

MONTHLY CURRENT AFFAIRS

By



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Important News Articles

GS I

1. What drives the process of “atlantification” in Arctic seas? - The Hindu

Relevance: Salient features of the world's physical geography.

News:

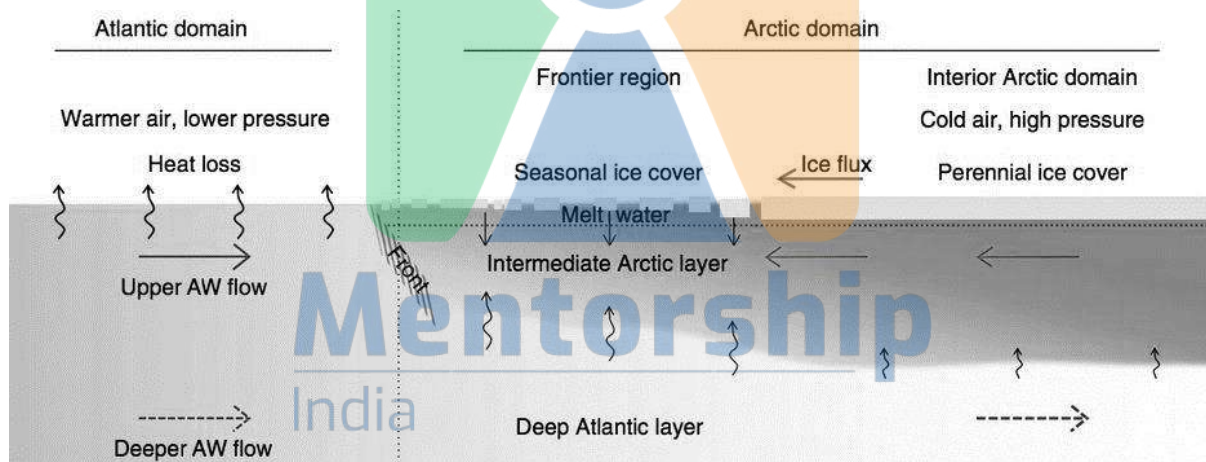
- In recent years, a phenomenon called “**atlantification**” has disturbed ocean stratification in the Arctic and **caused heat fluxes that help melt sea ice.**
- A study shows the Arctic **Dipole is the reason** behind it.

Prelims Takeaway

- Arctic Dipole Anomaly
- Atlantification

Atlantification

- It is the **increasing influence of Atlantic water in the Arctic.**
- **Warmer and saltier Atlantic water** is extending its reach **northward into the Arctic Ocean.**
- The **Arctic Ocean** is becoming **warmer** and **saltier** and **sea-ice is disappearing** as a result.
- This change in the Arctic climate is **most prominent in the Barents Sea**, a shallow shelf sea north of Scandinavia, where **sea-ice is disappearing faster** than in any other Arctic region.
- **Impact:**
 - This pattern, associated with anticyclonic winds over North America and cyclonic winds over Eurasia.
 - It affects the inflow of water from the North Atlantic through the Fram Strait.



Arctic dipole anomaly

- The Arctic dipole anomaly is a pressure pattern characterized by **high pressure on the arctic regions of North America and low pressure on those of Eurasia.**
- It was observed for the first time in the first decade of 2000s and is perhaps **linked to recent climate change.**
- **The Arctic dipole lets more southern winds into the Arctic Ocean** resulting in more ice melting.

2. Extreme weather events lead to increase in child marriages: Study - Down to Earth

Relevance: Social

News:

- According to a recent study published in the journal International Social Work, **extreme weather causes** an

Prelims Takeaway

- Child marriage
- Gender Inequality
- POCSO Act

increase in the occurrence of child, early and forced marriage (CEFM).

- It **intensifies the elements of structural oppression**, such as gender inequality and poverty.

The Study

- Researchers from the Ohio State University, US did a **review of 20 studies published from 2010-2022**.
- They **connected droughts, floods and other extreme weather events to increases in child, early and forced marriages** in low- and middle-income countries.
- **Focus Areas:** Bangladesh, India, Pakistan, Kenya, Indonesia, Malawi, Nepal, Tanzania, Vietnam and sub-Saharan Africa.

Key Findings

- **Gender-based violence (GBV) and inequities worsen** in extreme weather contexts.
- This has **adverse impacts on women and girls' resilience** during weather extremes and disasters.
- **Development initiatives might reproduce or ignore gender disparities**, without concerted efforts accounting for **gender and other social inequalities**.
- CEFM was used as an **adaptive coping strategy** to reduce economic vulnerabilities in extreme weather contexts.
 - In Bangladesh, daughters were married early after Cyclone Aila in 2009 to reduce their economic and food burden on the household.
 - In Kenya, young brides are sought to help with increased labour demands, such as walking long distances to find food and water.
 - In Malawi, girls exposed to drought were more likely to be married early compared to those living in non-drought areas.

Role of dowry or bride price

- An **important factor in the link between CEFM and extreme weather**.
- Girls in sub-Saharan Africa or Vietnam had an **increased probability of CEFM during droughts and rainfall shocks**.
 - As here the groom's family pays a bride price to the bride's family.
- But, in **regions where dowry is common** such as India, girls were **less likely to get married during a drought year**.
 - Since the bride's family could not afford the dowry payment.

Other causes

- Parents resorted to CEFM to **protect daughters from sexual violence and avoid family dishonour**.
 - Rates of sexual assault often escalate during times of crisis, particularly in evacuation camps or temporary shelters.

Gender Inequality and CEFM

- The main driver of child marriage is **gender inequality**.
- **Education and financial control** are key to **empowering women and girls** and allowing them to **make their own decisions**.
- **Educational attainment and CEFM were inversely associated** for girls in India and Malawi.
- The **incidence of CEFM decreased in India and Vietnam as parental education increased**.

Worrying Figures

- Every year, **12 million girls get married before adulthood**.
- The **Global Slavery Index 2023** said **climate change**, along with other environmental factors, has **exacerbated modern slavery in Africa**.
 - More than 3.1 million Africans are in forced marriage and more than 3.8 million in forced labour.
- Girls in their **early or late adolescence** are **highly vulnerable to child marriage**.
- Ensuring that their **education goes uninterrupted** and they **receive adequate nutrition** can go a long way in breaking the cycle.

Global Initiatives that address issue of Child Marriage

- The Convention on the Elimination of All Forms of Discrimination against Women covers the rights to protection from child marriage in Article 16.
- The Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages
- The African Charter on the Rights and Welfare of the Child
- The Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa.

3. Ancient terracotta figurines found during archaeological explorations at megalithic dolmen site near Moodbidri - The Hindu

Relevance: Indian culture will cover the salient aspects of Art Forms, literature and Architecture from ancient to modern times.

News:

- Archaeological explorations were conducted in the **megalithic dolmen site at Mudu Konaje**, near Moodbidri, in Dakshina Kannada.
- It is the **biggest megalithic dolmen site** which consists of **nine dolmens** on the slope of a stone hill.
- Recently, **unique terracotta figurines** in different states of preservation, with **bone and iron pieces** have been found.

Prelims Takeaway

- Megalithic Dolmen Site
- Terracotta
- Location Based Questions

Key Findings

- The **terracotta figurines** found at Mudu Konaje in a megalithic context are a **rare find of India**.
- Mudu Konaje terracotta figurines were **datable to 800-700 BC**.
- Of the **eight figurines found**, there are **two cow bovines, one mother goddess, two peacocks, a horse, a hand of a mother goddess and an unknown object**.
- First Cow Bovine**
 - One of the two cow bovines is a **solid handmade human body with a bull's head**.
 - It has a **clear snout of a bull** and its **femininity is well attested** by two breasts attached by the applique method.
 - A **thin line of groove** is created from below the right arm till the left side of the neck.
 - It has **two arms, but the hands are broken** and the left arm is turned towards the front.
 - Flatten wide belly** and a round section below the belly is seen.
 - Indication of **two legs** is clearly found.
 - Elongated round bun** at the back of the head as **headgear** is seen.
- Second Cow Bovine**
 - The second cow bovine is another **solid handmade figurine**.
 - It has a **bovine snout** and an **archtype head gear**.
 - It has **applique ornamentation** round the neck and below the belly.
 - At the bottom there are **no legs but a prop to stand the image**.
- The Peacocks**
 - One of the two peacocks is a **solid peacock**.
 - It is dipped into **red ochre** and its **feathers are down** towards the earth.
 - Another peacock has the **elongated head created separately**, which can be insertable into a shallow body.
 - The **body is missing** and the **feathers are designed upwards**.
- The **torso of a mother goddess** has **no head, hands and legs**.

Significance of Findings

- The **cow bovines** found in the dolmens helps to **determine the chronology of the dolmens**.
- Terracottas** found in the megalithic burial provides a solid ground for the study of the **Bhoota cult or Daiva Aradhane of coastal Karnataka**.
- Cow bovines** had its parallels in **Malampuzha megalithic terracotta figurines of Kerala and Egypt**.

Megalithic Dolmen Site

- Megalithic culture is known for its **different types of burials** and **use of iron in India** and **Dolmen is one among them**.
- Under a dolmen, **huge stone slabs** known as **orthostats** are **erected in clockwise order**, which creates a square room.
- This square chamber is **closed by another huge stone slab as a capstone**.
- Generally, on the Eastern slab, a **round or U-shaped entrance known as port hole** is created.

It is **known by different names in South India** like Kalmane, Pandavara Mane, Moriyara Mane, Moriyara Betta etc. which **reveals its popularity among the common people**

4. Libya's Catastrophic Flooding- The Hindu

Relevance: Salient features of world's physical geography.

News:

- Recently, **Eastern Libya experienced a catastrophic event as floods** caused by Storm Daniel, brought widespread destruction.
- The **enormous surge of Mediterranean storm water burst** two upstream river dams and reduced the city of Derna to an apocalyptic wasteland
- **Entire city blocks** and untold numbers of people were **washed into the Mediterranean.**
- **Decades of war and a lack of a central government** have resulted in deteriorating
- **Infrastructure, making the country highly susceptible** to the recent torrential rains.
- **Libya is the only nation without a climate strategy**, as per the United Nations.
- **This catastrophe underscores the urgent need for stability**, unity, and comprehensive
- governance in Libya, as it continues to **grapple with multiple crises**, from internal unrest to the exploitation of migrants and oil revenue disputes.

Prelims Takeaway

- Mediterranean Sea
- Mediterranean storm

Mediterranean storm

- It is also known as a **Mediterranean cyclone or a Mediterranean low**, is a type of weather system that forms over the Mediterranean Sea.
- **Mediterranean storms can vary in intensity and impact**, but they often lead to **heavy precipitation**.
 - which can result in **flooding, landslides, and other weather-related hazards.**



5. Santiniketan finds its place on UNESCO's World Heritage List - The Hindu/ Santiniketan on UNESCO's World Heritage List - Indian Express

Relevance: Indian culture will cover the salient aspects of Art Forms, literature and Architecture from ancient to modern times.

News:

- **Santiniketan**, a town located in **West Bengal's Birbhum district**, set up by Nobel laureate **Rabindranath Tagore** recently made it to the **UNESCO's World Heritage List.**

Prelims Takeaway

- UNESCO World Heritage Sites
- Santiniketan

Santiniketan

- It is a **renowned cultural and educational institution** located in the Birbhum District of West Bengal, India.
- Santiniketan literally means **"abode of peace" in Bengali.**
- It was the **home of Rabindranath Tagore**, where he lived and **composed many of his literary works**, including songs, poems, and novels.

- Initially, it started as an **ashram (hermitage)** founded by **Rabindra Nath Tagore's father, Debendranath Tagore**.
- But, eventually it developed into a **centre of art, culture, and learning**.

Key Features

- It is known for its **unique educational philosophy**, which emphasizes the **integration of nature, creativity, and holistic learning**.
- It follows the concept of an **open-air classroom** where students are encouraged to learn in close connection with nature.
- Santiniketan is also adorned with **splendid sculptures, frescoes, murals, and paintings** created by renowned artists such as **Rabindranath Tagore, Nandalal Bose and Ramkinkar Baij** among others.

UNESCO World Heritage Sites

- Landmarks or areas selected by UNESCO for their **cultural, historical, scientific or other significant value, legally protected by international treaties**.
- They represent **collective and preservative interests of humanity**, signifying remarkable accomplishments and intellectual history.
- World Heritage Sites require **practical conservation to protect them from risks** like trespassing, uncontrolled access, or administrative negligence.
- Selection Criteria:** The sites must be
 - already-classified landmarks
 - unique and significant culturally or physically, such as ancient ruins, historical structures, cities, monuments, etc.
- World Heritage Committee**
 - selects and monitors World Heritage Sites
 - manages the World Heritage Fund
 - provides financial assistance
 - India is not a member of the World Heritage Committee

6. Karnataka's Hoysala Temples on UNESCO World Heritage List - Indian Express/ PM hails inclusion of Sacred Ensembles of Hoysalas in UNESCO World Heritage List - PIB

Relevance: Indian culture will cover the salient aspects of Art Forms, literature and Architecture from ancient to modern times.

News:

- Recently, the **Hoysala temples at Belur, Halebidu and Somanathapur in Karnataka** were declared as **UNESCO World Heritage Sites**.
- The nominations were entered as **'The Sacred Ensembles of Hoysalas'**.
- All the three temples are protected by the **Archaeological Survey of India (ASI)**.

Prelims Takeaway

- Hoysala Architecture
- UNESCO World Heritage Sites
- Archaeological Survey of India (ASI)

Chennakeshava Temple, Belur

- Construction of the temple **commenced in 1117 AD** during the period of **king Vishnuvardhana** and took 103 years to complete.
- Dedicated to **Lord Vishnu** known as **Chennakesava**, which means beautiful (chenna) Vishnu (Keshava).
- The exterior of the temple narrates **scenes from the life of Vishnu, his reincarnations and the epics Ramayana and Mahabharata**.
- However, some of the **representations of Shiva are also included**.

Hoysaleswara Temple, Halebidu

- It is the **most exemplary architectural ensemble** of the Hoysalas extant today.
- **Commenced in 1121CE** during the reign of the Hoysala King, **Vishnuvardhana Hoysaleswara**.
- The temple, **dedicated to Shiva**, was **sponsored and built by wealthy citizens and merchants of Dorasamudra**.
- **Well-known** for the more than **240 wall sculptures** that run all **along the outer wall**.
- Halebidu has a **walled complex** containing **three Jaina basadi (temples)** of the Hoysala period as well as a stepped well.

Keshava Temple, Somanathapura

- Commissioned by **Somanatha Dandanayaka** during the regime of **Narasimha III in 1268 CE**.
- A **Trikuta temple** dedicated to **Lord Krishna in three forms** namely **Janardhana, Keshava and Venugopala**.
- Unfortunately, the **main Keshava idol is missing**, and the Janardhana and Venugopala idols are damaged.

Hoysala Architecture

- It is the building style developed under the **rule of the Hoysala Empire between the 11th and 14th centuries**, mostly concentrated in **southern Karnataka**.
- They are known for **evolving a distinct style** that is ornate with temple architecture following a **stellate plan built on a raised platform**.
 - Stellate-plan: multiple shrines grouped around a central pillared hall and laid out in the shape of an intricately-designed star.
- The **material** used in temple construction is **chloritic schist (soapstone)**, so, the artists were **able to carve their sculptures intricately**.
 - This can be seen particularly in the **jewellery of the gods** that adorn their temple walls.

7. Over 42% of Indian graduates under 25 unemployed: Report - Indian Express

Relevance: Role of women and women's organization, population and associated issues, poverty and developmental issues, urbanization, their problems and their remedies.

News:

- Recently, "**State of Working India 2023**" report by **Azim Premji University's Centre for Sustainable Employment** was released.
- It stated that over **42 per cent of India's graduates under 25 were unemployed** in 2021-22.

Prelims Takeaway

- Periodic Labour Force Survey
- Unemployment

Key highlights

- The overall **unemployment rate reduced to 6.6 per cent** in 2021-22 from 8.7 per cent in 2017-18,
- After the coronavirus pandemic, **60 percent of women were self-employed** as compared to 50 per cent before the pandemic.
- It was accompanied by a **decline in self-employment earnings**, which in 2022 were only 85 percent of what they were in the first quarter of 2019.
 - It is reflecting the impact of distress induced by the pandemic.
- There has been an **upward trend in intergenerational mobility**
- The trend has been **weaker for workers belonging to Scheduled Castes and Scheduled Tribes categories** as compared to workers belonging to general castes.
- For unemployment based on education and age groups, the report stated that **42.3 per cent of graduates under 25 are unemployed**
- The figure stands at **21.4 per cent** for those who have completed **higher secondary education** in the same age group.
- Notably, **with lower educational qualifications, the rate of unemployment also decreased**.
- The **minimum wage a graduate would demand** is much higher and if the **economy is not generating such jobs**, they may choose to be unemployed."
- Those getting **graduate-level education come from high-income households** or with at least one parent with a good job.
- For those kinds of young people, they have the **luxury to stay unemployed**.

- With regards to intergenerational upward mobility, **75.6 percent of SC/ST men in casual wage work also had sons involved in casual wage work in 2018.**
- In comparison, **the figure stood at 86.5 per cent in 2004.**
- This is indicating that **sons of casual wage workers belonging to SC/ST category have moved to other kinds of employment**, most notably informal regular wage work.
- The drop in this figure is more significant for the **general caste category**, from **83.2 per cent in 2004 to 53 per cent in 2018.**

Caste-wise participation in the workforce

- The report observed that the share of **SC workers in casual wage work has reduced** significantly between 1983 and 2021
- The reduction has been **more significant for general caste workers.**
- For instance, in 2021, **40 percent of SC workers were involved in casual employment as compared to 13 per cent of general caste workers.**
- Furthermore, around **22 percent of SC workers were regular wage workers as opposed to 32% of general caste workers.**
- According to the **Periodic Labour Force Survey 2021-22**, the unemployment rate in India stood at **4.1 percent for that period.**

Impact of economic growth on job

- The **report looks at the nature of economic growth** in India.
- One thing that **stands out is that economic growth has not guaranteed employment.** With every percentage increase in GDP, the capacity to generate jobs has systematically declined,
- There has been **movement of the labour force out of agriculture**, workers have not been able to move into salaried employment,
 - a trend that was present before the pandemic as well.
- whatever **salaried work is being generated has tended to be informal salaried work.**
- Salaried work **should come with a contract and other benefits**, but increasingly good salaried jobs are less and less prominent.

8. Uttarakhand HC to state: Why keep Joshimath report secret? - Indian Express

Relevance: Disaster and disaster management.

News:

- The Uttarakhand High Court has expressed concerns about the state government's decision to keep confidential the **reports regarding the subsidence in Joshimath.**
- After **cracks appeared in several houses in Joshimath in January**, the government had enlisted eight technical institutions to prepare a study report.

Prelims Takeaway

- Geographic fault
- Joshimath

Joshimath Issue

- Joshimath (also called Jyotirmath), **located in the Chamoli district of the Himalayan state of Uttarakhand**
- It is located in **seismic zone five** and bound by two regional thrusts: Vaikrita in the north and Munsiri in the south.
- Scientists from the Indian Institute of Remote Sensing, Dehradun, observed that **Joshimath and the surrounding areas have been sinking at a rate of 6.5 cm (2.5 inches) per year**
- **Data was based on satellite data** from July 2020 to March 2022.
- Their findings correlate well with the **base erosion of the Joshimath slope along the Alaknanda river.**

Reason behind Land subsidence:

- Experts have pointed out that Joshimath city has been built on an **ancient landslide material**
 - It means it rests on a deposit of sand and stone, not rock, which doesn't have high load-bearing capacity.
- This makes the **area extremely vulnerable to ever-burgeoning infrastructure and population.**

- **Unplanned and unauthorised construction** has led to the blocking of the natural flow of water, which eventually results in frequent landslides.
- **Tapovan Vishnugad Hydro Power Project** -
 - The construction of the Project is also seen as one of the reasons for the incident.
 - It was found that the tunnel had **water seepage from a punctured aquifer**, leading to the drying of water sources in Joshimath.
- It may also be the result of the **reactivation of a geographic fault**
 - Defined as a **fracture or zone of fractures between two blocks of rock**
 - Where the Indian Plate has pushed under the Eurasian Plate along the Himalayas.

9. Madhya Pradesh CM unveils Adi Shankaracharya statue at Omkareshwar: Its story, significance- Indian Express

Relevance: Indian culture will cover the salient aspects of Art Forms, literature and Architecture from ancient to modern times.

News:

- Madhya Pradesh Chief Minister unveiled the **108-foot-tall 'Statue of Oneness' of Adi Shankaracharya at on the Mandhata island of Khandwa Omkareshwar**
- It will form an **important tourism circuit, along with Ujjain, Maheshwar and Mandu religious towns.**

Prelims Takeaway

- Ekatma Dham
- Adi Shankaracharya

Who was Adi Shankaracharya?

- Adi Shankara, who is believed to have **lived between 788 and 820 AD**, was born in **Kerela's Kaladi, situated on the bank of the Periyar River.**
- He became a **sanyasi at an early age and left his Brahmin household**, where he is said to have made his way to Omkareshwar.
- **he studied under his guru Govinda Bhagavatpada** and soon became a **proponent of Advaita Vedanta**
 - It challenges prevailing philosophical traditions – including Buddhism and Jainism.
- He is said to have **authored 116 works.**
- The most notable among **them are the commentaries on the 10 Upanishads, the Brahmasutra and the Gita.**

Mandhata island- an important religious destination?

- The Mandhata island, **nestled on the Narmada River**
- It is **home to two of the 12 Jyotirlingas** – Omkareshwara (located on the south side of the island) and Amareshwara.
- The area is close to **Mahakaleshwara Jyotirlinga at Ujjain, located 110 km to the northwest.**
- The name '**Omkareshwar**' is derived from the shape of the island, which resembles the sacred syllable '**Om**', and its name means 'the Lord of Omkara'.

What are the other projects?

- The statue will be **accompanied by Ekatma Dham**, which will include the **Advaita Lok museum**,
- It is built to "**showcase the life and philosophy of Acharya Shankar** through exhibits reflecting the message of Advaita Vedanta,"
- **The Ekatma Dham will feature a mosaic of architectural styles**, including "Nagara, Dravidian, Oriya, Maru-Gurjara, Hoysala, North Indian-Himalayan, and Kerala" styles
- **The museum will include a "3D hologram projection gallery,**

10. 33% promise in LS, but women's representation is low in key positions, professions, sectors- Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- The Ministry of Statistics and Programme Implementation in a report stated that women's representation is low in key positions, professions, sectors.

Prelims Takeaway

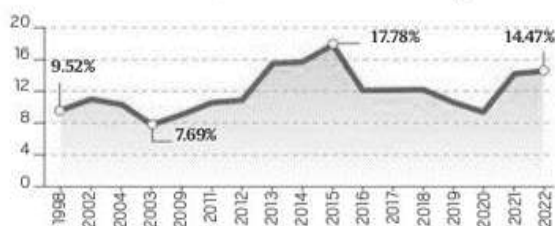
- The Ministry of Statistics and Programme Implementation
- Women reservation bill

TELLING NUMBERS

33% promise in LS, but women's representation is low in key positions, professions, sectors

UNION COUNCIL OF MINISTERS: 14%

THE REPRESENTATION of women in the Central Council of Ministers was 14.47% – 11 women, including two Cabinet Ministers, in the 76-member Council – as on January 1, 2023. In the last 20 years, the share of women in the Union ministry has been lower – 12% on average.



JUDICIARY: 10% IN SC, HIGHER IN HIGH COURTS

ONLY 3 women (10%) among the 29 judges of the SC as on September 29, 2022. (The court's current strength is 32.) Women judges' proportion in HCs ranged from 0 to 33.33% at the end September last year.

Women in SC & HCs	%
SUPREME COURT	10.34
HIGH COURTS	
Sikkim	33.33
Telangana	29.41
Delhi	23.91
Gujarat	21.43
Madras, Gauhati	16.67
Calcutta	14.81
Punjab & Haryana	14.29
Bombay	13.11
Jammu & Kashmir	12.50
Madhya Pradesh	9.09
Manipur, Meghalaya, Patna, Tripura, Uttarakhand:	0

Not all HCs have been listed

POLICE & SECURITY FORCES: 8%

FEMALE Police Officers were just 8.21% of the total as on January 2021 – 2,50,474 of the total police strength of 30,50,239. These women were posted in various police organisations including Civil Police, BSF, CISF, CRPF, ITBP, Assam Rifles, RPF etc.

Women in police organisations	%
Civil Police	12.58
District Armed Reserve Police	11.19
Special Armed Police Battalion	3.63
Indian Reserve Police Battalion	4.63
Assam Rifles	1.61
Border Security Force	2.25
Central Industrial Security Force	6.15
Central Reserve Police Force	2.78
Indo-Tibetan Border Police	2.54
National Disaster Response Force	1.39
National Security Guard	0.58
Railway Protection Force	8.95
Sashastra Seema Bal	2.59

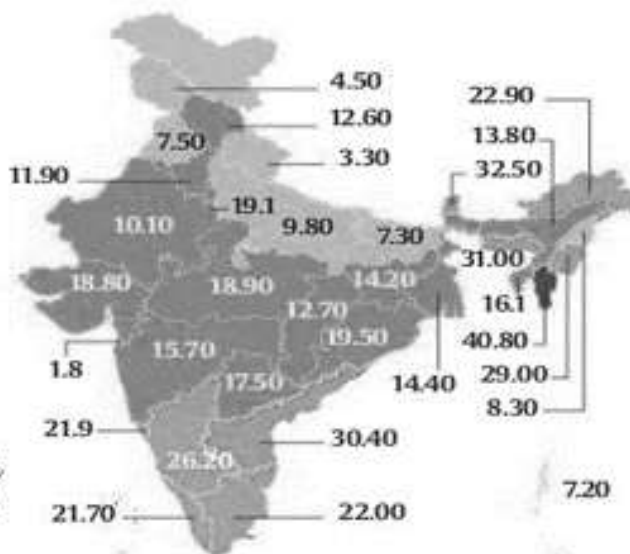
MANAGERIAL POSITIONS: FEWER THAN 1 IN 5 WORKERS

THE RATIO (%) of female workers to total workers in usual status working in managerial positions was recorded at 18% in 2021, according to the Women & Men in India 2022 report.



State-wise Ratio (%) of female workers to total workers in usual status (ps+ss) working in managerial positions, 2021

Source of all data: Women & Men in India 2022 report, Ministry of Statistics & Programme Implementation (MoSPI), Govt



11. Cancel free movement along Myanmar border: Manipur Chief Minister tells Centre - Indian Express

Relevance: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

News

- The Manipur state government has requested the Centre to permanently wind up the **Free Movement Regime (FMR)** along the Indo-Myanmar border.
- Recently, at a press meet, CM of Manipur said that the FMR has been the biggest impediment in Manipur's efforts to curb the influx of illegal migrants from Myanmar through the unfenced border.

Prelims Take Away

- Indo-Myanmar Border
- Assam Rifles
- Free Movement Regime

Issues raised by CM of Manipur

- **Permanently freeze the Free Movement Regime (FMR)**
 - FMR has been the biggest impediment in Manipur's efforts to curb the influx of illegal migrants & drug trafficking from Myanmar through unfenced border.
- State is working towards **National Register of Citizens and fencing of the border with Myanmar**
- **On the issue of deployment of security forces**
 - CM said that the security forces instead of being deployed at zero point, were found guarding the border 14 to 15 km inside Indian territory.

Issue of refugees and illegal migrants

- **Since the military coup** in Myanmar on February 1, 2021, the **ruling junta** has **launched a campaign of persecution** against the **Kuki-Chin people**.
- This has **pushed** large numbers of **Myanmar's tribals across** the **country's western border** into India, especially into Manipur and Mizoram, where they have sought shelter.
- **Mizoram**, where a **large section** of the population has close **ethnic and cultural ties** with people across the border, has set up **camps** for more than **40,000 refugees**, despite protests from the **Union Ministry of Home Affairs**.
- **Manipur** too has received a **chunk of illegal migrants** over the past year and a half.
 - A **committee** set up by the **state government** to identify such **migrants** recently put their number at 2,187.
 - In September 2022, 5,500 **illegal immigrants** were caught in **Moreh**, and 4,300 were pushed back. **Biometrics of these individuals** have been recorded.

Free Movement Regime:

- Under the FMR, **all the hill tribes, whether they are citizens of India or Myanmar, can travel within 16 km on either side of the Indo-Myanmar Border (IMB)**.
- They **can cross the border by producing a border pass with a one-year validity** issued by the competent authority and **can stay up to two weeks per visit**.
- The FMR was **implemented in 2018** as part of the Central government's Act East policy.
- FMR is **implemented by both governments for the people living along the IMB**.
- This **helps locals to get more culturally assimilated with trans-border villages** through weddings, celebrating common festivals together and trans-border trade.
- It is a **reflection of the physical, ethnic, linguistic, cultural and fraternal linkages** among the trans-border villagers.
- **Indo-Myanmar Border (IMB):**
 - It **runs for 1,643 km** in the four states of **Mizoram, Manipur, Nagaland, and Arunachal Pradesh**.
 - It **runs from the tripoint with China in the north to the tripoint with Bangladesh in the south**.
 - **Assam Rifles is tasked with guarding the IMB**.

12. India, UN launch capacity building initiative - India Today

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News

- **India** and the **United Nations** have **jointly launched** an initiative **aimed at building the capacity** of countries in the Global South.
- The **goal** is to share **India's development experiences, best practices**, and expertise through **capacity-building** and training programs.

Prelims Take Away

- Capacity building initiative

India, UN launch capacity building initiative

- The "**India-UN Capacity Building Initiative**" was announced at the event "India-UN for the Global South-Delivering for Development".
- As part of this initiative, the **UN India team** and the **Bill & Melinda Gates Foundation** will partner together.
- This **partnership** will leverage **India's Technical and Economic Cooperation platform** to share India's development experiences and best practices across the world.

Key highlights

- **Operationalise development-relevant deliverables** of India's G20 Presidency. Hence, it is seen as a big boost to India's G20 Presidency. This includes:
 - the G20 Action Plan for Accelerating Progress on the SDGs,
 - technological transformation and building Digital Public Infrastructure.
- **Complements the India-UN partnership** in the form of "India-UN Development Partnership Fund".
 - This fund has reportedly developed a portfolio of 75 development projects in 61 countries in the last 6 years.
- **Significance**
 - Contribution to global efforts towards accelerating momentum for achieving the SDGs by strengthening South-South Cooperation.
 - Reflects India's continuing efforts to strengthen its development partnership with the Global South.
 - It builds upon the extensive cooperation in development and capacity building that India already has bilaterally with partner countries.

13. Cheetahs may be flown in from new countries-The Hindu

Relevance: Distribution of key natural resources across the world (including South Asia and the Indian sub-continent); factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).

News:

- Wildlife experts associated with **Project Cheetah** are **considering options of importing the next batch of big cats** from countries other than South Africa and Namibia.

Project Cheetah

- It is **India's cheetah relocation programme**.
- This is the first **intercontinental reintroduction of a wild, large carnivore species**.
- The project is **to bring in 5-10 animals every year**, over the next decade, until a self-sustaining population of cheetahs is established.
- Asiatic Cheetahs were once abundant in India but the **last cheetah in the country died in 1952**.
- **The animals brought from Namibia and South Africa** are the Southeast African cheetahs.
- Under Project Cheetah, the animals are translocated from the forests of South Africa and Namibia **to the Kuno National Park in Madhya Pradesh**.
- Since last year, **Kuno National Park has received 20 cheetahs with the aim of establishing a free-ranging population**.

Prelims Takeaway

- National Tiger Conservation Authority (NTCA)
- Project Cheetah

- **The National Tiger Conservation Authority (NTCA) is the apex body** entrusted with the implementation of Project Cheetah.
- **NTCA comes under the Ministry of forest, environment and climate change.**
- **The Cheetah Conservation Fund (CCF) is also assisting** the Indian government in reintroducing cheetahs in India.

National Tiger Conservation Authority (NTCA)

- It is a **statutory body under the Ministry of Environment, Forests and Climate Change.**
- It was **established in 2005 following the recommendations of the Tiger Task Force.**
- It was **constituted under enabling provisions of the Wildlife (Protection) Act, 1972**, as amended in 2006, for strengthening tiger conservation, as per powers and functions assigned to it.

14. India ageing, elderly to make up 20% of population by 2050: UNFPA report - The Hindu

Relevance: Salient features of Indian Society, Diversity of India.

News:

- **The India Ageing Report 2023 was released recently by the United Nations Population Fund (UNFPA) and the International Institute for Population Sciences (IIPS).**
- **The report projects that the number of people aged 60 and above in India will double from 149 million in 2022 to 347 million in 2050.**

Prelims Takeaway

- United Nations Development Programme (UNDP).

Key highlights of the report

- **The decadal growth rate of the elderly population of India** currently estimated to be at 41%.
- **With this rate, the percentage of elderly population in the country projected to double to over 20% of total population by 2050.**
- **By 2046, it is likely that elderly population will have surpassed the population of children (aged 0 to 15 years) in the country.**
- **The report projected that the population of people aged 80+ years will grow at a rate of around 279% between 2022 and 2050 with a predominance of widowed and highly dependent very old women.**
- **More than 40% of the elderly in India are in the poorest wealth quintile**, with about 18.7% of them living without an income.
- **Such levels of poverty may affect their quality of life and healthcare utilisation.**
- **The data showed that women, on average, had higher life expectancy** at the age of 60 and at the 80, when compared to men — with variations across States and Union Territories.
- **The sex ratio (females per 1,000 males) among the elderly has been climbing steadily since 1991**, with the ratio in the general population stagnating.
- **Significant inter-State variation in absolute levels and growth of the elderly population**
- **Most States in the southern region and some northern States** such as Himachal Pradesh and Punjab reported a higher share of the elderly population than the national average in 2021.
- **States reporting higher fertility rates and lagging in demographic transition**, including Bihar and Uttar Pradesh, expect to see an increase in the share of the elderly population between 2021 and 2036.
- **Compared with southern and western India, central and northeastern regions** have the younger group of States as indicated by the ageing index.
- **Challenges: Poverty is inherently gendered in old age**
- **The report suggested that poverty in old age is not a uniform or gender-neutral phenomenon.**
- **Older women are more likely to be widowed, living alone, with no income and with fewer assets of their own, and fully dependent on family for support.**
- **The report pointed out that the major challenges facing India's ageing population are the feminisation and ruralisation of this older population.**
- **The report also highlighted that there is a lack of credible data on various issues related to the elderly in India.**

Suggestions

- Called for a special **focus on older persons in disaster-preparedness plans**
- The government **must work on increasing awareness about schemes for older persons,**
- This can be **done by creating short-term care facilities like creches or day-care facilities.**
- The government **should encourage the creation and running of elderly self-help groups,**
- Ensure that elderly people live in **multigenerational households.**

15. Architect of India's Green Revolution departs

Relevance: Distribution of key natural resources across the world (including South Asia and the Indian sub-continent); factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).

News:

- **M.S. Swaminathan, the agricultural scientist** known as the father of the Green Revolution in India, died at his residence in Chennai.

Prelims Takeaway

- Carbon fixation

- He played a pivotal role in **defining India's tryst with scientific agriculture.**

the Green Revolution

- A period of rapid, **scientific agricultural advancement in the mid-1960s** that involved growing a high-yielding, disease-resistant variety of wheat, primarily in Punjab.
- He was the **key architect of this movement**
- **Short-straw or dwarf varieties of crops** like rice and wheat formed the basis of India's Green Revolution.
- Dwarf strains have a higher Harvest Index, which means that the plant puts more of its energy resources into seeds rather than leaves or other plant structures.

high-yielding varieties of crops (HYVs)

- HYVs produced a **higher yield of crop per hectare in comparison to traditional variants.**
- These variants are produced using a combination of traditional breeding steps and **biotechnology**, which includes genetic diversity.
- The resulting HYVs are **usually disease-resistant and have a higher tolerance to conditions like drought.**
- **IR8, a variety of rice developed by the International Rice Research Institute (IRRI)**
- **This "miracle rice" was first introduced in the Philippines**

Yield gap

- The **difference between the potential or maximum achievable yield of a crop and the actual realized yield for a given area** is called the yield gap.
- During the **Green Revolution, one of the main areas of focus was the increase productivity** from existing farmlands using HYVs in order to tackle the threat of famine.

