Poka Yoka, etc., under the guidance of trained and competent LEAN Consultants to attain LEAN levels like Basic, Intermediate and Advanced.

### Government Support

- The government will provide 90% of the implementation cost for handholding and consultancy fees to support the implementation of LEAN manufacturing tools by MSMEs.
- Additionally, there will be an additional contribution of 5% for MSMEs which are part of SFURTI clusters, owned by Women/SC/ST, and located in the Northeast region.
- There will also be an additional contribution of 5% for MSMEs which are registered through Industry Associations/Overall Equipment Manufacturing (OEM) organizations after completing all levels.

**Why in news?**

- Union Minister of Commerce and Industry recently said that the ONDC will help small retailers survive the onslaught of large tech-based e-commerce companies.

**About ONDC**

- It is a not-for-profit organisation that will offer a network to enable local digital commerce stores across industries to be discovered and engaged by any network-enabled applications.
- It is neither an aggregator application nor a hosting platform, and all existing digital commerce applications and platforms can voluntarily choose to adopt and be a part of the ONDC network.
- The ONDC model is trying to replicate the success of the Unified Payments Interface (UPI) in the field of digital payments.
- UPI allows people to send or receive money irrespective of the payment platforms they are registered on.
- The open network concept also extends beyond the retail sector, to any digital commerce domains including wholesale, mobility, food delivery, logistics, travel, urban services, etc.

**Aims on ONDC**

- Promote open-source methodology, using open specifications and
- Promote open network protocols independent of any specific platform
- Digitise value chains,
- Promote inclusion of suppliers,
- Standardize operations,
- Derive efficiencies in logistics
- Enhance value for consumers.

**Reasons behind ONDC**

- The Department for Promotion of Industry and Internal Trade (DPIIT), under Ministry of Commerce and Industries, conducted an outreach during the outbreak of the COVID-19 pandemic to understand its impact on small sellers and hyperlocal supply chain functioning.
- Post which, it found that there is a huge disconnect between the scale of online demand and the ability of the local retail ecosystem to participate.
- Following this, consultations were held with multiple ministries and industry experts and "ONDC was envisioned to revolutionise digital commerce in India," as per the strategy paper.

**Advantages**

- The ONDC will standardise operations like cataloguing, inventory management, order management and order fulfilment, hence making it simpler and easier for small businesses to be discoverable over network and conduct business.
- However, experts have pointed out some likely potential issues such as getting enough number of e-commerce platforms to sign up, along with issues related to customer service and payment integration.

**Why in news?**

- RBI Governor had stated during the last Monetary Policy Committee (MPC) address that the apex banking regulator, in collaboration with banks, would be launching a pilot project to assess the functioning of a QR-code based coin vending machine.

**About the project**

- The Reserve Bank of India (RBI) has proposed a project to introduce vending machines that dispense coins to customers.
- The main objective of this project is to ease accessibility to coins by allowing customers to withdraw coins in required quantities and denominations without the need for physical tendering of banknotes.

### Coin Supply Situation:

- Deputy Governor at the Reserve Bank of India (RBI), has highlighted the peculiar situation with respect to coins.
- There is a very high supply of coins, taking up a lot of storage space, and not getting distributed properly.
- At the same time, there is demand in specific pockets.

### Proposed Mechanism:

- The proposed mechanism for coin dispensation is a departure from conventional machines that rely on banknotes for facilitating coin exchanges.
- The new machines will eliminate the need for physical tendering of banknotes and their authentication, which often results in fake currency being fed into the machines.
- Instead, the requisite amount will be debited from the customer's account using United Payments Interface (UPI).

### Pilot Plan:

- The pilot for this project is initially planned to be rolled out at 19 locations in 12 cities across the country.
- The machines will be installed at public places such as railway stations, shopping malls, and marketplaces with a particular focus on ease and accessibility for customers.

## CRISP

## Economy

### Why in news?

- Rubber Board has launched a mobile app–CRISP to inform growers about rubber cultivation and provides solutions online.

### About the app-

- **CRISP (Comprehensive Rubber Information System Platform)** has been developed by the Rubber Research Institute of India (RRII) in collaboration with the Digital University of Kerala.
- The RRII established in 1955 is located on a hillock in the eastern suburb of Puthuppally, Kottayam, eight kilometres from the town.
- With the help of CRISP, the farmers will now be able to receive recommendations of RRII on production and productivity enhancement, reduction of cultivation cost, maintenance of soil fertility, disease control measures, etc.
- Currently, these facilities are reaching the farmers through traditional extension methods.
- Many of these recommendations are location specific and can be linked to geo-information systems and delivered directly to the farmers.

### The Rubber Board-

- It is a **statutory body constituted by the Government of India**, under the Rubber Act 1947, for the overall development of the rubber industry in the country.
- **Head Office is in Kottayam, Kerala.**
- **It functions under the Ministry of Commerce & Industry** of the Government of India.
- The Board has a **Chairman appointed by the Central Government.**
- The Chairman of the Board presides over every meeting of the Board at which he is present and in his absence, the Vice Chairman shall preside, but when both the Chairman and the Vice Chairman are absent from any meeting, the members present shall elect one of their own member to preside at that meeting.
- The Board shall, in every year, elect a member to be a Vice Chairman for a period of twelve months commencing from the date of his election or, if the election is held before expiry of the term of office of an existing Vice Chairman, from the date on which such Vice Chairman would vacate office.
- The Central Government may appoint an Executive Director to exercise such powers and perform such duties under the direction of the Board as may be prescribed or as may be delegated to him by the Chairman.
- The Executive Director shall be responsible for the proper functioning of the Board and the implementation of its decisions and discharge of its duties under the Rubber Act, 1947.
- The Executive Director shall be the principal executive officer of the Board and shall exercise administrative control over all departments and officers of the Board.

**Why in news?**

- The U.S. Chambers of Commerce released the International Intellectual Property (IP) Index 2023, in which India was ranked 42nd out of 55 leading global economies.

**About International IP Index**

- The International IP Index is a tool created by the U.S. Chambers of Commerce to evaluate the effectiveness of the Intellectual Property (IP) framework in each economy across 50 indicators.
- The indicators provide a comprehensive overview of the IP ecosystem in an economy and cover nine categories of protection, including Patents, Copyrights, Trademarks, Design Rights, Trade Secrets, Commercialization of IP Assets, Enforcement, Systemic Efficiency, Membership, and Ratification of International Treaties.
- The Index is widely used by industry and helps identify economies with the most effective IP systems.
- The U.S. topped the Index, followed by the United Kingdom and France.