Cytogenetics

- Cytogenetics is the **study of chromosomes (DNA-carrying structures) and how they relate to hereditary characteristics and traits.**
- Identifying traits such as **resistance to diseases, drought, and pests in crops are applications of cytogenetics.**

Hexaploid wheat

- Scientifically known as **Triticum aestivum, hexaploid wheat contains six sets of chromosomes and is among the most widely cultivated cereal crops** across the world.
- It is also called "**bread wheat**"
- **Dr. Swaminathan is associated with research on the cytogenetics of hexaploid wheat.**

GS II

16. E-buses will be allotted to cities based on population - The Hindu

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- The 10,000 **electric buses under the PM e-bus Sewa scheme**, would carry a uniform branding provided by the Centre
- It would be allocated **based on the population** of a particular city.
- As per the **Ministry of Housing and Urban Poverty Alleviation** the 169 eligible cities would be categorised into four groups based on population
 - 15-20 lakh
 - 10-15 lakh
 - 5-10 lakh
 - less than 5 lakh.
- The scheme which would be rolled out **on a Public-Private Partnership mode**.
- The scheme is aimed at enhancing **green mobility**

Prelims takeaway:

- PM e-bus Sewa scheme

The PM e-bus Sewa Scheme

- It intends to **augment city bus services** with 10000 e-buses on a **PPP model**.
 - An e-bus is any bus whose propulsion and accessory systems are powered exclusively by a zero-emissions electricity source.
- It will have an **estimated cost of ₹57,613 crore**, of which the Centre will provide ₹20,000 crore.
- It will **support the bus operations for 10 years**.

Two segments of the Scheme

- **Segment A – Augmenting the City bus services (169 cities)**
 - The approved bus scheme will augment city bus operations with 10,000 e-buses on a PPP model.
- **Segment B – Green Urban Mobility Initiatives (GUMI) (181 cities)**
 - It envisages green initiatives like bus priority, infrastructure, multimodal interchange facilities, NCMC-based Automated Fare Collection Systems, Charging infrastructure, etc.

Coverage

- The scheme will **cover cities of 3 lakh and above population** as per the **census 2011**.
- Priority will be given to **cities having no organised bus service**.

Significance

- **Promote e-mobility** and provide full **support for behind-the-meter power infrastructure**.
- Foster **innovation in the e-mobility sector** including for high-efficiency e-buses.
- Help develop a **resilient supply chain** for the electric vehicles segment.
- Bring in **economies of scale for procurement** of electric buses through aggregation for e-buses.
- The scheme is expected to **generate 45,000 to 55,000 direct jobs**.
- Help **reduce air and noise pollution** and **curb carbon emissions**.
- Increased share of bus-based transportation will **reduce greenhouse gas emissions**.

17. After India, Philippines, Malaysia and Indonesia protest China's map - The Hindu/ After India, now Philippines, Malaysia and Taiwan reject China's latest map - Indian Express

Relevance: India and its neighbourhood- relations.

News:

- Recently, **The Philippines, Malaysia and Indonesia** released separate statements **voicing their opposition to China's new "standard map"** for 2023
- They said the drawing of territorial lines, including in the 2023 Edition of the Standard Map of China, **must be in accordance with the UN Convention on the Law of the Sea 1982 (UNCLOS 1982)**.

Prelims takeaway:

- South China Sea
- UN Convention on the Law of the Sea, 1982

UN Convention on the Law of the Sea 1982 (UNCLOS 1982)

- Adopted in 1982, it is also called the **Law of the Sea Convention**
- It is an international agreement that establishes a **legal framework for all marine and maritime activities**.
- As of June 2016, **167 countries and the European Union** are parties.
- It divides marine areas into five main zones namely
 - Internal Waters
 - Territorial Sea
 - Contiguous Zone
 - Exclusive Economic Zone (EEZ)
 - The High Seas
- The United Nations General Assembly develop an **international legally binding instrument under UNCLOS** on the conservation and sustainable use of marine biological diversity of areas beyond **national jurisdiction**
- While UNCLOS has been **signed and ratified** by nearly all the coastal **countries in the South China Sea**, its interpretation is still **hotly disputed**.

18. Special Session of Parliament from Sept. 18 to 22; agenda under wraps - The Hindu/ Govt calls special session of Parliament later this month, keeps all guessing - Indian Express

Relevance: Parliament and State legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these.

News:

- Recently the Union government announced a Special Session of Parliament from September 18 to 22, shortly after the conclusion of the G-20 Summit in New Delhi.

Prelims takeaway:

- Session of parliament
- prorogation

Sessions of Parliament:

- The summoning of Parliament is specified in **Article 85** of the Constitution.
- The decision is taken by **the Cabinet Committee on Parliamentary Affairs** which is formalised by the **President**, in whose name MPs are summoned to meet for a session.
- India does not have a fixed parliamentary calendar.
- By convention Parliament meets for three sessions in a year.

Budget Session:

- It is the longest session
- Starts towards the end of January, and concludes by the end of April or first week of May.
- The session has a recess so that Parliamentary Committees can discuss the budgetary proposals.

Monsoon Session:

- The three-week session usually begins in July and finishes in August.

Winter Session

- held from November to December.

Summoning of Parliament:

- Summoning is the process of **calling all members** of the Parliament to meet.
- The **President** summons each House of the Parliament from time to time.
- The **gap between two sessions** of the Parliament **cannot exceed 6 months**, which means the Parliament meets at least **two times in one year**.

Adjournment:

- Adjournment **terminates the sitting of the House** which meets again at the **time appointed for the next sitting**.
- The postponement may be for a specified time such as hours, days or weeks.

Adjournment sine die

- If the meeting is **terminated without any definite time/ date fixed** for the next meeting, it is called Adjournment sine die.

Prorogation:

- Prorogation is the **end of session** and not the dissolution of the house (in case of Lok Sabha, as Rajya Sabha does not dissolve).
- The **time between the Prorogation and reassembly** is called **Recess**.

19. Speedy trial can address jail overcrowding: SC panel - Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- **The Supreme Court Committee on Prison Reforms** said living conditions in jails are not comparable to those envisaged under the Model Prison Manual, 2016.
- It requires urgent and **result-oriented attention**.
- 12 states were selected for study in the **first preliminary report on overcrowding in prisons**
- The highest rate of overcrowding was observed in:
 - district prisons (148 per cent)
 - central prisons (129 per cent)
 - sub-prisons (106 per cent).

Prelims takeaway:

- Model prison act

Key points:

- **factors contributing to overcrowding in jails:**
 - stagnancy of prison infrastructure against steady increase in inmate flow
 - lack of initiative
 - drive of expansion or improvement in prison infrastructure
 - avoidable arrests
 - incarceration for petty offences
 - delay in investigation and trial.
- **Undertrial Review Committee (UTRC)** mechanism needs to be **strengthened** to address the issue of overcrowding
- Following steps can be taken to address the issue:
 - special fast track courts to be set up to extensively deal with petty offences and for cases pending for five years or more.
 - high courts should direct the District & Sessions Judge to regularly monitor the progress of cases pending in courts.
- Shortage of staff in prison departments across the country needs to be addressed immediately by **filling up the existing vacancies**.
- There are **existing legal provisions of sentencing, alternative** to one of **imprisonment**, for some offences should be used to their full potential by the courts such as:
 - Fine
 - Probation
 - Admonition

20. Govt. panel to study simultaneous polls to LS, State Assemblies - The Hindu/ One nation, one election: Govt sets ball rolling, with panel under Kovind - Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Recently, the government has constituted a **committee to look into the 'One Nation, One Election' issue** and submit a report for a debate in Parliament.
- Former President Ram Nath Kovind** would head the **committee** on One Nation, One Election.

Prelims Takeaway

- One nation one election
- Election commission

Background

- The Election Commission first **mooted** the idea around since at least **1983**.
- Until 1967, simultaneous elections** were **the norm** in India.
- The **first General Elections** to the House of People (Lok Sabha) and all State Legislative Assemblies were held **simultaneously in 1951-52**.
- The **practice continued** in three subsequent General Elections held in the years **1957, 1962 and 1967**.
- However, due to the **premature dissolution of some Legislative Assemblies in 1968 and 1969, the cycle got disrupted**.
- In **1970**, the **Lok Sabha** was itself **dissolved prematurely** and fresh elections were held in 1971.
- As a result of **premature dissolutions and extension of terms of both the Lok Sabha and various State Legislative Assemblies**, the cycle of simultaneous elections has been disturbed.

Arguments in the favour of 'One Nation, One Election'

- To reduce the **problem in the decision-making process**.
- It helps in **reducing election expenses** for both political parties and the government
- The idea of **simultaneous elections** for **Parliament, State assemblies and local bodies** will:
 - Reduce expenditure
 - Ensure efficient utilisation of government resources and security forces
 - Help in effective policy planning.

Arguments against 'One Nation, One Election'

- Critics say that simultaneous elections are almost impossible **to implement**, as it would be **midterm polls in the States**, due to political instability in the States.
- Term of Legislative Assemblies cannot be reduced**, to have simultaneous elections to Legislative Assemblies and Parliament
- There is a possibility of **midterm polls for Parliament** also, due to the ruling **party losing majority**, as it happened earlier.

21. Children from void marriages entitled to parents' share in property, says SC - The Hindu/ Child from void marriage can claim ancestral property: SC - Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Recently, the Supreme Court held that a **child born of a void or voidable marriage can inherit the parent's share in a joint Hindu family property governed by the Mitakshara law**.

Prelims Takeaway

- Hindu Succession (Amendment) Act, 2005
- Voidable marriage

- A child would **not be entitled** to rights in or to the property of **any other person in the family**.

Voidable marriage

- A voidable marriage is one that is made **invalid by the husband or wife through a decree**.
- A void marriage is invalid **at the very inception**.

Legal provision for child through voidable marriage:

- **Section 16 of the Hindu Marriage Act** has statutorily conferred **legitimacy to children** born out of void or voidable marriages.
- **Section 16(3)** stipulates that children from void and voidable marriages would have a **right to their parents' property**.
- Children from void or voidable marriages come **within the ambit of "legitimate kinship"** and cannot be regarded as illegitimate by the Hindu Succession Act when it comes to inheritance.
- A child born in such a relationship is innocent and is **entitled to all the rights which are given to other children born in valid marriage** as per **Revanasidappa versus Mallikarjun case**.

Hindu Succession (Amendment) Act, 2005

- Hindu Succession Act, 1956 was amended in September 2005 and **women were recognised as coparceners for property** partitions arising from 2005.
- Section 6 of the Act was amended to make a **daughter of a coparcener also a coparcener by birth "in her own right** in the same manner as the son".
- It also **gave the daughter the same rights and liabilities** "in the coparcenary property as she would have had **if she had been a son**".
- The law applies to **ancestral property and to intestate succession** in personal property, where succession happens as per law and not through a will.

22. HC declares as null and void election of Prajwal Revanna - The Hindu

Relevance: Salient features of the Representation of People's Act.

News:

- Recently, the High Court of Karnataka on Friday declared as **null and void the election of Prajwal Revanna of Janata Dal (Secular)** for indulging in a series of **corrupt practices during the poll process**.
- He contested from Hassan Lok Sabha constituency in the **general elections held in April-May 2019**.
- The court also **rejected the plea of A. Manju**, who had then unsuccessfully contested the elections from the Bharatiya Janata Party, **to declare him as a returned candidate in place of Mr. Prajwal**.
- Mr. Manju as the returned candidate as **he too had indulged in corrupt practices**.

'Corrupt Practices' under the RPA, 1951

Section 123 of the Act:

- It defines '**corrupt practices**' and include:
 - Bribery
 - undue influence
 - false information
 - promotion or attempted promotion of "feelings of enmity or hatred between different classes of the citizens of India on grounds of religion, race, caste, community, or language".

Section 123 (2):

- It deals with '**undue influence**' with the consent of the candidate or his election agent, with the free exercise of any electoral right."
- This could also include **threats of injury, social ostracism and expulsion from any caste or community**.

Section 123 (4):

- It **extends the ambit of "corrupt practices"** to the intentional publication of false statements which can prejudice the outcome of the candidate's election.
- Under the provisions of the Act, an elected representative can be **disqualified if convicted of certain offences** on grounds of;
 - Corrupt practices
 - For failing to declare election expenses
 - For interests in government contracts or works.

Prelims Takeaway

- Salient features of the Representation of People's Act
- Corrupt Practices' under the RPA, 1951

23. NCERT given deemed-to-be university tag, says Pradhan - The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News

- Recently, the Union Minister for Education and Skill Development and Entrepreneurship announced that **the National Council of Educational Research and Training (NCERT)** has been granted the **status of deemed university**.
- The Union Minister made an announcement during an event to mark the **63rd foundation day of NCERT** in the national capital.

Prelims Takeaway

- The National Council of Educational Research and Training (NCERT)
- Information and Communication Technology (ICT) laboratory

Key Highlights

- The Council, on becoming a **research university**, will **offer opportunities for global collaborations** and contributions to the global educational landscape.
- A **play-based learning-teaching material** tailored for children between the age group of **3-8 years** developed by NCERT.
- Keeping in mind the '**Industrial revolution 4.0**', the union minister suggested developing **small booklets on varied subjects**
 - To provide the facts on the subjects such as India's Covid-19 management, Chandrayaan 3, etc.
- He also inaugurated a **new Information and Communication Technology (ICT) laboratory of the central institute of educational technology (CIET)** on the occasion.

The National Council of Educational Research and Training (NCERT)

- The NCERT is an **autonomous organization set up in 1961** by the Government of India
- **The Executive Committee (EC) is the highest decision-making body** of NCERT and is **chaired by the Education Minister**.

Objectives

- To **assist and advise the Central and State Governments** on policies and programmes for **qualitative improvement in school education**.
- To undertake, **promote and coordinate research** in areas related to:
 - School education
 - Prepare and publish model textbooks
 - Supplementary material
 - Newsletters, journals
 - Develop educational kits, multimedia digital materials

24. Putin, Erdogan meeting amid efforts to repair Black Sea grain deal - Indian Express

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- The **Russian President will hold talks with Turkey** in the Black Sea resort of Sochi as Ankara and the United Nations seek to **revive a Ukraine grain export deal** that helped ease a global food crisis.
- **Russia quit the deal in July** - a year after it was brokered by the United Nations and Turkey.

Prelims Takeaway

- Black sea
- Black Sea Grain Initiative

Black Sea Grain Deal

- **Ukraine** is among the **world's biggest exporter** of foodgrains, such as wheat and corn, and a **major contributor to the UN's food aid programmes**.
- When **Russia invaded the country** and blockaded its ports, it sent **food prices soaring and raised fears of food security** in the poorer nations of the world.
- Against this backdrop, **the UN and Turkey got Russia to agree to the Black Sea Grain Initiative**.
- In July 2022, **Russia and Ukraine signed a deal to reopen grain exports from Ukrainian Black Sea ports**.
- Under the initiative, **cargo ships would be allowed to travel from and to three Ukrainian ports** of Odesa, Chornomorsk and Pivdennyi (Yuzhny), after inspection that they weren't carrying arms.
- A **control centre** was established in **Istanbul**, staffed by U.N., Turkish, Russian and Ukrainian officials, to run and coordinate the process.
- The deal has been extended twice, and **expired on July 17**.

Why has Russia not agreed to renew it?

- Russia claims that the **promises made to it under the deal have not been met**.
- Russia own **food and fertiliser exports faced obstacles**
- Not enough Ukrainian grain was going to countries in need rather **exported mainly to high-and middle-income countries**.
- While there is no direct restriction on Russia's agricultural products, barriers on **payment platforms, insurance, shipping and other logistics are hampering its exports**.
- One of Moscow's main demands is for the **Russian Agricultural Bank to be reconnected to the SWIFT international payments system**.
 - The EU cut it off in June 2022.

25. LPG price cut, Ujjwala expansion could cost over 37k cr annually - Indian Express

Relevance: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.

News

- Recently, the Union government announced a **price cut** of Rs 200 per **cylinder** for all users and the **beneficiaries of the government's Ujjwala Yojana** will now get a reduction of Rs 400 per cylinder.
- **Expanding the Yojana by adding 75 lakh poor households to its beneficiary base could cost upwards of Rs 37,000 crore on an annualised basis**.

Prelims Takeaway

- Socio Economic Caste Census Data 2011
- Pradhan Mantri Ujjwala Scheme

Pradhan Mantri Ujjwala Scheme

- The Scheme was **launched** by the **Prime Minister** on **1st May, 2016** with the slogan of "**Clean Fuel, Better Life**".
- **Objective:** To safeguard the health of women & children by providing them with a clean cooking fuel – LPG.
- **Implementing Agency:** Ministry of Petroleum & Natural Gas
- **5 crore LPG connections** were to be provided to **BPL (Below Poverty Line)** families with a support of Rs 1600 per connection in the next 3 years (2016-19).
- Subsequently, the target was revised to **8 crore LPG connections** in April 2018.
- **Connections** are issued in the name of **women of the households**.
- The **identification** of the **BPL** families is done through **Socio Economic Caste Census Data 2011**.

26. Centre's DIKSHA e-education platform to offer AI help - The Hindu

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

News:

- The **National eGovernance Division (NeGD)** is set to integrate **Personalised Adaptive Learning (PAL)** into its existing **DIKSHA** platform.

Personalised Adaptive Learning (PAL)

- PAL's software-based approach will allow each student to have an **individualised learning experience** over the course of the curriculum **based on their unique needs and abilities**.
- The National Council of Educational Research and Training (NCERT) has sought the **MeitY's expertise in facilitating PAL for DIKSHA**.
- The process of making PAL is **time consuming** and it will still take three to four years to develop the tech and roll it out for use
- **Budget constraints** have been an obstacle.
- Focus on **improving learning outcomes and school retention**.

Digital Infrastructure for Knowledge Sharing (DIKSHA)

- **Ministry:** Ministry of Education
- **Objectives**
 - Provides e-content for schools via an online portal and a mobile application.
 - It has embedded assistive technologies for learners with visual or hearing impairments.
- It is a **static content repository**.
- It features **digitised National Council of Educational Research and Training (NCERT) textbooks** used by national and State Boards.
- It hosts 2.43 lakh **contributions by 11,624 academicians** by way of teaching videos, explainers, and practice questions.

Prelims Takeaway

- Digital Infrastructure for Knowledge Sharing (DIKSHA)
- Personalised Adaptive Learning (PAL)

27. Community radio station lends an ear to palliative care patients - The Hindu

Relevance: Development processes and the development industry —the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders.

News:

- **Radio Saanthwanam 90.4 FM**, perhaps a first-of-its-kind initiative in **Kerala**, dealing with **social isolation, anxiety and pain of persons undergoing palliative care**.
- The community radio operated by **Pain and Palliative Care Trust**

Prelims Takeaway

- Palliative care
- World health organisation (WHO)

Features:

- Radio Saanthwanam will be transmitting a **wide range of programmes** enabling social interactions and enhancing patients' quality of life."
- Through the radio station, all **information regarding free clinical services and medication** can be easily shared.
- **Effective directions to caregivers** can be given who are attending the patients,"

Palliative care

- It is explicitly recognized under the **human right to health**.
- It is a type of medical care that focuses on **improving the quality of life** for people with serious illnesses.
- It is meant to **address physical, psychological, spiritual, and social needs for people with serious disease**.
- According to **WHO**, each year an estimated **40 million people are in need of palliative care**, 78% of whom live in low- and middle-income countries.
- Also worldwide, only about **14% of people who need palliative care currently receive it**.

- Furthermore, WHO explicitly recognized that **palliative care is part of the comprehensive services required for Non-Communicable Diseases (NCDs) through the Global Action Plan for the Prevention and Control of NCDs 2013–2020.**
- In 2019, the World Health Assembly extended the **WHO Global action plan for the prevention and control of NCDs 2013–2020 to 2030.**

28. Canada pauses negotiations on trade agreement with India, says official - Indian Express

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News

- Recently, **Canada has paused negotiations for a free trade agreement with India.**
- Now both countries will **mutually decide on resuming the talks** in the future.
- Earlier, both countries **re-launched negotiations for an interim agreement**, officially dubbed as **Early Progress Trade Agreement (EPTA).**

Prelims Takeaway

- Free Trade Agreement
- Globalisation

Free Trade Agreement (FTA)

- An **agreement** between countries or regional blocks to **reduce or eliminate trade barriers**, through mutual negotiations with a view to **enhancing trade.**
- It includes **goods, services, investment, intellectual property**, competition, government procurement and other areas.
- This **concept** of free trade is the opposite of **trade protectionism or economic isolationism.**
- FTAs can be **categorised** as
 - Preferential Trade Agreement
 - Comprehensive Economic Cooperation Agreement (CECA)
 - Comprehensive Economic Partnership Agreement (CEPA)

Impact of FTA on the Global Economy

- By blending **local production** with foreign trade, FTAs help **boost growth in economies.**
- As **selected goods** are produced by every country at **lower costs** due to FTAs, international trade increases **production and consumption.**
- FTAs also help **diversify supply chains** by making it easier for more businesses to **conduct business across borders.**

Focus Areas

- **India:** Duty-free access for products like textiles and leather, easy visa norms for the movement of professionals.
- **Canada:** Areas like dairy and agricultural products.
- The **bilateral trade** has **increased to USD 8.16 billion in 2022-23** from USD 7 billion in 2021-22.

Impact of Halting of Negotiations

- It **does not harm Indian trade interests** as **more than half of Indian products** already **enter Canada duty-free.**
- It may **harm Canadian exports**, which would have benefitted from the **crumbling of the high tariff wall in India.**

29. CJJ asks petitioners if Article 370 is above Basic Structure and amending powers of Parliament - The Hindu

Relevance: Constitution of India —historical underpinnings, evolution, features, amendments, significant provisions and basic structure.

News:

- The **Chief Justice, hearing the challenge to the repeal of Article 370** said petitioners were placing **Article 370 on a pedestal loftier than the Basic Structure Doctrine of the Constitution.**

Prelims Takeaway

- Basic structure of the Indian Constitution
- Separation of powers

Basic Structure Doctrine of the Constitution.

- The **Kesavananda Bharati judgement** introduced the **Basic Structure doctrine**.
- It **limited Parliament's power to make drastic amendments** that may affect the **core values** enshrined in the Constitution.
- The verdict upheld the power of the **Supreme Court to judicially review** laws of Parliament.
- It evolved the concept of **separation of powers among the three branches of governance** viz. legislative, executive and the judiciary.
- The following **four cases are important to understand the genesis of 'Basic structure' doctrine**
 - Shankari Prasad case
 - Golaknath case
 - Keshavananda Bharati case
 - Minerva mills case
- It held that the "basic structure of the Indian Constitution **could not be abrogated even by a constitutional amendment**".
- The **judgement listed some basic structures of the constitution** as:
 - Supremacy of the Constitution
 - Unity and sovereignty of India
 - Democratic and republican form of government
 - Federal character of the Constitution
 - Secular character of the Constitution
 - Separation of power
 - Individual freedom
- Any law or amendment that violates **these principles can be struck down by the SC on the grounds that they distort the Basic Structure.**

30. The Pradhan Mantri Dakshata Aur Kushalata Sampanna Hitgrahi (PM-DAKSH) Yojana - PIB

Relevance: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.

News:

- The **Pradhan Mantri Dakshata Aur Kushalata Sampanna Hitgrahi (PM-DAKSH) Yojana**, a **Central Sector Scheme**, was launched during 2020-21.
- **Objective**
 - To enhance the competency level of the target groups
 - To make them employable both in self-employment
 - Wage-employment for their socio-economic development.
- **The target group**
 - SCs
 - OBCs
 - EBCs
 - DNTs Safai Karamcharis
 - Waste pickers.
- **The age criterion** : 18-45 years
- **Income criteria:**
 - No income limit for SCs, SafaiKaramcharis Including waste picker and DNT.
 - The annual family income should be below Rs.3 lakh for OBCs
 - The EBCs (Economically Backward Classes) annual family income below Rs.1 lakh.
- The **Cost of the training** to trainees is **free of cost**.
- The **stipend** under this scheme **will also be given**.

Prelims Takeaway

- Pradhan Mantri Dakshata Aur Kushalata Sampanna Hitgrahi (PM-DAKSH) Yojana
- Central Sector Scheme

31. Vikram lander does a hop, goes to sleep; goodnight till Sept. 22 - The Hindu/ Chandrayaan-3 lander hops on Moon, marks big leap for ISRO - Indian Express

Relevance: Achievements of Indians in science & technology; indigenization of technology and developing new technology.

News:

- Recently, the **Chandrayaan-3 mission's lander Vikram** achieved another significant milestone as it **successfully undertook a hop experiment**.

Prelims Takeaway

- Chandrayaan 3
- ISRO

The Hop Experiment

- The **lander underwent a hop experiment** and on command, **fired the engines, elevated itself** by about 40 cm and **landed safely at a distance**.
- It could have **significant bearing on the future missions** launched with an aim to **bring back samples from the moon** and also **future human missions to the moon**.
- Deployed **Ramp, ChaSTE and ILSA** were **folded back and redeployed successfully** after the experiment.

Key Findings on Moon

- One of the **payloads onboard the Vikram** while conducting in-situ measurements has indicated the **presence of plasma near the lunar surface**.
- Two payloads** have detected and **confirmed sulphur in the moon's south polar region**.

Chandrayaan-3 Mission

- It is **India's third lunar mission** and **second attempt at achieving a soft landing** on the moon's surface.
- The mission took off from the **Satish Dhawan Space Center (SDSC) in Sriharikota on July 14, 2023**.
- Objectives**
 - To demonstrate Safe and Soft Landing on Lunar Surface
 - To demonstrate Rover roving on the moon
 - To conduct in-situ scientific experiments
- Components**
 - Indigenous Lander module (LM), Propulsion module (PM) and a Rover.
 - The lander (Vikram) and rover payloads(Pragyaa) of Chandrayaan-3 remain the same as the Chandrayaan-2 mission.
 - The lander and the rover will have a mission life of one lunar day (about 14 Earth days) as they work on solar energy.
- Launch Vehicle:** The LVM3 M4 launcher has been successfully utilized to launch Chandrayaan-3

Payloads

- The **scientific payloads** on the lander aim to **study various aspects of the lunar environment**.
- These payloads include **studying lunar quakes, thermal properties of the lunar surface, changes in plasma near the surface and accurately measuring the distance between Earth and the moon**.
- The **propulsion module** of Chandrayaan-3 features a new experiment called **Spectro-polarimetry of Habitable Planet Earth (SHAPE)**.
 - SHAPE aims to search for smaller planets with potential habitability by analyzing reflected light.



Lander Payloads

RAMBHA-LP Langmuir Probe
To measure the near surface plasma (ions and electrons) density and its changes with time.

ChaSTE Chandra's Surface Thermo-physical Experiment
To carry out the measurements of thermal properties of lunar surface near polar region.

ILSA Instrument for Lunar Seismic Activity
To measure seismicity around the landing site and delineating the structure of the lunar crust and mantle.

Rover Payloads

APXS Alpha Particle X-Ray Spectrometer
To derive the chemical composition and infer mineralogical composition to further enhance our understanding of lunar surface.

LIBS Laser Induced Breakdown Spectroscopy
To determine the elemental composition (Mg, Al, Si, K, Ca, Ti, Fe) of lunar soil and rocks around the lunar landing site.

Propulsion Module Payload

SHAPE Spectro-polarimetry of HAbitable Planet Earth
An experimental payload to study the spectro-polarimetric signatures of the habitable planet Earth in the near-infrared (NIR) wavelength range (1-1.7 μm).

32. CBDCs can make payments across borders efficient: Das - The Hindu/ 'Cross-border payments can be more efficient with CBDC' - Indian Express

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment

News:

- Recently, the Reserve Bank of India (RBI) said the key challenges to existing cross-border payments continued to be high cost, low speed, limited access and insufficient transparency.
- He emphasized adoption of the Central Bank Digital Currencies (CBDCs) can make cross-border payments efficient.

Prelims Takeaway		
•	Central Bank	Digital Currency
•	Reserve Bank of India	

Central Bank Digital Currency

- CBDCs are a digital form of a paper currency and unlike cryptocurrencies that operate in a regulatory vacuum,
- These are legal tenders issued and backed by a central bank.
- It is the same as a fiat currency and is exchangeable one-to-one with the fiat currency.
- A fiat currency is a national currency that is not pegged to the price of a commodity such as gold or silver.
- The digital fiat currency or CBDC can be transacted using wallets backed by blockchain.
- Though the concept of CBDCs was directly inspired by Bitcoin
- It is different from decentralised virtual currencies and crypto assets, which are not issued by the state and lack the 'legal tender' status.

33. Gujarat Declaration' underlining outcome of the first WHO Traditional Medicine Global Summit 2023 released - PIB

Relevance: Health

News:

- The **World Health Organization (WHO)** has released the outcome document of the first WHO Traditional Medicine Global Summit 2023 in the form of "**Gujarat Declaration**".
- The **first global summit on Traditional Medicine** was organised by the **World Health Organization (WHO)** and co-hosted by the **Ministry of Ayush**, from August 17-18, 2023, at **Gandhinagar, Gujarat**.

Prelims Takeaway

- Gandhinagar Declaration
- World Health Organisation

Key Outcomes

- It **reaffirmed global commitments** towards **indigenous knowledge, biodiversity and traditional, complementary and integrative medicine**.
- It reiterates that **India as host of the WHO Global Traditional Medicine Centre** at Jamnagar, Gujarat has an **important role in taking forward the summit action agenda** and other relevant priorities.
- The Gujarat Declaration will serve as a **catalyst to harness the potential of traditional medicine** through the lens of science.
- It will **focus on the integration of traditional medicines in national health systems** and help **unlock the power of traditional medicine**.
- It talks about **scaling up efforts to further implement**
 - Evidence-based TCIM (Traditional complimentary integrative medicine) interventions
 - Approaches in support of the goal of universal health coverage (UHC)
 - All health-related Sustainable Development Goals (SDGs)
- It mentions that **actions should be promoted and taken at all levels**
 - to safeguard, restore and sustainably manage biodiversity
 - to ensure the fair and equitable sharing of the benefits arising from the use of biodiversity resources, related genetic material and Indigenous knowledge.

34. Researchers discover how fungus helps destroy harmful food toxin - The Print

Relevance: Science and Technology- developments and their applications and effects in everyday life.

News:

- Recently, a research team from the **Tokyo University of Science (TUS)** in **Japan** discovered a **fungus** that helps **destroy a harmful food toxin, Patulin**.

Prelims Takeaway

- TUS-MM1
- Patulin

Key Findings

- The team identified a **filamentous fungal (mold) strain, Acremonium sp.** or "**TUS-MM1**," belonging to the **genera Acremonium**.
- They performed **various experiments** to shed light on the **mechanisms by which TUS-MM1 degraded patulin**.
- This involved **incubating the mold strain in a patulin-rich solution** and focusing on the substances that **gradually appeared both inside and outside its cells in response to patulin** over time.
- They found that TUS-MM1 cells **transformed any absorbed patulin into desoxypatulinic acid** by **adding hydrogen atoms** to it.
 - This compound is much less toxic than patulin.
- Some of the compounds secreted by TUS-MM1 cells can **transform patulin into other molecules too**.

Patulin

- Patulin (C₇H₆O₄) is a **toxic mycotoxin** produced by **several types of fungi**.
- It is **harmful to a wide range of creatures**, including humans, mammals, plants, and microbes.
- It can grow on **damaged or decaying fruits, especially apples**.

Impacts

- It is responsible for a **wide variety of health hazards**.
 - It includes nausea, lung congestion, ulcers, intestinal haemorrhages,
 - It also includes even more serious outcomes such as DNA damage, immunosuppression and increased cancer risk.

Treatment

- It includes **oxygen therapy, immunotherapy, detoxification therapy, and nutrient therapy**

35. 37,000 'alien species' introduced by human activities, says report - Indian Express

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- **The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) releases its new publication – the “Assessment Report on Invasive Alien Species and their Control”**
- It was found that there are **37,000 alien species, including plants and animals, have been introduced by many human activities**

Prelims Takeaway

- The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)
- Invasive alien species

Highlights of the report:

- **Invasive alien species** have played a key role in **60% of global plant and animal extinctions recorded**.
- many invasive alien species have been **intentionally introduced** for their perceived benefits, “without consideration or knowledge of their negative impacts”.
- The **water hyacinth is the world’s most widespread invasive alien** species on land.
- The **brown rat and the house mouse** are also widespread invasive alien species.
- The **reduction of food supply** has been cited by the report as the most common impact of alien invasive species.
- Invasive alien species like *Aedes albopictus* and *Aedes aegyptii* **spread diseases such as malaria, Zika and West Nile Fever**
- **Climate change** is also predicted to increase the competitive ability of some invasive alien species
- Most countries (80%) have included **targets related to managing invasive alien species in their national biodiversity plans**.
- Nearly half of all countries (45%) do not invest in management of biological invasions.
- In December last year, governments agreed to reduce the rate of introduction and establishment of invasive alien species by at least 50% by 2030
- The governments revised the target under target 6 of the Kunming-Montreal Global Biodiversity Framework.

The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)

- IPBES is an **independent intergovernmental body** established to strengthen the science-policy interface for biodiversity and ecosystem services.
- It works in a **similar way to the IPCC**, which is the UN’s climate science body

36. ‘Bharat’ replaces ‘India’ in G-20 invite from President - The Hindu

Relevance: Constitution of India —historical underpinnings, evolution, features, amendments, significant provisions and basic structure.

News:

- **Invitations sent by the President** to the heads of states and government for an official banquet **on the occasion of the G-20 Summit** in New Delhi created a flutter.
- In the invitation, **Instead of the usual “President of India”, the cards said “President of Bharat”.**
- In 2020, the **Supreme Court had dismissed a PIL** seeking to remove “India” from the **Constitution** and retain only Bharat in order to “ensure the citizens of this country.

Prelims Takeaway

- Article 1
- First Schedule.

- SC said “India is already called Bharat in the Constitution itself.”

History of name BHARAT

- Bharata’ refers to the “**supraregional and subcontinental territory** where the Brahmanical system of society prevails
- Bharata is also the **name of the ancient king of legend** who was the ancestor of the **Rig Vedic tribe of the Bharatas**, and by extension, the progenitor of all peoples of the subcontinent.
- **‘India’ and ‘Hindustan’:**
 - The name Hindustan is thought to have derived from ‘Hindu’, the Persian cognate form of the Sanskrit ‘Sindhu’ (Indus)
 - It came into currency with the Achaemenid Persian conquest of the Indus valley that begin in the 6th century BC.
 - From around the first century of the Christian era, the suffix “stan” came to be used with the name to create “Hindustan”.
- The **Greeks**, who had acquired **knowledge of ‘Hind’** from the Achaemenids, **transliterated the name as ‘Indus’.**
- By the time the **Macedonian king Alexander invaded India** in the 3rd century BC, **‘India’ had come to be identified with the region beyond the Indus.**
- By the time of the **early Mughals (16th century)**, the name **‘Hindustan’** was used to describe the entire Indo-Gangetic plain
- In the **mid-to-late eighteenth century**, **Hindustan** often referred to the territories of the Mughal emperor, which **comprised much of South Asia”.**
- From the late 18th century onwards, **British maps increasingly began to use the name ‘India’**, and ‘Hindustan’ started to lose its association with all of South Asia.

Constitutional Provision:

Article 1 : Name and territory of the Union

- **India**, that is **Bharat**, shall be a **Union of States**.
- The States and the territories thereof shall be as specified in the **First Schedule**.
- The **territory of India shall comprise –**
 - The territories of the States;
 - The Union territories specified in the First Schedule; and
 - Such other territories as may be acquired.

37. Modi, Biden to hold bilateral talks on Friday: White House - The Hindu

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India’s interests.

News:

- **Indian Prime Minister and U.S. President** will hold **bilateral talks**.
- U.S. will focus on “**delivering for developing countries, making progress on key priorities** for the American people from climate to technology, and showing our commitment to the G 20

Prelims Takeaway

- QUAD
- G-20

India’s Relations with the US

- The U.S.-India strategic partnership is founded on shared values including a **commitment to democracy and upholding the rules-based international system**.
- Both have shared interests in **promoting global security, stability, and economic prosperity through trade, investment, and connectivity**.

Economic Relations:

- The **U.S.** has emerged as **India's biggest trading partner** in 2022-23 on account of increasing economic ties between the two countries.
- The **bilateral trade** between India and the U.S. has **increased by 7.65%** to USD 128.55 in 2022-23 as against USD 119.5 billion in 2021-22.
- Exports to the U.S. rose by 2.81% to USD 78.31 billion in 2022-23 as against USD 76.18 billion in 2021-22, while imports grew by about 16% to USD 50.24 billion.

International Cooperations:

- India and the United States cooperate closely at **multilateral organizations**, including :
 - The United Nations

- G-20
- Association of Southeast Asian Nations (ASEAN) Regional Forum
- International Monetary Fund
- World Bank
- World Trade Organization.
- The **United States welcomed India joining the UN Security Council** in 2021 for a two-year term
- **USA supported a reformed UN Security Council** that includes India as a permanent member.
- Together with **Australia and Japan, the United States and India convene as the Quad** to promote a free and open Indo-Pacific and provide tangible benefits to the region.
- **India is also one of twelve countries partnering** with the United States on the **Indo-Pacific Economic Framework for Prosperity (IPEF)**.
- **India is a member of the Indian Ocean Rim Association (IORA)**, at which the United States is a dialogue partner.
- In 2021, the **United States joined the International Solar Alliance** headquartered in India, and in 2022 the United States Agency for International Development (USAID).

38. 'Xi Jinping skipping G-20 Summit a deliberate signal to India, West' - The Hindu

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- **Chinese President skipping a G-20 summit** for the first time.
- It is sending "**deliberate signals**" to **India and the West** by essentially downgrading its involvement in a key international forum.
- China sees as a "**politicisation**" of the **G-20**, which it believes should be limited to economic issues and **not involve itself with issues such as the war in Ukraine**.

Prelims Takeaway

- G20 Troika
- G20

G20

- The Group owes its **origin to the Financial Crisis in 1997-98** of the Asian Tigers (Countries of East and Southeast Asia), which caused its establishment in 1999.
- It worked first as a **forum for the Central Bank Governors and Finance Ministers** of the major industrialised and developing economies to discuss global economic and financial stability.
- After the 2008 global financial crisis, it was **upgraded to the level of Heads of State or Government**
- In 2009, it was declared as the "**premier forum for international economic cooperation**".
- The G20 Leaders have met on a regular basis since then, and the **G20 has emerged as the leading platform for global economic cooperation**.

G20 India Presidency:

- India's G20 logo juxtaposes planet Earth with the lotus, India's national flower and the theme is 'Vasudhaiva Kutumbakam' or '**One Earth-One Family-One Future**'
- The **G20 Logo draws inspiration from the vibrant colours of India's national flag** – saffron, white and green, and blue.
- **The theme also spotlights LiFE (Lifestyle for Environment)**, with its associated, environmentally sustainable and responsible choices.
- During the course of its G20 Presidency, **India will host about 200 meetings in 32 different sectors in multiple locations across India**.
- The G20 Leaders' Summit at the level of Heads of State/Government is scheduled to be held on September 9 and 10, 2023 in New Delhi.
- During India's Presidency, **Indonesia and Brazil along with India would form the G20 Troika**.
- This would be the **first time when the Troika would consist of three developing countries and emerging economies**.

39. Myanmar won't be allowed to lead ASEAN in 2026, in blow to Generals - The Hindu/ Blow to junta: Myanmar barred from leading ASEAN in 2026 - Indian Express

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- Southeast Asian leaders decided that Myanmar won't take over the rotating leadership of their regional bloc as scheduled in 2026.
- Western governments led by the U.S. have condemned the Myanmar Army's ouster of Aung San Suu Kyi's democratically elected government in 2021.
- they demanded her immediate release from years-long detention.

Prelims Takeaway

- ASEAN
- Myanmar

Association of Southeast Asian Nations (ASEAN)

- It is a regional grouping that promotes **economic, political, and security cooperation**.
- It was established in **August 1967 in Bangkok**, Thailand with the signing of the ASEAN Declaration (Bangkok Declaration).
- The **founding fathers** of ASEAN are **Indonesia, Malaysia, Philippines, Singapore and Thailand**.
- Its **chairmanship rotates annually**, based on the alphabetical order of the English names of Member States.
- **ASEAN countries** have a total population of 650 million people and a combined **Gross Domestic Product (GDP) of USD 2.8 trillion**.

Members:

- ASEAN brings together **ten Southeast Asian states** – Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam – into one organisation.

40. Centre should remove 50% cap, raise quota by 15% to 16% to include more communities: Pawar - The Hindu

Relevance: Constitution of India —historical underpinnings, evolution, features, amendments, significant provisions and basic structure.

News:

- Amid protests demanding reservation for Marathas, the **Nationalist Congress Party (NCP) president told the Centre to remove the 50% cap on reservation**.
- In May 2021, the **Supreme Court had held Maratha reservation to be unconstitutional**.

Prelims Takeaway

- Articles 14
- Indira Sawhney judgement

Maratha reservation issue:

- A 11-member commission headed by **Retired Justice N G Gaikwad recommended Marathas should be given reservation** under Socially and Educationally Backward Class (SEBC) in 2017.
- **Maharashtra Assembly in 2018**, passed a **Bill** proposing **16% reservation for Maratha community**.
- **The Bombay High Court** in its judgement in 2018 **upheld the reservation**
- HC pointed out that instead of 16% it should be reduced to 12% in education and 13% in jobs.
- A five-judge Constitution Bench of the Supreme Court declared **Maratha quota law as unconstitutional**.

Constitutional Provision:

- A separate reservation for the Maratha community **violates Articles 14** (right to equality) **and 21** (due process of law).
- Reservation breaching the 50% limit **will create a society based on "caste rule"**.
- **The Maratha reservation** of 12% and 13% (in education and jobs) had **increased the overall reservation ceiling to 64% and 65%, respectively**.

Indira Sawhney judgement 1992

- SC had categorically said **50% shall be the rule for reservation**.
- **Only in certain exceptional and extraordinary situations** for bringing far-flung and remote areas' population into mainstream said **50% rule can be relaxed**.

41. Byelections to 7 Assembly seats peaceful; results on September 8 - The Hindu

Relevance: Parliament and State legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these.

News:

- Recently, **bypolls to various Assembly seats in Uttar Pradesh, West Bengal, Jharkhand, Kerala, Tripura and Uttarakhand** were held by and large peacefully.
- The **Election Commission of India (ECI) officials said no major untoward incidents were reported** from the constituencies where polls were held.

Prelims Takeaway

- Bypolls
- General Elections
- Election Commission of India

By-polls

- Also called **bye-elections or special elections**, it refers to **elections held to fill vacant seats in the legislative bodies of India**.
- It serves as a **vital component within the broader electoral cycle** and **complements regular elections** by addressing unforeseen vacancies.
- **Purpose:** To ensure the timely filing of vacant seats, enabling the representation of the affected constituency or district in the legislative body.
- **Occurrence:** When a seat in the legislature becomes vacant due to reasons such as
 - Death
 - Resignation
 - Disqualification
 - Expulsion of a sitting member

Timeframe

- **Section 151A of the Representation of the People Act, 1951**
 - It mandates the Election Commission to fill the casual vacancies through bye elections within six months from the date of occurrence of the vacancy.
 - Provided that the remainder of the term of a member in relation to a vacancy is one year or more.

Impact

- They often serve as a **litmus test** for political parties and their popularity.
- Bye-election **outcomes can affect the majority of the ruling government**.
 - If the ruling party loses a significant number of by-poll seats, it may lead to a loss of majority in the legislative body.
 - This can impact the government's stability and decision-making.
- They provide an avenue for political parties to **test their electoral strategies** and **fine-tune their campaign approaches**.

42. Amid 'crises', Delhi, ASEAN to focus on food security, growth - Indian Express

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- The **ASEAN-India Summit** decided to **strengthen cooperation on food security and nutrition** through promoting mutual trade and investment.
- Leaders agreed to **exchange information on rice and acknowledge the multiple benefits of millets**.
- The **two sides also agreed to:**
 - enhance cooperation on maritime safety and security through confidence-building measures
 - sharing best practices on emergency response
 - Humanitarian Assistance and Disaster Relief (HADR)
 - Search and Rescue (SAR) operations
 - early warning systems
 - countering piracy
 - armed robbery against ships
 - trafficking in persons and smuggling of arms and drugs

Prelims Takeaway

- The Association of Southeast Asian Nations
- ASEAN-India Summit

- combating IUU (illegal, unreported and unregulated) fishing.

The Association of Southeast Asian Nations or ASEAN

- It is a **regional grouping** that aims to **promote economic and security cooperation** among its ten members.
- **Members:** Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.
- **Establishment:** 1967 in Bangkok, Thailand, with the signing of the ASEAN Declaration (Bangkok Declaration) by the founding fathers of ASEAN.
- ASEAN countries have a combined **gross domestic product (GDP) of \$3.2 trillion as of 2022.**
- **Decision Making:** It is done through consultation and consensus.

43. China on mind, PM says laws apply to all in Indo-Pacific, flags territorial integrity - Indian Express

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- **East Asia Summit (20th ASEAN-India Summit) in the Indonesian capital Jakarta,** Prime Minister reiterated that "today's era is not of war" and "dialogue and diplomacy" form "the only path to resolution".

Prelims Takeaway

- East Asia
- Mission LiFE

Highlights

- In addition to India and ASEAN leaders, **Timor-Leste participated in the Summit as Observer.**
- At the ASEAN-India Summit, Prime Minister presented a **12-point proposal for strengthening India-ASEAN cooperation.** These are:
 - Establishing multi-modal connectivity and economic corridor that links South-East Asia-India-West Asia-Europe
 - Offered to share India's Digital Public Infrastructure Stack with ASEAN partners
 - Announced ASEAN-India fund for Digital Future focusing on cooperation in digital transformation and financial connectivity
 - Announced renewal of support to Economic and Research Institute of ASEAN and East Asia (ERIA) to act as knowledge partner for enhancing our engagement.
 - Called for collectively raising issues being faced by Global South in multilateral fora
 - Invited ASEAN countries to join Global Centre for Traditional Medicine being established by WHO in India
 - Called for working together on Mission LiFE
 - Offered to share India's experience in providing affordable and quality medicines to people through Jan-Aushadhi Kendras
 - Called for collective fight against terrorism, terror financing and cyber-disinformation
 - Invited ASEAN countries to join Coalition for Disaster Resilient Infrastructure
 - Called for cooperation in disaster management
 - Called for enhanced cooperation on maritime safety, security and domain awareness
 - Two joint statements – on Maritime Cooperation and Food Security – were adopted

East Asia Summit (EAS)

- It was **established in 2005** as a forum of **18 regional leaders** for strategic dialogue and **cooperation on the key political, security, and economic challenges facing the Indo-Pacific region.**
- The **first summit was held in Kuala Lumpur, Malaysia** on 14 December 2005.
- **EAS comprises the ten member states** of the Association of Southeast Asian Nations (ASEAN) – **Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam** – along with **8 members Australia, China, Japan, India, New Zealand, the Republic of Korea, Russia and the United States.**

44. 'African Union to join G-20, as Sherpas reach a deal - The Hindu

Relevance: Important International institutions, agencies and fora- their structure, mandate.

News:

- The **African Union (AU)** is set to join the **G-20** as negotiators agreed on clearing its membership.
- The **55-member AU** will join the **European Union** as the **only two regional bodies in the G-20**.
- It is still unclear **whether the G-20 will be renamed as the "G-21"** after the induction of the AU.

Prelims Takeaway

- The African Union (AU)
- G-20

The African Union

- The African Union (AU) is a **continental body consisting of the 55 member states** that make up the countries of the African Continent.
- **Formation:**
- **In 1963, the Organization of African Unity was founded by the independent states of Africa.** The organization aimed to promote cooperation between African states.
- The 1980 **Lagos Plan of Action** was adopted by the **Organization of African Unity**.
- The plan suggested that **Africa should minimize reliance upon the West by promoting intra-African trade.**
- In 2002, the **Organization of African Unity** was **succeeded by the African Union**, which had as one of its goals to accelerate the **"economic integration of the continent"**.

45. Shri Dharmendra Pradhan launches the Malaviya Mission - Teachers Training Programme by University Grants Commission - PIB

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

News:

- Recently, the Union Minister for Education and Skill Development & Entrepreneurship launched the **Malaviya Mission - Teachers Training Programme**.
- He also inaugurated the **Portal of the Programme** and released its **information brochure**.

Prelims Takeaway

- Malaviya Mission
- University Grants Commission
- Madan Mohan Malaviya

Malaviya Mission - Teachers Training Programme.

- It is organised by the **University Grants Commission**, in association with the **Ministry of Education**.
- **Objective:** To provide tailored training programmes for teachers.
- This programme will work for the **capacity building of faculty members in higher educational institutions (HEIs)**.
- It aims to **improve the quality of teachers' training, build leadership skills** in teachers and **help realise the goals of NEP**.
- It will ensure **continuous professional development** and **help in building capacities** of 15 lakh teachers of HEIs through 111 **Malaviya Mission centres** across India in a **time-bound manner**.
- The **capacity building** under the Mission will be **mapped to the credit framework** to ensure **career progression pathways** for educators.
- The **two-week online programme** shall focus on **various themes** identified for **course curriculum** for their capacity building.
- The **8 themes** include
 - Holistic and Multidisciplinary Education
 - Indian Knowledge Systems (IKS)
 - Academic Leadership
 - Governance and Management
 - Higher Education and Society
 - Research and Development
 - Skill Development

- Student Diversity
- Inclusive Education
- Information and Communication Technology.
- The UGC has also established a **dedicated portal** for faculty members to **register for the capacity-building programmes**.

46. Centre to stop sites from weaving 'dark patterns' to mislead buyers - The Hindu/ Govt looks to crack down on 'dark patterns', releases draft guidelines - Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- The Centre recently sought public comments on the **draft guidelines for prevention and regulation of "dark patterns,"** on the Internet, particularly in e-commerce platforms.
- The guidelines include ways to **prevent and regulate false urgency, basket sneaking, confirm shaming, forced action, subscription traps and more such "dark patterns"**.
- It would be made **applicable to all the persons and online platforms** including sellers and advertisers.

Prelims Takeaway

- Dark Patterns
- e-commerce

Dark Patterns

- The **draft guidelines** has **defined dark patterns** as
 - "any practices or deceptive design patterns using user interface or user experience interactions on any platform; designed to mislead or trick users to do something they originally did not intend or want to do; by subverting or impairing the consumer autonomy, decision making or choice; amounting to misleading advertisement or unfair trade practice or violation of consumer rights."
- They are **unethical UI/UX** (user interface/user experience) interactions, designed to **mislead or trick users** to make them **do something** they don't want to do.
- In turn, they **benefit the company or platform** employing the designs.
- By using dark patterns, digital platforms take away a **user's right to full information** about the **services** they are using and their **control over their browsing experience**.

Types of Dark Patterns

- **False urgency:** Creates a sense of urgency or scarcity to pressure consumers into making a purchase or taking an action.
- **Basket sneaking:** inclusion of additional items at the time of checkout without the consent of the user.
- **Confirm shaming:** using a phrase, video, audio or any other means to create a sense of fear or shame or ridicule or guilt in the mind of the user.
- **Forced action:** Pushes consumers into taking an action they may not want to take, such as signing up for a service in order to access content.
- **Subscription traps:** Easy to sign up for a service but difficult to quit or cancel; option is hidden or requires multiple steps.
- **Bait & switch:** Advertising a certain product/service but delivering another, often of lower quality.
- **Nagging:** Users face an overload of requests, information, options, or interruptions; unrelated to the intended purchase of goods or services, which disrupts the intended transaction.
- **Disguised ads:** Designed to look like content, such as news articles or user-generated content.
- **Interface interference:** The design element that manipulates the user interface
- **Drip pricing:** Practice where elements of prices are not revealed upfront

47. As distance from China grows, India and US work on technology projects - chips to AI - Indian Express

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- In a bilateral meeting Indian Prime Minister and US President reiterated their stance on building **resilient global semiconductor supply chains**.
- India also **supported the US's 'Rip and Replace' pilot project**.
 - It mandates that American companies tear out telecom equipment made by the Chinese companies Huawei and ZTE.

Prelims Takeaway

- 5G and 6G
- artificial intelligence (AI)

Key highlights of the meeting

- Memory manufacturer Micron has committed an **investment to set up a chip packaging plant in Gujarat**, as part of India's \$10 billion incentive scheme for chipmaking.
- Lam Research had announced a proposal to **train 60,000 Indian engineers** through its Semiverse Solution virtual fabrication platform.
- Applied Materials announced a proposed investment of \$400 million to **establish a collaborative engineering centre in India**.
- The India-US Major Defence Partnership to deepen and diversify through expanded cooperation in new and emerging domains such as **space and artificial intelligence (AI)**.
- The PM had recently called for a **global framework to ensure the ethical use of AI** as he flagged concerns over algorithmic bias and its disruptive impact on society.
- **Two Joint Task Forces** to be set up, focused on **collaboration in the field of Open RAN and research and development in 5G/6G technologies**.
 - Open RAN is an ongoing shift in mobile network architectures that enables service providers the use of non-proprietary subcomponents from a variety of vendors.
- India and the U.S. also welcomed the signing of an **agreement between the Bharat 6G Alliance and Next G Alliance**, operated by Alliance for Telecommunications Industry Solutions.
 - It is a first step towards deepening public-private cooperation between vendors and operators.
- The **Bharat 6G alliance, a public-private sector initiative**, was formed after the PM said India would launch the **next-generation high speed network by 2030**.
- The alliance, **aims to establish India as a supplier of:**
 - IP
 - Products and solutions of affordable 5G and 6G
 - Other future telecom solutions have all the three telcos – Jio, Airtel and Vi – as members along with companies like Tech Mahindra.

48. UN's global climate stocktake flags large deficits as G20 drags its feet - Indian Express

Relevance: Important International institutions, agencies and fora- their structure, mandate.

News:

- Recently, A **report** released by **UN Climate** highlights the rapidly closing window of opportunity **to contain the rise in global temperatures within 1.5 degree Celsius from pre-industrial times**.
- The synthesis **report of the Global Stocktake (GST)** is a **Paris Agreement-mandated exercise** at assessing the progress on climate action,
- It notes that while headway had indeed been made, **countries were nowhere close to achieving targets** that would keep global warming under agreed levels.

Prelims Takeaway

- Paris agreement
- synthesis report of the Global Stocktake (GST)

Key Highlights of the report:

- **Citing previous assessments**, the synthesis report pointed out **Keeping the chances of meeting the 1.5 degree Celsius target implied:**

- a reduction of “around 43, 60 and 84 per cent in global GHG (greenhouse gas) emissions below the 2019 level by 2030, 2035 and 2050 respectively”.
- **Global greenhouse gas emissions in 2030** were expected to be about **24 billion tonnes of CO₂-equivalent**, more than where it should be to keep the 1.5 degree Celsius.
- There are the **deficits in every aspect of climate action** — mitigation, adaptation, finance, technology and capacity building.
- While action is proceeding, **much more is needed now on all fronts**.
- This report would be presented at the **year-ending annual climate change meeting, in Dubai**, and is expected to inform and influence its outcome.
- In fact, the **Environment and Climate Sustainability Working Group of G20** which wrapped up its deliberations in **Chennai** in July:
 - It had been unable to reconcile the differing positions of the developed and developing countries within the grouping.
- At the **Chennai meeting**, there was also a proposal to commit to **global emission reductions by 60 per cent by the year 2035 from the 2019 baseline**.
- Countries need to **cut their emissions by about 45 per cent from 2019 levels** by the year 2030 to retain hopes for meeting the 1.5 degree Celsius target.

49. Modi, Biden welcome progress in defence ties - The Hindu/ Biden and Modi take their Washington pact forward in Delhi - Indian Express

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- Recently, Prime Minister and visiting US President made **progress in a sweeping range of areas** they had flagged last June, like:
 - space research
 - cancer to critical tech and small modular nuclear reactors.

Prelims Takeaway

- India-US Defense Acceleration Ecosystem (INDUS-X)
- Critical and Emerging Technology (iCET)

Key Highlights:

- The commencement of negotiations for a commercial agreement between **GE Aerospace and Hindustan Aeronautics Limited (HAL)** to manufacture GE F-414 jet engines in India.
- In June, both sides had welcomed **India's plans to procure General Atomics MQ-9B HALE UAVs — powerful drones**.
- Launching the **Initiative on Critical and Emerging Technology (iCET)** as a major milestone in India-U.S relations, in June,
- Advancement toward a multi-billion-dollar investment platform to provide **catalytic capital for greenfield renewable energy projects**.
- **India's National Investment and Infrastructure Fund and the US Development Finance Corporation** exchanged letters of intent to anchor a renewable infrastructure investment fund.
- In June, the leaders had welcomed the setting up and launch of the **India-US Defense Acceleration Ecosystem (INDUS-X)**,
- They had thought of a **network of universities, startups, industry and think tanks**.
- On trade disputes, the agreement lauded the settlement of the seventh and last outstanding **India-US World Trade Organisation (WTO) dispute**.
- This was **beyond the settlement of six outstanding bilateral trade disputes** in the WTO in June 2023.

50. “Bharat: The Mother of Democracy” Portal- Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- On the eve of the G20 leadership summit, the **Ministry of Culture** launched a portal of the mega exhibition—‘**Bharat: The Mother of Democracy**’.

The Portal

- The portal showcases the **content on the history of democracy in India**.
- It showcases 7,000 years of democratic ethos starting from the **Sindhu-Saraswati civilisation** to 2019.
- It is **available in 16 languages**, including German, French, Spanish, Arabic, Portuguese, Italian, Turkish, and Russian besides English and Hindi.
- The portal is divided into **five sections and 22 sub-sections** starting from:
 - Sindhu-Saraswati Civilisation (6000-2000 BCE)
 - Mahajanapada and Gantantra (7-8 BCE)
 - Vijaynagar Empire (14-16 century)
 - Mughal emperor Akbar reign (1556-1605)
 - Constitution of India (1947)
 - Elections in Modern India (1952 onwards).
- The website-- www.motherofdemocracyg20.com-- is **curated by the Indira Gandhi National Centre for the Arts (IGNCA)**.

Key Points

- The **Indira Gandhi National Centre for the Arts (IGNCA)** was established in 1987.
- It is an **autonomous institution under the Ministry of Culture**, as a centre for research, academic pursuit and dissemination in the field of the arts.
- The **IGNCA has a trust** (i.e. Board of Trustees), which meets regularly to give general direction about the Centre’s work.
- The **Executive Committee, drawn from among the Trustees**, functions under a Chairman.

Prelims Takeaway

- Bharat: The Mother of Democracy’
- Indira Gandhi National Centre for the Arts (IGNCA)

51. West Bengal unveils education policy, stresses on three-language formula - The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Recently, the **West Bengal** government notified the **State Education Policy, 2023**.
- It has **continued with the prevailing 5+4+2+2 pattern** for school education
- it has recommended the introduction of a **three-language formula**

Prelims Takeaway

- National Education Policy 2020 (NEP 2020)
- Schedule 7

The Policy

- It is suggested that in the upper **primary level (class V to VIII)** with the first language, the **“mother tongue”**, being the **medium of instruction**.
- The **second language may be English in a non-English medium** or any language other than first language, **depending upon the choice of the student**.
- “The **third language** may be any **other language opted by the student**, other than first and second languages.
- The three-language formula shall be **applicable for upper primary level only as the language learning ability in the primary stage**.
- In the primary level, the education policy also recommended that **‘Bangla’ as a subject may be introduced from Class I to Class XII for students of other mediums** of instruction.

- At the **secondary education level**, “appropriate and adequate career counselling” is recommended.
- It will help to equip students with the ability to **choose their future careers** based on their abilities and interests.
- It has recommended “**introducing a semester system** to ease the transition from **school to university in a phased manner**”.

National Education Policy 2020 (NEP 2020)

- **Objective:** “India a global knowledge superpower”.
- It is only the **3rd major revamp of the framework of education** in India since independence.
- The **two earlier education policies were brought in 1968 and 1986**.
- It will ensure **Universal Access at All Levels of schooling** from pre-primary school to Grade 12.
- It will ensure **quality early childhood care and education** for all children between **3-6 years**.
- **New Curricular and Pedagogical Structure (5+3+3+4) corresponds to the age groups of 3-8, 8-11, 11-14, and 14-18 years** respectively.
- It covers four stages of schooling: **Foundational Stage (5 years), Preparatory Stage (3 years), Middle Stage (3 years), and Secondary Stage (4 years)**.
- **No hard separations between arts and sciences**, between curricular and extra-curricular activities, between vocational and academic streams;
- Emphasis on promoting **multilingualism and Indian languages**
- Setting up of a **new National Assessment Centre, PARAKH** (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development)
- A separate **Gender Inclusion fund and Special Education Zones** for disadvantaged regions and groups.

52. Education Ministry asks States to bring all data under one platform - The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Under the **National Digital Education Architecture (NDEAR)**, the Ministry of Education is **pushing States to open Vidya Samiksha Kendras (VSKs)**.
- It is a **data repository** which will have data from all schemes run by the **Ministry of Education (MoE)**.

Prelims Takeaway

- National Council for Educational Research and Training (NCERT)
- PM-POSHAN

Vidya Samiksha Kendras (VSKs).

- This will include regularly **updated data** from:
 - the **PM-POSHAN** mid-day meal programmes
 - **teacher training data** from National Initiative for School Heads’ Teachers’ Holistic Advancement portal
 - **textbook** content from Digital Infrastructure for Knowledge Sharing
 - **school dropout** and attendance-related data on Unified District Information System for Education (UDISE+)
 - students’ **learning outcomes** from National Achievement Survey
 - **Performance Grading Index** which evaluates school education system at the State/U.T. level.
- Currently, **at the Central level**, a VSK centre is housed in **the Central Institute of Educational Technology building in the National Council for Educational Research and Training (NCERT) campus**
- **multi-national IT company Ernst and Young**, managing its operations.
- It is an **open-source platform run on C-Qube software**.
- **EkStep Foundation**, which is a non-profit organisation, is on board in an advisory role for **implementing the VSK project**.
- “The Centre has allocated **funds ranging from ₹2 to ₹5 crore to each State** for adopting and establishing VSKs

- It includes **pre-configured open-source hardware and software** as well as hiring human resources.
- States like **Gujarat, Maharashtra, Odisha, and Jharkhand** have already begun the process of setting up the tech platform,
- In certain schools, **Gujarat has employed biometrics to capture attendance** patterns of students and teachers.
- The attendance gets recorded and **reported at State level.**
- This can be **mapped with trends of student drop-out data** to analyse any co-relations between both data sets,”
- Another instance would be **co-relating data from the mid-day meal scheme** or PM-POSHAN with attendance.
- This will give us insight on whether in those **demographical areas where mid-day meals are provided regularly**, students are more **incentivised** to attend schools
- the idea of developing VSKs is also to map the school location layer with the population layer to **assess the Gross Access Ratio**,
- It which can help plan for new schools, or for industry clusters to **understand skilling requirements of the area**,
- It help plan **higher educational institutions based** on demand and future scenarios,

53. SC to hear petitions challenging sedition law on September 12 - The Hindu

Relevance: Structure, organization and functioning of the Executive and the Judiciary—Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity

News:

- The **Supreme Court is scheduled** on September 12 to **hear a series of petitions** challenging the **legality of the sedition law.**

Key Highlights:

- The hearing follows **sweeping changes proposed in criminal law** by the government with the introduction of three new Bills in the Parliament.
- One of them, **Bharatiya Nyaya Sanhita Bill**, seeks to replace the colonial **Indian Penal Code (IPC) of 1860.**
- The other two are **Bhartiya Nagrik Suraksha Sanhita 2023**, meant to replace the **Criminal Procedure Code.**
- **Bharatiya Sakshya Bill 2023**, in place of the Indian Evidence Act, 1872.
- **section 124A is part of the IPC.** Its use had been kept in abeyance following a Supreme Court order in May 2022.
- The court had given the government time to **re-look the sedition law.**
- Though the Bharatiya Nyaya Sanhita Bill **does not explicitly have a Section 124A** in it, it has Section 150.
- This proposed provision in the **new Bill avoids using the term ‘sedition’**, but describes the offence as **“endangering sovereignty, unity and integrity of India”.**

Sedition Law

- The law was **originally drafted in 1837 by Thomas Macaulay**, but was inexplicably omitted when the Indian Penal Code (IPC) was enacted in 1860.
- **Section 124A was inserted in 1870** by an amendment introduced by Sir James Stephen when it felt the need for a specific section to deal with the offence.
- Today the **Sedition is a crime under Section 124A** of the Indian Penal Code (IPC).
- It defines **sedition as an offence committed** when:
 - "any person by words, either spoken or written

Prelims Takeaway

- Section 124A of the Indian Penal Code (IPC).
- Bharatiya Sakshya Bill 2023
- Bharatiya Nyaya Sanhita Bill,

- by signs, or by visible representation,
- or otherwise, brings or attempts to bring into hatred or contempt,
- or excites or attempts to excite disaffection towards the government established by law in India".
- Disaffection includes **disloyalty and all feelings of enmity**.
- **comments without exciting or attempting to excite hatred**, contempt or disaffection, will **not constitute an offence** under this section.
- It is a **non-bailable offence** with Punishment ranging from imprisonment up to three years to a life term, to which a fine may be added.
- A person charged under this law is **barred from a government job**

54. Launch of Global Biofuels Alliance a key moment in quest for clean energy: PM - The Hindu

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- Recently, **the Prime Minister of India** announced the **launch of the Global Biofuels Alliance**.
- He launched the **GBA in the presence of leaders from the US, Brazil, the UAE, Singapore, Italy, Argentina, Bangladesh, and Mauritius**.

Prelims Takeaway

- Biofuels
- The 'Global Biofuel Alliance' or the GBA

The 'Global Biofuel Alliance' or the GBA

- It is a **grouping of more than 30 countries and international institutions**.
- It is formed to **facilitate adoption of biofuels**, in order to unlock bioenergy access in emerging economies.
- So far, a **total of 19 countries and 12 international organisations have agreed to join the GBA**.
- Seven of the 19 countries are from the **G20, four are among the G20 invitee countries**, while eight are neither G20 members nor invitees.
- In July, consultations about the GBA were held **on the sidelines of the G20 energy ministers' meeting in Goa**.
- **Organisations that have joined the alliance** are:
 - World Bank
 - Asian Development Bank
 - World Economic Forum
 - International Energy Agency
 - International Energy Forum
 - International Renewable Energy Agency
 - International Civil Aviation Organisation

Significance

- Due to Climate change and the need to increase the **use of alternate fuels that can protect the environment**
- To work together to **achieve the goal of sustainable energy**.
- It will **facilitate mobilizing a virtual marketplace to assist industries**, countries, ecosystem players and key stakeholders in mapping demand and supply.
- It will also **facilitate**:
 - development, adoption and implementation of internationally recognized standards, codes
 - sustainability principles and regulations to incentivize biofuels adoption and trade."
- India is the **world's third largest consumer of crude oil**.
- Thus, increasing the use of biofuels is likely to significantly help in **reducing the country's carbon footprint**.

Biofuels

- It refer to the **renewable fuels derived from biomass**, meaning biowaste that comes from agricultural, animal, or industrial production.
- These are known to be **significantly cleaner than conventional fossil fuels**.
- The **US and Brazil are seen as global leaders in biofuels** and account for 52 percent and 30 percent of global ethanol production, respectively.

55. On the crime of 'false promise to marry'

Relevance: Structure, organization and functioning of the Executive and the Judiciary—Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity.

News:

- **Section 69 of the proposed Bharatiya Nyaya Sanhita (BNS), 2023** seeks to replace the Indian Penal Code (IPC), 1860, identifies 'sexual intercourse on false promise of marriage' as an offence.
- If a man **promises to marry a woman but never intends to**, and still has 'consensual' sex with her, will amount to a criminal offence
- At present, **the offence is not carved out separately in the IPC.**
- Courts have dealt with similar cases through **other provisions within the criminal law framework.**
- **Section 69 creates two violations:** one by deceitful means, and one by a 'false promise to marry.'
- **Deceitful** means will include the "false promise of employment or promotion, inducement or marrying after suppressing identity."
- **The false promise to marry** will be attracted only when a man makes a promise to marry a woman, **with the intention of breaking it.**
- offences will attract a penalty of up to **ten years of imprisonment.**
- In 2016, a **quarter of the total rape cases registered in Delhi** pertained to sex under 'false promise of marriage', as per Delhi Police data.
- The **National Crime Records Bureau** in the same year recorded 10,068 similar cases of rape by "known persons on a promise to marry the victim" (the number was 7,655 in 2015).
- In 2021, the **Supreme Court reiterated that under Section 375**, a woman's consent "must involve an active and reasoned deliberation towards the proposed act".
- If a man can prove he intended to marry the woman before he entered into a sexual relationship, but later is unable to due to whatever reason, it is not legally punishable.

Prelims Takeaway

- National Crime Records Bureau
- Bharatiya Nyaya Sanhita (BNS), 2023

56. Several hill villages in Manipur added to valley districts: panel - The Hindu

Relevance: Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.

News:

- A report by the **National Commission for Scheduled Tribes (NCST)** has observed that **several hill villages in Manipur** were wrongly included in the valley districts during the Census 2011 exercise.

Key Highlights

- As per the Booklet of **Census of India 2011 and Administrative Atlas**, "Manipur has **wrongly included several hill** villages under **valley districts**"
- The **issue had been flagged** to the State government by the office of the **Registrar General of India in 2017.**
- The definition of "**Hill Areas**" is in the **First Schedule of the Manipur Legislative Assembly** (Hill Areas Committee) Order, 1972,
- All boundary **disputes** had to be **settled as per this definition.**
- It recommended that any order, **notification or legislative action** issued without the express **approval of the HAC** needed to be "**reviewed/rescinded**".

Prelims Takeaway

- National Commission for Scheduled Castes (NCSC), and
- National Commission for Scheduled Tribes (NCST)

- The report had also noted that the **withdrawal of the Armed Forces Special Powers Act (AFSPA), 1958** from the hill areas of Manipur **needs to be reviewed**.
- It **reviewed the funds** spent by the Manipur government under the Central grant under **Article 275(1) of the Constitution**.
- It noted that it **had not utilised any of the ₹52.47 crore allotted to it** in the last three financial years (2020-21 to 2022-23)

National Commission for Scheduled Tribes (NCST)

- **Formation:** NCST was set up in 2004 by amending Article 338
- by inserting a **new article 338A** in the Constitution through the 89th Constitution Amendment Act, 2003.
- It is a **constitutional body**.
- By this amendment, the erstwhile National Commission for Scheduled Castes and Scheduled Tribes was replaced by **two separate Commissions** namely:
 - National Commission for Scheduled Castes (NCSC), and
 - National Commission for Scheduled Tribes (NCST)
- **Objective:**
 - to oversee the implementation of various safeguards provided to Scheduled Tribes (STs) under the Constitution
 - to evaluate the working of such safeguards.
- **Composition:** It consists of a **Chairperson, a Vice-Chairperson** and 3 other Members who are **appointed by the President** by warrant under his hand and seal.
- At least **one member should be a woman**.

57. Declaration reaffirms G-20 is a body for economic ties, ‘not geopolitics’, says China - The Hindu

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- **China** in its first official reaction to the G-20 Summit said it **welcomed the New Delhi Declaration**.
- Beijing said it also “welcomed” the **ambitious new India-Middle East-Europe Economic Corridor (IMEC) plan**, but said it should not become a “geopolitical tool.”

Prelims Takeaway

- Belt and Road Initiative (BRI)
- India - Middle East - Europe Economic Corridor (IMEC)

India - Middle East - Europe Economic Corridor (IMEC)

- A Memorandum of Understanding (MoU) was signed between the **Governments of India, the US, Saudi Arabia, the European Union, the UAE, France, Germany and Italy** to establish the IMEC.
- IMEC is part of a broader initiative called the **Partnership for Global Infrastructure Investment (PGII)**.
- The PGII was initially **introduced during the G7 summit in the UK in June 2021**.
- PGII aims to **finance infrastructure projects** in developing countries through a **combination of public and private investments**.
- IMEC is a significant infrastructure project **connecting India, the Middle East, and Europe**.
- The project aims to establish a **network of transport corridors, including railways and sea lanes**.
- IMEC is seen as a **response to China's Belt and Road Initiative (BRI)**, providing an alternative infrastructure network.