**About Intellectual Property Right**

- Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce.
- Intellectual property right (IPR) is the right given to persons over the creations of their minds: inventions, literary and artistic works, and symbols, names and images used in commerce.
- They usually give the creator an exclusive right over the use of his/her creation for a certain period of time.
- These rights are outlined in Article 27 of the Universal Declaration of Human Rights, which provides for the right to benefit from the protection of moral and material interests resulting from authorship of scientific, literary or artistic productions.

## India Post Payments Bank

## Economy

**Why in News?**

- MD and CEO of India Post Payments Bank (IPPB) recently said that IPPB wants to convert itself to a universal bank.

**About India Post Payments Bank (IPPB)**

- The India Post Payments Bank is a public sector payments bank from India operated by the India Post.
- The India Post Payment Bank (IPPB) was setup under the Department of Post, Ministry of Communication with 100% equity Owned by Government of India.
- The India Post Payments Bank (IPPB) will be like any other banks but its operations will be on a smaller scale without involving any credit risk.
- It will carry out most banking operations like accepting deposits but won't advance loans or issue credit cards.
- **Motto:** "Every customer is important, every transaction is significant and every deposit is valuable".
- **Vision:** "Building the most accessible, affordable and trusted bank for the common man".
- **Mission:** "Spearheading financial inclusion by removing barriers and reducing costs for accessing banking services".
- The IPPB has been integrated with Post Office Savings Bank (POSB).
- The IPPB is the sixth Payments bank, which has become operational after Aditya Birla, Airtel, Fino, Jio and Paytm Payments Banks.
- The freshly-minted payments bank will accept deposits of up to Rs. 1 lakh, offer remittance services, mobile payments/transfers/purchases and other banking services like ATM/debit cards, net banking and third-party fund transfers.
- The Payments bank are licensed under Section 23 of the Banking Regulation Act 1949, and registered as public limited company under the Companies Act, 2013.

**Why in news?**

- India has gone from being a marginal sugar exporter five years ago to No. 2 in the world, behind only Brazil. Between 2017-18 and 2021-22, exports have soared from USD 810.9 million to USD 4.6 billion.

**Sugar Industry in India: Current Status and Geographical Conditions**

- The sugar industry in India plays a crucial role in the country's agro-based economy, providing livelihood to millions of sugarcane farmers and workers.
- In the 2021-22 season, India became the world's largest producer and consumer of sugar and the second-largest exporter.

**Geographical Distribution:**

- The sugar industry in India is concentrated in two major regions: Uttar Pradesh, Bihar, Haryana, and Punjab in the north, and Maharashtra, Karnataka, Tamil Nadu, and Andhra Pradesh in the south.
- The southern region has a tropical climate that is suitable for higher sucrose content, resulting in a higher yield per unit area as compared to the northern region.

**Geographical Conditions for Sugar Growth:**

- The following conditions are ideal for the growth of sugar in India:
- **Temperature:** The ideal temperature for sugarcane growth is between 21- 27°C with a hot and humid climate.
- **Rainfall:** An annual rainfall of around 75-100 cm is required.
- **Soil Type:** The deep, rich loamy soil is suitable for the growth of sugarcane.

**Issues with the Sugarcane Industry**

- Sugarcane has to compete with several other food and cash crops like cotton, oil seeds, rice, etc. This affects the supply of sugarcane to the mills and the production of sugar also varies from year to year causing fluctuations in prices leading to losses in times of excess production due to low prices.
- India's yield per hectare is extremely low as compared to some of the major sugarcane producing countries of the world. For example, India's yield is only 64.5 tonnes/hectare as compared to 90 tonnes in Java and 121 tonnes in Hawaii.
- Sugar production is a seasonal industry with a short crushing season varying normally from 4 to 7 months in a year. It causes financial loss and seasonal employment for workers and lack of full utilization of sugar mills.
- The average rate of recovery of sugar from sugarcane in India is less than ten per cent which is quite low as compared to other major sugar producing countries.
- High cost of sugarcane, inefficient technology, uneconomic process of production and heavy excise duty result in high cost of manufacturing.

**Status of Sugar Exports from India**

- **Background:**
  - Until 2017-18, India's sugar exports were mainly limited to low-quality white sugar with an ICUMSA value of 100-150.
  - However, India had hardly exported any raw sugar (produced after the first crystallization of cane juice).

**Reasons for Rising Exports:**

- There are several reasons behind the rise of India's raw sugar exports, including:
- **Free of Bacterial Compound:**
  - Indian raw sugar is free of dextran, a bacterial compound that forms when sugarcane stays in the sun for too long after harvesting.
  - Indian cane is crushed within 12-24 hours of harvesting while it takes around 48 hours in Brazil.
- **High Sucrose Content:**
  - Indian raw sugar has a higher polarization (98.5-99.5%) compared to other producers like Brazil, Thailand, and Australia, making it easier and cheaper to refine.

**Why in news?**

- The Special Window for Affordable and Mid-Income Housing (SWAMIH) Investment Fund I is India's largest social impact fund specifically formed for completing stressed and stalled residential projects.

**SWAMIH Fund**

- The Special Window for Affordable and Mid-Income Housing (SWAMIH) Investment Fund I is India's largest social impact fund specifically formed for completing stressed and stalled residential projects.
- The Fund is sponsored by the Ministry of Finance, Government of India, and is managed by SBICAP Ventures Ltd., a State Bank Group company.
- The Fund has no precedent or comparable peer fund in India or the global markets.
- It is a Category-II AIF (Alternate Investment Fund) debt fund registered with SEBI
- Since the Fund considers first-time developers, established developers with troubled projects, developers with a poor track record of stalled projects, customer complaints and NPA accounts, and even projects where there are litigation issues, it is considered as the lender of last resort for distressed projects.

## RBI initiates 75 Digital Villages Programme

**Why in news?**

- The Reserve Bank of India (RBI) has launched a programme to adopt 75 villages and convert them into digital payment enabled villages.

**About 75 Villages Digital Programme**

- Launching the Har Payment Digital initiative to encourage digital payments adoption among people.
- Payment system operators (PSOs) will "adopt 75 villages in the country and convert them into digital payment-enabled villages," under the 75 Digital Villages programme and in observance of 75 years of independence.
- They (PSOs) will conduct two camps in each of these villages to enhance awareness and onboard merchants in the village for digital payments.

**About PSOs**

- PSOs are entities authorised by RBI to set up and operate a payment system.
- As of February 20, 2023, according to the data on the RBI's website, there are 67 PSOs including NPCI, Mastercard, Visa, SBI, Punjab National Bank, Amazon Pay (India), PhonePe, Muthoot Finserv USA, Ola Financial Services, PayU Payments, and more under various categories such as retail payments organisations, card payment networks, ATM networks, prepaid payment instruments, etc.