58. Launch of West Asia economic corridor is a historic step: PM - The Hindu/ Post-G20, India and Saudi Arabia build on corridor, strategic ties - Indian Express

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- Recently, Prime Minister described **Saudi Arabia** as “**one of the most important strategic partners** of India.
- The exchange between the two sides took place during the **state visit of the Crown Prince of Saudi Arabia**.

Prelims Takeaway

- Saudi Arabia
- greenfield refinery at Raigarh in Maharashtra.

Key Highlights

- They agreed to set up a **joint task force** to fast-track the **West Coast refinery project**.
- The **discussion focused on defence, energy, security, education**, technology, culture, space and semiconductors as areas of possible cooperation.
- the West Coast refinery project — which is a **trilateral project** between **ARAMCO, ADNOC and Indian companies**.
- Both sides agreed to work on the **India-GCC Free Trade Agreement**.

India's Relations with Saudi Arabia been

- Saudi Arabia is currently **India's second-largest supplier of crude oil** (Iraq has been India's top supplier).
- Saudi Arabia will assist in setting up the **world's largest greenfield refinery at Raigarh in Maharashtra**.
- Saudi Arabia is **India's fourth largest trade partner** (after the USA, China and UAE).
- In FY 2021-22, **bilateral trade was valued at USD 42.8 billion**.
- India's **imports from Saudi Arabia** reached USD 34.01 billion and exports to Saudi Arabia were worth USD 8.76 billion. An increase of 49.5% over 2021.
- The 2.6 million-strong Indian community in Saudi Arabia is **the largest expatriate community in the Kingdom**
- It is the 'most **preferred community**' due to their **expertise, sense of discipline, law-abiding and peace-loving nature**.
- **Haj pilgrimage** is another important component of bilateral relations between **India and Saudi Arabia**.

59. 2014 verdict striking down DSPE Act provision providing immunity to officers will have retrospective effect: Supreme Court- Indian Express

Relevance: Structure, organization and functioning of the Executive and the Judiciary—Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity.

News:

- Recently, the Supreme Court ruled that its 2014 judgment in **Subramanian Swamy vs Director CBI** would have a **retrospective effect**.
- The **case struck down Section 6A of the 1946 Delhi Special Police Establishment Act (DSPE Act)**.

Prelims Takeaway

- Delhi Special Police Establishment Act (DSPE Act)
- Subramanian Swamy vs Director

Background

- **Section 6A of the DPSE Act** states that the CBI should obtain **prior sanctions to investigate corruption** cases against an **officer of the rank of joint secretary and above**.
- **SC struck down provision in the 2014** in the case Subramanian Swamy v. Union of India.
- The Court had held that **there cannot be any distinction between public servants**.
- The 2014 ruling had, **however, not clarified what would happen to existing cases being probed by the central agency**.

- A constitution bench was, therefore, constituted to examine whether the **2014 decision would affect existing corruption cases.**

Retrospective effect

- The retrospective law is a law that has **backdated effect or is effective since before the time it is passed.**
- The retrospective law is also referred to as **ex post facto law.**

60. Nipah breaks out again in Kerala, claims 2 lives - The Hindu

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

News:

- Recently, **Nipah scare returned to Kerala**, with two deaths reported from Kozhikode district.
- The Union Health Minister **confirmed that the deaths were due to Nipah virus.**

Prelims Takeaway

- World Health Organization
- Nipah virus

Nipah virus

- Nipah virus infection **is a zoonotic illness.**
- It is transmitted to **people from animals.**
- It can be **transmitted through contaminated food** or directly from person to person.
- Among infected people, it causes a range of illnesses, from asymptomatic (subclinical) infection to **acute respiratory illness and fatal encephalitis.**
- While the Nipah virus **does not spread as quickly as the Covid-19 virus**, it is more deadly.
- According to the **World Health Organization (WHO)**, the overall **global case fatality rate of Nipah is estimated at 40% to 75%**
- The **first outbreaks of the Nipah virus** among humans was **reported from Malaysia (1998) and Singapore (1999).**
- The animal **host reservoir** for this virus is known to be the **fruit bat**, commonly known as **flying fox.**
- Fruit bats are known to **transmit this virus to other animals like pigs, and also dogs, cats, goats, horses and sheep.**
- According to the World Health Organization (WHO), **Nipah has a relatively high case fatality ratio.**
- It is an **emerging zoonotic disease of public health importance** in the South East Asia and Western Pacific WHO Regions.

61. Kim Jong Un arrives in Russia amid US warning against sale of weapons - Indian Express

Relevance: Important International institutions, agencies and fora- their structure, mandate.

News:

- Recently, **North Korean leader has arrived in Russia**, for what the Kremlin said would be a comprehensive discussion with the Russian President.
- He attended the **plenary session of the Eastern Economic Forum.**

Prelims Takeaway

- Eastern Economic Forum
- Belt and Road Initiative (BRI)

Eastern Economic Forum

- The EEF was **established in 2015 to encourage foreign investments** in Russia's Far East (RFE).
- The EEF displays the **economic potential, suitable business conditions and investment opportunities** in the region.
- Agreements signed at the **EEF increased from 217 in 2017 to 380 agreements in 2021, worth 3.6 trillion roubles.**
- The agreements focus on **infrastructure, transportation projects, mineral excavations, construction, industry and agriculture.**

- **China, South Korea, Japan and India** are the Key Players in the region, where **China is the biggest investor**.
- China who sees potential in promoting the **Chinese Belt and Road Initiative (BRI) and the Polar Sea Route in the RFE**.
- **China's investments** in the region account for **90% of the total** investments.
- Russia has strategically developed the region with the aim of **connecting Russia to the Asian trading routes**.
- With the fast modernisation of cities like Vladivostok, Khabarovsk, Ulan-Ude, Chita and more, **Russia aims to attract more investments in the region**.
- **To survive the economic crisis** and the sanctions with the help of China and other Asian powers.

62. South Korea keen on joining Quad, says envoy Chang Jae-bok - The Hindu

Relevance: Important International institutions, agencies and fora- their structure, mandate.

News:

- **South Korea** is very keen on joining the **Quad** grouping and the ball is now in the Quad's court to decide on expansion.
- On the bilateral front, **India and South Korea are negotiating expansion of the Comprehensive Economic Partnership Agreement (CEPA)**.

Prelims Takeaway

- Comprehensive Economic Partnership Agreement (CEPA)
- Quad

Comprehensive Economic Partnership Agreement (CEPA)

- India has signed **CEPAs with South Korea and Japan**.
- It is a kind of **free trade pact** that covers negotiation on the trade in services and investment, and other areas of economic partnership.
- It may even consider negotiation in areas such as **trade facilitation and customs cooperation, competition, and IPR**.
- **Partnership agreements or cooperation agreements** are more comprehensive than Free Trade Agreements.
- CEPA also looks into the **regulatory aspect of trade and encompasses an agreement covering the regulatory issues**.

63. Honourable President of India, Smt. Droupadi Murmu, to virtually launch Ayushman Bhav Campaign on September 13, 2023 - The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- The **Honourable President** will virtually inaugurate the visionary '**Ayushman Bhav**' campaign today.
- It will mark a **significant leap towards achieving Universal Health Coverage (UHC)** and ensuring healthcare for all.

Prelims Takeaway

- Universal Health Coverage (UHC)
- Ayushman Bhav Campaign
- Ayushman Bharat Scheme

'Ayushman Bhav' Campaign

- Initiated by the **Ministry of Health and Family Welfare**, it is a **comprehensive nationwide healthcare initiative**.
- **Objective:** To provide saturation coverage of healthcare services, reaching every village and town in the country.
- It builds upon the success of the **Ayushman Bharat program** and signifies a **paradigm shift in healthcare services**.

The Approach

- It embodies a **whole-of-nation and whole-of-society approach**.
- It **unites government sectors, civil society organizations and communities** under a common mission.

- This is to ensure that **every individual receives essential health services** without any disparity or exclusion.

The Components

- This synergistic approach aims to **saturate coverage of health services** through its **three components**
 - Ayushman - Apke Dwar 3.0
 - Ayushman Melas at Health and Wellness Centres (HWCs) and Community Health Centres (CHCs)
 - Ayushman Sabhas in every village and panchayat.

Ayushman Apke Dwar 3.0

Objective

- To **provide Ayushman cards to remaining eligible beneficiaries** enrolled under the PM-JAY scheme
- To ensure that **more individuals have access to essential health services**.

Ayushman Melas at HWCs and CHCs

- These Melas will **facilitate the creation of ABHA IDs (Health IDs) and issuance of Ayushman Bharat Cards**.
- They will also offer **early diagnosis, comprehensive primary health care services, teleconsultation** with specialists and **appropriate referrals**.

Ayushman Sabhas

- These **gatherings in every village and Panchayat** will play a **pivotal role in**
 - distributing Ayushman cards
 - generating ABHA IDs
 - raising awareness about vital health schemes and disease conditions
 - raising awareness about blood donation and organ donation drives

Recognition

- **Panchayats that successfully saturate the health schemes** will earn the prestigious title of **'Ayushman Gram Panchayat'** or **'Ayushman Urban Ward'**.
- This will **symbolise their dedication** to equitable healthcare provision.

64. SC declines BJP MP's petition to lift firecracker ban in Delhi- the hindu

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- Recently, the **Supreme Court declined a plea** by MP to **lift its ban on the production, storage, sale and bursting of firecrackers** in the national capital.
- The court had **dismissed arguments** that **bursting crackers was a fundamental right and an essential practice** during religious festivals like Diwali.

Prelims Takeaway

- Petroleum & Explosives Safety Organization (PESO)
- Green crackers

Background

- In 2017, **the apex court had banned the use and sale of toxic crackers** on the basis of a petition filed,
- The **sale of green and improved crackers would be only through licensed traders**.
- Manufacturers would face **penal action if the composition of fireworks' do not match the composition** mentioned in the **CSIR-NEERI test report** previously approved by the PESO

Green crackers

- These are dubbed as **'eco-friendly' crackers** and are known to **cause less air and noise pollution** as compared to traditional firecrackers.
- These crackers were first designed by **the National Environmental and Engineering Research Institute (NEERI)**, under the aegis of the Council for Scientific and Industrial Research (CSIR) in 2018.
- These crackers **replace certain hazardous agents** in traditional crackers with less polluting substances.
- Most green crackers **do not contain barium nitrate**, which is the most dangerous ingredient in conventional crackers.

- Green crackers use **alternative chemicals such as potassium nitrate and aluminium** instead of magnesium and barium as well as carbon instead of arsenic and other harmful pollutants.
- Regular crackers also **produce 160-200 decibels of sound**, while that from **green crackers are limited to about 100-130 decibels**.

Petroleum & Explosives Safety Organization (PESO)

- It is an organization under the **Department for Promotion of Industry and Internal Trade, Ministry of commerce & industry**.
- It administers the **usage of explosives & petrol stations** in India.
- It is **headquartered at Nagpur, Maharashtra**.

65. Transfer of personal data under UN treaty will be under domestic laws: India-The Hindu

Relevance: Important International institutions, agencies and fora- their structure, mandate.

News:

- Recently, **United Nations member states** negotiate a treaty **to counter cybercrimes**
- India has made suggestions at **the international forum that transfer of “personal data”** under the convention will be done **in accordance with the country’s domestic laws**.

Prelims Takeaway

- Digital Personal Data Protection Act
- U.N. Cyber Crime Convention

Background

- The **Digital Personal Data Protection Act** enacted by the Parliament in August.
- It says that **personal data can be processed “in the interest of sovereignty and integrity of India or security of the state”** for “fulfilling any obligation under law”.
- The Act requires **firms to disclose to users the identity of other firms to which their data would be entrusted for processing**
- They are explicitly **exempted from disclosing or sharing of such data** in the case of lawful interception of data.
- The Union Home Ministry recently reviewed the **draft of the U.N. Cyber Crime Convention** to discuss the necessary changes in the existing systems if this convention is signed and ratified by India.
- The sixth session of the **“Ad Hoc Committee to Elaborate a Comprehensive International Convention on Countering the Use of Information and Communications Technologies for Criminal Purposes”** held from August 21-September 1,
- India asked for the **deletion of a clause** encouraging state parties to **“establish bilateral or multilateral arrangements”** to facilitate the transfer of personal data.
- India also **agreed to the clause that state parties may transfer personal data to:**
 - a third country
 - an international organisation
 - only with the prior written authorisation of the original transferring state party, subject to effective and appropriate safeguards.

66. Union Cabinet approves third phase of eCourts project- The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation

News:

- Recently, the Union Cabinet on approved the **third phase of the eCourts project to upgrade digital infrastructure of the lower judiciary**.

Prelims Takeaway

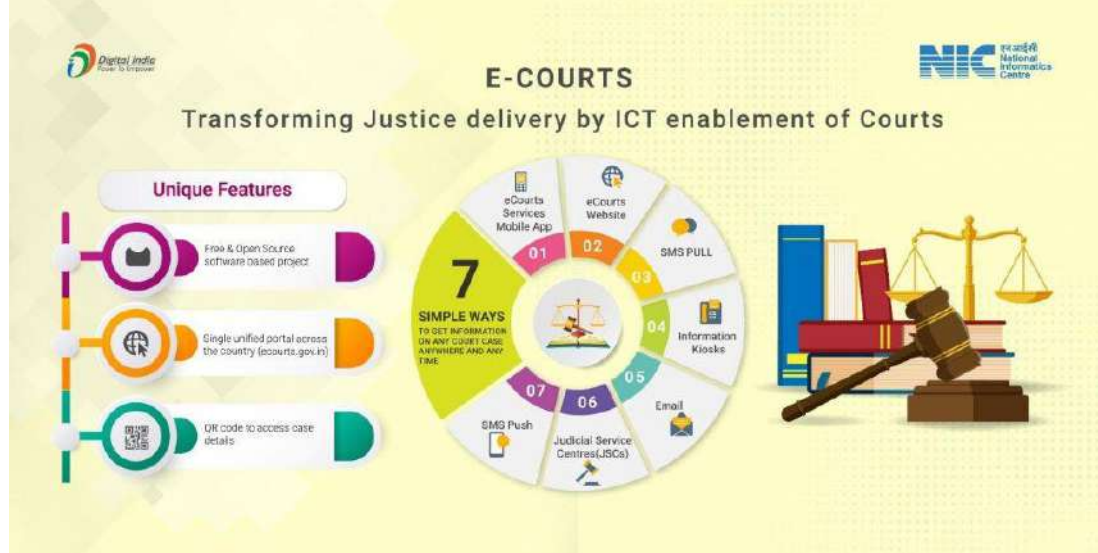
- E-court
- Information and Communication Technology (ICT)

Key Points

- The third phase **will see digitisation of entire court records** at an estimated cost of ₹2,038.4 crore.
- A total of **3,108 crore documents will be digitised**.

e-Courts Project

- It was conceptualized on the basis of the “**National Policy and Action Plan for Implementation of Information and Communication Technology (ICT)**” in the Indian Judiciary.
- It is a Pan-India Project, **monitored and funded by the Department of Justice, Ministry of Law and Justice**, for the District Courts across the country.
- Integrating advanced technology will make **judicial system more accessible and transparent**.



67. ‘Special Session to discuss Parliament’s 75-year journey, take up Bills on CEC, the Press’- The Hindu

Relevance: Parliament and State legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these.

News

- The Union **government** of India has **announced** a **special session** of **Parliament** to be **held** in the **newly constructed building**.
- This **session holds** particular **significance** as it **marks** the **first official use** of the **new parliamentary facility**.

Special Session of Parliament: An Overview:

- A **special session** of Parliament refers to a **unique meeting** convened outside of the **regular parliamentary sessions**.
- The term “**special session**” is **not explicitly mentioned** in the Constitution of India.
- Its convening is carried out as per the provisions of **Article 85(1)** of the Constitution.

Procedure of calling such Session

- **Article 85(1)** of the Indian **Constitution stipulates** the procedure for summoning Parliament.
- This **constitutional provision** grants the President the **authority to call Parliament** into session, including special sessions, as deemed necessary.
- **It says:**
 - “The President shall from time to time summon each House of Parliament to meet at such time and place as he/she thinks fit, but six months shall not intervene between its last sitting in one session and the date appointed for its first sitting in the next session.”

Historical Context of Special Sessions:

- **Special sessions** of Parliament have **varied** in their **focus and format** over the years:

[A] Special Sessions with Debates:

- **2015:** A special session commemorated Dr. B.R. Ambedkar’s 125th birth anniversary.
- **1997:** Parliament convened to mark India’s 50th anniversary of independence.
- **1962:** The agenda included a discussion on the India-China war situation.

[B] Midnight Special Sessions (Without Debates):

- **1972:** A session was held to celebrate 25 years of India's independence.
- **1992:** A special session marked the 50th anniversary of the Quit India Movement.
- **2017:** A session was convened to mark the rollout of the Goods and Services Tax (GST).

68. Govt. to explain to SC pricing of life-saving drugs - The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- The Centre has agreed to place on record in the Supreme Court its **mechanism for controlling the price of life-saving and essential drugs**.
- In November 2022, the government **had revised the list and prices of essential medicines**.

Drug Price Control Order, 2013

- The **Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers** had announced the **Drugs Price Control Act, 2013**
- **Objective:** to improve the availability of basic medicines at affordable prices across the country.
- Under **The Order**, the work of revising the applicable ceiling price of notified drugs **was initiated by the National Pharmaceutical Pricing Authority**.
- The order has been issued by the Government of India for the **regulation of drug pricing in the country under Section 3 of Essential Commodities Act, 1955**.
- As per the DPCO 2013, all dosages mentioned in the **National List of Essential Medicines (NLEM) will be under price control**.

National Pharmaceutical Pricing Authority (NPPA)

- It is a **government regulatory agency** established with the aim of controlling and regulating the prices of pharmaceutical drugs and medical devices in the country.
- It was constituted vide **Government of India Resolution** dated 29th August 1997.
- It is an **attached office of the Department of Pharmaceuticals (DoP), Ministry of Chemicals & Fertilizers**.
- **Functions**
 - To implement and enforce the provisions of the Drugs (Prices Control) Order in accordance with the powers delegated to it.
 - To deal with all legal matters arising out of the decisions of the Authority.

Prelims Takeaway

- National Pharmaceutical Pricing Authority (NPPA)
- Drug Price Control Order, 2013

69. All reported births, deaths to be digitally registered from Oct. 1 - The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- **All reported births and deaths in the country will be digitally registered** on the Centre's portal from October 1, according to a government notification.

Key Highlights

- The **Registration of Births and Deaths (Amendment) Act, 2023** that paves way for **digital birth certificates** which will be a single document to be used for:
 - admission to educational institutions
 - applications for driving licence
 - government jobs
 - passports or Aadhaar
 - voter enrolment,
 - registration of marriage,

Prelims Takeaway

- National Register of Citizens (NRC)
- Centre's Civil Registration System (CRS)

- It will **come into effect from October 1.**
 - **sub-section (2) of Section 1 of the Registration of Births and Deaths (Amendment) Act, 2023** (20 of 2023) gives the power to the **Central government** to do so.
 - The centralised database will also **update the National Population Register (NPR)**, ration cards, property registration and electoral rolls.
 - It will be **compulsory for States:**
 - to register births and deaths on the Centre’s Civil Registration System (CRS) portal
 - to share data with the RGI which functions under the Union Home Ministry.
 - The Act authorises the government to **“collect Aadhaar numbers of parents and informants, if available, in case of birth registration.**
 - **Presently, either parent voluntarily provides an Aadhaar number** for a newborn’s birth certificate generated through the CRS.
 - As on March 31, **Aadhaar has a saturation of 93%** for a projected population of 138.72 crore.
- National Population Register (NPR)**
- It is a database **containing a list of all usual residents of the country.**
 - A usual resident for the purposes of NPR is a person who has **resided in a place for six months or more and intends to reside there for another six months or more.**
 - Its objective is to have a **comprehensive identity database of people** residing in the country.
 - In March 2020, the **Ministry of Home Affairs (MHA) amended the Census Rules** framed in 1990
 - The objective was to **capture and store the Census data in an electronic form** and enabled self-enumeration by respondents.
 - NPR, **first collected in 2010** and updated in 2015 **through door-to-door enumeration, during the “house-listing” phase of the Census.**
 - It has a **database of 119 crore residents.**
 - NPR is the **first step to the creation of National Register of Citizens (NRC)**, as per the Citizenship Act.

70. Bill downgrades EC to status of Cabinet Secy from that of SC Judge - The Hindu

Relevance: Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.

News:

- **The Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023**, is listed for discussion in the **special session** starting September 18,
- It was introduced in Rajya Sabha in August

Current scenario

- The **Election Commission of India (ECI) is an autonomous constitutional authority** responsible for administering Union and State election processes in India.
- The **President appoints CEC 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 (SC) of India.**
- They can **resign anytime or can also be removed before the expiry of their term.**
- “At present, when the **commissioners call a government officer like:**
 - The Law Secretary
 - Cabinet Secretary at the Centre
 - The Chief Secretary of a state
- For a meeting, or seek their explanation regarding a lapse or deliberate disregard of their direction, their order is perceived **to carry the authority of a Supreme Court Judge.**

Prelims Takeaway

- Election Commission of India
- The Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023

- The equivalence of the **EC to a Judge is implied in the Constitution itself** as it says the CEC can **only be removed through impeachment**.

The Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023

- It proposes to **revise the salary, allowance and service conditions of the Chief Election Commissioner (CEC) and the two Election Commissioners**, aligning them with those of a **Cabinet Secretary**.
- As of today, it is **aligned to that of a Supreme Court Judge**.
- It deals with the **constitution of a committee responsible for selecting the three election commissioners**.
- This **committee**, which has the **Prime Minister, Leader of Opposition, and a Union Cabinet Minister does not have the Chief Justice of India** as a member, contrary to the **Supreme Court's suggestion in a March 2023 judgment**.
- In its ruling dated March 2, 2023, the Supreme Court had said that such **appointments must be made based on the recommendations of a committee**.
- This committee is to be composed of the **Prime Minister, the Chief Justice of India, and the Leader of the Opposition in the Lok Sabha**.
- Currently there is **no law of a Central government law governing appointments to the Election Commission of India**.

Concern

- "Being seen as the equal of a Cabinet Secretary means **below an MoS (Minister of State) in stature**.
- aligning Election Commissioners with the bureaucracy **could potentially tie their hands and erode their perceived authority**
- if the Bill is passed, it would **create a peculiarity** wherein the **Constitution stipulates that a CEC can only be removed in a manner similar to that of a Supreme Court Judge**.
- However, in practice, the **CEC's service conditions align with those of a Cabinet Secretary**.
- It would not only erode their authority but also **impact their international standing**.
- In many countries, especially developing countries which **look up to India's electoral democracy**, their counterparts are either retired Supreme Court Judges or enjoy the status of SC Judges.
- **"Half of the countries in the world have judges as Election Commissioners.**
- **India is the vishwa guru in elections**, 108 countries have sent their Election Commissioners to learn from us in the past 10 years.
- equating the EC with the Cabinet Secretary **may have been an oversight**.
- "In the past few years, the government has **similarly equated the salary of the CIC (Chief Information Commissioner) and CVC (Chief Vigilance Commissioner)** with that of the **Cabinet Secretary** instead of an apex court Judge.
- The **difference is that the CVC and CIC are not Constitutional bodies** like the EC.
- The salary may not be different in the proposed Bill, but what is **different is the public perception of who the EC is being equated to**.
- **Judges are given an independent stature under the Constitution** because they have to decide cases that involve the government, the Prime Minister and Ministers.
 - That kind of independence is needed for the Election Commission too.
- This is **sending the wrong message about the independent character of the EC**.

71. PMMSY: bridging gaps in the fisheries sector - The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- **Minister for Fisheries, Animal Husbandry and Dairying** will launch a six-month-long outreach initiative of the **Department of Fisheries "Matsya Sampada Jagrukata Abhiyan"**.
- Its **objective is to efficiently implement the scheme** and reach out to the potential stakeholders.

Prelims Takeaway

- Central Sector Scheme
- Centrally Sponsored Scheme
- Pradhan Mantri Matsya Sampada Yojana

Pradhan Mantri Matsya Sampada Yojana

- It was introduced **as part of the 'Atma Nirbhar Bharat' package** with an investment of Rs. 20,050 crores, the highest-ever investment in this sector
- It aims to bring about the **Blue Revolution** through sustainable and responsible development of the fisheries sector in India.
- The scheme is being **implemented in all States and UTs for a period of 5 years from FY 2020-21 to FY 2024-25.**
- In order to facilitate access **to institutional credit, fishermen are provided with insurance coverage, financial assistance and a facility of Kisan Credit Card (KCC)** as well.
- It will be **implemented as an umbrella scheme** with two separate components namely:
 - **Central Sector Scheme:** The project cost will be borne by the Central government.
 - **Centrally Sponsored Scheme:** All the sub-components/activities will be implemented by the States/UTs and the cost will be shared between Centre and State.

72. SC information a click away as it joins National Judicial Data Grid - The Hindu/ SC data now onboard National Judicial Data Grid portal: CJI - Indian Express

Relevance: Structure, organization and functioning of the Executive and the Judiciary

News:

- Recently, the **Chief Justice of India** announced that the **Supreme Court is now "onboard" the National Judicial Data Grid (NJDG) portal.**
- The onboarding of Supreme Court's case data on the NJDG is **based on the 'open data policy.**
- With this onboarding, the **flagship project of the e-courts project** completes the full circle.
- One can now access **case-related information, statistics** such as pendency and disposal of cases, **case types and year-wise break-up of the SC at the click of a button.**
- The **NJDG-SC portal** can be accessed through the **Supreme Court website.**

Prelims Takeaway

- National Judicial Data Grid
- eCourts Project

National Judicial Data Grid

- It is a **database of orders, judgments and case details** of 18,735 District & Subordinate Courts and High Courts.
- It was created as an **online platform** under the **eCourts Project.**
- Data is updated on a **near real-time basis** by the connected District and Taluka courts.
 - It provides data relating to **judicial proceedings/decisions of all computerised district and subordinate courts** of the country.
- All **High Courts have also joined** the NJDG **through web services**, providing easy access facility to the litigant public.
- Aligned with the **National Data Sharing and Accessibility Policy (NDSAP)**, NJDG provides an **Open Application Programming Interface (API)** to Central & State Governments.

Significance

- It works as a **monitoring tool** to identify, manage & reduce pendency of cases.
- It helps to **provide timely inputs for making policy decisions** to reduce delays in disposing of cases and helps in **reducing case pendency.**
- Facilitates **better monitoring of court performance and systemic bottlenecks** and thus, serves as an **efficient resource management tool.**
- To track cases related to land disputes, **land records data of 26 States have been linked with NJDG.**

International Recognition

- NJDG is recognised as a **significant innovation under the Centre's ease of doing business initiative.**
- **World Bank's Ease of Doing Business Report, 2018**

- It commended NJDG for its role in generating **case management reports that facilitate contract enforcement.**

Current CJI views on NJDG

- The **NJDG portal** has
 - increased transparency
 - brought in accountability and responsibility
 - improved efficiency
 - increased coordination
 - helped informed decision-making
 - helped optimum deployment of resources and manpower
- Besides being a single source of data, it has **huge potential for high-quality research work.**

73. India-Middle East-EU corridor to have multiple routes, but hurdles remain - The Hindu

Relevance: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

News:

- Days after India, **U.S, Saudi Arabia, UAE and other countries launched the India-Middle East-Europe Economic Corridor (IMEC)**, officials said many of the details are still being ironed out.
- **Multiple route options are being considered** that will include ports like Haifa in Israel and Piraeus in Greece.
- The **IMEC MoU was signed by India, the U.S., Saudi Arabia, UAE, European Union, Italy, France and Germany**, in the presence of all their leaders.

Prelims Takeaway

- Belt and Road Initiative
- Partnership for Global Infrastructure Investment (PGII)

Key Highlights

- Among the ports that could be connected on the west coast of India are **Mundra (Gujarat), Kandla (Gujarat), and Jawaharlal Nehru Port Trust (Navi Mumbai).**
- In the Middle East, at least **five ports have been shortlisted to be connected to the Indian ports** which include Fujairah, Jebel Ali, and Abu Dhabi in the UAE as well as Dammam and Ras Al Khair ports in Saudi Arabia.
- It is to be noted that apart from government-owned ports, both **Mundra port in India and Haifa port in Israel are privately** controlled by the Adani Group, and have been **highlighted in proposal documents.**
- While IMEC has been proposed **to counter the Belt and Road Initiative** proposed by China, **Chinese presence cannot be wished away** along the IMEC route,
- This is because **Piraeus port is controlled by China Ocean Shipping** (Group) Company which is a Chinese state-owned company.
- Currently, all trade between **India and Europe happens via the sea route, that passes through Suez Canal**, controlled by Egypt.

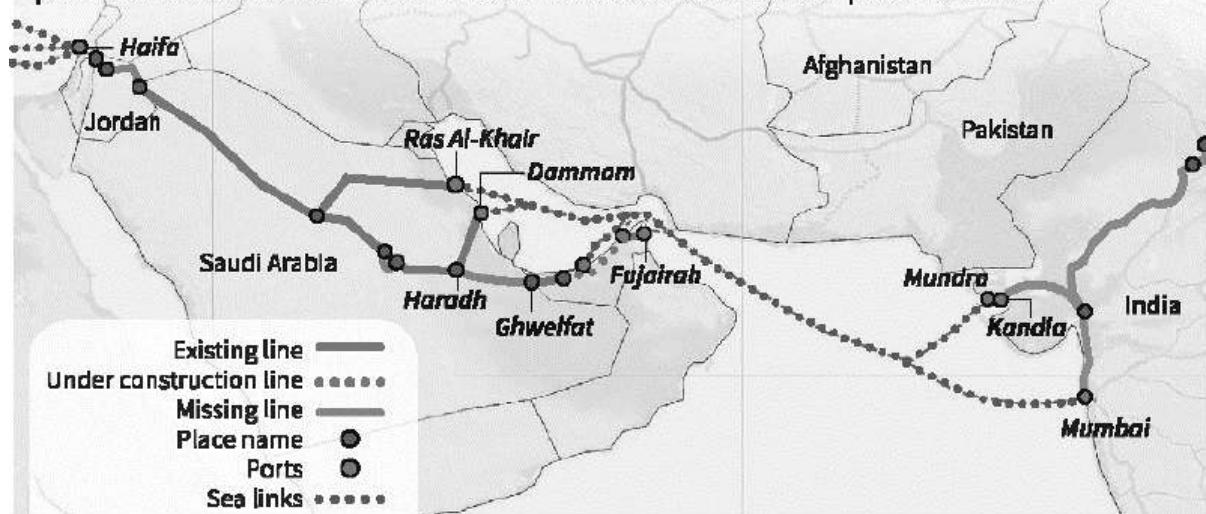
India Middle East Europe Corridor

- it is a network of **transport corridors comprising railway lines and sea lanes** to promote economic integration between Asia, the Arabian Gulf, and Europe.
- The proposed corridor will comprise two separate corridors- **the Eastern corridor and the Northern corridor.**
 - The Eastern Corridor will connect India to the Arabian Gulf
 - The Northern Corridor will connect the Arabian Gulf to Europe.
- It will involve transit by ship between India and Saudi Arabia, followed by a rail link to the UAE and likely to Jordan from where the shipment will move by sea to Turkey and further by rail.

- Along with the railway track, **cables for energy and digital connectivity as well as a pipeline** for clean hydrogen export will be laid.
- India, US, UAE, Saudi Arabia, European Union (EU), Italy, France and Germany are Member nations.
- It is **part of the Partnership for Global Infrastructure Investment (PGII)**
 - It is a collaborative effort by G7 nations to fund infrastructure projects in developing nations.
- PGII is the **G7 bloc's counter to China's Belt and Road Initiative.**
- PGII is part of G7's vision of **Build-Back-Better** framework.

Corridor trajectory

The map shows the multiple routes being considered for the India-Middle East-EU Corridor. Indian ports on the west coast of India could be connected to five shortlisted ports in West Asia



74. Committed to helping artisans, says PM; unveils ₹13,000-crore scheme - The Hindu/PM launches scheme to support traditional artisans: Training, guarantee-free loans - Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Recently, **Prime Minister launched the PM Vishwakarma Scheme** for providing collateral-free loans
- It will also provide **skills training to 18 categories of traditional artisans and craftspersons.**
- He also **inaugurated Yashobhoomi, or the India International Convention Centre at Delhi's Dwarka.**
- He also said that India is on its way to becoming a **major destination for conference tourism**
 - The new centre, along with the 'Bharat Mandapam', will be a medium for showcasing India of the future.

Prelims Takeaway

- Yashobhoomi and Bharat Mandapam
- PM Vishwakarma Scheme

Key Points

- India's current global share of conference tourism is only 1 per cent, **international exhibition centres like Yashobhoomi and Bharat Mandapam will increase that share.**
- The PM Vishwakarma Scheme will allow artisans to:
 - attend a five-day skilling workshop
 - a voucher to buy toolkits,
 - the provision for guarantee-free loans of up to Rs 3 lakh.

- Under the **financial assistance component of the scheme:**
 - beneficiaries would first be eligible for an interest-free loan of Rs 1 lakh, which they would have to repay within 18 months.
 - Upon repayment, they would qualify for a second tranche of loan worth Rs 2 lakh at an interest rate of 5 per cent.
 - beneficiaries would also get a subsidy of up to 8 per cent of the interest amount.
- the **verification of beneficiaries would be done at three levels**, which are the gram panchayat, district collector, and state levels.
- There will be **committees identifying these people** and making the final list of beneficiaries.
- Furthermore, the financial assistance component of the PM Vishwakarma scheme is **guarantee-free**.
- The **credit guarantee fees will be borne by the Centre**.
- The scheme is expected to **benefit about 30 lakh families** of traditional artisans and craftsmen, including weavers, goldsmiths, blacksmiths, laundry workers, and barbers.
- PM also launched **postal stamps inspired by the scheme and a toolkit** booklet for artisans written in various languages.
- Under PM Vishwakarma scheme, the artisans and craftspeople will be provided **recognition through PM Vishwakarma certificate and ID card**
- The scheme will **further provide skill upgradation, toolkit incentives, digital transactions and marketing support**.

75. Women's Bill in the works again - Indian Express/ Two House panels on women's Bill: Govt should decide quota within quota, review after 15 yrs - Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- The **Union Cabinet**, which held an **unscheduled meeting** recently, is said to have cleared the **women's reservation Bill, stuck for 27 years**.
- It **reserves 33 percent seats for women** in Parliament and legislative Assemblies.

Prelims Takeaway

- Women's Reservation Bill
- Reservation

Need for the Women Reservation

- The move comes when the **number of women candidates** contesting Lok Sabha elections has **slowly and steadily increased**.
 - From just 45 in the 2nd Lok Sabha elections of 1957 to 726 in 2019.
- **Women's turnout** has also been **steadily increasing**.
 - **46.6%** of the women electors **turned out to vote in 1962**.
 - Women had **left men behind**, at **67.2% voting** compared to 67%, by the time of the **2019 polls**.
- Correspondingly, the **number of women candidates in the Parliament has also risen**.
- However, their **share in the Lok Sabha ranks remains low**.
 - In the **1st Lok Sabha**, there were **22 women MPs (4.41%)**
 - The figure of **78** elected in the **2019 Lok Sabha elections** is the **highest ever**, but it is **still only 14.36% of the total**.
 - That makes it **less than half of the 33% seats envisioned** to be kept aside for women by the Women's Reservation Bill.

Pros and Cons of the Bill

- **Pros**
 - It will lead to the **empowerment of women**.
 - For instance, the 73rd Constitutional Amendment Act led to **gender sensitive decisions, increased responsiveness, etc**.

- **Decriminalisation of politics**, as there will be **fewer criminal charges against women legislators**.
- **Cons**
 - Distracts **attention away from major electoral reforms** such as intra-party democracy, etc.
 - **Limits voters' choice**.
 - Rotation of reserved constituencies **may limit an MP's incentive to work**.

76. IRDAI plans committee to create Bima Sugam platform, to appoint project consultant - Indian Express

Relevance: Statutory, regulatory and various quasi-judicial bodies.

News:

- IRDAI recently formed a **steering committee**, which will act as the **apex decision making body** for creation of its ambitious **Bima Sugam platform**.

Bima Sugam Platform

- It is envisioned as a **trusted platform by the IRDAI**.
- It will be an **online portal** that will be a **one-stop shop for**
 - insurance related queries
 - policy purchase
 - claim settlement
 - insurance advice
 - grievance redressal
- **Web aggregators, brokers, insurance agents, bank agents**, etc would act as **facilitators** on this platform for selling insurance policies.
- The portal would provide all such facilities to **policyholders having an e-insurance account (E-IA)**.
- It will further act as a **window to view all policies, details and renewal details**.

Significance

- Help in **eliminating the need to fill lengthy forms**.
- Help to **cut down commissions** paid to intermediaries.
- Allow for a **speedy acceptance of new/sandbox products**.
- It will **simplify and digitise the insurance marketplace**, right from buying policies to renewals, claim settlement and agent and policy portability.

Insurance Regulatory and Development Authority of India

- It is an **autonomous and statutory body** established under the **IRDA Act 1999**.
- It is the **apex body that supervises and regulates the insurance sector** in India.
- **Objective:** To protect the interests of policyholders, to regulate, promote and ensure orderly growth of the insurance industry in India.
- **10-member body:** a Chairman, five full-time members and four part-time members appointed by the Government of India.
- **Nodal Ministry:** Ministry of Finance

Prelims Takeaway

- Insurance Regulatory and Development Authority of India
- Bima Sugam Platform

77. France and Germany back EU enlargement proposal - The Hindu

Relevance: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

News:

- **France and Germany, the two largest economies in the European Union**, pushed new proposals for the **enlargement of the 27-member bloc**.
- The policy **paper was presented along the fringes of a European ministerial meeting**.
- The paper, commissioned in January this year, is **in response to growing calls for expanding the EU, partly in response to Russia's invasion of Ukraine**.

Prelims Takeaway

- The European Union
- EURO

The European Union

- It is a **group of 27 countries** that operate as a cohesive economic and political block.
- **19 of these countries use EURO as their official currency.**
- **8 EU members** (Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden) **do not use the euro.**
- The EU grew out of a desire to form a single European political entity to end centuries of warfare among European countries
 - It culminated with World War II and decimated much of the continent.
- The EU has **developed an internal single market through a standardised system** of laws
- It **applies in all member states in matters**, where members have agreed to act as one.

European Union and India

- The European Union **works closely with India to promote** peace, generate employment, **boost economic growth, and enhance sustainable development.**
- At the 2017 European Union-India Summit, **leaders reiterated their intention to strengthen cooperation** on implementing the **2030 Agenda for sustainable development**
- The European Union is the **largest trading partner**, accounting for 85 billion euros (95 billion USD) worth of trade in 2017, ahead of China and the USA.
- The EU's share of foreign investment inflows to India has more than doubled from 8% to 18% in the last decade, **making the EU the largest foreign investor in India.**
- Since 2007, there has **been a free trade agreement between the EU and India.**

78. Govt to discuss transition timeline, consent mechanism with industry - Indian Express

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News:

- Almost a month after the data protection Act was notified into law, **the Centre will kick start discussions**
 - The discussion is on contours of subsequent rules which are crucial for its operationalising.

Prelims Takeaway

- Data Protection Board
- The Digital Personal Data Protection Act, 2023

Key Highlights

- Officials from the **IT Ministry will meet representatives of top tech companies** such as Meta Google, Apple and Amazon.
- Meeting is to **discuss issues including the timeline for compliance, whether all entities will be given the same amount of time to adhere to the law.**
- The Digital Personal Data Protection Act, 2023, even though notified as law, **depends heavily on subordinate legislation**
 - at least 25 rules have to be formulated to operationalise the Act
- The government **has also been empowered to enact rules for any provision that it deems fit.**
- The government will implement the law **first for big tech companies and offer a longer transition timeline for its own agencies and departments**, smaller entities, and start-ups.
- The law requires companies to **gather personal data of users through a consent-based mechanism.**
- It even **allows some relaxations to that end for certain "legitimate uses".**
- The penalty **for not being able to take enough safeguards for preventing a data breach could go as high as Rs 250 crore.**
- The data protection Act **also allows significant concessions to small businesses and start-ups from some key provisions**
- The **law has retained the contents of the original version** of the legislation proposed last November.
- In its new avatar, the **proposed law has also accorded virtual censorship powers to the Centre.**
- It empowers the **Central government to block any platform that has violated its provisions** on at least two different instances.

- The Act **also allows the central government to exempt its instrumentalities** from adhering to any and all provisions of the law
- It will allow **centre to processing citizens' personal data for reasons** including national security, and public order, among other things

Digital Personal Data Protection Act

- It will apply to the **processing of digital personal data within India where such data is collected online, or collected offline and is digitised.**
- It will also apply to **such processing outside India, if it is for offering goods or services in India.**
- Personal data **may be processed only for a lawful purpose upon consent of an individual.**
- **Data fiduciaries will be obligated to maintain the accuracy of data, keep data secure, and delete data once its purpose has been met.**
- The Bill grants **certain rights to individuals including the right to obtain information, seek correction and erasure, and grievance redressal.**
- The central government will establish the **Data Protection Board of India to adjudicate on non-compliance with the provisions of the act.**

79. WHO releases report on global impact of high BP - The Hindu/ WHO red flag: Only 37% Indians with high BP diagnosed, 30% get treatment - Indian Express

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

News:

- At least **4.6 million deaths in India can be prevented by 2040** if half its hypertensive population controls its blood pressure, **says a report**
 - the first-ever report released by WHO on the global impact of hypertension.
- It estimates that **31 per cent of the country's population or 188.3 million people are living with the condition currently.**

Prelims Takeaway

- Hypertension
- World Health Organisation (WHO)

Key Highlights

- High blood pressure (140/90 mmHg or higher) **leads to stroke, heart attack, heart failure, kidney damage and many other health problems** and is preventable.
- Only **37 percent of Indians with hypertension are diagnosed** and only 30 per cent get treated.
- At present, **only 15 percent of those with hypertension in the country have it under control**, the report says.

What report mean to young population

- "Uncontrolled hypertension damages blood vessels and organs and this impact increases with **prolonged exposure to heart stress.**
- So **young people are at a high risk of future adverse health events** if their hypertension is undetected or uncontrolled.
- Given the high levels of diabetes (101 million) and pre-diabetes (137 million) in our population, **uncontrolled hypertension can ignite a wildfire of health complications.**
- However, **effective control, by changing our living habits and using medicines additionally when needed**, can greatly avert these risks.
- **Detection of hypertension also opens the door to investigation**, detection and management of other abnormalities.
- While India has decided to **put 75 million patients with hypertension or diabetes on standard care by 2025**
- Globally, hypertension **affects one in three adults or about 1.3 billion people.**

The Primary Trigger

- **High salt intake, tobacco use, obesity, alcohol consumption** and lack of physical exercise can trigger hypertension.
- In fact, **the report flagged tobacco use (28 per cent) and physical inactivity (34 per cent)** as the two most potent triggers in India.

Low awareness

- **“In rural India, a majority of the people still do not know much about the condition.**
- even **diagnosed people are reluctant to take these medicines** and follow dosage
- There are **no symptoms really until there are complications** — the heart gets damaged or the kidney fails.

Prevention protocol in India- WHO

- The report takes a look at the **India Hypertension Control Initiative (IHCI)**
 - a government initiative to screen people and put them on hypertension treatment at their local health centres
- It has as of now **enrolled 5.8 million people with hypertension from 27 states.**
- It flags issues with **procuring the blood pressure medicine that the programme initially faced.**
- **“By 2020, the IHCI had ensured that more than 70 per cent of health care facilities** had ensured one month’s stock of the protocol medicines,
- With an **adequate and uninterrupted availability of drugs**, it was possible to decentralise the programme.
- The **program was decentralised to 18,000+ Ayushman Bharat health** and wellness Centres for improved access to care.

Way forward

- **Continue medication** on diagnosis.
- **promotion of dietary approaches** that help people to reduce salt in food and increase consumption of fruit and vegetables (which contain blood pressure lowering potassium).
- **Alcohol consumption should be avoided** or greatly reduced, as it precipitates or perpetuates hypertension and makes effective control very difficult.
- **Physical activity, good sleeping habits, reduced exposure to air pollution** will help lower blood pressure, as will stress coping methods like yoga, meditation and music.
- **Technology enabled frontline health workers, like ASHAs and ANMs**, can be very effective in early detection and long-term management of hypertension.

80. SHREYAS scheme empowers thousands: over 2300 crore rupees allocated for education of SC and OBC students since 2014 - PIB

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

News:

- A total of **1628.89 crore rupees** have been released to benefit **21326 beneficiaries** under the **umbrella scheme SHREYAS, from 2014-15 until 2022-23.**

Prelims Takeaway

- SHREYAS Scheme
- University Grants Commission
- National Eligibility Test

SHREYAS Scheme

- The **Scholarships for Higher Education for Young Achievers Scheme** has **four central sector sub-schemes.**
 - Top Class Education for SCs
 - Free Coaching Scheme for SCs and OBCs
 - National Overseas Scheme for SCs
 - National Fellowship for SCs
- Since these sub-schemes are central sector schemes, **state-wise data is not maintained.**

Free Coaching Scheme for SCs and OBCs

- **Objectives**

- To **provide coaching of good quality** for economically disadvantaged Scheduled Castes (SCs) and Other Backward Classes (OBCs) candidates.
- To enable them to **appear in competitive and entrance examinations** for obtaining jobs as well as securing admission in reputed higher education institutions.
- The **ceiling of the total family income** under the scheme is **8 lakhs per annum**.
- The **ratio of SC:OBC students is 70:30**, and **30% of slots are reserved for females in each category**.
- In case of the **non-availability of an adequate number of candidates** in the SC category, the **Ministry can relax this ratio**.
- However, in no case, **less than 50% SC students shall be permitted**.

Top Class Education for SCs

- **Objective:** To **recognise and promote quality education** amongst students belonging to SCs by **providing full financial support**.
- **Coverage:** SC students pursuing studies beyond the 12th class.
- The scholarship, once awarded, will **continue till the completion of the course**, subject to **satisfactory performance** of the student.
- The ceiling of the total family income under the scheme is **8 lakhs per annum**.
- Under the scheme, **full tuition fees, non-refundable charges and academic allowance and other expenses** are provided.

National Overseas Scheme for SCs

- Provides **financial assistance for pursuing masters and Ph.D. level courses abroad** to the selected students from
 - Schedule Caste (SC)
 - De-notified, Nomadic and Semi-Nomadic Tribes
 - Landless agricultural labourers
 - Traditional artisan categories
- **Eligibility Criteria**
 - Total family income, including the candidate less than 8 lakhs per annum
 - More than 60% marks in the qualifying examination
 - Below 35 years of age
 - Secured admission in top 500 QS ranking foreign Institutes/ Universities.
- Under the scheme, **total tuition fees, maintenance and contingency allowance, visa fees, to and fro air passage etc.** are provided to the awardees.

National Fellowship for SC Students

- Provides **fellowship to SC students** for pursuing **higher education** leading to **M.Phil/PhD degrees in Sciences, Humanities and Social Sciences** in Indian Universities/Institutions/ Colleges recognised by the **University Grants Commission (UGC)**.
- Provides for **2000 new slots per year** who have qualified the **National Eligibility Test- Junior Research Fellowship (NET-JRF) of UGC** and **Junior Research Fellows for Science stream** qualifying UGC-Council of Scientific and Industrial Research (UGC-CSIR) Joint Test.

81. Immunity to legislators on bribery: Supreme Court to revisit order- Indian Express

Relevance: Structure, organization and functioning of the Executive and the Judiciary—Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity.

News:

- **The Supreme Court referred a 1998, 5-judge Constitution Bench judgement** (in the P V Narasimha Rao case) to a **7-judge Bench**, as the issue deeply affects the morality of the Indian polity.

Prelims Takeaway

- Article 105
- Article 194

- In its **1998 judgement**, the majority of the **SC Bench had held that legislators have immunity against criminal prosecution on bribery charges** for any speech or vote in Parliament.
- Privileges and Immunities to the MPs and MLAs**
- Privileges are **special rights, immunities and exemptions enjoyed by the two Houses** of Parliament and legislature of States, and their committees and their members.
 - The **Constitution has also extended these privileges** to those persons who are entitled to speak and take part in:
 - the proceedings of a House
 - any of its committees.
 - The **main purpose of these MPs/MLAs** can perform their duties or function properly without any hindrances.
 - It is **essential for democratic functioning of the legislatures**.
 - Without these **privileges the Houses can neither maintain their authority, dignity and honour**.
 - Nor can **protect their members from any obstruction in the discharge of their parliamentary responsibilities**.
 - **Article 105 and Article 194** to the Constitution of India grant privileges or advantages to the MPs (Article 105) and to the MLAs (Article 194) of every State.
 - These powers, **privileges and immunities should be defined by the law** from time-to-time.
 - These **privileges are considered as special provisions** and have an overriding effect in conflict.
 - It must be clarified here that these privileges **do not extend to the President** (or Governor) who is also an integral part of the Parliament (or state legislature).
 - The same provisions are stated under **Article 194, where MLAs of a state are referred instead of MPs**.

82. Delimitation debate: gender vs regional, caste identities - The Hindu

Relevance: Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.

News:

- Recently, the Government said the **Women's Reservation bill would come into effect after the delimitation of Lok Sabha constituencies**.
 - an exercise that will be carried out only after the completion of the next Census.

Prelims Takeaway

- Delimitation
- Delimitation Commission

Key points

- The next **delimitation of Lok Sabha constituencies will hence involve two shifts**:
 - The southern to northern and eastern States
 - Men to women across the country.
- In the process, the serious concerns regarding the **diminishing say of States that have stabilised their populations**.

Population skew

- If **Lok Sabha seats were to be redistributed according to current distribution of the population**
 - the **northern States** might have as many as **32 seats more**.
 - the **southern States** might have up to **24 seats fewer**.
 - **Kerala could lose six** of its current 20 Lok Sabha seats
 - **Tamil Nadu 11 of its 39**, according to some calculations.
- Delimitation of Lok Sabha constituencies **was kept on hold until 2026** through a constitutional amendment in 2002
 - It is in the hope that population growth across the country will be even by then.
- Northern States like **Madhya Pradesh, Rajasthan, Uttar Pradesh and Bihar have decennial growth rates of 12% to 15%**.
- In the southern States, the **decennial growth rates range between 6% and 10%**.

Delimitation

- It literally means **the act or process of fixing limits** or boundaries of territorial constituencies in a country **to represent changes in population**.
- The Delimitation Commission is to **work without any executive influence**.
- The Constitution mandates that the **Commission's orders are final**
- It **cannot be questioned before any court** as it would hold up an election indefinitely.
- When the orders of the Delimitation Commission are laid before the Lok Sabha or State Legislative Assembly, **they cannot effect any modification in the orders**.
- **Under Article 82**, the Parliament enacts a Delimitation Act after every Census.
- Under **Article 170**, States also get divided into territorial constituencies as per Delimitation Act after every Census.
- Once the Act is in force, the **Union government sets up a Delimitation Commission**.
- The **first delimitation exercise** was carried out by the President (with the help of the Election Commission) in **1950-51**.
- The **Delimitation Commission Act was enacted in 1952**.
- Delimitation Commissions have been **set up four times — 1952, 1963, 1973 and 2002** under the Acts of 1952, 1962, 1972 and 2002.
- There was **no delimitation after the 1981 and 1991 Censuses**.

83. Constitution Bench to examine validity of extending quota - The Hindu/ Continuation of reservation is 'absolutely necessary': Govt to SC - Indian Express

Relevance: Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.

News:

- Recently, the **Centre told the Supreme Court that it will submit more material** to strengthen its case regarding extension of reservation.
 - Central government Favours **extension of the period of reservation of seats for Scheduled Castes (SCs) and Scheduled Tribes (STs)** in Lok Sabha and state Assemblies.
- a **five-judge Constitution bench**, which took up the **petitions challenging the Constitutional validity of the Constitution 104th (Amendment) Act**.

Prelims Takeaway

- Article 334
- Representation of the People Act of 1951

Constitution 104th (Amendment) Act

- It extended the **deadline for the cessation of seats for SCs and STs in the Lok Sabha and states assemblies from Seventy years to Eighty**.
- It removed the reserved seats for the **Anglo-Indian community in the Lok Sabha and state assemblies**.

Reservation of seats for Scheduled Castes (SCs) and Scheduled Tribes (STs) in Lok Sabha and state Assemblies

- As per **Article 334** of the Indian Constitution, **Anglo-Indians, the Scheduled Castes, and Scheduled Tribes have been provided with reservations since 1950**.
- Various amendments have been made to the Constitution to **extend this reservation every 10 years**.
- The reservation of seats for the SCs and STs was **set to expire in 2020** as mandated by the 95th Amendment.
- The SCs and STs have **seats reserved in the Indian Parliament, state assemblies, and urban and rural-level organizations**
- Seats for **Scheduled Castes and Scheduled Tribes** in the Lok Sabha are allocated based on **the proportion of their population** in the State, as prescribe by:
 - Article 330 of the Constitution of India
 - Section 3 of the Representation of the People Act of 1951

84. Union Minister of Civil Aviation inaugurates 'Udaan Bhawan' at Delhi's Safdarjung Airport - PIB

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Recently, the **Union Minister of Civil Aviation** launched an **e-wallet payment option on Bharatkosh portal**.

The e-wallet Payment

- It will be particularly useful for **processing offees for various regulatory approvals** in the Bharat Kosh portal.
- It acts as a **prepaid wallet** that would enable registered users to **add funds in advance**.
 - Initially, only NEFT/RTGS mode will be allowed for adding funds.
- The users would also be able to **generate receipts and challan instantly eliminating the problem of failed bank transactions**.
- The facility will only be **available to registered Bharatkosh users**, wherein a **unique wallet ID** will be generated for each user to manage the wallet transactions.

Bharatkosh Portal

- An initiative of the **Controller General of Accounts, Ministry of Finance**, Government of India.
- It provides **one-stop services to deposit any fees/fine/other money into the government's account**.
- It **converges all the Civil Ministries/Departments** of the Government of India.
- It aims to **provide 24X7 year-round electronic services to deposit money into Government accounts** using internet-based payment technologies to the users.
- It thus **leverages the e-Governance commitment** of the Government to provide **e-efficient, e-effective, e-excellent government** anywhere anytime.

Prelims Takeaway

- Bharatkosh Portal
- NEFT
- RTGS

85. SC refuses to intervene in order directing Karnataka to release Cauvery water to T.N.- The Hindu

Relevance: Structure, organization and functioning of the Executive and the Judiciary—Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity.

News:

- Recently, the **Supreme Court** refused to intervene either in **favour of Karnataka or Tamil Nadu in the Cauvery water dispute**.
- It banked on the combined expertise of the **Cauvery Water Regulation Committee (CWRC) and the Cauvery Water Management Authority (CWMA)**.

Key points

- The **CWMA had in turn confirmed the CWRC order** that Karnataka has to ensure **Cauvery water releases from the Krishna Raja Sagara and Kabini** reservoirs put together
- So the flows were **released at Biligundulu** at the rate of 5,000 cusecs.
- The **south-west monsoon** which feeds the catchment in Karnataka has failed **miserably**.
- Tamil Nadu had originally moved the Supreme Court** seeking a direction to Karnataka to forthwith release 24,000 cusecs of Cauvery water from its reservoirs at Biligundulu

Prelims takeaway

- Cauvery river
- Cauvery Water Regulation Committee
- Location Based Questions

Dispute:

- As the **river originates in Karnataka**, flows through **Tamil Nadu with major tributaries coming from Kerala** and drains into the Bay of Bengal through **Pondicherry**.
- The dispute therefore involves **3 states and one Union Territory**.
- The Cauvery water dispute between Karnataka and Tamil Nadu **began in 1974** when Karnataka started diverting water without Tamil Nadu's consent.
- After several years, the **Cauvery Water Disputes Tribunal (CWDT)** was established in 1990 to **resolve the issue**.
- It took **17 years for the CWDT to reach a final order in 2007**, which outlined the sharing of Cauvery water among the four riparian states.
- In 2018, the **Supreme Court declared the Cauvery a national asset** and largely upheld the water-sharing arrangements determined by the CWDT.
- It also **directed the Centre to notify the Cauvery Management Scheme**.
- The **central government notified the 'Cauvery Water Management Scheme'** in June 2018
- It constitutes the **'Cauvery Water Management Authority' and the 'Cauvery Water Regulation Committee'**.

86. Women's quota Bill cleared in Rajya Sabha as all members vote in support - The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- **The Constitution (128th Amendment) Bill**, or the Nari Shakti Vandan Adhiniyam, and its **six clauses were passed with all 214 members** present in the **Upper House** voting in favour of them.

Women Reservation Bill 2023

- The Bill reserves **one-third of all seats for women in Lok Sabha, state legislative assemblies, and the Legislative Assembly of the National Capital Territory of Delhi**.
- Additionally, this reservation will also extend to **the seats reserved for SCs and STs in Lok Sabha and state legislative assemblies**.
- The reservation will be **effective once the census conducted** after the commencement of this Bill has been published.
- Based on the census, **delimitation will be undertaken** to reserve seats for women.
- The **reservation will be provided for a period of 15 years**.
- However, **it shall continue till such date as determined by a law made by Parliament**.
- Seats **reserved for women will be rotated after each delimitation**, as determined by a law made by Parliament.

Prelims takeaway

- Women Reservation Bill 2023
- delimitation

87. India's suspension of visa services in Canada creates panic in Punjab - The Hindu

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News

- In a further scaling up of the ongoing diplomatic tensions between India and Canada, **India has suspended its visa services in Canada till further notice**.
- New Delhi issued an advisory to Indian nationals in Canada, **including students, to exercise utmost caution while travelling in the country**.

Prelims takeaway

- Comprehensive Economic Partnership Agreement (CEPA)
- Khalistan movement

India-canada bilateral relation

- India **established diplomatic relations with Canada in 1947.**
- According to Invest India, **Canada is the 18th largest foreign investor in India** with an overall investment of about \$3,306 million from April 2000 to March 2023.
- Both countries are engaged in technical **negotiations for a Comprehensive Economic Partnership Agreement (CEPA)** including trade in goods, services, investment, and trade facilitation.
- Canada **hosts one of the largest Indian diasporas** in the world, numbering 16 lakh people of Indian origin.
- Indian **students studying in Canada now comprise approximately 40%** of the entire population of international students in Canada.
- Canada's Intellectual Property Office and India's Department of Industrial Policy and Promotion (DIPP) **agreed to strengthen cooperation in the area of Intellectual Property Rights (IPR).**
- **ANTRIX, the Commercial arm of ISRO,** has launched several nanosatellites from Canada.
- ISRO in its 100th Satellite PSLV (Polar Satellite Launch Vehicle) **launched in 2018, also flew Canadian first LEO (Low earth Orbit) satellite,** from Indian spaceport Sriharikota.

88. Panel suggests GPS trackers to reduce overcrowding in prisons- The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Recently, the **parliamentary committee on home affairs** presented its report titled '**Prison-Conditions, Infrastructure and Reforms**'.
- The panel has **recommended ankle trackers or bracelets on prison inmates** to reduce overcrowding in prisons.

Prelims takeaway

- National Crime Record Bureau (NCRB)
- Sabarmati Jail

Key Highlights of the report

- It said **mostly bail is denied on three counts:**
 - the undertrial prisoner may influence or intimidate the witness
 - will try to leave the country
 - commit another crime.
- It **recommended that prisoners from overcrowded jails may be transferred** to other jails with vacant cells in the same State or other States.
- The panel appreciates the **proposal of the Government of Gujarat to make Ahmedabad Jail Bhajiya House cum-Restaurant-cum-historical gallery, a heritage structure.**
- It will depicting the '**life and times**' of Mahatma Gandhi, Sardar Patel, Kasturba Gandhi, Bal Gangadhar Tilak, Zaverchand Meghani, **who were all inmates of Sabarmati Jail.**

Data of National Crime Record Bureau (NCRB)

- According to the prison statistics published by **the National Crime Record Bureau (NCRB) for 2021, there are 1319 prisons in India,** with a total capacity of 4,25,609 prisoners.
- However, the **actual inmates are 5,54,034 which shows that the occupancy capacity rate is 130.2%.**
- Thus, the **record clearly shows that the undertrial prisoners are more** in prisons which is the main reason for overcrowding.
- The **occupancy of women prisoners has also been increased** and the prisons are understaffed by approximately 30% of the required strength.
- **Uttar Pradesh had the highest number of undertrial prisoners,** 21.21% of the country's total undertrial prisoners are lodged in Uttar Pradesh.
- **Delhi has the highest percentage of undertrial prisoners** which is 91% of the total prisoners.

- Out of these, **10,145 prisoners** were recommended by **Under Trial Review Committee (UTRC)** for granting bail.
- However, only **1,696 of the prisoners** were released, which is very low.

89. New Pamban bridge may miss its November deadline- The Hindu

Relevance: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

News

- The **new Pamban railway sea bridge** being built to **connect Mandapam town** on the **mainland** with **Rameswaram** on the **Pamban Island** in Tamil Nadu, may **not be ready by November**.
- The **bridge is under construction since 2019**.

Prelims takeaway

- Location Based Question
- Rail Vikas Nigam Limited.

Pamban Bridge

- It is being developed by the **Rail Vikas Nigam Limited**.
- It is being **developed parallel** to the **old railway bridge**, which was **constructed** by the British in **1914** to **bolster trade relations** with **Sri Lanka**.
- The **Pamban cantilever bridge connects** the town of **Mandapam** in mainland India with **Pamban Island**, and **Rameswaram**.
- The **new 2.5 km bridge** will be India's **first vertical lift railway sea bridge**.
- It will **ensure** that the **trains**, which **currently** operate at a **maximum speed** of just **10 kmph** will be able to **cross 2km distance** at over **80 kmph**.
- It will be **3.0 metres higher** than the **existing bridge** with navigational **air clearance** of **22.0 metres** above sea level.
- It will **have** will have **electrified double-line railway track** and **electro-mechanical** controlled systems.
- It is **expected** to give a **boost** to the **tourism industry** in this region, **especially** for **pilgrimage purposes** as a large number of devotees, every year, visit **Rameshwaram Temple** and **Jyotirling**.

90. Govt launches AI chatbot for PM-Kisan scheme-Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- The **Ministry of Agriculture and Farmers' Welfare** **launched an AI chatbot** for the **PM-KISAN Scheme**.
- It is the first of its kind to be **integrated with a major flagship scheme of the central government**.

Prelims takeaway

- AI Chatbots
- Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)

Key Points

- The introduction of the **AI Chatbot in the PM-KISAN grievance management** system is aimed at empowering farmers with a user-friendly and accessible platform.
- In the initial phase of the development, the **AI Chatbot will assist farmers in seeking information related to their application status**, payment details, ineligibility status and other scheme-related updates.
- The chatbot is **currently available in English, Hindi, Bengali, Odia and Tamil**, and will soon be available in all 22 official languages of the country.

Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)

- The Pradhan Mantri Kisan Samman Nidhi (PM-Kisan) Yojana **came into effect from December 1, 2018**.
- Under the scheme, **income support of Rs 6000 per annum is provided to all eligible farmer families** across the country
 - In three equal instalments of Rs 2,000 each every four months.

- The fund of Rs 2,000 is **directly transferred to the bank accounts** of the eligible farmers/farmer's family under the Direct Benefit Transfer Mode.
- **Ministry of Agriculture and Farmers Welfare** is the nodal ministry
- It is a **Central Sector Scheme** with 100% funding from the Central Government.

Eligibility

- Landholding farmers' families with **cultivable landholding in their names**
- Farmers from **both the urban and rural areas**
- **Small and Marginal** farmers families.

AI Chatbots

- A chatbot is a **computer program that uses artificial intelligence (AI)** and natural language processing (NLP)
- **objective:** to **understand customer questions and automate responses** to them, simulating human conversation.

91. House panel wants monuments list pruned: Some not important- Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Recently, the **Parliamentary Standing Committee on Transport, Tourism and Culture** has said that **Centrally protected monuments should be categorised** on the basis of **their national significance**
- the **Archaeological Survey of India (ASI)** should be **split into two wings** for a more effective functioning.

Prelims Takeaway

- Father of Indian Archaeology
- Archaeological Survey of India

Key highlights

- Objective of **Ancient Monuments and Archaeological Sites and Remains (AMASR) (Amendment) Bill:**
 - The Government aims to effect a change in the current benchmark of a structure having to be at least 100 years old to be listed as a monument.
- **Most of the current monuments are from the British-era** despite India having a vast wealth of more ancient structures.
- the Government, which is making efforts to **showcase India's rich past and believes the country has more than British-era structure to show.**
- the report also noted that, till date, **531 monuments, or 14.4 per cent** of ASI's total 3,691 centrally protected monuments, **have been encroached.**
- On the functioning of ASI, the panel advised that the **organisation be divided into two wings**
 - Archaeological Survey of India (ASI) - can look after the core mandate, i.e. exploration, excavation and conservation aspects
 - the India Heritage Development Corporation (IHDC) - can deal with the ASI's entire revenue.

Archaeological Survey of India

- ASI, under the **Ministry of Culture**, is the premier organization for the archaeological **research and protection of the cultural heritage of the nation.**
- It administers more than **3650 ancient monuments, archaeological sites and remains of national importance.**
- **Function:**
 - carrying out surveys of antiquarian remains
 - exploration and excavation of archaeological sites
 - conservation and maintenance of protected monuments etc.
- It was founded in **1861 by Alexander Cunningham**- the first Director-General of ASI.
- **Father of Indian Archaeology**- Alexander Cunningham

92. Sports Minister will skip Asiad inaugural as China bars entry of Arunachal players - The Hindu

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

News:

- Recently, the **Union Sports Minister cancelled his visit to the Asian Games**, due to China's denial of entry to Indian Wushu players from Arunachal Pradesh.

Prelims Takeaway

- 19th Asian Games Hangzhou, China
- Olympic Council of Asia (OCA).

the Asian Games

- The **19th Asian Games will take place in Hangzhou, China**, from 23rd September 2023 to 8th October 2023.
- Originally scheduled to be held in 2022** and was postponed due to the Covid-19 pandemic.
- The **Asian Games is the biggest sports competition in Asia**, held once every four years.
- They are **organized by the Olympic Council of Asia (OCA)**.
- The **symbol for the Asian Games is the rising sun with interlocking rings**.
- It is **recognised by the International Olympic Committee**.
- The **first-ever Asian Games were held in New Delhi** in 1951.
- Asian Games were **regulated by the Asian Games Federation** from 1951 to 1978.
- Since 1982, the **Olympic Council of Asia has regulated the Asian Games**.
- India is a founder member of Asian Games** and also the host of the first Asian Games.
- The **9th edition of the Asian Games was also held in New Delhi** in November and December 1982.
- Appu**, the Indian elephant, was the **first mascot to be used for the Asian Games**.

19th Asian Games Hangzhou, China:

- A **total of 40 sports and 61 disciplines will take center stage** across 54 competition venues in Hangzhou and five co-host cities.
- The mascots of the **19th Asian Games are a group of robots named: Chenchen, Congcong, Lianlaian**.
- The **torch of the 19th Asian Games is named "Eternal Flame"**. The design was inspired by the Liangzhu Culture of ancient Chinese Civilisation
- Esports and Breaking (Breakdance) are scheduled to make their inaugural** appearances as recognized and official sporting events.

93. Quad Ministers hold talks on rules-based order, UN reform - The Hindu

Relevance: Important International institutions, agencies and fora- their structure, mandate.

News:

- Along the fringes of the **78th session of the United Nations General Assembly (UNGA)**, Foreign Ministers of the Quad reaffirmed the group's commitment to a "**free and open**" **Indo-Pacific region**
- The Quad also committed **itself to the principles of the UN charter and reform of the institution**.
- A new initiative to help countries respond to terror attacks was also discussed.

United Nations

- The United Nations (UN) is an **international organization founded in 1945**.
- It is currently **made up of 193 Member States**.
- Its mission and **work are guided by the purposes and principles** contained in its founding Charter and implemented by its various organs and specialised agencies.
- Its activities **include maintaining international peace and security**, protecting human rights, delivering humanitarian aid, promoting sustainable development and upholding international law.

UN Organs

- General Assembly
- Security Council
- UN Secretariat
- ICJ

- Trusteeship Council
- ECOSOC

The General Assembly

- It is the main deliberative, **policymaking and representative organ of the UN.**
- All **193 Member States of the UN** are represented in the General Assembly, making it the only UN body with universal representation.
- Each year, **in September, the full UN membership meets in the General Assembly Hall** in New York for the annual General Assembly session, and general debate.
- Decisions on other questions are **by simple majority.**
- **The President of the General Assembly is elected each year** by assembly to serve a one-year term of office.

Security Council

- It has primary responsibility, **under the UN Charter, for the maintenance of international peace and security.**
- The Security Council is made up of **fifteen member states, consisting of five permanent members**
 - **China, France, Russia, the United Kingdom, and the United States**
 - **Ten non-permanent members** elected for two-year terms by the General Assembly on a regional basis.
- **Veto power refers to the power of the permanent member to veto (Reject)** any resolution of Security Council.
- The unconditional veto possessed by the five governments has been seen as the **most undemocratic character of the UN.**
- Critics also claim that **veto power is the main cause for international inaction on war crimes and crimes against humanity.**
- **Supporters of the veto power regard it as a promoter of international stability,** a check against military interventions, and a critical safeguard against U.S. domination.

94. Aadhaar unreliable in 'hot, humid' India: rating agency - The Hindu

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

News

- **Global rating major Moody's Investors Service has flagged concerns about security and privacy vulnerabilities** in centralised identification systems like **India's Aadhaar programme.**
- **The unique ID system often results in "service denials",** and using biometric technologies in humid conditions is unreliable, it noted.

Prelims Take Away

- Aadhaar
- blockchain technology

Key Points

- The **Aadhaar system enables access to public and private services,** with verification via fingerprint or iris scans and alternatives like One-Time Passcodes (OTPs).

Unreliable biometric tech

- "The Unique Identification Authority of India (**UIDAI**) administers Aadhaar, aiming to integrate marginalized groups and expand welfare benefits access.
- The system often results in service denials, and the **reliability of biometric technologies, especially for manual laborers in hot, humid climates, is questionable.**
- In August, the **government extended its deadline for switching to Aadhaar-based** payment system (ABPS) for MGNREGA beneficiaries for the fifth time,

Privacy, security concerns

- In a report on "**Decentralized Finance and Digital Assets**" Moody's acknowledged Aadhaar as "the world's largest digital ID program.
- Stressing that **ID systems like Aadhaar lead to the concentration of sensitive information** with specific entities and increase the risks of data breaches,
- Moody's made a pitch for **decentralised ID (DID) systems such as digital wallets,** based on blockchain capabilities

- It gives users more control of their private data and can reduce online fraud.

Decentralised systems

- “In a **centralized system**, a single **entity controls and manages a user’s identifying** credentials and their access to online resources.
- That **entity can dispose of the user’s identity data** – name, address and Social Security number, for example – for internal or third-party profiling purposes,”
- **The adoption of DID** — where personal data is saved in a user’s digital wallet and identity verification takes place on a **decentralised digital ledger such as a blockchain**
- It **increases privacy and reduces the amount of personal information** held by intermediaries.
- The **DID, can be stored and managed in a user’s portable and reusable digital wallet**, rather than by a government, business, employer, or other entity.

Negative social repercussions

- Decentralised IDs also **pose some challenges**.
- At a broader level, it **warned that digital IDs, centralised or not, can have negative social repercussions**
 - since they may strengthen group identities and political divides,
 - particularly if offered by technology and social media companies with significant monopolistic influence.
- Further **polarization of group identities and political affiliations would undermine** the goal of a united and diverse digital space.

95. Multiple entry, exit option in higher studies may not suit India: House panel- The Hindu

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

News

- Recently, the **Parliamentary Standing Committee on Education**, has advised the Centre to hold discussions with all stakeholders on the **option of multiple entry and multiple exit (MEME) in the national education policy (NEP)**.
- The panel, in a report titled **‘Implementation of the National Education Policy, 2020 in Higher Education’**, said Indian institutions were likely to face several issues in implementing this system.