## Central Government launches High Price Day Ahead Market and Surplus Power Portal (PUSHP)

**Why in news?**

- The Central Government has launched a High Price Day Ahead Market and Surplus Power Portal (PUSHP) – an initiative to ensure greater availability of power during the peak demand season.

**About PUSHP Portal**

- The surplus power portal is a one-of-its-kind initiative, reflecting the ingenuity of the Ministry of Power and the Regulator.
- Distribution Companies have tied up long term PPAs for power supply.
- They have to pay fixed charges even when they do not schedule the power.
- Now the DISCOMs will be able to indicate their surplus power in block times / days / months on portal.
- Those DISCOMs who need power will be able to requisition the surplus power.
- The new buyer will pay both variable charge (VC) and fixed cost (FC) as determined by Regulators.
- Once power is reassigned, the original beneficiary shall have no right to recall as entire FC liability is also shifted to the new beneficiary.
- Financial liability of new buyer shall be limited to quantum of temporary allocated / transferred power.

**Why in news?**

- The Reserve Bank of India (RBI) has granted an 'Infrastructure Finance Company (IFC)' status to Indian Renewable Energy Development Agency (IREDA) recently.
- It was earlier classified as 'Investment and Credit Company (ICC)'.

**Significance**

- With the IFC status, IREDA will be able to take higher exposure in RE financing. The IFC status will also help the company to access wider investor base for fund mobilisation, resulting in competitive rates for fund raising.
- The recognition of IREDA as an IFC will increase the investors' confidence, enhance the brand value, and generate positive outlook in the market.
- The grant of IFC status is a recognition of IREDA's 36 years of infrastructure financing and development with focused development of Renewable Energy.
- With IFC status, IREDA will keep contributing towards Govt. of India's target of 500 GW installed capacity of non-fossil fuels by 2030.
- The IFC status is a significant milestone for IREDA and will enable us to maintain our leading position as a financier of RE space.
- IREDA will continue to play a motherly role for development of RE sector.

**About IREDA**

- IREDA has been promoting, developing and financing new and renewable sources of energy with the motto: "Energy for Ever" since 1987.
- It finances all RE technologies and value chain such as solar, wind, hydro, bio-energy, waste to energy, energy efficiency, e-mobility, battery storage, biofuel and new and emerging technologies.

**Why in news?**

- Union Minister (FAHD) Shri Parshottam Rupala unveiled the department's annual publication, the 'Basic Animal Husbandry Statistics 2022' recently.

**Major Highlight**

- Total milk production in the country during 2021-22 is 221.06 million tonnes.
- In the current year 2021-22, the milk production has registered an annual growth rate of 5.29%.
- Top five major milk producing States are Rajasthan (15.05%), Uttar Pradesh (14.93%), Madhya Pradesh (8.06%), Gujarat (7.56%) and Andhra Pradesh (6.97%).
- In 2021-22, the total egg production in the country is 129.60 billion nos which has increased by 6.19% as compared to previous year.
- Total five major egg producing States are Andhra Pradesh (20.41%), Tamil Nadu (16.08%), Telangana (12.86%), West Bengal (8.84%) and Karnataka (6.38%).
- The total meat production in the country is 9.29 million tonnes for the year 2021-22 with an annual growth rate of 5.62%.
- The total five major meat producing States are Maharashtra (12.25%), Uttar Pradesh (12.14%), West Bengal (11.63%), Andhra Pradesh (11.04%), and Telangana (10.82%).
- The total wool production in the country during 2021-22 is 33.13 thousand tonnes which has decline by 10.30% as compared to previous year.
- The top five major wool producing States are Rajasthan (45.91%), Jammu and Kashmir (23.19%), Gujarat (6.12%), Maharashtra (4.78%) and Himachal Pradesh (4.33%).
- The per-capita availability of milk is 444 gram/day during 2021-22 increased by 17 gram/day over previous year.

**Animal Husbandry**

- Animal husbandry refers to livestock raising and selective breeding. It is the management and care of animals in which the genetic qualities and behavior of animals are further developed for profit.

- India is the highest livestock owner of the world.
- As per the 20th Livestock Census, the total Livestock population is 535.78 million in the country showing an increase of 4.6% over Livestock Census-2012.

## Invest India

## Economy

### Why in news?

- In the 32nd Board Meeting of Invest India, the Board appointed Ms. Manmeet K Nanda, IAS, West Bengal Cadre (2000 Batch) as the Managing Director & CEO (Addl charge) of Invest India until a full time regular appointment.

### Invest India

- Created under the Hon'ble Prime Minister's vision of a New India, Invest India today is well acknowledged by stakeholders for its tangible contributions and instrumental role in executing the Government's flagship initiatives including Make in India, Startup India, National Single Window System, Project Monitoring Group.
- Invest India's work spans the entire spectrum of India's transformational business sector, from supporting India's rapidly expanding start-up ecosystem to harnessing the power of innovation from India's laboratories and bringing it to market, or identifying, developing, and deploying technologies on the ground.
- **Invest India** was awarded the Investment Promotion Award, 2020 by the United Nations Conference on Trade and Development for our good practices during the pandemic.

## DigiClaim

## Economy

### Why in news?

- Union Minister of Agriculture & Farmers Welfare, Shri Narendra Singh Tomar launched National Crop Insurance Portal's digitized claim settlement module namely DigiClaim under the ambit of Pradhan Mantri Fasal Bima Yojana (PMFBY) at Krishi Bhawan, New Delhi.

### About DigiClaim

- With the launch of the module, claims will be disbursed electronically, which will benefit the respective farmers of six states.
- Now, the automated claim settlement process will be an ongoing activity to ease all insured farmers' lives and provide them with a sustainable financial flow and support.
- DigiClaim is yet another feather in PMFBY's cap in its ongoing effort to usher in advanced technological solutions such as automated calculation and disbursement of crop insurance claims.

### Significance

- With the launch of a DigiClaim Module, insurance claims totaling Rs 1260.35 crore have been disbursed on March 23, 2023 to insured farmers in the states of Rajasthan, Uttar Pradesh, Himachal Pradesh, Chhattisgarh, Uttarakhand and Haryana.
- Till date Rs 1.32 lakh crore claim amount has been disbursed to the insured farmers under PMFBY.
- This would directly impact the claim reversal ratio, which is expected to go down with DigiClaim.
- Another noteworthy feature of this digital advancement is that farmers would be able to track the claim settlement process on their mobile phones in real-time and avail the scheme's benefits.

## Pradhan Mantri Ujjwala Yojana

## Economy

### Why in news?

- The Cabinet Committee on Economic Affairs has approved a subsidy of Rs.200 per 14.2 kg cylinder for up to 12 refills per year to be provided to the beneficiaries of Pradhan Mantri Ujjwala Yojana(PMUJ).

### About PMUJ

- Launched in May 2016 to provide LPG (liquefied petroleum gas) connections to poor households.
- It is aimed to provide maximum benefit to the migrants who live in other states and find it difficult to submit address proof.

- Now they will only have to give "Self Declaration" to avail the benefit.
- The scheme provides a financial support of Rs 1600 for each LPG connection to the BPL households.
- Along with a deposit-free LPG connection, Ujjwala 2.0 will provide the first refill and a hotplate free of cost to the beneficiaries.
- Under Ujjwala 1.0, the target was to provide LPG connections to 50 million women from the below poverty line (BPL) households, by March 2020.
- Under Ujjwala 2.0, an additional 10 million LPG connections will be provided to the beneficiaries.
- Government has also fixed a target of providing piped gas to 21 lakh homes in 50 districts.

### Objectives

- Empowering women and protecting their health.
- Reducing the number of deaths in India due to unclean cooking fuel.
- Preventing young children from a significant number of acute respiratory illnesses caused due to indoor air pollution by burning fossil fuel.



### Why in news?

- India recently rejected the Organisation of Islamic Cooperation's (OIC) "unwarranted references" to the Union Territory of Jammu and Kashmir.

### About the Organisation of Islamic Cooperation (OIC)

- The Organisation of Islamic Cooperation is an international organization founded in 1969, consisting of 57 member states, with a collective population of over 1.8 billion as of 2015 with 53 countries being Muslim-majority countries.
- The organisation states that it is "the collective voice of the Muslim world" and works to "safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony".
- The OIC has permanent delegations to the United Nations and the European Union.
- Some members, especially in West Africa and South America, are – though with large Muslim populations – not necessarily Muslim majority countries.
- A few countries with significant Muslim populations, such as Russia and Thailand, sit as Observer States.

### Significance of the region

- India has enjoyed centuries of good relations with countries like Iran, while smaller gas-rich nation Qatar is one of India's closest allies in the region.
- India shares good relations with most of the countries in the Gulf.
- The two most important reasons for the relationship are oil and gas, and trade.
- Two additional reasons are the huge number of Indians who work in the Gulf countries, and the remittance they send back home.

### Why in News?

- Recently, an Inter-Ministerial delegation from India led by the Department of Commerce participated in the second Indo-Pacific Economic Framework for Prosperity (IPEF) negotiating round in Bali, Indonesia

### Indo-Pacific Economic Framework for Prosperity (IPEF)

- The Indo-Pacific Economic Framework for Prosperity (IPEF) is an economic initiative that was launched by United States President Joe Biden on May 23, 2022. Here are some key facts about IPEF:
- Member States:** IPEF has fourteen member states, including Australia, Brunei, Fiji, India, Indonesia, Japan, South Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, United States, and Vietnam.
- Pillars:** The IPEF has four pillars that form the basis of its economic framework. These are Trade (Pillar I), Supply Chains (Pillar II), Clean Economy (Pillar III), Fair Economy (Taxation & Anticorruption) - (Pillar IV).
- Bali Round:** The Bali Round was a meeting held as part of the IPEF initiative, where member states discussed various aspects of the framework. During this meeting, discussions were held on all four pillars of the IPEF. India participated in the discussions related to Pillars II to IV, which covered Supply Chains, Clean Economy, and Fair Economy (Taxation & Anticorruption).

### Why in news?

- The Institute for Economics and Peace (IEP) recently corrected its report related to Global Terrorism Index (GTI) 2023 after the Communist Party of India (CPI) was wrongly included in the list of deadliest terror groups of 2022.

### About Global Terrorism Index:

- The Global Terrorism Index (GTI) is an annual report that provides a detailed analysis of the trends and patterns of terrorism worldwide. Here are some key points about the GTI:

- Published by the Institute for Economics and Peace (IEP): The GTI is published annually by the IEP, a global think tank based in Sydney, Australia.
- Covers 15 years of terrorism data: The index provides a comprehensive summary of the key global trends and patterns in terrorism over the past 15 years.
- Ranks 163 countries: The report ranks 163 countries, which represent 99.7% of the world's population, on the impact of terrorism.
- Uses multiple indicators: The GTI uses several indicators to measure the impact of terrorism, including the number of terrorist incidents, fatalities, injuries, and hostages.
- Data sources: The GTI is produced using data from TerrorismTracker of Dragonfly, which provides event records on terrorist attacks since January 1, 2007, and other sources.

### **Key Highlights of the Global Terrorism Index 2023**

- Afghanistan tops the list again: Afghanistan has retained the top spot on the list of countries impacted by terrorism for the fourth year in a row.
- India ranks 13th: India has been ranked 13th on the index, indicating a marginal decrease from the previous year.
- Pakistan's terror-related fatalities increased: Pakistan saw the second- largest increase in terror-related fatalities globally last year, with a total of 643 deaths.
- Military personnel impacted significantly: Military personnel made up at least 55% of all casualties of terrorism.

## **International Telecommunication Union**

## **International Relations**

### **Why in News?**

- Prime Minister will inaugurate the new International Telecommunication Union (ITU) Area office and Innovation Centre at a programme in Delhi's Vigyan Bhawan.

### **International Telecommunication Union (ITU)**

- Specialized agency of the United Nations for information and communication technologies.
- Coordinates between governments and private sector bodies for global telecommunication and ICT services.
- Established in 1865 as International Telegraph Union.
- Became a specialized agency of the United Nations in 1947.
- Headquarters located in Geneva, Switzerland.
- Membership: ITU has a membership of 193 countries and nearly 800 private sector entities and academic institutions.

### **Functions of International Telecommunication Union (ITU):**

- Allocation of global radio spectrum and satellite orbits.
- Coordination and setting of technical standards related to telecommunication/ICT.
- Striving to improve access to ICTs in underserved communities worldwide.

### **India's association with ITU:**

- India has been an active member of the ITU since 1869.
- India has been a regular member of the ITU Council since 1952.