Prelims Take Away

- Credit Accumulation and Transfer (CAT)
- National education policy (NEP).

Key highlights of report

- The **NEP proposes multiple entry and multiple exit options** for the students in higher education.
- The panel, **citing high population, said the estimated intake of students in higher education every year was high**.
- If institutions allow MEME, **it would be very difficult for the institutions to predict how many students would exit and how many would join midway**.
- Since **institutions would not know the in- and out-traffic, it will certainly disturb the pupil-teacher ratio**,” the report said.
- The members in the panel also expressed concern that **uneven geographical distribution of higher educational institutions would create hurdles in managing MEME**.

Greater flexibility

- The panel, though noted that **MEME will offer students greater flexibility and choice in their educational pathways**
- **Panel asked the Centre to develop comprehensive guidelines** and a well-defined framework for MEME options, including:
 - specific eligibility criteria
 - credit transfer mechanisms providing a clear road map for students pursuing different exit points.
- Also, **implementation of a standardised Credit Accumulation and Transfer (CAT) system** would facilitate smooth transitions between different levels of education
 - It allows students to earn and transfer credits seamlessly across institutions

- it will **reduce the value of one's degree and this is a way to produce cheap labour** for the job market.
- **The Kerala government has decided not to implement MEME in colleges and universities** in the State.

96. Jaishankar, Guterres discuss reform of global financial institutions, sustainability- The Hindu

Relevance: Important International institutions, agencies and fora- their structure, mandate.

News:

- Recently, **External Affairs Minister S. Jaishankar and United Nations (UN) Secretary-General Antonio Guterres held bilateral talks** on the eve of the Minister's address to the 78th session of the UN General Assembly (UNGA).
- They discussed **the sustainability agenda and the reform of international financial institutions and the UN.**

Prelims Takeaway

- UNSC

Reform in United Nation

UN Security Council (UNSC) Issue

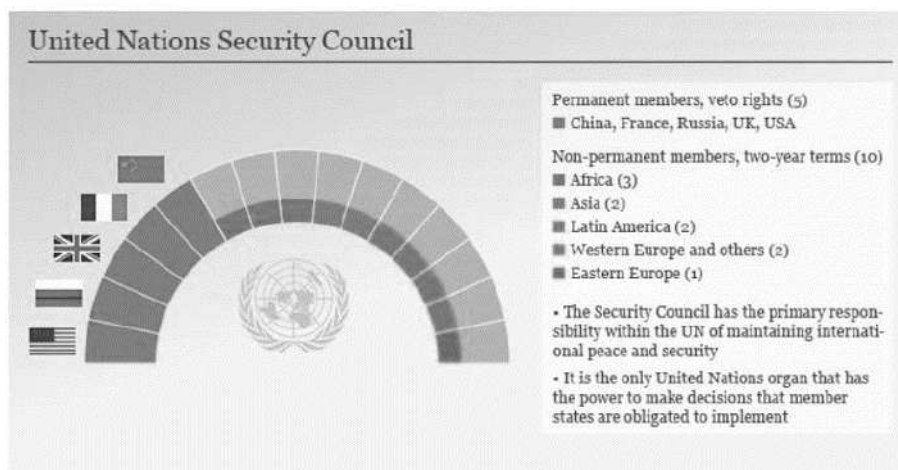
- The **UN Security Council is less effective** because it is less representative, the most pertinent absence being that of Africa, a continent of 54 countries.
- It is a matter of concern that **globally important countries such as India, Germany, Brazil, and South Africa are not represented** on the UNSC permanent members list.
- **Veto power has been always criticized** by many experts
- The geopolitical **rivalry among the permanent members** has prevented the UNSC from coming up with effective mechanisms to deal with global issues.

India and UNSC

- There is **widespread support**, including by **four of the five permanent members** of the Security Council – US, UK, France and Russia – for a permanent seat for India at the Council.
- It's a **regular contributor to the UN's peacekeeping missions.**
- It's one of the **main financial backers of the UN.**
- It's the **world's largest democracy.**
- It maintains one of **the largest armies in the world.**
- It is **responsible for nuclear power** despite being non-signatory to NPT.
- India has been **elected eight times to the UN Security Council**, most recently from 2021 to 2022 after receiving 184 of 192 votes.

Way forward

- The power **imbalance between the P5 and other countries in the UNSC** needs to be addressed urgently to make the council more democratic
- The changing **needs of global governance for peace and security** require significant reforms in the UNSC



97. We can scrap Justice Gita Mittal Committee or you can trust it, CJI tells petitioners- The Hindu

Relevance: Security challenges and their management in border areas – linkages of organized crime with terrorism.

News:

- Faced with myriad complaints and grievances from petitioners in the Manipur ethnic violence case, **the Supreme Court said it could not run the State administration**
- It said **petitioners had to trust the Justice Gita Mittal Committee to do its job.**

Prelims Takeaway

- Map based questions

Manipur issue

- The **central valley of Manipur (10% of the geographical area) is home to the Meitei and Meitei Pangals** who constitute roughly 64% of the state's population.
- The **remaining 90% of the state's geographical area comprises hills** surrounding the valley, which are home to the recognized tribes, making up about 35% of the state's population.
- **The Meitei community (living in the valley) wants to be included in the state's Scheduled Tribes list.**
- They argue that **being left out of the ST list has caused the community to be victimized** without any constitutional safeguards.
- A single judge of the **Manipur High Court passed an order asking the government to consider the demand of the Meitei community for ST status.**
- The order has **been opposed by tribal groups in the state.**
- Both the demand and the order, passed by a single judge of the High Court, have been strongly opposed by groups representing the state's tribal communities such as **Kukis and Naga (living in Hills)**

Status of Meiteis

- Opposition to the inclusion of the Meiteis in the Scheduled Tribe (ST) category by hill tribe in Manipur is **due to their dominant population and political representation of Meitei and fear of job loss.**
- Additionally, **the Meitei language is already included in the Constitution**
- sections of the Meitei community are already classified as Scheduled Castes, Other Backward Classes with access to opportunities associated with that status.

Effort by judiciary

- Recently, The **Justice Mittal Committee was constituted by the apex court to intervene and monitor relief and rehabilitation**, restoration of homesteads, religious places of worship, etc, in Manipur.

98. NGOs told to declare assets acquired with foreign funds - The Hindu

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

News:

- The Ministry of Home Affairs on Monday issued a gazetted notification, **amending the Foreign Contribution Regulation Act (FCRA) rules**
- Decision came after mandating **NGOs with FCRA license to submit details of movable and immovable assets created out of foreign contributions.**

Prelims Takeaway

- Foreign Contribution Regulation Act (FCRA)
- nongovernmental organization (NGO)

Key changes in FCRA rule

- Under the new rules, **political parties, legislature members, election candidates, judges, government servants, journalists and media houses among others** – all barred from receiving foreign contribution

- They will **no longer be prosecuted if they receive foreign contribution from relatives** abroad and fail to intimate the government within 90 days.

Foreign Contribution Regulation Act (FCRA)

- The “**Foreign Contribution (Regulation) Act**” (FCRA) regulates foreign donations and ensures that such contributions do not adversely affect internal security.
- **First enacted in 1976, it was amended in 2010 in which a slew of new measures was adopted to regulate foreign donations.**
- The FCRA act is implemented by the **Ministry of Home Affairs.**
- Under the **new rules notified by MHA in 2015, NGOs are required to give an undertaking that**
 - the acceptance of foreign funds is not likely to prejudicially affect the sovereignty and integrity of India
 - impact friendly relations with any foreign state and does not disrupt communal harmony.
- The FCRA is **applicable to all associations, groups and NGOs which intend to receive foreign donations.**

Registration

- It is mandatory **for all such NGOs to register themselves under the FCRA.**
- Registration can be canceled for a range of reasons including:
 - if in the opinion of the Central Government
 - If It is necessary for the public interest to cancel the certificate
- Once the registration of an NGO is canceled, **it is not eligible for re-registration for three years.**

99. Centre rebuffs Moody’s Aadhaar report; says a billion Indians trust it, no breach of database- The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Recently, **The Electronics and IT Ministry took on a report from Moody’s Investors Service that raised questions** about the efficacy of Aadhaar
- It asserted that **there have been no breaches reported from the unique ID system’s database** till date to dismiss concerns about security and privacy in a centralised system.

Prelims Takeaway

- Virtual ID(VID)
- Aadhaar

Key points

- The ministry said that **the seeding of Aadhaar and payment in the MGNREGS has been done without requiring the worker to authenticate using their biometrics.**
- The Moody’s report also ignores that **biometric submission is also possible through contactless means like face authentication and iris authentication,**
- the **option of mobile OTP (One-Time Passcode)** is also available in many use cases.
- Parliament has laid down **robust privacy protections in the law governing the Aadhaar** system
- **State-of-the-art security solutions are in place,** along with a federated database and encryption of data both at rest and in motion,
- These **systems are certified as per international security and privacy standards**

Aadhaar

- It is a **12-digit unique identification number issued by the Unique Identification Authority of India (UIDAI)** to every individual resident of India.
- It **serves as proof of identity,** which is linked to the individual's biometric and demographic information.
- The **Aadhaar programme was launched in 2009 by the UIDAI** with the goal of providing a unique and verifiable identity for every resident of India.
- **Mask Aadhaar option allows you to mask your Aadhaar number** in your downloaded e-Aadhaar.

Virtual ID(VID)

- **It is a temporary, revocable 16-digit random number** mapped with the Aadhaar number.

- It can be **used in lieu of an Aadhaar number whenever authentication or e-KYC services are performed.**
- Authentication may be performed using VID in a manner similar to using an Aadhaar number. It is not possible to derive Aadhaar number from VID.

100. Union Home Minister and Minister of Cooperation, Shri Amit Shah chairs 31st meeting of the Northern Zonal Council at Amritsar in Punjab -PIB

Relevance: Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.

News:

- While chairing **31st Northern Zonal conference in Amritsar**, Union Home Minister said **an anti-drone system will be deployed along the international border** for strengthening security.

Prelims Takeaway

- Map based question
- Zonal council

Zonal Council

- The **idea of creation of Zonal Councils was mooted by the first PM Nehru in 1956.**
- This **was suggested during the course of debate on the report of the States Re-organisation Commission**
- It was suggested that a **high-level advisory forum should be set up:**
 - to minimise the impact of linguistic hostilities prevailed at that time;
 - to create healthy inter-State and Centre-State environment.
- Zonal Councils **are the statutory** and not the constitutional bodies.
- The five councils are:
 - The Northern Zonal Council
 - The Central Zonal Council
 - The Eastern Zonal Council
 - the Western Zonal Council
 - The Southern Zonal Council.
- **The North Eastern States are not included in the Zonal Councils.**



101. The Judiciary is losing talent as the government sits on names: SC-The Hindu

Relevance: Structure, organisation and functioning of the Executive and the Judiciary—Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity.

News:

- The Supreme Court said the judiciary is losing fresh talent like never before as prospective candidates shortlisted for judgeships in High Courts give up as months tick by without a decision from the government.

Prelims Takeaway

- A High Court collegium
- First Judges Case

Collegium System

- It is the system of appointment and transfer of judges that has evolved through judgments of the SC, and not by an Act of Parliament or by a provision of the Constitution.

Background

- **First Judges Case (1981)** declared that the “primacy” of the CJI’s (Chief Justice of India) recommendation on judicial appointments and transfers can be refused for “cogent reasons”.
- The ruling gave the **Executive primacy over the Judiciary in judicial appointments**.
- **In Second Judges Case (1993)**, SC introduced the Collegium system, holding that “consultation” really meant “concurrence”.
- It added that it was not **the CJI’s individual opinion, but an institutional opinion formed in consultation with the two senior-most judges in the SC**.
- **In Third Judges Case (1998)**, SC on the President’s reference (Article 143) expanded the Collegium to a five-member body, comprising the CJI and four of his senior-most colleagues.

A High Court collegium

- It is led by the **incumbent Chief Justice and two other senior most judges of that court**.
- Judges of the higher judiciary are appointed only through the **collegium system and the government has a role only after names have been decided by the collegium**.

102. Indo-Pacific region a web of interdependencies: Army chief-The Hindu

Relevance: Security challenges and their management in border areas – linkages of organised crime with terrorism.

News:

- Recently, **Army Chief Gen said The Indo-Pacific region** is not merely a collection of nations but a “**web of interdependencies**”.
- **India is hosting it for the first time 13th Indo-Pacific Army Chiefs Conference (IPACC)** along with the US and involves 30 countries with 20 Chiefs present.

Prelims Takeaway

- Malabar Exercise
- Yudh Abhyas

Key Points

- **Chief of Staff of the U.S. Army and army chiefgen Chiefs** were addressing a press conference on the **13th Indo-Pacific Army Chiefs Conference (IPACC)**
- **India is hosting it for the first time along with the US** and involves 30 countries with 20 Chiefs present.
- **The 47th Indo-Pacific Armies Management Seminar (IPAMS) and 9th Senior Enlisted Leaders Forum (SELF)** are also being held alongside the IPACC.
- **The IPACC has been a biennial convention since 1999**, while IPAMS and SELF have been an annual event since 1978 and 2013, respectively.
- In a parallel development, **the 19th edition of India-US bilateral Army exercise Yudh Abhyas commenced** recently, at Fort Wainwright, Alaska in the US
 - the theme ‘**employment of an integrated battle group in mountain/extreme climatic conditions**’ under Chapter VII of United Nations mandate.
 - **The previous edition was hosted by India at Auli** in Uttarakhand, India last November.

Yudh Abhyas

- It is the **largest running joint military training** and defence cooperation endeavour between **India and the US**.

- The exercise **was started in 2004 under the US Army Pacific Partnership Program**. The exercise is hosted alternately between both countries.
- The exercise **aims at enhancing understanding, cooperation and interoperability between two Armies**.
- This will **help them in undertaking joint operations at battalion level in mountainous terrain** with cold climatic conditions under the ambit of the United Nations.

Other Exercises

- **Tiger Triumph** (Humanitarian Assistance and Disaster Relief exercise)
- **Vajra Prahar** (Special Forces' Exercise)
- **Cope India** (Air Force).
- **Malabar Exercise** (Quadrilateral naval exercise of India, USA, Japan and Australia).
- **Red Flag** (US' multilateral air exercise).

103. FATF reports used to target NGOs, says Amnesty -The Hindu

Relevance: Statutory, regulatory and various quasi-judicial bodies.

News:

- The **Ministry of Home Affairs (MHA) recently amended rules** pertaining to the filing of annual returns by **Non-Government Organisations (NGOs) registered under the Foreign Contribution Regulation Act (FCRA), Foreign Contribution Regulation Act (FCRA)**

Prelims Takeaway

- Foreign Contribution Regulation Act (FCRA)

- It is a **law enacted by Parliament to regulate foreign contributions (especially monetary donations)** provided by certain individuals or associations to NGOs and others within India.
- The Act, **in its consolidating form, was originally passed in 1976 and majorly modified in 2010**.
- The Act **aims to prevent foreign organisations from influencing electoral politics, social, political, economic, or religious discussions in India** for wrong purposes and activities detrimental to the public interest.
- The Act **falls under the purview of the Ministry of Home Affairs (MHA)**.
- **'Foreign Contribution'** means the donation, delivery or transfer made by any foreign source of any security.
- Contributions **made by a citizen of India living in another country (e.g. a Non-Resident Indian (NRI) from his/her personal savings** through the normal banking channels, will not be treated as foreign contributions.
- **Any person can receive foreign contribution provided:**
 - The person has a definite cultural, economic, educational, religious, or social programme;
 - The person must have obtained FCRA registration/prior permission from the Central Government and
 - Person includes
 - an individual;
 - a Hindu Undivided Family;
 - an association;
- It is **mandatory for all such NGOs to register themselves under the FCRA**.
- The **applicant should not be fictitious or benami and should not have been prosecuted or convicted for indulging in activities aimed at conversion through inducement or force**,
- The ministry also **has the power to suspend an NGO's registration for 180 days pending inquiry and can freeze its funds**.
- All orders of **the government can be challenged in the High Court**.

104. STs trail non-STs in 81 health measures: 2021 study - The Hindu

Relevance: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.

News:

- In a recent study published in ‘**The Lancet Regional Health — Southeast Asia**,’ researchers provide a **detailed analysis of the health, nutrition, and population trends of Scheduled Tribes (STs) from 2016 to 2021**.
- It Draws its **data from the National Family Health Surveys** from 2016 and 2021.

Prelims Takeaway

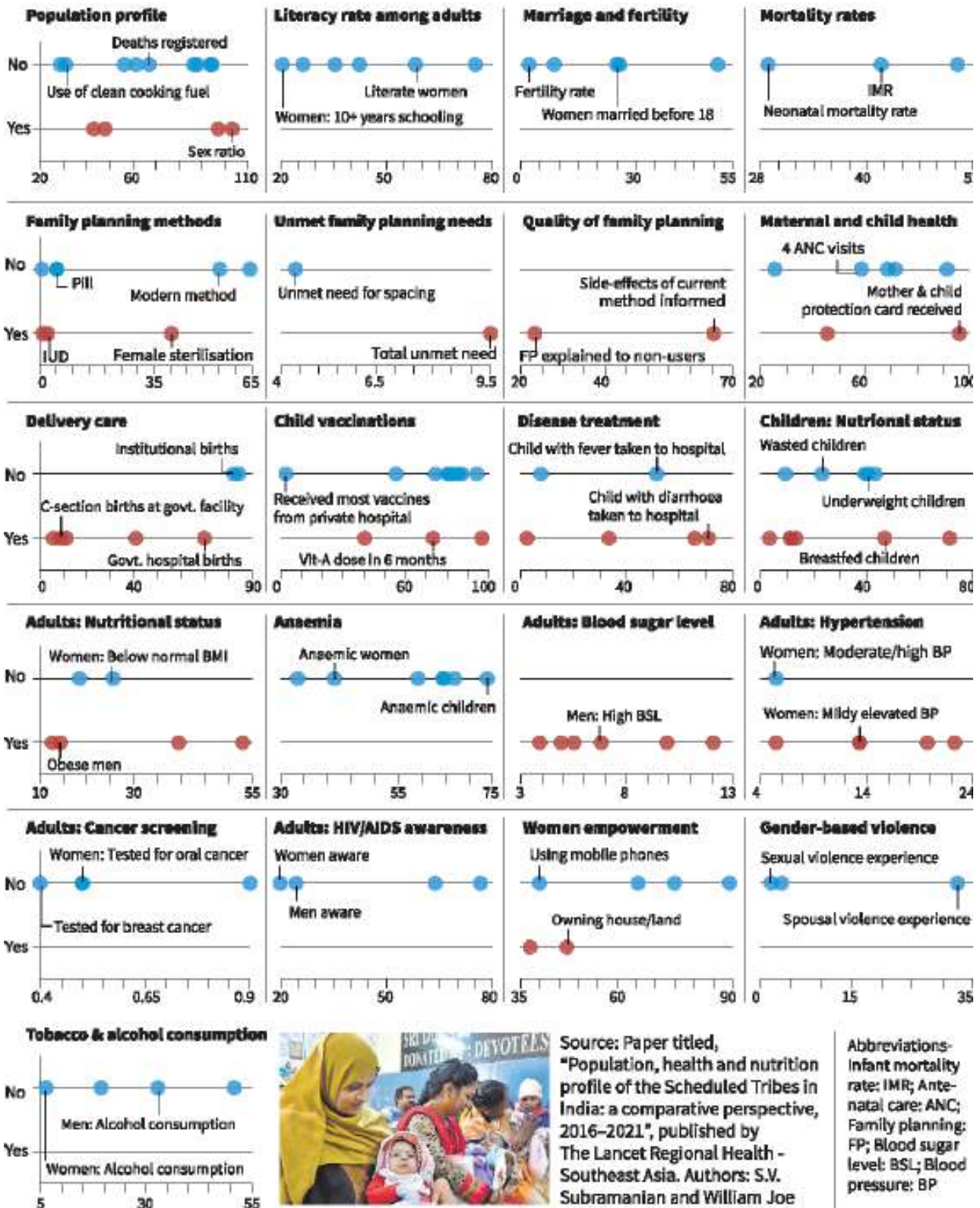
- National Family Health Surveys

Key Highlights of the report

- there is a **noticeable improvement in the health and welfare metrics of STs**,
- There are **persistent disparities between the metrics of ST and non-ST populations**, which demand urgent and consistent policy efforts.
- The **2011 Census recorded over 104 million STs** spread across 705 recognised ethnic groups.
- Even with targeted policies in place, STs, who make up 8.6% of India’s population, **face health and socioeconomic challenges**.
- The **study offers an overview of the performance metrics** for STs, non-STs, and the overall population based on 129 parameters in 2021.
- It also **highlights the contrast in the performance metrics of STs between 2016 and 2021**, spotlighting areas of both progress and decline.
- In 2021, the **non-ST population outperformed the ST population in 81 out of 129 indicators**.
- STs continued to face challenges, particularly **concerning women’s status and major public health issues such as child malnutrition, anemia**, insufficient vaccination coverage, and disparities in fertility and mortality rates.
- The 48 indicators on which **STs surpassed non-STs include:**
 - overall gender balance
 - gender balance at birth
 - use of family planning methods
 - consistent treatment during pregnancy
 - adherence to recommended breastfeeding practices.
- Moreover, **STs showed a reduced occurrence of diabetes and hypertension compared to non-STs**.
- The study says that **the areas where they face greater vulnerability need dedicated policy efforts**.
- The **mortality rate for children under five in the ST community was alarmingly high**, with 50 out of every 1,000 children not reaching their fifth birthday.
- **child malnutrition was a pressing issue**, as more than 40% of ST children under five were stunted, with a similar percentage being underweight.
- STs experienced **major improvements in access to improved sanitation facilities** (an increase of 30.4 percentage points between 2015–2016 and 2019–2021).
- **more births were being attended to by skilled health personnel** (an increase of 13 points) and full vaccination coverage among children aged 12–23 months (an increase of 18.6 points).
- **The civil registration of births among STs also increased from 76% in 2016 to 88% in 2021**.

Comparing health metrics

Under each indicator, the circles labelled as 'yes' ● in the chart are indicators where STs outperformed non-STs and those labelled 'no' ● indicate the opposite. All figures are in percentage



Source: Paper titled, "Population, health and nutrition profile of the Scheduled Tribes in India: a comparative perspective, 2016-2021", published by The Lancet Regional Health - Southeast Asia. Authors: S.V. Subramanian and William Joe

Abbreviations- Infant mortality rate: IMR; Antenatal care: ANC; Family planning: FP; Blood sugar level: BSL; Blood pressure: BP

105. NIA holds searches in six States, detains several over 'terror links' -The Hindu

Relevance: Statutory, regulatory and various quasi-judicial bodies.

News:

- The **National Investigation Agency** detained several suspects during searches across six States and one Union Territory

- **Detention was part of a crackdown** on the alleged nexus among terrorists, gangsters and drug smugglers linked to a Canada-based "listed terrorist".

National Investigation Agency

- The **NIA is a federal agency of the Indian government** responsible for investigating and prosecuting crimes related to Terrorism, Insurgency, and other national security matters.
- Federal agencies in a country typically have **jurisdiction over matters that affect the country as a whole, rather than just individual states or provinces.**
- It was **established in 2009** following the Mumbai terrorist attacks in 2008, under the National Investigation Agency (NIA) Act, 2008
- It **operates under the Ministry of Home Affairs.**
- **The National Investigation Agency (Amendment) Act, 2019** was passed in July 2019, amending the NIA Act, 2008.
- The **NIA has the power to take over investigations** of terrorism-related cases from state police forces and other agencies.
- It also has the **authority to investigate cases across state boundaries without obtaining prior permission from state governments.**

Prelims Takeaway

- National Investigation Agency

106. What is the 'Five Eyes' intelligence alliance?

Relevance: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

News:

- Recently, tussle between India and Canada over the killing of a Khalistani leader has put the spotlight on the **intelligence-sharing alliance 'Five Eyes' (or FVEY), which is believed to have provided the information that "helped" Canada.**

Who are the 'Five Eyes'?

- **The 'Five Eyes' is a multilateral intelligence-sharing network shared by over 20** different agencies of five English-speaking countries
 - Australia,
 - Canada
 - New Zealand
 - the United Kingdom
 - the United States.
- It is both **surveillance-based and signals intelligence (SIGINT).**
- Intelligence documents shared between the member countries are classified '**Secret—AUS/CAN/NZ/UK/US Eyes Only,**' which gave the group its title 'Five Eyes.'

How did the alliance come into being?

- The alliance **between the U.S. and the U.K.** evolved around the Second World War to counter the Cold War Soviet threat.
- The **two countries, which had successfully deciphered German and Japanese codes** during the World War, forged a collaboration to share intelligence related to signals such as radio, satellite and internet communications.
- In the **aftermath of the war in 1946, the alliance was formalised through an agreement** for cooperation in signals intelligence.
- Its scope was **limited to "communication intelligence matters only"** related to "unrestricted" exchange of intelligence products in six areas

Prelims Takeaway

- 'Five Eyes'

- The arrangement was later extended to ‘second party’ countries —Canada joined in 1948, while Australia and New Zealand became part of the alliance in 1956.
- In fact, **no government officially acknowledged the arrangement by name until 1999** and the text of the agreement was first officially released in public after over 60 years in 2010.
- The **goalpost of the Five Eyes, however, has shifted following the collapse of the Soviet Union** and the emergence of new global challenges like terrorism and the growing influence of China.
- **he Five Eyes have become involved in ocean and maritime surveillance**, scientific and defence intelligence analysis, medical intelligence, geospatial intelligence, counterintelligence, counterterrorism, and the continuous sharing of intelligence products via a secret collective database known as ‘Stone Ghost’,
- To increase **cooperation and maintain closeness, the Five Eyes Intelligence Oversight and Review Council (FIORC) was created** in September 2016

What are the concerns?

- There have been **several concerns regarding the privacy, security and methods of working of the intelligence alliance**, which remained shrouded in mystery for long.
- The alliance was **embroiled in a major controversy in 2013 following the disclosure of classified documents** by Edward Snowden, a former National Security Agency (NSA) contractor.
- The papers documented the **mass surveillance programme jointly operated by the Five Eyes to monitor the citizens of member countries.**
- In 2013, a **Canda court rebuked the Canadian Security Intelligence Service (CSIS) for using the alliance to monitor the electronic communications** of Canadian terror suspects overseas.

107. Mizoram not to collect data of Myanmar ‘refugees

Relevance: Important International institutions, agencies and fora- their structure, mandate.

News:

- **Mizoram has decided not to collect biometric and biographic data of Myanmar refugees** in the state as it would lead to discrimination.

Prelims Takeaway

- The 1951 Refugee Convention

Key points

- **Refugees from neighbouring countries cannot be given the refugee status** in Mizoram
 - India is not a signatory to the United Nations High Commissioner for Refugees and the protocol.
- the **Mizoram government allowed refugees to take shelter in the state** and provided the necessary humanitarian assistance and healthcare.

The 1951 Refugee Convention

- It is a UN treaty that defines **who a refugee is and establishes the rights of such persons and also of those who are granted asylum.**
- It is the main **legal document that governs the working of the UNHCR.**
- It is also called the **Convention Relating to the Status of Refugees or the Geneva Convention of 28 July 1951.**
- It also talks about the **responsibilities and legal obligations of countries that grant asylum status to people.**
- Apart from that, the **Convention also defines those who are not eligible for asylum status, such as war criminals.**
- This Convention is **the central guiding document of international refugee protection today.**
- The Convention defines a **refugee as someone who is unable or unwilling to return to their country of origin owing to a well-founded fear** of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion.
- The **Convention is both a status and rights-based instrument and is underpinned by a number of fundamental principles**, most notably non-discrimination, non-penalization and non-refoulement.

108. MGNREGA social audit unit in a state of paralysis in many States

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- An oft-repeated **criticism against the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** scheme is its alleged high rate of corruption.
- **the social audit units meant to detect any cases of malpractice** — has not been backed by the effective recovery of embezzled funds.

Prelims Takeaway

- Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)

Key Points

- As per the **statistics available with the Union Rural Development Ministry** in the ongoing financial year, **less than 14% of the amount flagged by the auditors has been recovered so far.**
 - In the ongoing financial year, **the social audit units have flagged misappropriation** to the tune of ₹27.5 crore.
 - **After action was taken in some of these cases, the amount came down** to ₹9.5 crore out of which only ₹1.31 crore has been recovered so far, merely 13.8% of the total.
 - In 2021-22, **one of the social audit units flagged one of the highest amounts of misappropriation** at ₹171 crore but only ₹26 crore, 15% of the total, was recovered.
 - Section 17 of **the Act governing the scheme says that the gram sabha “shall monitor the execution of works**
 - **Each State has social audit units** which are supposed to work independent of the implementing authorities.
 - But the **Ministry, which directly funds the social audit units** so that they are able to maintain their independence from the States, **is not getting funds to them in time.**
 - For example, **units in Karnataka and Bihar have not got funds for nearly two years now,”**
- Poor monitoring**
- Over the last three years, **there has been a consistent trend of the same States reporting “zero number of cases” and making “zero recoveries”.**

109. ‘Age of consent under POCSO must remain’

Relevance: Statutory, regulatory and various quasi-judicial bodies.

News:

- The government **should not tinker with the age of consent currently 18 years** under the **Protection of Children from Sexual Offences (POCSO) Act**, the Law Commission said in a report
- Instead, **it advised the introduction of “guided judicial discretion”** while sentencing in cases that involve the tacit approval of children in the 16 to 18 years age bracket.

Prelims Takeaway

- Law Commission

Tacit approval’

- In the report, **the Law panel noted that certain amendments would be required in the POCSO Act, 2012** to remedy the situation in cases involving tacit approval, though not consent under law, on the part of children aged between 16 and 18 years.
- **reference was made by the Madhya Pradesh High Court (Gwalior Bench)** in April this year,
- the Court noted that the enforcement of the POCSO Act, **in its present form, “causes injustice in cases of statutory rape where de facto consent is present”.**

Reporting crime in real time

- The **Law Commission also submitted a report (no. 282)** in which it recommended **amending Section 154 of the Criminal Procedure Code, 1973**
 - in order to roll out the registration of e-FIRs in a phased manner, beginning with offences that attract a jail term of up to three years.

110. Afghan consulates counter embassy's decision to shut down

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- **Afghanistan's last remaining diplomats in Delhi plan their exit**, citing a resource crunch and lack of support from the Ministry of External Affairs,
- **The move to shut down the Embassy could cast a long shadow on the future of about 25,000 Afghan refugees in India.**

Prelims Takeaway

- Taliban

Key points

- **No government has yet recognised the Taliban as the legitimate authority** in Kabul, although at least 15 countries, including India, operate diplomatic missions there.
- In addition, many like **Russia, China, Pakistan, and some central Asian countries** have allowed the Taliban to appoint Acting Ambassadors in their capitals
- while **some have even allowed the black and white flag of the Taliban's Islamic Emirate to replace** the red, green and black tricolor of the previous Islamic Republic.
- However, **since 2021, the government has canceled all visas to Afghans**, issuing only a handful to Afghan citizens since then,
- This **left in the lurch thousands of Afghan students** who had received admission in Indian institutes.

India approached Afghanistan since the Taliban Regime

- After the Taliban takeover, **India is caught in the middle of this dilemma** divided between restoring Afghanistan as a strategic priority in its policy and the practical hurdles on the ground.
- Currently, **India is assessing three broad ways of potential engagement** with Afghanistan:
 - Providing humanitarian assistance.
 - Exploring a joint counterterrorism effort with other partners.
 - Engaging in talks with the Taliban.
- The end goal of all these is to **restore people-to-people links and prevent backsliding** of the gains Delhi's developmental aid has made in Afghanistan in the past two decades.
- **India has undertaken more than 400 key infrastructure projects** in all 34 Afghan provinces and has signed strategic agreements to enhance trade and bilateral relations.
- **From 2002 to 2021, India spent \$4 bn in development assistance in Afghanistan**, building high-visibility projects such as highways, hospitals, the parliament building, rural schools, and electricity transmission lines.
- **These projects have created a vast and deep pool of goodwill** for India of the kind that no other country can claim.
- **One of the projects that was left incomplete was the Shahtoot Dam**, to provide drinking water to 2 million residents of Kabul.

111. Electoral bonds to go on sale from October 4

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- The government on September 29 announced the 28th **tranche of electoral bond sales to be undertaken over a ten-day window starting October 4** and closing on October 13, at all authorised branches of the State Bank of India.

Key points

- In November 2022, **the government had amended the scheme to grant itself the power to declare an extra fortnight of electoral bond sales** in years when States and Union Territories with a legislature have polls.
- Individuals **can buy electoral bonds on their own** or along with others, and remit them to registered political parties with at least one percent vote share in the Lok Sabha or Vidhan Sabha elections.

- The bonds are valid for 15 calendar days from the date of issuance.

Electoral Bonds

- Electoral bonds are money instruments like promissory notes, which can be bought by companies and individuals in India from the State Bank of India (SBI)
- It is donated to a political party, which can then encash these bonds.
- The bonds are only redeemable in the designated account of a registered political party.
- A person being an individual can buy bonds, either singly or jointly with other individuals.

Electoral Bond Scheme

- Electoral Bonds Scheme was launched in 2018 to cleanse political funding in India.
- The central idea behind the electoral bonds scheme is to bring about transparency in electoral funding in India.
- The government had described the scheme as an “electoral reform” in a country moving towards a “cashless-digital economy”.

112. In SC case on Agama, the contested history of temple priesthood

Relevance: Indian culture will cover the salient aspects of Art Forms, literature and Architecture from ancient to modern times.

News:

- Recently, the Supreme Court ordered status quo on the appointment of archakas (priests) in Agamic temples in Tamil Nadu.

Prelims Takeaway

- The Agamas

The Agamas

- These are a collection of Tantric literature (in Tamil and Sanskrit) and scriptures of Hindu schools.
- The three main branches of Agama texts are Shaiva, Vaishnava, and Shakta.
- The term ‘Agamas’ literally means tradition or that which has come down, and the Agama texts describe yoga, mantras, temple construction, deity worship, etc.
- Temple worship according to Agamic rules can be said to have started during the Pallava dynasty (551-901 AD) in South India, but they were fully under establishment during the Chola dynasty (848-1279 AD).
- The niches of following Agamic rules for building Shiva temples in Tamil Nadu continues even in the modern era.
- Almost all the temples follow the same custom during festivals and worship methods with minor exceptions.

the Priests of Agamic temples Approach SC

- An association of archakas had challenged reforms introduced by the present govt of Tamil Nadu, which are seen as attempting to change the hereditary system of appointing archakas in Agama temples.
- The petitioners asked for the quashing of the state government’s order, which paved the way for individuals trained in Agama Sastra, irrespective of caste and gender, to assume priesthood.
- The petitioners alleged the state government was unlawfully attempting to appoint non-believers as archakas, infringing upon religious rights protected under the Constitution of India.
- They contended that knowledge of the Agamas required years of rigorous training under learned Gurus and a one-year certificate course run by the government is not sufficient to assume priesthood.

GS III

113. Economy grows 7.8%, fastest in 4 quarters - The Hindu/ Services give fillip to growth, GDP up 7.8% in April-June - Indian Express

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

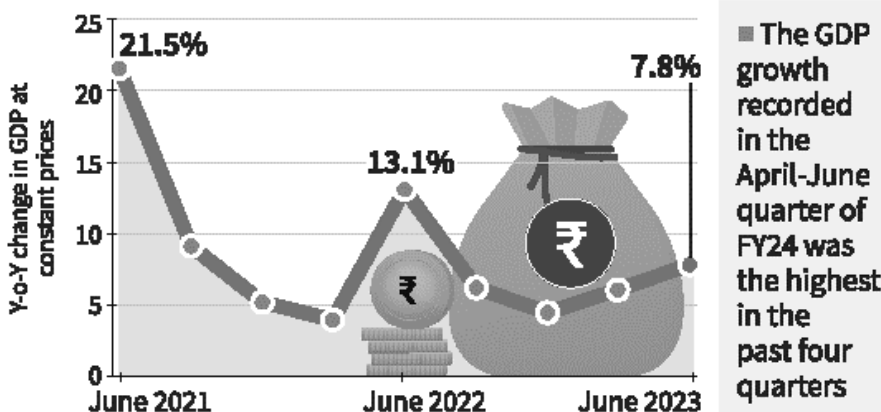
- According to data released by the **National Statistical Office**, India's **Real GDP growth** rose to a **four-quarter high of 7.8 percent** in April-June.
- The GDP measures the **monetary measure of all "final" goods and services**, those that are **bought by the final user, produced in a country** in a given period.
- This was mainly due to a **pickup in agriculture and services**, especially financial, real estate and professional services and contact-intensive services of trade, hotel and transportation.
- **Manufacturing and construction sectors**, however, recorded **slower-than-expected growth rates**.