### **ITU Area office and Innovation Centre:**

- India has fully funded the ITU Area Office, which is located on the second floor of the Centre for Development of Telematics (C-DoT) building in Mehrauli, New Delhi.
- The office will serve countries in the region including India, Nepal, Bhutan, Bangladesh, Sri Lanka, Maldives, Afghanistan, and Iran.
- The office aims to improve coordination among nations in the region and foster mutually beneficial economic cooperation.

**Why in news?**

- After more than a decade of negotiations, the countries of the United Nations have recently agreed to the High Seas Treaty.

**About UN High Seas Treaty:**

- The UN High Seas Treaty is the first-ever treaty to protect the world's oceans outside national boundaries.
- It is also referred to as the 'Paris Agreement for the Ocean'.
- The treaty is legally binding and aims to protect marine life in international waters.
- Its goal is to establish protected areas covering 30% of the seas by 2030, a pledge made by countries at the UN biodiversity conference in 2022.
- The treaty provides a legal framework for creating marine protected areas (MPAs) to safeguard wildlife and share genetic resources of the high seas.
- It covers environmental assessments to evaluate potential damage from commercial activities, like deep-sea mining.
- The treaty establishes a conference of the parties (CoP) that meets periodically to hold member states accountable for governance and biodiversity issues.
- Signatories of the treaty pledge to share ocean resources.
- The UN High Seas Treaty is built on the legacy of the UN Convention on the Law of the Sea (UNCLOS), the last international agreement on ocean protection signed in 1982. UNCLOS established an area called the high seas.

**About High seas**

- High seas refer to the areas of the oceans that are beyond the national jurisdiction of any country. Here are some key points to note:
- The high seas begin at the border of countries' exclusive economic zones beyond 370 km (200 nautical miles) from a country's coastline and extend up to the outer limits of the continental shelf.
- All countries have the right to use the high seas for shipping, fishing, and scientific research.
- The high seas comprise more than 60% of the world's oceans by surface area.
- Due to a lack of regulation and monitoring, activities on the high seas are often vulnerable to exploitation, making it important to protect them through international treaties and agreements.

### Why in news?

- The Indian Railways is collaborating with Indian Space Research Organization (ISRO) under the Real Time Train Information System (RTIS) project.

### About the Real Time Train Information System (RTIS) project:

- The RTIS project involves the installation of satellite-based devices on trains to automatically acquire movement timing data, including arrival and departure times at stations.
- The project is executed by the Centre for Railway Information Systems (CRIS) in collaboration with the Indian Space Research Organisation (ISRO).

### Functions

- The RTIS devices use satellite imagery to track the location and speed of trains, providing mid-section updates with a periodicity of 30 seconds.
- The movement timing data is automatically plotted on the control chart of the train in the Control Office Application (COA) system, enabling train controllers to track the location and speed of trains more closely and without any manual intervention.
- Passengers can use the system to get real-time information about a train's location and running status on their smartphones.

### Collaboration with ISRO

- The RTIS system uses ISRO's GSAT satellites, which have GAGAN payloads for tracking the movement of trains.
- Benefits:
  - The RTIS system enables faster decision-making and improved efficiency in train operations.
  - It provides passengers with real-time information about train locations and running status, improving their travel experience.
  - It enhances the safety and security of train operations by enabling closer monitoring of train movements.

## 6G: India's Preparations for This Game-Changer

## Science & Technology

### Why in news?

- India's aim to roll out its 6G telecom network, which promises ultra-high-speed internet connectivity, by the end of the decade was recently announced by the Prime Minister.

### Recognizing 6G's Improvements Over 5G Technology:

- 6G (sixth-generation wireless) is the successor to 5G cellular technology.
- 6G networks will be able to **use higher frequencies** than 5G networks and provide **substantially higher capacity** and **much lower latency**.
- One of the goals of 6G internet will be to **support one microsecond-latency communication**.
- This is 1,000 times faster — or **1/1000th the latency** — than one millisecond throughput.
- **Working in conjunction with artificial intelligence (AI)**, the computational infrastructure of 6G will autonomously determine the best location for computing to occur; this includes decisions about data storage, processing and sharing.
- 6G is expected to support **data rates of 1 terabyte per second**.
- It seeks to utilize the **terahertz band of frequency** which is currently unutilized. Terahertz waves fall between infrared waves and microwaves on the electromagnetic spectrum.

**Why in news?**

- For the first time, scientists have reported evidence of the piezoelectric effect in liquids.

**About the effects**

- The effect has been known for 143 years and in this time has been observed only in solids.
- The new finding challenges the theory that describes this effect as well as opens the door to previously unanticipated applications in electronic and mechanical systems.
- The effect was found in pure 1-butyl-3-methyl imidazolium bis(trifluoromethyl-sulfonyl)imide and 1-hexyl-3-methyl imidazolium bis(trifluoromethylsulfonyl)imide — both ionic liquids (liquids which are made of ions instead of molecules) at room temperature.

**What is the piezoelectric effect?**

- In the piezoelectric effect, a body develops an electric current when it is squeezed.
- Quartz is the most famous piezoelectric crystal; it is used in analog wristwatches and clocks. Such crystals are also used in other instruments where converting mechanical stress to a current is useful.
- Quartz is silicon dioxide (SiO<sub>2</sub>). The quartz crystal consists of silicon and oxygen atoms at the four vertices of a three-sided pyramid; each oxygen atom is shared by two pyramids.
- These pyramids repeat themselves to form the crystal.
- The effective charge of each pyramid is located slightly away from the centre.
- When a mechanical stress is applied, that is when the crystal is squeezed, the position of the charge is pushed further from the centre, giving rise to a small voltage. This is the source of the effect.

**Why in news?**

- AI powerhouse OpenAI announced GPT-4, the next big update to the technology that powers ChatGPT and Microsoft Bing, the search engine using the tech, on Tuesday.

**About GPT 4.0:**

- Generative Pre-training Transformer or GPT-4 is a large multimodal model created by OpenAI.
- **Multimodal models** can encompass more than just text – **GPT-4 also accepts images as input.**
- **GPT-3 & GPT-3.5** only operated in one modality, text, meaning users could only ask questions by typing them out.
- OpenAI says that **GPT-4** also "**exhibits human-level performance on various professional and academic benchmarks.**"
- The language model can pass a simulated bar exam with a score around the top 10 per cent of test takers and can solve difficult problems with greater accuracy.
- **For example**, it can "answer tax-related questions, schedule a meeting among three busy people, or learn a user's creative writing style."
- **GPT-4** is also capable of handling over **25,000 words of text**, opening up a greater number of use cases that now also include long-form content creation, document search and analysis, and extended conversations.

**Benefits**

- It is being seen as a replacement for the basic **emails, party planning lists, CVs, and even college essays and homework.**
- It can also be **used to write code**, as examples have shown.

**Limitations**

- It may **generate incorrect information**, and create "biased content." More importantly, the chatbot's knowledge of the world and events after 2021 is limited.
- Some people pointed out that the **chatbot displayed clear racial and sexist biases**, which remains a problem with almost all AI models.
- The chatbot gives answers which are **grammatically correct and read well– though some have pointed** out that these **lack context** and substance, which is largely true.

### Why in news?

- Scientists at Johns Hopkins University (JHU) recently outlined a plan for a potentially revolutionary new area of research called "organoid intelligence", which aims to create "bio-computers".

### About 'bio-computer'

- The JHU researchers' scheme will combine brain organoids with modern computing methods to create "bio-computers".
- They have announced plans to couple the organoids with machine learning by growing the organoids inside flexible structures affixed with multiple electrodes (similar to the ones used to take EEG readings from the brain).
- These structures will be able to record the firing patterns of the neurons and also deliver electrical stimuli, to mimic sensory stimuli. The response pattern of the neurons and their effect on human behaviour or biology will then be analysed by machine-learning techniques.
- Recently, scientists were able to grow human neurons on top of a microelectrode array that could both record and stimulate these neurons. Using positive or negative electric feedback from the sensors, they were able to train the neurons to generate a pattern of electrical activity that would be generated if the neurons were playing table tennis.

### Opportunities for 'bio-computers'

- While human brains are slower than computers at, say, simple arithmetic, they outshine machines at processing complex information.
- Brain organoids can also be developed using stem cells from individuals with neuro degenerative diseases or cognitive disorders. Comparing the data on brain structure, connections, and signalling between 'healthy' and 'patient-derived' organoids can reveal the biological basis of human cognition, learning, and memory.
- They could also help decode the pathology of and drug development for devastating neuro developmental and degenerative diseases such as Parkinsons disease and microcephaly.

### Why in news?

- Recently, researchers studied a supernova explosion that occurred over 450 years ago using NASA's Imaging X-ray Polarimetry Explorer (IXPE).

### About Tycho

- Tycho, a Type Ia supernova, occurred when a white dwarf star shredded its companion star, causing a violent explosion that sent debris hurtling into space at tremendous speeds.
- It released an enormous amount of energy, equivalent to what the Sun would emit over ten billion years, and blasted particles out into space near the speed of light.
- Researchers used the Imaging X-ray Polarimetry Explorer (IXPE) to reveal the magnetic field geometry near Tycho's shock wave to investigate how particles are accelerated there and to study polarised X-rays from the supernova remnant.

### Imaging X-ray Polarimetry Explorer (IXPE) and its significance

- The IXPE Space Observatory is a collaborative effort between NASA and the Italian Space Agency.
- It is designed to study "the most extreme and mysterious objects in the universe - supernova remnants, supermassive black holes, and dozens of other high-energy objects."
- By observing polarised X-rays from neutron stars and supermassive black holes, it can help scientists understand the geometry and inner workings of their sources, including how black holes spin and their location in the past.
- Measuring the polarization of X-rays can also unravel how pulsars shine so brightly in X-rays, tracing the story of where the light came from.
- Overall, IXPE will provide valuable insights into some of the universe's most fascinating and enigmatic phenomena.

**Why in news?**

- A function was held to commemorate the success of "SWAYATT", an initiative to promote Start-ups, Women and Youth Advantage Through eTransactions on Government eMarketplace (GeM) in New Delhi.

**About SWAYATT**

- The initiative to promote "Start-ups, Women and Youth Advantage Through eTransactions" (SWAYATT) on GeM was first launched in February 2019.
- The intent of SWAYATT 2019 was to promote inclusiveness of various categories of sellers and service providers on the portal, by taking proactive steps to facilitate their training and registrations of such specific
- category of manufacturers and sellers, develop women entrepreneurship and encourage participation of MSME sector and Start-ups in public procurement.

**About GeM**

- Government e Marketplace (GeM) - GeM is a Section 8 company setup under the administrative control of the Department of Commerce, Ministry of Commerce and Industry, for procurement of goods and services by Central Ministries, State Departments, PSEs and Autonomous Bodies.
- Social inclusion is a core value at GeM and we are focused on increasing participation from under-served sellers who face challenges in public procurement.
- More than 1.45 lakh women MSEs have fulfilled 7.32 lakh orders worth 15,922 Crore and approx. 43K SC/ ST MSEs have delivered 1.35 lakh+ order worth 2,592 Crore on the GeM portal so far.

**Why in news?**

- Union Minister of State (Independent Charge) Science & Technology; recently stated that all pension portals will be integrated in a single portal in the form of the newly created "Integrated Pensioners' Portal" () to ensure "Ease of Living for the elder citizens".

**Bhavishya**

- BHAVISHYA is a Portal for Pension Payment and Tracking System is being integrated with Pension Seva portal of SBI and will enable Pensioners to get all information and services at one place with single login.
- On completion of all phases of this integration the retirees can choose a Bank and Branch for opening an online Pension Account, check their monthly pension slips, Form 16, Status of Life Certificate as well as change their Pension Disbursing Bank through BHAVISHYA.
- 'Bhavishya' platform was made mandatory for all central government departments since 01.01.2017.
- BHAVISHYA has recently been rated as the 3rd best portal among all Government of India service portals by National e-Governance Service Delivery Assessment (NeSDA).

**Anubhav**

- Anubhav' is an online initiative that enables submission and display of commendable work done by retiring employees.
- Initially this facility is being provided only to retiring Central government employees.
- It is an initiative of the Department of Pensions & Pensioners' Welfare, Ministry of Personnel, Public Grievances & Pensions, Government of India.

**Why in news?**

- World Tuberculosis Day will be observed on March 24.
- The significance of World Tuberculosis Day is to educate the world about the impact of tuberculosis.

### About World TB Day

- Theme- "Yes! We can end TB!".
- The objective behind the theme is to inspire hope and encourage high-level leadership, faster adoption of new World Health Organisation recommendations, growth in investments, accelerated actions, adoption of innovations, and multisectoral collaboration to tackle tuberculosis.
- On March 24 1882, Dr. Robert Koch announced the discovery of Mycobacterium tuberculosis, the bacterium that causes tuberculosis.
- The discovery was the most critical step taken towards the control and elimination of tuberculosis.
- Officially, the first World Tuberculosis Day was first celebrated in 1982 on the 100th anniversary of Dr. Koch's announcement

### About TB

- The term "tuberculosis" was coined by Johann Schölein in 1834.
- Before the disease was called tuberculosis, the disorder was known by different names in different countries. ("phthisis" in ancient Greece, "tabes" in ancient Rome, and "schachepheh" in ancient Hebrew).
- Few symptoms of tuberculosis are extreme tiredness or fatigue, lack of appetite and weight loss, night sweats, and a high body temperature.
- Mostly, tuberculosis infections affect the lungs which can lead to persistent coughing that can last for more than three weeks and brings up phlegm, that contains blood.
- It can also lead to breathlessness which can worsen over a period of time.