Prelims takeaway:

- Gross Domestic Product (GDP)
- Gross Value Added (GVA)
- Tax-to-GDP Ratio

Growth accelerates

India's gross domestic product grew by 7.8% in the first quarter of FY24 compared with 13.1% growth in Q1 FY23



114. Core sectors grew 8% in July, output shrank 2.2% from June's level - The Hindu/ Key infra sectors grow 8% in July - Indian Express

Relevance: Indian Economy and issues relating to planning, mobilisation of resources, growth, development and employment.

News:

- All of **India's eight infrastructure industries** reported **growth for the first time in 14 months this July**, with **core sectors' output rising 8%** after a five-month high surge of 8.3% in June.

Prelims takeaway:

- Index of Industrial Production
- Eight core sectors

Index of Industrial Production

- IIP is an indicator that measures the changes in the **volume of production of industrial products** during a given period.
- It is a **composite indicator** that measures the **growth rate of industry groups**
 - The industry groups that it measures are **classified** as
 - Broad sectors like manufacturing, mining, and electricity.

- Use-based sectors like capital goods, basic goods, intermediate goods, infrastructure goods, consumer durables, and consumer non-durables.
- It is used by **government agencies** including the Ministry of Finance, the Reserve Bank of India, etc, **for policy-making purposes**.
- It is compiled and published **monthly** by the **National Statistical Office (NSO)**, Ministry of Statistics and Programme Implementation.
- Base Year for IIP is **2011-2012**.

Eight Core Sectors

- These comprise **40.27%** of the weight of items included in the Index of Industrial Production (IIP).
- The eight core sector industries in **decreasing** order of their weightage: **Refinery Products> Electricity> Steel> Coal> Crude Oil> Natural Gas> Cement> Fertilisers**.

115. 'ONDC a pivotal force set to enhance digital commerce' - The Hindu

Relevance: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

News:

- As per a whitepaper released by **Deloitte India** recently, **ONDC will be a pivotal force enhancing the digital commerce sector** in the country.
- It observed that the **ONDC framework presents an opportunity for businesses of all sizes to connect and transact seamlessly**.

Prelims takeaway:

- Open Network for Digital Commerce
- Digital India

Open Network for Digital Commerce (ONDC)

- It was **launched in late 2021** under the **Department for Promotion of Industry and Internal Trade (DPIIT)** by the **Ministry of Commerce** as part of the **Digital India push**.
- It works as a **network of interconnected e-marketplaces** through which **sellers**, including brands, can **list and sell their products directly to customers** bypassing any middlemen or intermediaries.
- It functions on the basis of an **open network in the form of a gateway** where buyers and sellers across different platforms will be able to connect.
- Along with food delivery, ONDC also offers **delivery services for groceries, home decor, cleaning essentials and other products**.

Objectives

- **Democratisation and decentralisation** of e-Commerce
- **Inclusivity and access for sellers**, especially small and medium enterprises as well as local businesses
- **Increased choices and independency** for consumers
- Making goods and services **cheaper**

Advantages of ONDC

- **Increased Transparency** by making government data more accessible to the public.
- **Increased Customer Choice** and **lower entry barriers**.
- **Spur Innovation** by providing entrepreneurs and researchers with access to government data that lead to the **development of new products and services benefitting society**.
- ONDC can **save money** by **reducing duplication of effort** and enabling more **efficient use of resources**.
- **Protecting the Consumers' Interest** by breaking the hegemony of existing e-commerce.
- ONDC is keen to **level the playing field for e-commerce operators** and **widen the digital market access** for MSMEs and small traders in the country.
- It aims at **fostering open networks developed on open-sourced methodology**, using open specifications and network protocols and independent of any specific platform.

116.HC permits stem cell therapy for two kids with autism - Indian Express

Relevance: Science and Technology- developments and their applications and effects in everyday life.

News:

- The **Delhi High Court** recently permitted two children suffering from **autism spectrum disorder (ASD)** to undergo **stem cell therapy** for treatment of their condition.
- The order came in a petition against a **recommendation** of the **Ethics and Medical Registration Board (EMRB)** regarding stem cell treatment (SCT) in ASD.
- The doctors treating the children stopped the same because the recommendation stated that the **“use, promotion and advertisement of SCT shall amount to professional misconduct”**.
- HC stated, **no statutory provision of law** has been brought to our notice, which **prohibits the use of SCT in ASD**.

Prelims takeaway:

- Autism Spectrum Disorder
- Stem Cell Therapy

Stem Cell

- Stem cells are the **body's raw materials** i.e. cells from which all other cells with specialised functions are generated.
- Under **certain conditions** in the body or a laboratory, **stem cells divide to form more cells called daughter cells**.
- These daughter cells either become **new stem cells (self-renewal)** or become **specialised cells (differentiation)** with a **more specific function**.
 - Such specialised cells include blood cells, brain cells, heart muscle cells or bone cells.
- **No other cell** in the body has the **natural ability to generate new cell types**.

Stem Cell Therapy

- Also known as **regenerative medicine**, it **promotes the repair response** of diseased, dysfunctional or injured tissue **using stem cells or their derivatives**.
- Stem cells can then be **implanted into a person** to replace the damaged or lost cells.

Autism Spectrum Disorder (ASD)

- ASD refers to a **range of conditions** characterised by some degree of **impaired social behaviour, communication, language and a narrow range of interests and activities** that are both **unique** to the individual and carried out repetitively.
- It is a **complex brain development disability** which makes itself visible during the **first 3 years of a person's life**.
- It is **not mental retardation** as people with autism may show **excellent skills in spheres like art, music, writing etc.**
- The level of **intellectual functioning** in individuals with ASDs is **extremely variable**, extending from profound impairment to superior levels.
- There are probably **many factors** that make a child more likely to have an ASD, including **environmental and genetic factors**.
- Although autism is **not curable**, its **symptoms can be addressed with appropriate interventions**.

117.Chandrayaan probe finds sparse plasma on moon - The Hindu/ Another payload detects sulphur presence - Indian Express

Relevance:

News:

- The Indian Space Research Organisation (ISRO) put out **samples of data** collected from the **Moon by three more instruments**.
- Chandrayaan-3 is carrying **seven scientific payloads, four installed on the lander, two on rover, and one on the propulsion module** that is going around the Moon in an orbit.

Key findings:

- The seventh instrument, called **LASER Retroreflector Array**, is a **set of mirrors** that will remain on the Moon for much longer duration.

Prelims takeaway:

- Chandrayaan-3
- RAMBHA

- It does not collect any data on its own but is meant **to reflect laser beams fired from Earth**.
- Scientists use these kinds of experiments to accurately measure the **distance of the Moon from the Earth**.
- **RAMBHA or Radio Anatomy of Moon Bound Hypersensitive Ionosphere and Atmosphere** is meant to **measure the plasma density** (concentration of ions and electrons) near the lunar surface.
- It indicated that the **plasma near the lunar surface** was “**relatively sparse**”.
- The **Alpha Particle X-ray Spectroscope, or APXS**, installed on the rover, **detected signals of the presence of Sulphur** and other minor elements.

Chandrayaan-3 Mission

- It is **India's third lunar mission** and **second attempt at achieving a soft landing** on the moon's surface.
- The mission took off from the **Satish Dhawan Space Center (SDSC) in Sriharikota on July 14, 2023**.
- **Objectives**
 - To demonstrate Safe and Soft Landing on Lunar Surface
 - To demonstrate Rover roving on the moon
 - To conduct in-situ scientific experiments
- **Components**
 - Indigenous Lander module (LM), Propulsion module (PM) and a Rover.
 - The lander (Vikram) and rover payloads (Pragyan) of Chandrayaan-3 remain the same as the Chandrayaan-2 mission.
 - The lander and the rover will have a mission life of one lunar day (about 14 Earth days) as they work on solar energy.
- **Launch Vehicle:** The LVM3 M4 launcher has been successfully utilized to launch Chandrayaan-3

Payloads

- The **scientific payloads** on the lander aim to **study various aspects of the lunar environment**.
- These payloads include **studying lunar quakes, thermal properties of the lunar surface, changes in plasma near the surface and accurately measuring the distance between Earth and the moon**.
- The **propulsion module** of Chandrayaan-3 features a new experiment called **Spectropolarimetry of Habitable Planet Earth (SHAPE)**.
 - SHAPE aims to search for smaller planets with potential habitability by analyzing reflected light.

118. European agency to support Aditya-L1 - The Hindu

Relevance: Achievements of Indians in science & technology; indigenization of technology and developing new technology.

News

- The **Indian Space Research Organisation (ISRO)** is all set to launch the **Aditya-L1 solar mission** from the launch pad at **Sriharikota** in Andhra Pradesh.
- The **European Space Agency (ESA)** is supporting Aditya-L1, providing **deep space communication services** to the mission.
- Earlier, it had provided **crucial support to ISRO to monitor the Chandrayaan-3's health**.

Prelims Takeaway

- Aditya-L1 Mission
- Lagrange Points
- ISRO

Support for Aditya L1 Mission

- ESA is **providing support** from **all three of its 35-metre deep space antennas** over **Australia, Spain and Argentina**.
- Also from the **Kourou station in French Guiana** and coordinated support from the **Goonhilly Earth Station in the UK**.
- ESA stations will **support the mission from beginning to end**
 - From the critical 'Launch and Early Orbit Phase', throughout the journey to L1, and then to send commands to and receive science data from Aditya-L1.

- ESA's global network of **deep space tracking stations** and use of **internationally recognised technical standards** allows to **track, command and receive data** from their spacecraft **almost anywhere in the solar system**.

Aditya-L1 Mission

- To be launched by **ISRO** to the **L1 orbit** which is about **1.5 million km from the Earth**.
- The orbit allows Aditya-L1 to **look at the Sun continuously** without any occultation/eclipses.

Objective

- To study the **Sun's corona, Sun's photosphere, chromosphere, solar emissions, solar winds and flares and Coronal Mass Ejections (CMEs)**.
- To carry out **round-the-clock imaging of the Sun**.

Launch Vehicle and Payloads

- **Launch Vehicle:** Polar Satellite Launch Vehicle (PSLV)
 - Previous Launches
 - Chandrayaan-1 in 2008
 - Mars Orbiter spacecraft in 2013
- **7 payloads (instruments)** on board viz.
 - Visible Emission Line Coronagraph (VELC)
 - Solar Ultraviolet Imaging Telescope (SUIT)
 - Solar Low Energy X-ray Spectrometer (SoLEXS)
 - Aditya Solar wind Particle Experiment (ASPEX)
 - High Energy L1 Orbiting X-ray Spectrometer (HEL1OS)
 - Plasma Analyser Package for Aditya (PAPA)
 - Advanced Tri-axial High Resolution Digital Magnetometers

What is L1?

- It refers to **Lagrangian/Lagrange Point 1**, one of the five points in the **orbital plane of the Earth-Sun system**.
- These are **positions in space** where the combined **gravitational pull of two large masses roughly balance each other**.
- These can be used by spacecraft to **reduce fuel consumption** needed to remain in position.

119. Indian Navy's stealth frigate Mahendragiri launched - The Hindu

Relevance: Defence

News

- Recently, the **seventh and last stealth frigate** of **Project 17A, Mahendragiri**, was launched into water by the wife of Vice-President of India at **Mazagon Dock Shipbuilders Limited (MDL) in Mumbai**.
- Under **Project 17A**, a total of **seven ships were constructed**, four at MDL and three at Garden Reach Ship Builders Limited (GRSE), Kolkata.

Prelims Takeaway
<ul style="list-style-type: none"> • Mahendragiri Hills • Mahendragiri Frigate • Project 17A

Mahendragiri Frigate

- It is the **seventh and last stealth frigate** of **Project 17A Frigates**.
- It is named after a **mountain peak in Eastern Ghats located in Odisha**.
- The ship is being built by the **Mazagon Dock Shipbuilders Limited (MDL) in Mumbai**.

Mahendragiri Hills

- Mahendragiri is a mountain in the **Rayagada subdivision** of the **district of Gajapati, Odisha**.
- It is situated amongst the **Eastern Ghats** at an elevation of 1,501 metres.
- The hill and its surrounding areas are recognized as a **biodiversity hot spot** due to **numerous medicinal plants and other species** that are found here.
- It is inhabited by the **Soura people, a particularly vulnerable tribal group** as well as the **Kandha tribe**.

Project 17 Alpha Frigates

- P-17A was launched by the **Indian Navy in 2019** to construct a series of **stealth guided-missile frigates**.

- These are currently being **constructed by two companies** viz.
 - Mazagon Dock Shipbuilders (MDL)
 - Garden Reach Shipbuilders & Engineers (GRSE)
- **Six P17A Project ships** have been **launched so far** between 2019 and 2023.
 - These were 'Nilgiri', 'Himgiri', 'Udaygiri', 'Dunagiri', 'Taragiri' and 'Vindhyagiri'.

Key Features

- These guided-missile frigates have been constructed with a **specific stealth design**.
- Project 17A frigates are the **follow-on Class of Project 17 'Shivalik Class' frigates**, with **improved stealth features, advanced weapons, sensors and platform-management systems**.
- It has **radar-absorbent coatings** and is **low-observable** which can make its **approach undetectable** for the enemies.
- It also reduces the **infrared signals of the ship**.
- As much as **75% of the orders for equipment and systems** of Project 17A ships are from **indigenous firms, including MSMEs**.
- The **economic development, employment generation, growth of MSMEs and ancillary industry** in the country are **positive spin-offs of the shipbuilding project**.

120. Seven years on, mission to clean the Ganga remains a work in progress - The Hindu

Relevance: Conservation, environmental pollution and degradation

News:

- Since the government unveiled its ambitious **National Mission for Clean Ganga (NMCG)**, it has **installed treatment plants** capable of treating just **20% of the sewage**.
- This is expected to **increase to about 33% by 2024** and it is projected that treatment plants will be capable of **treating 60% of sewage by December 2026**.
- These calculations are premised on **sewage being generated** in the five States viz. **Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal**, through which the river courses.

Prelims Takeaway

- Ganga River
- National Mission for Clean Ganga (NMCG)

National Mission for Clean Ganga (NMCG)

- **Establishment:** 12th August 2011 under the **Societies Registration Act, 1860** as a registered society.
- It is implemented by the **National Council for Rejuvenation, Protection and Management of River Ganga** also known as the **National Ganga Council**.
- **Mandate:** To plan, execute, monitor and coordinate various activities under the Namami Gange programme.

Objectives

- To **rehabilitate and boost the existing STPs** (Sewage Treatment Plants) and **instant short-term steps to curb pollution** at exit points on the riverfront.
- To maintain the **continuity of the water flow** without changing the natural season variations.
- To **restore and maintain the surface flow and groundwater**.
- To **regenerate and maintain the natural vegetation** of the area.
- To **conserve and regenerate the aquatic biodiversity** as well as the **riparian biodiversity** of the river Ganga basin.
- To allow **participation of the public** in the process of protection, rejuvenation and management of the river.

Signs of improvement

- **Rise in the dolphin population**, both adult and juvenile, from 2,000 to about 4,000.
- Presence of dolphins in **new stretches of the river** as well as in **tributaries** of the Ganga.

- Fishermen are also reporting the **increased presence of Indian carp** [a fish species] that **only thrives in clean water**.

River Ganga

- It is the **longest river of India** and is revered by Hindus as the **most sacred river on earth**.
- It originates in the snowfields of the **Gangotri Glacier** in the Himalayas.
 - At its source, the river is called the **Bhagirathi**.
 - It descends down the valley upto **Devprayag** where after joining another hill stream **Alaknanda**, it is called **Ganga**.
- The Ganga basin **outspreads in India, Tibet (China), Nepal and Bangladesh** over an area of 10,86,000 Sq.km.
- **Drainage Basin:** Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar, West Bengal, Uttarakhand, Jharkhand, Haryana, Chhattisgarh, Himachal Pradesh and Union Territory of Delhi draining nearly 26% of the total geographical area of the country.
- **Tributaries**
 - **Right Tributaries:** The Yamuna and the Son
 - **Left tributaries:** The Ramganga, the Ghaghra, the Gandak, the Kosi and the Mahananda
 - **Sub Tributaries:** The Chambal and the Betwa
- The Ganga River basin is one of the **most fertile and densely populated areas** of the world.
- The **Ganges River Dolphin** is an **endangered animal** that specifically habitats this river.
- The Ganga **joins the Brahmaputra in Bangladesh** and continues its run under the name **Padma or Ganga**.
- The Ganga widens out into the **Ganges Delta in the Sundarbans** swamp of Bangladesh, before it ends its journey by emptying into the **Bay of Bengal**.

121. Using AI on X-rays can detect more TB cases - The Hindu

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

News:

- India has a powerful technology — **AI-assisted chest X-ray — to screen presumptive TB cases**.
- **The AI algorithm (qXR)**, which was developed by the Mumbai-based Qure.ai, can **help in early detection** of people with presumptive **TB disease**.

Prelims Takeaway

- Tuberculosis (TB)
- AI-assisted chest X-ray-qXR

AI-assisted chest X-ray- qXR:

- The AI software combined with molecular tests for TB disease confirmation **can vastly increase detection rates**.
- It was one of the three **AI algorithms that the WHO had referenced** to when updating the TB screening guidelines in March 2021.
- Unlike in adults, **paediatric pulmonary TB detection using X-rays is a challenge** as radiological evidence of pulmonary TB in children is less specific.
- The **qXR software meets the WHO requirement** with over 90% sensitivity and more than 70% specificity in people older than 15 years.
- It is already being **used in over 50 countries**.
- In India, **24 States are using it in about 150 sites**. But nowhere in India is the software used at scale.
- In some States, **the qXR software is used in just one site, like in Kerala**.
- It **was first installed in January 2021 at the S.K. Patil Hospital in Mumbai**.
- The absence of policy guidance has led to low adoption.
- The Central TB Division is yet to recommend the use of qXR.

Tuberculosis (TB)

- It is an infectious disease caused by **Mycobacterium tuberculosis**.
- It commonly **affects the lungs**, but can also affect other parts of the body.
- It is a **treatable and curable disease**.
- **Transmission:** TB is spread from person to person through the air.
- **Symptoms:** Common symptoms of active lung TB are cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats.
- **Vaccine:** Bacille Calmette-Guérin (BCG) is a vaccine for TB disease.

India's Efforts

- **India's National TB Elimination Programme** is strengthened to meet the goal of ending the TB epidemic by **2025** from the country, **five years ahead of the Sustainable Development Goals (SDG) for 2030**.

Other Initiatives

- National Strategic Plan (NSP) for Tuberculosis Elimination (2017-2025)
- The Nikshay Ecosystem (National TB information system)
- Nikshay Poshan Yojana (NPY- financial support)
- TB Harega Desh Jeetega Campaign

122. Three-fourths of India's irrigation sources run on electricity: study - The Hindu

Relevance: different types of irrigation and irrigation systems storage

News:

- The **latest (sixth) edition of the Minor Irrigation Census (MIC)** finds that **electricity is the dominant source of power to extract water**, over diesel, windmills, and solar pumps.
- Minor Irrigation Census (MIC) is a **compendium of borewells, tubewells, and other privately owned irrigation sources by farmers**.
- The data reflects **irrigation trends in 2017-18 in all States and UTs** except Delhi, Daman & Diu, Dadra and Nagar Haveli and Lakshadweep.
- Data collection requires **collecting granular data down to the block level**, so it takes a few years to compile and make the data public.

Prelims Takeaway

- Minor Irrigation Census
- Methods of Irrigation

Use of Electricity

- It showed a **quantum jump** from powering only 56% of sources in 2011 to **70% in 2017**.
- The latest report shows **electricity as powering 76% of sources - a slower growth rate**.
- This electrification of groundwater withdrawal corresponds to a **rise in the use of tube wells and borewells** capable of extracting water at greater depths.

Dominant source of Groundwater

- **Dug-wells or ponds** remain the **dominant source of groundwater**.
- However, their **number has declined** from 87 lakh to 82 lakh between the fifth and sixth editions.
- **'Shallow' tube wells** too have **declined** from 59 lakh to 55 lakh.
- **'Medium-sized' wells grew** from 31 lakh to 43 lakh
- **'Deep' wells rose** from 26 lakh to 37 lakh.

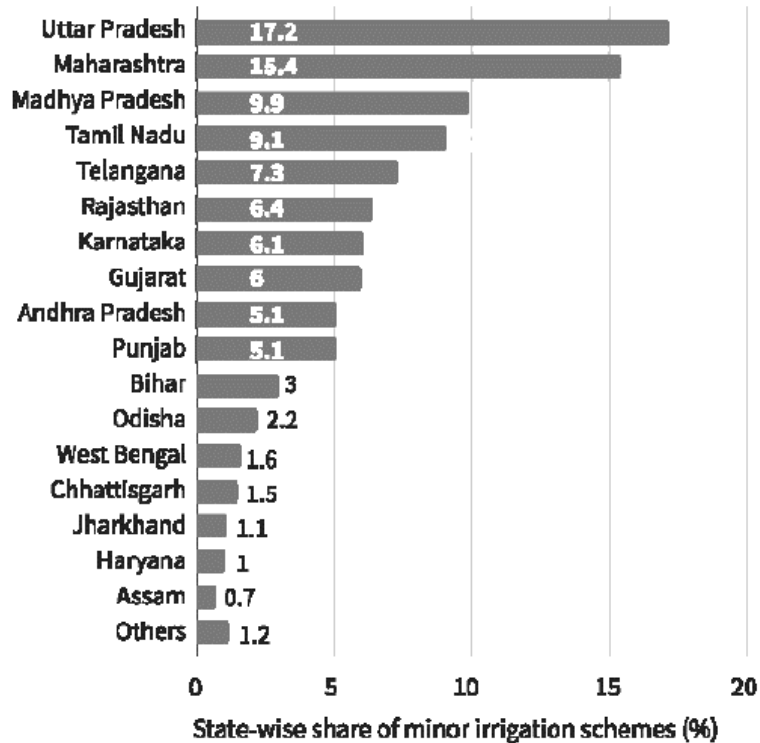
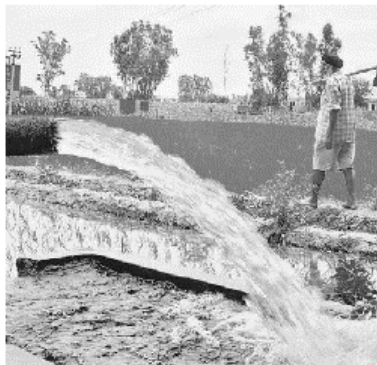
Causes for the Increase of more powerful and deep-reaching tubewells

- **Excessive groundwater withdrawal** has been a matter of long-standing concern.
- However, the report **doesn't discuss the causes for such an increase**.
- **State government schemes** where farmers are incentivised or get access to loans to buy such tubewells, could be an explanation.

- However, the **lower growth in electrification** is also likely to be a result of **greater emphasis on energy efficient water extraction**.

Irrigation share

According to the 6th minor irrigation census, there were **23.14 million schemes** in the country, with **Uttar Pradesh** possessing the largest share (**17.2%**), followed by **Maharashtra** and **Madhya Pradesh**



Key Findings on Minor Irrigation (MI) Schemes

- Overall, **23.14 million MI schemes** were reported in India from **695 districts** and **6,47,394 villages**.
- Out of all MI schemes, **21.93 million (94.8%)** were for **groundwater (GW)** and **1.21 million (5.2%)** for **surface-water (SW)** extraction.
- The number of MI schemes **increased by about 1.42 million** between the fifth and sixth editions.
- **Most of the schemes (96.6%)** were **privately owned** and **small and marginal farmers** owned the majority of MI schemes.
- **Top Positions**
 - **Uttar Pradesh:** Largest number of MI schemes in the country (17.2%)
 - Maharashtra (15.4%)
 - Madhya Pradesh (9.9%)
- **Maharashtra, Karnataka, Telangana, Odisha and Jharkhand** have the **highest share in surface-water (SW) schemes**.

123. Early prediction of preeclampsia using a biomarker - The Hindu

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News

- According to a study, a **liquid-biopsy approach** that measures **DNA-methylation levels in the blood** may **improve the detection of pregnancies at risk of developing preeclampsia at early stages**.

Prelims Takeaway

- Preeclampsia
- Liquid Biopsy
- Biomarkers

Liquid Biopsy

- It is a simple and non-invasive alternative to surgical biopsies.

- It enables doctors to discover a range of information about a tumour through a simple blood sample.
- It is increasingly being used to detect disease and monitor progression and treatment response.

Preeclampsia

- It is a **serious blood pressure condition that develops during pregnancy.**
 - It typically develops after the **20th week of pregnancy.**
- It can also **affect other organs in the body** and be **dangerous for both the mother and her developing foetus.**
- It is a **major cause of morbidities during gestation.**
- **Early-onset preeclampsia**, occurring before 34 weeks of gestation, is associated with a **higher risk of severe disease and foetal mortality.**
- Previous studies have shown that **widespread methylation changes in the placenta occur at delivery.**

Symptoms

- **high blood pressure** (hypertension) and **high levels of protein in urine** (proteinuria).
- **changes in vision**, including temporary loss of vision, blurred vision or light sensitivity

Prevention and Treatment

- **Low-dose aspirin at early stages** of the disease (before 16 weeks of gestation) can reduce the risk of developing preeclampsia.
 - However, **early identification of the disease is needed** to initiate this intervention.
- **Lifestyle and healthy choices**

Biomarker

- Refers to a **measurable indicator of some biological state or condition.**
- They are often **measured and evaluated to examine normal biological processes**, pathogenic processes or pharmacologic responses to a therapeutic intervention.
- Often **used in clinical trials**, where they are **derived from bodily fluids** that are easily available to the early phase researchers.
- **Disease-related biomarkers** give an **indication of the probable effect of treatment on patients.**

124.FM flags threats to financial system from crypto, tax havens - The Hindu/ 'Need to set up framework to handle challenges related to crypto assets' - Indian Express

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- Recently, the Union Finance & Corporate Affairs Minister said **cryptocurrencies, drug mafias, tax havens and cyber threats** among others posed major **threats to the global financial ecosystem.**
- **Understanding these global challenges** would help in **building a responsible, inclusive, resilient and sustainable financial ecosystem.**
- She also said that a **global collaborative effort is needed** to counter such challenges.

- Prelims Takeaway**
- Cryptocurrencies
 - Cyber Security
 - Tax Havens

Indian Fintech Industry

- Fintechs in India are **driving more inclusion** and **influencing India's financial ecosystem.**
- Today, fintech has become a **robust and dynamic financial inclusion tool.**
- According to a **2022 BCG Matrix Report**, in **lending, fintechs had 36% share** of new-to-credit customers versus the **22% share of brick-and-mortar banks.**
- She urged the fintech industry to **guard against these threats** and **invest heavily to counter cyberthreats.**
- A **secured system will build trust** and therefore it is a **must for the financial ecosystem.**

Bracing for risks

Finance Minister Nirmala Sitharaman calls for a collaborative effort across the globe to counter rising financial threats

■ The FM cites drug mafias, tax havens, round tripping and tax evasion as serious threats to global finance

■ Ms. Sitharaman urges the fintech industry to invest heavily to protect user data and financial transactions

■ Fintechs in India are enhancing financial inclusion and influencing India's financial ecosystem, the minister adds



Role of India

- **India can lead** in making the financial ecosystem **inclusive, resilient and sustainable**.
- Currently, India's priority is to have an **enhanced cross-border payment arrangement** considering the volume of remittances to the country.

Global Cooperation

- One of the priority areas for the G20 under India's presidency was **information sharing and seeking cooperation**.
- India has put on table issues relating to **regulation and undertaking a framework for handling issues relating to crypto assets**.
- **Consultative papers were being discussed** on various issues.
 - On crypto, the International Monetary Fund (IMF) and Financial Stability Board (FSB) have released their synthesis papers.

Cryptocurrency

- A **digital or virtual currency that uses cryptography for security**.
- It is a **decentralized currency** i.e. it is not controlled by any government or institution.
- **Examples:** Bitcoin, Ethereum, and Litecoin.
- To use cryptocurrency, one must first **acquire a digital wallet**, which is a software program that **stores the user's public and private keys**.
 - These **keys are used to send and receive cryptocurrency**.
 - They are also used to **verify transactions on the blockchain**.
- Users can **acquire cryptocurrency** through a process called "**mining**".
 - It involves using computer power to solve complex mathematical equations.
 - This validates and records transactions on the blockchain, in return for a certain amount of cryptocurrency.

Secured Transactions

- Transactions with cryptocurrency are **recorded on a public digital ledger called blockchain**.
- This ledger is **maintained by a network of computers** around the world.
- Each **new transaction is verified and added to the blockchain** by these computers.
- This decentralization and use of cryptography **makes it difficult for anyone to manipulate the currency or the transactions recorded** on the blockchain.

125. August services PMI shows momentum sustaining, tad slower - The Hindu

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- Recently, **India's services sector output eased** from a **13-year high of 62.3 in July** to 60.1 in August as measured by the **S&P Global India Services Purchasing Managers' Index (PMI)**.
- However, **new export orders grew at the fastest pace** in almost nine years.
- To cope with the additional workflow, firms ramped up **hiring at the strongest pace**.
- However, favourable demand trends also led to the **joint-fastest increase in prices charged for Indian services** in over six years.
- This may **prompt attention from policymakers** and potentially **delay cuts to the benchmark repo rate**.

Prelims Takeaway

- Purchasing Managers Index
- Sovereign Credit Ratings
- S & P Global

Purchasing Managers Index

- It is a **survey-based measure** that asks the respondents about **changes in their perception** about key business variables as compared with the previous month.
- **Purpose:** To provide information about current and future business conditions to company decision makers, analysts, and investors.
- It is **calculated separately** for the manufacturing and services sectors and then a **composite index** is also constructed.
- The PMI is a number from **0 to 100**.
 - A print above 50 means expansion, while a score below that denotes contraction.
 - A reading at 50 indicates no change.
- It is considered a **good leading indicator** of economic activity.
 - It is usually released at the start of every month.
- PMI is compiled by **IHS Markit** for more than 40 economies worldwide.

IHS Markit

- IHS Markit is part of **S&P Global**.
- It is a **global leader in information, analytics and solutions** for the major industries and markets that drive economies worldwide.

126. SC hands over its green watchdog committee to Environment Ministry - Indian Express

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- **The Central Empowered Committee (CEC) will now report to the Environment Ministry** which will nominate its members and have the final say on the merit of its recommendations.

Prelims Takeaway

- The Central Empowered Committee (CEC)
- Environment Ministry

The Central Empowered Committee (CEC)

- **It was set up by the Supreme Court** to flag cases of official non-compliance with its orders related to conservation
- **Set up in 2002, and reconstituted in 2008**
- The CEC has **"rendered yeoman services** to the cause of the environment."
- It has filed thousands of reports on issues referred to it by the apex court that **have shaped the discourse around environment policy**.
 - These include compensatory afforestation, net present value of forests, Kudremukh mining, Aravali forests and Bellary mining.
 - In 2006, a CEC report resulted in a month's simple imprisonment of a former Maharashtra minister.
 - serving the Forest Secretary for permitting wood mills to operate in violation of the SC's order.

- Most recently, the CEC's recommendation to cancel the double-tracking of a railway line from Castle Rock in Karnataka to Kulem in Goa was accepted by the SC this May.
- In August, the SC permitted the ministry to proceed further with the constitution of the **CEC "as a permanent body"** would be in the interest of all the stakeholders." the ministry issued the notification.
- The **notification, diluted the CEC's autonomy** on four key counts:
 - the committee will report to the ministry, instead of the SC
 - the ministry will pick all the members and the SC will have no role in the process
 - the ministry, and not the court, will fund the committee;
 - the provision of having two NGOs in the committee has been done away with.
- Now **anyone considered an "expert"** can be included as a member.
- The notification makes it clear that **"the Committee shall function under the administrative control of the Central Government in the Ministry of Environment"**.
- "In case any suggestion or recommendation of the **Central Empowered Committee is not acceptable to the State or Central Government.**
- The **Government shall give reasons in writing for not accepting the same** and such decision of the Central Government shall be final,".
- It does seem that **the government has been successful in reducing the role and influence of the SC.**

127. Indore tops clean air survey among cities with mn-plus people - Indian Express

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- **The Union Environment, Forest and Climate Change Minister recently announced awards under the Swachh Vayu Sarvekshan 2023 (clean air survey).**

Swachh Vayu Sarvekshan:

- In September 2022, **the Union Ministry of Environment, Forest and Climate Change released guidelines on 'Swachh Vayu Sarvekshan - Ranking of Cities'** under the National Clean Air Programme (NCAP).
- **Objective:**
 - Swachh Vayu Sarvekshan is to give ranking to 131 cities in the country for implementing City Action Plans
 - It was prepared as part of NCAP for reducing air pollution up to 40% by 2025-26.
- Cities are required to do **the self-assessment** as per the framework provided on **PRANA** online portal.
- **'PRANA' is the acronym for Portal for Regulation of Air-pollution in Non-Attainment Cities.**
- This Sarvekshan provides **a tool to cities to plan their actions** in order to improve the air quality.
- It is **not based on the measurement of the air quality** parameters to rank the cities.
- It is **based on the actions taken by the cities** to improve the air quality in different domains.
- Under the **1st category (more than 10 lakh population) Indore ranked first followed by Agra and Thane.**
- **Indore** received the highest score of **187 out of 200.**
- In the second category (between 3-10 lakhs population), **Amravati secured first rank followed by Moradabad and Guntur.**
- Similarly, for the **third category (less than 3 lakhs population) Parwanoo (Himachal Pradesh) secured first rank followed by Kala Amb (Himachal Pradesh) and Angul (Odisha).**
- **Nodal Ministry: Ministry of Environment, Forest and Climate Change**

Prelims Takeaway

- Portal for Regulation of Air-pollution in Non-Attainment Cities.
- Swachh Vayu Sarvekshan

128. 'Clear illegal constructions in ESZ, buffer zone of Bandipur' - The Hindu

Relevance: Conservation, environmental pollution and degradation

News:

- The **Additional Principal Chief Conservator of Forests (APCCF) Vigilance** recently directed the Regional Commissioner of Mysuru to **clear illegal constructions in the Bandipur ESZ**.
- The APCCF directives followed a **complaint by activist Giridhar Kulkarni of construction in the notified ESZ and buffer zone** of the Bandipur Tiger Reserve.
- These areas are also part of the **elephant and tiger corridor**.

Prelims Takeaway

- Bandipur Tiger Reserve
- Eco Sensitive Zones (ESZs)

Eco Sensitive Zones (ESZs)

- The **National Wildlife Action Plan** of MoEFCC stipulated that state governments should **declare land falling within 10 km of the boundaries of national parks and wildlife sanctuaries as ESZs** under the **Environmental (Protection) Act, 1986**.
- While the **10-km rule is implemented as a general principle**, the **extent of its application can vary**.
- **Areas beyond 10 km** can also be **notified by the Union government as ESZs**, if they hold **larger ecologically important "sensitive corridors"**.

Activities Around ESZs

- **Prohibited Activities:** Commercial mining, saw mills, industries causing pollution, establishment of major hydroelectric projects (HEP), commercial use of wood.
- **Regulated Activities:** Felling of trees, establishment of hotels and resorts, commercial use of natural water, erection of electrical cables, drastic change of agriculture system, widening of roads.
- **Permitted Activities:** Ongoing agricultural or horticultural practices, rainwater harvesting, organic farming, use of renewable energy sources, adoption of green technology for all activities.