## NASA-ISRO Synthetic Aperture Radar

## Science & Technology

### Why in news?

- National Aeronautics and Space Administration (NASA) and the Indian Space Research Organization (ISRO) have jointly manufactured an earth science satellite named, NISAR (NASA-ISRO Synthetic Aperture Radar).

### About NISAR

- NISAR was envisioned by NASA and ISRO eight years ago in 2014 as a powerful demonstration of the capability of radar as a science tool and help us study Earth's dynamic land and ice surfaces in greater detail than ever before.
- The spacecraft will orbit the Earth in a sun synchronous orbit of 747 Km with an inclination of 98.4 degree for a 12-day repeat cycle.
- NISAR an Earth-observation satellite, is being jointly developed by the National Aeronautics and Space Administration (NASA) and the Indian Space Research Organisation (ISRO).
- NASA-ISRO SAR (NISAR) is a Low Earth Orbit (LEO) observatory.
- NISAR will map the entire globe in 12 days and provide spatially and temporally consistent data for understanding changes in Earth's ecosystems, ice mass, vegetation biomass, sea level rise, groundwater, and natural hazards including earthquakes, tsunamis, volcanoes, and landslides.
- It carries L and S dual band Synthetic Aperture Radar (SAR), which operates with the Sweep SAR technique to achieve large swaths with high-resolution data.
- The SAR payloads mounted on Integrated Radar Instrument Structure (IRIS) and the spacecraft bus are together called an observatory.

### Applications

- It will provide a means of unraveling complex phenomena, ranging from ecosystem disturbances to ice sheet collapse and natural hazards including earthquakes, tsunamis, volcanoes, and landslides.
- This is expected to provide impetus to the fast-maturing microwave remote sensing applications in geosciences.
- The precision interferometric orbits of the mission will enable the mapping of a few millimeters of deformations in the land surface.
- The NISAR mission will observe sea ice characteristics over the seas surrounding India's Antarctic polar stations.
- It can be used to detect the marine oil spill and disseminate the spill location during accidental oil seepage for preventive measures.

**Why in news?**

- The maiden Joint Military Exercise FRINJEX-23 between Indian Army and French Army will be conducted at Pangode Military Station, Thiruvananthapuram in Kerala.

**About FRINJEX - 23**

- It is for the first time armies of both the nations are engaging in this format with each contingent comprising of a Company Group each from the Thiruvananthapuram based Indian Army troops and French 6th Light Armoured Brigade.
- The exercise is aimed at enhancing inter-operability, coordination and cooperation between both forces at tactical level.
- The scope of the exercise involve establishment and operationalisation of a joint command post to secure an envisaged area for undertaking joint humanitarian assistance and disaster relief, establishing an Internally Displaced Population (IDP) camp and move of disaster relief material.
- The Joint exercise will further cement defence cooperation with France which is a key aspect of the overall Indo-France strategic partnership.

**Why in news?**

- **INS Trikand** is participating in the International Maritime Exercise/ Cutlass Express 2023 (IMX/CE-23) being held in the Gulf region.

**About IMX/CE-23**

- IMX/CE-23 is one of the largest multinational maritime exercises in the world.
- This is Indian Navy's maiden IMX participation.
- The International Maritime Exercise is coordinated by the US-led Combined Maritime Forces (CMF).
- Combined Maritime Forces (CMF) – a 34-nation naval group that seeks to promote security, stability, and prosperity.
- India became an associate member of CMF in 2022.
- It marks the second occasion where an Indian Naval ship is participating in an exercise conducted by the CMF.
- Earlier, INS Trikand had participated in the CMF-led Operation Sea Sword 2 in 2022.

**About INS Trikand**

- INS Trikand' is a Stealth Frigate.
- It was commissioned into the Indian Navy in 2013.
- It is the last of the three "Follow On Talwar Class" frigates built in the Russian Federation.
- The other ships of the class: INS Teg and INS Tarkash
- INS Trikand carries a state-of-the-art combat suite which includes the supersonic BRAHMOS missile system, advanced Surface to Air missiles Shtil, upgraded A190 medium range gun, Electro-optical 30 mm Close-in Weapon System, Anti-Submarine weapons such as torpedoes and rockets and an advanced Electronic Warfare system.
- The weapons and sensors are integrated through a Combat Management System 'Trebovanie-M', which enables the ship to simultaneously neutralize multiple surfaces, sub-surface and air threats.
- The ship can carry an integrated Kamov 31 helicopter which is best suited for airborne early warning roles.

**Why in news?**

- Indian Navy's major Operational level exercise TROPEx for the year 2023, conducted across the expanse of IOR over a duration of four months from Nov 22 - Mar 23, culminated recently in the Arabian Sea.

### TROPEX-23

- TROPEX is conducted biennially and includes participation from Indian Navy units, Indian Army, Indian Air Force, and Coast Guard assets.
- The exercise is being conducted over a duration of three months, from January to March.
- The Theatre Level exercise aims to validate the Navy's offensive-defence capabilities, safeguard national interests in the maritime domain and promote stability and peace in the Indian Ocean Region.
- This exercise aimed to validate the coastal defence setup of the country, which was entirely revamped after the 26/11 Terror attacks at Mumbai.
- It aimed at testing combat readiness of the Navy in a complex multi-dimensional scenario set in the context of the current geo strategic environment.
- All surface combatants of the Indian Navy including Destroyers, Frigates, Corvettes as well as submarines and aircraft are put through complex maritime operational deployments.

### Maritime Partnership Exercise (MPX)

### Defence & Security

#### Why in news?

- Indian Navy's indigenously built guided missile frigate, INS Sahyadri participated in a Maritime Partnership Exercise (MPX) with French Navy (FN) ships FS Dixmude.

#### About MPX

- The exercises were aimed at enhancing interoperability and streamlining seamanship and communication procedures.
- This exercise is part of the ongoing efforts between the two navies towards ensuring safe and secure international shipping and trade in the Indian Ocean Region (IOR).
- The two countries have been carrying out regular exercises in IOR towards reinforcing maritime association.

#### Other Maritime Exercises between India & Japan

- Japan-India Maritime Exercise (JIMEX)
- Malabar Exercise (India – US – Japan - Australia)

### Exercise La Perouse – 2023

### Defence & Security

#### Why in news?

- The third edition of the multilateral exercise La Perouse is scheduled to be conducted in the Indian Ocean Region from 13 to 14 March 2023.

#### Exercise La Perouse

- This edition will witness participation of personnel, ships and integral helicopters of Royal Australian Navy, French Navy, Indian Navy, Japanese Maritime Self Defence Force, Royal Navy and the United States Navy.
- The biennial exercise La Perouse is conducted by the French Navy, and is aimed at enhancing maritime domain awareness and optimising maritime coordination amongst the participating navies in the Indo-Pacific Region.
- The two day exercise provides an opportunity for like minded navies to develop closer links in planning, coordination and information sharing for seamless maritime operations.
- The exercise will witness complex and advanced naval operations including surface warfare, anti-air warfare, air defence exercises, cross deck landings and tactical manoeuvres.
- Indigenously built guided missile frigate INS Sahyadri and fleet tanker INS Jyoti will be participating in this edition of the exercise.

### VSHORADS Missile

### Defence & Security

#### Why in news?

- Defence Research and Development Organisation (DRDO) conducted two consecutive successful flight tests of Very Short Range Air Defence System (VSHORADS) missile.

### About VSHORADS

- VSHORADS is a Man Portable Air Defence System (MANPAD) meant for neutralising low altitude aerial threats at short ranges.
- It has been designed and developed indigenously by Research Centre Imarat, Hyderabad in collaboration with other DRDO laboratories and Indian Industry Partners.
- The missile incorporates many novel technologies including Dual-band IIR Seeker, miniaturised Reaction Control System and integrated avionics.
- The propulsion is provided by a dual thrust solid motor.

### Significance

- Being man-portable and lightweight compared to the other missile systems in the Army's armoury, it can be deployed in the mountains close to the LAC at a short notice.
- When inducted, they will be a critical air defence missile for the forces, even for an all-equipped infantry unit, and will be the best option for mountain warfare.
- The procurement of VSHORAD, as a robust and quickly deployable system, will strengthen India's air defence capabilities.

## Joint India Singapore Exercise 'BOLD KURUKSHETRA'

## Defence & Security

### Why in news?

- The Singapore Army and Indian Army participated in the 13th edition of Exercise Bold Kurukshetra, a bilateral armour exercise recently at Jodhpur Military Station, India.

### Bold Kurukshetra

- For the first time in the exercise series, both armies participated in a command post Exercise, which involved Battalion and Brigade level planning elements and computer wargaming. Hosted by the Indian Army.
- The ten-day long joint training that commenced on 05th March fostered common understanding of mechanised warfare in emerging threats and evolving technologies, developing inter-operability through a computer simulation-based Wargame using joint operational and tactical procedures controlled through a joint command post.
- Both contingents not only learnt about each other's operating drills and procedure, but also exchanged ideas and best practices being followed in a modern combat zone.
- Exercise Bold Kurukshetra is conducted under the ambit of the bilateral arrangement for the joint Army Training and exercises between the Singapore Army and the Indian Army.
- First conducted in 2005, this exercise underscores the strong and long-standing bilateral defence relationship between both countries and enhances cooperation between the two armies.

## Exercise Sea Dragon 23

## Defence & Security

### Why in news?

- Indian Navy is participating in SEA DRAGON 23 exercise in waters off Guam, USA which has been scheduled from 15- 30 March 23.

### Exercise Sea Dragon 23

- The Sea Dragon is an annual, multinational anti-submarine warfare (ASW) exercise conducted by the United States Navy.
- Participating Countries: India, USA, Japan, Canada and South Korea.
- The annual exercise launched in 2014. This is the third edition of the coordinated multi-lateral ASW exercise for Long Range MR ASW aircraft.
- The Exercise aims to achieve high levels of synergy and coordination between the friendly navies, which is based on their shared values and commitment to an open, inclusive Indo-Pacific.
- The Exercise would witness representation by an Indian Navy P8I aircraft along with other countries' aircrafts.

- This exercise will test the capabilities of participating aircraft in tracking simulated and live underwater targets, whilst also sharing mutual expertise.
- The Exercise aims to achieve high levels of synergy and coordination between the friendly navies, which is based on their shared values and commitment to an open, inclusive Indo-Pacific.

## Search And Rescue (SAR) Exercise

## Defence & Security

### Why in news ?

- The Indian Coast Guard conducted Regional Search and Rescue exercise recently at Kakinada, Andhra Pradesh.

### About SAR

- The aim of the exercise was to simulate a real time maritime distress scenario and highlight the functioning of Search and Rescue (SAR) organisation for a mass rescue operation.
- The exercise involved all stakeholders with effective use of available resources towards M-SAR (Maritime Search and Rescue) contingency efficiently.
- The exercise simulated an Offshore Support vessel (OSV) carrying more than hundreds of passengers that reported a distress call of major fire onboard off Kakinada. Maritime Rescue Sub Centre (MRSC) Kakinada coordinated with all resource agencies to save the lives in distress.
- The two-day long workshop and exercise enhanced knowledge and understanding, promoting cooperation and coordination amongst member agencies for a Mass Rescue Operation (MRO), wherein the efforts of a single agency may not be sufficient.

## Project Akashteer

## Defence & Security

### Why in news?

- The Ministry of Defence signed three contracts – two with Bharat Electronics Limited (BEL) and one with NewSpace India Limited (NSIL) – at a total cost nearly Rs 5,400 crore.

### About the Project

- The Automated Air Defence Control & Reporting System 'Project Akashteer' will empower the Air Defence units of the Indian Army with an indigenous, state-of-the-art capability, to effectively operate in an integrated manner.
- Akashteer will enable monitoring of low level airspace over the battle areas of Indian Army and effectively control the Ground Based Air Defence Weapon Systems.

### Sarang Systems

- Sarang is an advanced Electronic Support Measure system for helicopters of the Indian Navy, designed and developed indigenously by Defence Electronics Research Laboratory, Hyderabad under programme Samudrika.
- The scheme will generate an employment of approximately two lakh man-days over a period of three years.

### Advanced Communication Satellite

- The satellite will considerably enhance the communication capability of the Indian Army by providing mission critical beyond line of sight communication to troops and formations as well as weapon and airborne platforms.
- The geostationary satellite, being a first-of-its-kind in the five-tonne category, will be developed indigenously by Indian Space Research Organisation (ISRO).



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