Bandipur Tiger Reserve

- Established in the **1930s as a wildlife sanctuary**, which became a **tiger reserve in 1973 under Project tiger**.
- **Location:** The tri-junction area of the States of Karnataka, Tamil Nadu and Kerala.
- Situated in **two contiguous districts** viz. Mysore and Chamarajanagar of Karnataka.
- It is **surrounded by**
 - **Nagarahole Tiger Reserve** (Tamil Nadu) in the North West.
 - The Kabini Reservoir separates the two.
 - **Mudumalai Tiger Reserve** (Tamil Nadu) in the South
 - **Wayanad Wildlife Sanctuary** (Kerala) in the South West

129. 21st edition india france bilateral naval exercise 'varuna' - 2023 - PIB

Relevance: Defence

News:

- Recently, **Phase II of the Varuna naval exercise between Indian and French Navy** was conducted in the Arabian Sea.

Prelims Takeaway

- Exercise Varuna
- Frigates

Exercise Varuna

- It is the **bilateral Naval Exercise between India and France** initiated in 1993.
- The exercise witnessed participation of **guided missile frigates, tanker, Maritime Patrol Aircraft and integral helicopters** from the two sides.
- Units of both **navies endeavoured to enhance and hone their war fighting skills**, improve **interoperability and demonstrate their ability**.
- The exercise also facilitates operational level interaction between the two Navies.
- It will **foster mutual cooperation** for good order at sea, underscoring the shared commitment to ensuring security, safety and freedom of the global maritime commons.

130. Crypto to climate: Delhi takes step back to move forward, get consensus - Indian Express

Relevance: Economics

News:

- India, as part of its **G20 presidency**, is working to **evolve a consensus on a range of issues** even if that means stepping back on its stated position.
- These issues range from **calling for a global framework on regulating crypto-assets to yielding on climate transition.**

Prelims Takeaway

- Cryptocurrency
- International Monetary Fund
- G20

Policy Paper on Crypto

- Recently, the **International Monetary Fund (IMF)** and the **Financial Stability Board (FSB)**, released a **policy paper**, at the request of **India's G20 Presidency**.
- It suggested introducing a **licensing regime for crypto-asset platforms** instead of an **outright ban on crypto-assets**

India's Crypto Scenario

- In 2018, the **Central Board of Direct Taxes** had submitted a **draft scheme** to the finance ministry **for banning virtual currencies**.
- A month later, the **RBI restrained banks from dealing in cryptocurrencies**, a decision that had to be **reversed by the Supreme Court in 2020**.
- **RBI has been vocal about its problems with crypto-assets**, having identified them as **"a macro-economic risk"**.
- The government had also imposed a **tax on "any income from transfer of any virtual digital asset" at a rate of 30%**.
- It also imposed a **1% tax deduction at source (TDS) on each transaction**.
- Last year, the Finance Minister said in Parliament that **"international collaboration" would be needed** for "any effective regulation or ban" on cryptocurrency.
 - This is because the **digital currency is borderless in nature**.

131. RBI decides to discontinue I-CRR in a phased manner - The Hindu/ RBI to discontinue I-CRR in a phased manner from today - Indian Express

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- Recently, the RBI announced the **discontinuation of the incremental cash reserve ratio (I-CRR)** in a **phased manner** beginning September 9.
- Earlier, the RBI had asked banks to maintain an **I-CRR of 10% on the increase in their net demand and time liabilities (NDTL)** between May 19 and July 28, 2023.

Prelims Takeaway

- Incremental Cash Reserve Ratio
- Cash Reserve Ratio
- Reserve Bank of India

Incremental Cash Reserve Ratio (I-CRR)

- A **monetary policy tool** used by central banks, including the Reserve Bank of India (RBI).
- It is an **additional cash balance** which the banks maintain over and above the CRR **to absorb excess liquidity** from the banking system.
 - **CRR** is the **minimum amount** of the total deposits that banks have to keep with the central bank for a specific period.
- Announced as a **temporary measure** to absorb the surplus liquidity **caused due to**
 - the return of Rs 2,000 banknotes to the banking system
 - surplus transfer to the government by the RBI
 - pick up in government spending
 - sustained foreign inflows

Features

- **Temporary Nature**
 - It's implemented for a **short duration** to address a particular liquidity issue or economic circumstance.
- **Targeted Absorption**
 - The purpose of the Incremental CRR is to **absorb excess liquidity** in the banking system.
 - This might arise due to particular events, policies, or economic conditions.
- **Graduated Approach**
 - RBI typically specifies a **certain percentage of additional CRR** that banks need to maintain **on the incremental deposits** they receive during the specified period.
 - The graduated approach ensures that the **impact on banks' liquidity and lending activities is proportional and manageable**.

132. In a first, scientists identify variant of chickenpox-causing virus: ICMR-NIV study - Indian Express

Relevance: Health

News:

- Recently, the **Indian Council of Medical Research-National Institute of Virology scientists** found the presence of **Clade 9 variant of varicella zoster virus (VZV) for the first time** in the country.
- So far, the clade 9 is the **most common strain** in circulation in countries such as Germany, UK and USA.

Prelims Takeaway

- Varicella Zoster Virus
- Chicken Pox

Varicella Zoster Virus (VZV)

- According to the World Health Organisation, it is a **herpes virus** that causes **chickenpox**, a common childhood illness.
- It is an **exclusively human virus** that belongs to the **α -herpesvirus family**.
- In rare cases, VZV infections can progress to the **central nervous system involvement and severe complications**.

Chicken Pox

- Also known as **varicella**, it is a **communicable, infectious, viral disease** characterised by **itchy red blisters** that appear all over the body.
- This dreadful disease was **introduced in the mid-1990** and more often **affects children**.
- The **incubation period is 10 to 21 days**.
- **Symptoms**
 - It can cause an **itchy, blister-like rash**, among other symptoms.
 - The **rash first appears on the chest, back, and face** and then **spreads over the entire body**.
- **Transmission**
 - Through contact with infected individuals
 - Through contact with infected fluids
 - Airborne transmission from sneezing or coughing
- It can be serious, especially **during pregnancy, in babies, adolescents, adults and people with weakened immune systems**.
- It can be **easily prevented by vaccinating newborn kids** with the chickenpox vaccine.

133. RBI has announced the issue price of Sovereign Gold Bond Scheme 2023-24 Series II (second tranche).

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- The **Reserve Bank of India (RBI)** recently announced the **issue price for the upcoming Sovereign Gold Bond (SGB) Tranche 2.**

Sovereign Gold Bond (SGB) Scheme:

- SGBs were **introduced by the Government of India in 2015** under the **Gold Monetization Scheme.**
- SGBs are **government securities issued by the RBI** on behalf of the Government of India.
- They are **substitutes for holding physical gold.**
- SGBs are **denominated in grams of gold with a basic unit of 1 gram.**
- Investors have to **pay the issue price in cash, and the bonds will be redeemed in cash on maturity.**
- The Bonds will be restricted for **sale to resident Indian entities**, including individuals, HUFs, Trusts, Universities and Charitable Institutions.
- The tenor of the Bond will be for a **period of 8 years** with an exit option in the 5th, 6th and 7th year, to be exercised on the interest payment dates.
- **Investment Limit:**
 - Minimum: 1 gram of gold.
 - Maximum: 4 KG for individuals, 4 Kg for HUF and 20 Kg for trusts.
 - Interest: 2.5% per annum, paid on a half-yearly basis.
- The interest on Gold Bonds shall be **taxable as per the provisions of the Income Tax Act, 1961.**
- SGBs can be used as **collateral for loans.**

Prelims Takeaway

- Sovereign Gold Bond (SGB) Scheme
- Reserve Bank of India (RBI)

134. China-based hacking group compromise Microsoft's cloud security

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News:

- The group, identified as **Storm-0558, gained access to email accounts** of 25 organisations, including **Western European government agencies**, email accounts from top **American officials** such as Commerce Secretary Gina Raimondo, U.S.
- The company further explained that hackers were able to **extract a cryptographic key** from the engineer's account to access email accounts.
- The flaw has been **fixed now.**

How did the threat actors breach Microsoft's security?

- The China-based threat actor was able to **compromise Microsoft's cloud security systems**
- it used an acquired MSA key to forge tokens to access Outlook Web Access (OWA).

MSA keys

- These are token signing keys used by a service to **validate authentication tokens for the service.**
- Hackers then **used the acquired key to forge a token** that was used for validation issues to **impersonate Azure AD** users and gain access to enterprise email.

A cryptographic key

- It is a **string of characters used within an encryption algorithm** to alter data making it illegible to someone without the correct key.
- Like a physical key, a **cryptographic key encrypts data** and is used to decrypt the encased data by the holder of the key.
- In the case of **SSL encryption (HTTPS)**, two types of encryptions are used.
- They can be **symmetric and asymmetric encryptions.**

Prelims Takeaway

- Cryptographic key
- MSA keys

- In symmetric encryption, both sides of a **conversation use the same key for turning plain text into cyphers (encrypted) text.**
- However, **in asymmetric or public key encryption**, the two sides of the conversation **use a different key.**
- A public key and a private key, **the private key is never shared by the party with anyone.**
- When plaintext is encrypted with the public key, **only the private key can decrypt it, not the public key.**

135. Powerful earthquake causes extensive damage in Morocco

Relevance: Disaster and disaster management.

News:

- Recently, a rare, powerful **earthquake struck Morocco**, killing hundreds of people and damaging buildings, including in the **historic city of Marrakech.**
- Marrakech is a **UNESCO World Heritage Site.**
- So far, more than 2000 people have died, **mostly in Marrakech and five provinces near the quake's epicentre.**

Prelims Takeaway

- Earthquake
- Marrakech

Earthquake

- An earthquake is an **intense shaking of the ground caused by movement under the earth's surface.**
- The **location below the earth's surface** where the earthquake starts is called the **hypocentre.**
- The **location directly above the hypocentre** on the surface of the earth is called the **epicentre.**
- It happens when two blocks (tectonic plates) of the **earth suddenly slip past one another** releasing stored-up 'elastic strain' energy in the form of seismic waves.
- These spread through the earth and **cause the shaking of the ground.**
- They are measured on scales called the -
 - Moment Magnitude Scale (Mw), based on the total moment release of the earthquake.
 - The Richter scale (magnitude scale) - energy released - 0-10.
 - The intensity scale/Mercalli scale - visible damage - 1-12.
- Earthquakes **continue to remain the most common natural hazard** that cannot be predicted as no early warning systems can be developed.

136. The RBI has proposed setting-up a Self Regulatory Organisation for fintechs

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- **Reserve Bank of India (RBI)** has asked **fintech entities to form a Self-Regulatory Organisation (SRO).**
- Those entities who are **interested in being recognized as SROs will have to apply to the RBI.**
- Once the RBI finds an **entity suitable, it will issue a letter of recognition.**

Prelims Takeaway

- Self-Regulatory Organisation (SRO):
- Financial Technology

Financial Technology

- FinTech (financial technology) is a **catch-all term referring to software, mobile applications, and other technologies** created to improve and automate traditional forms of finance for businesses and consumers alike.
- FinTech can include **everything from straightforward mobile payment apps to complex blockchain networks** housing encrypted transactions.
- The term "**fintech company**" describes any business that **uses technology to modify, enhance, or automate financial services for businesses or consumers.**
- Some **examples** include:
 - mobile banking
 - peer-to-peer payment services (e.g., Gpay, PhonePe)
 - automated portfolio managers (e.g., Fintoo, Motilal Oswal),

- trading platforms (e.g., Zerodha, Groww).

Self-Regulatory Organisation (SRO):

- An SRO is a **non-governmental organisation (NGO)** that sets and enforces rules and standards relating to the conduct of entities in the industry (members)
- **Objective:** to protect the customer and promote ethics, equality, and professionalism.
- SROs typically collaborate with all stakeholders in framing rules and regulations.

137. Ban on firecrackers to return; allow green crackers, says BJP - The Hindu/ Crackers banned again this Diwali: Govt - Indian Express

Relevance: Conservation, environmental pollution and degradation

News:

- The **Delhi government** recently announced its decision to impose a **complete ban** on the **sale, storage, production and bursting of firecrackers**.
- This decision was taken as the **air quality deteriorates sharply in winter** and turns **“lethal” for children and the elderly**.
- Meanwhile, the **opposition slammed the government’s decision** and said **green crackers should be exempted** from the ban.

Prelims Takeaway

- Green Crackers
- Petroleum and Explosives Safety Organisation
- National Environmental and Engineering Research Institute

Green Crackers

- Known as **‘eco-friendly’ crackers**, they are known to **cause less air and noise pollution** as compared to traditional firecrackers.
- Designed by the **National Environmental and Engineering Research Institute (NEERI)**, under the aegis of CSIR in 2018.
 - NEERI is a constituent of CSIR to conduct research and developmental studies in environmental science and engineering.
- These crackers **replace certain hazardous agents** in traditional crackers with **less polluting substances** with the aim to **reduce the noise intensity and emissions**.
- Most green crackers do not contain **barium nitrate**, which is the **most dangerous ingredient** in conventional crackers.
- It uses alternative chemicals like **potassium nitrate, aluminium, carbon** instead of harmful pollutants.
- **Regular crackers** produce **160-200 decibels of sound**, while that from **green crackers** are limited to about **100-130 decibels**.
- They have a **green logo printed** on their boxes, along with a **Quick Response (QR) coding system**.

Available Green crackers

- **SWAS - Safe Water Releaser**
 - These crackers do not use sulphur or potassium nitrate.
 - They release water vapour instead of certain key pollutants.
 - It also deploys the use of diluents, thus is able to control PM emissions by upto 30%.
- **STAR – Safe Thermite Cracker**
 - These also do not contain sulphur and potassium nitrate.
 - Besides controlling particulate dust emissions, it also has lower sound intensity.
- **SAFAL – Safe Minimal Aluminium**
 - It replaces aluminium content with magnesium and thus produces reduced levels of pollutants.

Approval for Green Crackers

- **All three brands of green crackers** can currently only be **produced by licensed manufacturers, approved by the CSIR**.
- The **Petroleum and Explosives Safety Organisation (PESO)** certifies that crackers are made **without arsenic, mercury, and barium**, and are **not loud beyond a certain threshold**.

138. RBI may start e-rupee pilot in call money market by October - The Times of India

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- **Reserve Bank of India's (RBI)** Executive Director said that the central bank is likely to launch the **pilot of Central Bank Digital Currency (CBDC)**
- It is for transactions in the **interbank borrowing or call money market** by October.

Prelims Takeaway

- Central Bank Digital Currency (CBDC)
- RBI Act 1934

Key highlights

- **Pilot of the wholesale CBDC** or the Digital Rupee-Wholesale (e-W) **was launched** in November last year.
- At the time, the use case was limited to the **settlement of secondary market transactions in government securities**.
- The **pilot for the retail CBDC was started** on December 1.
- The RBI will introduce the **wholesale CBDC in the call market** either this month or next month,"
- Union Finance Minister announced the **introduction of CBDC in the Union Budget 2022-23**.
- For this purpose, necessary amendments were made to the **relevant sections of the RBI Act 1934 with the passage of the Finance Bill 2022**.
- In 2022, the **RBI floated digital Rupee, India's very own CBDC**, and an electronic form of sovereign currency.
- the central bank proposed to issue two versions of the digital Rupee- **CBDC-Wholesale (CBDC-W) and CBDC-Retail (CBDC-R)**.
- While CBDC-W is for restricted access to select financial institutions, CBDC-R can be used by **all including private sector, non-financial consumers and businesses**.
- The central bank picked **nine banks for its pilot project** for wholesale CBDC.
 - These banks include State Bank of India (SBI), Bank of Baroda, Union Bank of India, HDFC Bank, ICICI Bank, Kotak Mahindra Bank, YES Bank, IDFC First Bank and HSBC.
- **e-R users** can transact with digital Rupee using a **digital wallet offered by participating banks**.
- The retail e-Rupee has been launched in **denominations of 50 paise, 1, 2, 5, 10, 20, 50, 100, 200, 500, and 200**
- The **wholesale e-Rupee does not envisage any denomination**, as per the central bank's annual report 2022-23.
- RBI showcased several **digital initiatives** that it has undertaken in the financial sector at the recently concluded G20 Leaders' Summit.
- These include **Public Tech Platform (PTP) for Frictionless Credit, CBDC, UPI One World, RuPay On-The-Go and Bharat Bill Payment System**.

139. IISc develops novel approach to detect, kill cancer cells - The Hindu

Relevance: Science and Technology- developments and their applications and effects in everyday life.

News:

- Indian Institute of Science (IISc) scientists have developed a **new approach to potentially detect and kill cancer cells**, especially those which form a solid tumour mass.
- hybrid **nanoparticles made of gold and copper sulphide**, which can kill cancer cells using heat, and enable their detection using sound waves.

Prelims Takeaway

- Nanoparticles
- Cancer

Nanoparticles

- Nanoparticles (NPs) are **tiny particles between 1 and 100nm**.
- Due to their **ultrafine size, they can be suspended in the atmosphere** for a long time and can travel larger distances.
- They possess **very little mass but are many in number**.
- So, the current mass-based, ambient air quality regulations for **particulate matter are ineffective in dealing with nanoparticle concentrations** in cities.
- Nanoparticles **enter the environment from various sources**, including natural, incidental and manufactured processes.

140. What are picoflare jets? - The Hindu

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News:

- The researchers studying the findings of the **Solar Orbiter Aircraft** recently announced that they **detected picoflare jets** from the sun's outer atmosphere.

Prelims Takeaway

- Picoflare Jets
- Solar Orbiter Aircraft

Picoflare Jets

- These **small-scale picoflare jets** were observed within **emissions from the coronal hole** under observation.
- They **lasted only a few dozen seconds** and were **emerging at a supersonic speed**.
- The researchers calculated that they had **enough energy** to power a considerable **fraction of the solar wind**.
- They are named so because they **carry approximately one-trillionth the energy of the largest flares the sun is capable of producing**.

Significance

- According to the researchers, these '**picoflare jets**' could be a **source of the solar wind**.
 - A solar wind is a **high-speed stream of charged particles** from the sun.
 - They have **important effects on the solar system** at large and on the **earth's magnetic field** as well.
- The discovery is important because **strong gusts of solar winds are capable of**
 - disrupting the earth's magnetic field
 - damaging electronics in satellites in space
 - damaging electronics in circuits on the ground
- However, they also **create beautiful auroras** in polar areas.

Solar Orbiter Aircraft

- Launched in 2020, it will take images of the Sun from closer than any spacecraft before.
- It is a **joint mission** by the **European Space Agency** and **NASA**.
- It contains **six remote-sensing instruments** and **four sets of in situ instruments**.
- **Objectives**
 - To **observe the Sun's 11-year cycle** of rising and subsiding magnetic activity.
 - To study the **upper layer of its atmosphere**, the corona.

141. Small islands take ocean protection case to UN court - The Hindu

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- Recently, the **UN maritime court will hear a landmark case** brought by a group of small island states
- The **nine island states have turned to the International Tribunal for the Law of the Sea to:**

Prelims Takeaway

- International Tribunal for the Law of the Sea
- Vanuatu island

- determine if carbon dioxide emissions absorbed by the oceans can be considered pollution
- what obligations countries have to prevent it.

Key Highlights

- The countries have pointed to the **international treaty UNCLOS that binds countries to preventing pollution of the oceans.**
- the UN General Assembly in March adopted a resolution calling on the **International Court of Justice to lay out nations' obligations on protecting Earth's climate**
- It talks about the **legal consequences countries will face if they fail to do so.**
- The **UN treaty defines pollution** as the introduction by humans of "**substances or energy into the marine environment**" that leads to harm to marine life.
- **Ocean ecosystems create half the oxygen humans breathe** and limit global warming by absorbing much of the carbon dioxide emitted by human activities.
- **increasing emissions** can warm and **acidify seawaters, harming marine life.**
- Entire marine and **coastal ecosystems** are dying in waters that are becoming **warmer and more acidic.**
- **Small islands like Vanuatu are particularly exposed to the impact of global warming,** with seawater rises threatening to submerge entire countries.
- Across the two-thirds of the planet covered by seas, **nearly 60% of ocean surface waters experienced at least one marine heatwave in 2022**

142. Rajnath lays foundation stone for Nyoma airfield near the LAC in eastern Ladakh - The Hindu/ LAC focus as Rajnath inaugurates 90 border infrastructure projects - Indian Express

Relevance: Security challenges and their management in border areas – linkages of organized crime with terrorism.

News:

- As many as **90 border infrastructure** projects across **11 states and Union Territories** were inaugurated by the Defence Minister from the Nechiphu tunnel to a key military airfield in eastern Ladakh's Nyoma
- the **Nechiphu tunnel will provide all-weather connectivity** to the strategic Tawang region of Arunachal Pradesh

Prelims Takeaway

- Nechiphu Pass
- BRO

Key points

- Of the 90 projects of the Border Roads Organisation, **64 are in Arunachal Pradesh, Ladakh and Sikkim.**
- In the last three years, India has ramped up **infrastructure development along the LAC, both in eastern Ladakh and the North-East.**
- The projects include 11 in **Jammu and Kashmir**, five in **Mizoram**, three in **Himachal Pradesh**, two each in **Uttarakhand and West Bengal** and one each in **Nagaland, Rajasthan and Andaman and Nicobar Islands.**
- Other key projects inaugurated include the **Bagdogra and Barrackpore airfields in West Bengal.**
- The BRO will **begin construction of the Shinku La tunnel, the world's highest tunnel** at an altitude of 15,855 feet.
- The **Devak Bridge on the Bishnah-Kaulpur-Phulpur Road in J&K's Samba district** was inaugurated .

Significance

- The lines of communication from **Tawang also stretch to Guwahati and the extended Siliguri Corridor**, which makes it militarily important.
- The tunnel **will bypass the Nechiphu Pass** that has foggy weather conditions, a major hindrance for military convoys and other traffic.
- It will facilitate **faster mobility of troops and equipment to the LAC** by cutting short the existing distance by around 5 km.
- India uses **Bomdila, Nechiphu and Se La for deployment of forces.**

- Reconstructed at a cost of over Rs 500 crore, the **airfields are a significant addition to air infrastructure in the North-East**
- **It will bolster the preparedness of the IAF** while facilitating commercial flight operations in the region.
- **Devak bridge is of strategic importance** as it will “enhance the operational preparedness of the Armed Forces and **boost socio-economic development of the region.**
- These projects will help in **faster mobility of troops and equipment to the Line of Actual Control in case of a contingency**
- It will also improve **overall connectivity for the population.**
- **The Tawang region provides the easiest access to the Brahmaputra plains** and the shortest route to Tezpur in Assam.

Border Roads Organisation

- Initially, BRO was functional under the **Ministry of Road Transport and Highways.**
- since 2015, it is being managed and is functional under the **Ministry of Defence**
- The **BRO has constructed infrastructure projects** in several countries such as **Myanmar and Bhutan** and helped in strengthening peace and cooperation with them.
 - It also plays a **key role in the socio-economic development of far-flung areas.**

143,2,300 dead, many missing as flash floods hit Libya city - The Hindu

Relevance: Disaster and disaster management.

News:

- Recently, about a quarter of **Libya’s eastern city of Derna** was wiped out **after dams burst in a storm.**
- Approx. **10,000 people were feared to be missing** across the country in floods.

Prelims Takeaway

- Flash Floods
- Landslides

Flash Floods

- **Excessive or continuous rainfall** over a period of days or during particular seasons, can **lead to stagnation of water and cause flooding.**
- It occurs in a much **shorter span of time**, say, when rainfall creates flooding in **less than 6 hours** and is **highly localised.**
- These are **accompanied by landslides**, which are sudden movements of rock, boulders, earth or debris down a slope **which makes it dangerous.**

Factors Responsible for Flash floods

- Apart from heavy rain, **flash floods can also be caused by**
 - dam or levee failures
 - ice or debris jams
 - sudden release of water from natural reservoirs such as glacial lakes.
- The **following factors are also responsible** for flash floods
 - The intensity and duration of rainfall
 - The steepness of terrain
 - The nature of the soil
 - The presence of man-made structures that impede water flow
- In **India**, flash floods are **often associated with cloudbursts** i.e. sudden, intense rainfall in a short period of time.

Features of Flash Floods

- Flash floods are known for their **extreme force and velocity, carrying a tremendous amount of water, debris and sediment.**
- They can **overwhelm drainage systems, cause rivers to overflow their banks and inundate low-lying areas.**
- It commonly happens more where **rivers are narrow and steep**, so they flow more quickly.
- They can occur in **urban areas located near small rivers**, since **hard surfaces** such as roads and concrete **do not allow the water to absorb into the ground.**

144. For sickle cell patients, an elusive disability certificate- The Hindu

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

News:

- A plan to **get permanent disability certificates** issued for **Sickle-Cell Disease** patients above the age of 5 years has been stuck in a quagmire.
- In a **report tabled during the Monsoon Session of Parliament**, a House panel urged the government to get a move on it.

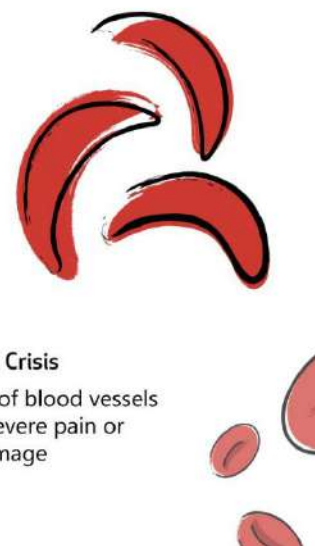
Prelims Takeaway	
• Sickle-Cell Disease	
• Rights of Persons with Disabilities Act, 2016	

Key Highlights

- **The Health Ministry** is responsible for determining the criteria and **rules for disability certificates**.
- the **Social Justice and Empowerment Ministry** actually **issues the certificates**, which are required for **availing reservations and other scheme benefits**.
- Sickle Cell Disease, a **debilitating genetic blood disorder**, is especially prevalent among **tribal populations across India**.
- The Union government has been publicising its campaign to **“eradicate” SCD in India by 2047**.
- current patients, who are **only eligible for disability certificates with a three-year validity**, despite the chronic and progressive nature of their disease.
- A project is **currently underway to screen seven crore tribal people** in 17 States and Union Territories for SCD
 - It is under the aegis of the National Health Mission and coordinated by the Tribal Affairs Ministry.
- **SCD as a “lifelong illness”** with a blood and bone marrow transplant being the only cure, “which very few people, specially amongst the tribal population can undertake”.
- When **SCD was included in the list of disabilities under the Rights of Persons with Disabilities Act, 2016**, patients could only avail disability certificates with a one-year validity.
- The DEPwD eventually **increased the validity of disability certificates for SCD patients to three years**, requiring a minimum of 25% disability.

What are Sickle Cell Disorders?

- A group of disorders that cause red blood cells to become misshapen and break down.
- The cells die early, leaving a short age of healthy red blood cells and can block blood flow causing pain.



Types:

Sickle Cell Anaemia

Dysfunctional red cells due to abnormal haemoglobin

Sickle Cell Crisis

Blockage of blood vessels causing severe pain or organ damage

145. Govt. will protect industry from EU’s carbon law: Goyal- The Hindu

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- Recently, **Commerce and Industry Minister** assured **the government will take all necessary steps to protect Indian industry** from any adverse impact of the **European Union’s Carbon Border Adjustment Mechanism (CBAM)**

Prelims Takeaway	
• European Union’s	
• Carbon Border Adjustment Mechanism (CBAM)	

- CBAM which **mandates reporting of carbon emissions** for certain exports to Europe from October 1.

Key highlights:

- the CBAM framework **involves onerous reporting requirements for cement, iron and steel, aluminium, fertilisers, and electricity imports** in the region
- There will be **additional import levies to be imposed** on such carbon-intensive products from 2026.
- Experts reckon **Indian steel exports to Europe, could take the biggest hit** from the CBAM
 - It is due to more carbon-intensive nature of production processes vis-à-vis rivals like China and South Korea.

European Union’s Carbon Border Adjustment Mechanism (CBAM)

- It is a **mechanism to be introduced by the European Union (EU)**
- **Objective:**
 - to put a fair price on the carbon emitted during the production of carbon intensive goods that are entering the EU
 - to encourage cleaner industrial production in non-EU countries.
- The EU **plans a gradual introduction of CBAM** from 1st October 2023 and this will translate into a **20-35% tax on selected imports** to the EU nations by 1st January 2026.
- From 1st January 2026, the **EU will start levying the carbon tax on multiple products exported to the EU.**
- The products **included in the CBAM list will be expanded over a period of time and by 2034.**

146. IAF chief takes delivery of first C-295 transport aircraft in Spain- The Hindu

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News

- In a significant **milestone**, the Indian Air Force (IAF) **received** its inaugural **C-295 transport aircraft** during a **ceremony** held in Seville, **Spain**.
- **IAF’s fleet of C-295s** is set to become the **largest globally**, with an **initial order** for 56 aircraft.

Prelims Takeaway
<ul style="list-style-type: none"> • C-295 • Bharat Dynamics Limited • STOL



C-295

- The C-295MW is a **transport aircraft** with a **carrying capacity** ranging from 5 to 10 tonnes.
- It can **accommodate up to 71 troops or 49 para-troopers**, offering significant flexibility.

- The **aircraft** boasts a **maximum cruise speed** of **260 knots**, ensuring rapid deployment.
- Its exceptional **low-level flight characteristics** enable tactical **missions**, even at **slow speeds** as low as **110 knots**.
- The **C-295** is equipped with a **rear ramp door**, facilitating **swift troop** and cargo **deployments**.
- Each **aircraft** is **outfitted** with an **indigenous Electronic Warfare Suite** developed by **Bharat Electronics Ltd** and **Bharat Dynamics Limited**.
- **Two Pratt & Whitney Canada PW127G turboprop** engines **propel** the aircraft.
- The **C-295** exhibits **short take-off** and landing (**STOL**) **capabilities**, enabling the use of **unprepared airstrips**.

Significance of the aircraft

- India’s entry into **aircraft production** will place it among a **select group** of **nations** with the capability to **manufacture C-295 aircraft**.
- This **group** includes countries like the **US, UK, Russia, France, Italy, Spain, Ukraine, Brazil, China, and Japan**.
- The project will stimulate **India’s aerospace ecosystem**, involving numerous **MSMEs** across the country in the manufacturing of **aircraft components**.
- This **includes areas** of **strategic importance**, such as the **border with China** and the **Andaman and Nicobar archipelago**.

147.Explained: 75th anniversary of Operation Polo and ‘Police Action’ in Hyderabad- Indian Express

Relevance: Post-independence consolidation and reorganization within the country.

News

- On 13 Spet. India celebrated the 75th anniversary of Operation Polo.
- On this day in 1948, Indian Army launched military action to integrate the princely state of Hyderabad.

What was the background against which Operation Polo was launched?

- **Intentions of Nizam of Hyderabad state**
 - The Nizam of Hyderabad state, Mir Osman Ali Shah, had the intention of keeping his state as an independent entity and did not join India or Pakistan after Independence.
 - The Nizam took advantage of the fact that the Indian government got preoccupied with the Kashmir war soon after Independence.
- **Standstill agreement with India**
 - The Nizam signed a standstill agreement with India in November 1947.
 - This essentially meant that a status quo would be maintained between the Indian dominion and the Hyderabad state till a solution was found.
 - The agreement was signed for a period of one year during which the Indian government would not exercise any authority over Hyderabad.

Why was Operation Polo launched?

- **Location of Hyderabad**
 - Situated in the Deccan, Hyderabad was one of the most populous and richest states.
 - It had 17 districts including Aurangabad (now in Maharashtra) and Gulbarga (now in Karnataka).
- **Intention to have fraternal relations with Pakistan**
 - The landlocked state had a majority Hindu population with the state administration almost entirely run by its Muslim rulers.
 - There was no common border with Pakistan but the Nizam had every intention to have fraternal relations with that country.
- **Excesses of the Razakars**
 - During this period, the Nizam’s administration had taken advantage of the standstill agreement signed with India.
 - It started to increase the number of its irregular force called Razakars which was led by Maj Gen SA El Edroos, the Arab commander in chief of the Hyderabad state forces.
 - The Razakars were a paramilitary force in the Hyderabad State. It was created to support the Nizam’s rule.
 - It also resisted the integration of Hyderabad into the newly independent India.
 - The Razakars primarily consisted of local radical Muslim volunteers who were loyal to the Nizam’s regime.
 - The Razakars persecuted Hindus and forced them to become Muslims.
 - They killed many Hindus and Hindu sympathizers, forcing them to flee the state. They also raped women.

Operation Polo on the ground

- The Indian forces were led by Maj Gen Jayanto Nath Chaudhuri, the General Officer Commanding of 1 Armoured Division.
- The Nizam of Hyderabad announced a ceasefire on September 17.

- On September 18, Maj Gen Chaudhuri entered Hyderabad city with his forces and Maj Gen El Edroos surrendered to him.
- Maj Gen Chaudhuri was later appointed the Military Governor of Hyderabad.

148. Govt. limits wheat stocks to control price rise, hoarding - The Hindu/ Amid rise in wheat prices, Centre curbs stock limit to 2000 MT - Indian Express

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- The Centre recently **reduced the wheat stock limit** from 3,000 metric tonnes (MT) to 2,000 MT for **traders, wholesalers, and big chain retailers.**

Prelims Takeaway

- Essential Commodities Act 1955
- Minimum Support Price

The Order on Stock Limits

- **Objective:** To curb the rising retail and wholesale prices of wheat and atta.
- **All wheat stocking entities** are required to register on the **wheat stock limit portal** and **update the stock position** every Friday.
- Any entity found to have **not registered on the portal** or **violating the stock limits** will be subject to suitable punitive action under **Section 6 & 7 of Essential Commodities Act, 1955.**

Reasons behind the Order

- An **upward movement in wheat prices** in near future
- **Chances of hoarding** ahead of the festive season

Essential Commodities Act 1955

- To **prevent hoarding and black marketing of foodstuffs**, the Essential Commodities Act was enacted in 1955.
- It was legislated at a time when the country was facing a **scarcity of foodstuffs** due to **persistent low levels of foodgrains production.**

Essential Commodity

- There is **no specific definition of essential commodities** in the Essential Commodities Act, 1955.
 - **Section 2(A) of the Act** states that an “**essential commodity**” means a **commodity specified in the Schedule** of the Act.
- The Act gives **powers to the central government to add or remove a commodity in the Schedule.**
- The Centre, if it is satisfied that it is necessary to do so **in the public interest**, can **notify an item as essential**, in consultation with state governments.
- By declaring a commodity as essential, the government can **control the production, supply, distribution of that commodity and impose a stock limit.**

149. Rubber Board to increase area under rubber in Northeast States - The Hindu

Relevance: Major crops-cropping patterns in various parts of the country

News:

- In a move to **expand the area under natural rubber in non-traditional States**, the Rubber Board is implementing a project in the **Northeastern States.**
- However, the project area will **exclude Sikkim, but will include West Bengal.**
- This is in **collaboration** with the **Central government** and the **Automotive Tyre Manufacturers' Association.**
- The project is expected to bring in **socio-economic benefits.**

Prelims Takeaway

- Natural Rubber
- Rubber Board

Rubber Board

- It is a **statutory organisation** constituted under the **Rubber Act, 1947.**
- It functions under the administrative control of the **Ministry of Commerce and Industry.**
- **Headquarters:** Kottayam, Kerala.

Functions

- **Development of the rubber industry** by assisting and encouraging research, development, extension and training activities related to rubber.
- **Maintain statistical data of rubber**, take steps to **promote marketing of rubber** and undertake **labour welfare activities**.
- **Issue licenses** to rubber producers, manufacturers and exporters.
 - This license, known as the "**Rubber Board license/registration**," is **mandatory** for anyone involved in rubber manufacturing and export

Structure

- The Board is headed by a **Chairman appointed by the Central Government**.
- It has **28 members representing various interests of the natural rubber industry**.
- The **activities** of the Board are **exercised through Five Departments** viz.
 - General Services
 - Extension & Advisory Services
 - Research Services (rubber Research Institute of India)
 - Training (Rubber Training Institute)
 - Finance

Natural Rubber

- Rubber is made from the **latex of a tree called Hevea Brasiliensis**.
- It is largely perceived as a **strategic industrial raw material** and accorded special status globally for **defence, national security and industrial development**.

Conditions for Growth

- It is an equatorial crop, but under special conditions, it is also grown in tropical and sub-tropical areas.
- **Temperature:** Above 25°C with a moist and humid climate.
- **Rainfall:** More than 200 cm.
- **Soil Type:** Rich well-drained alluvial soil.
- **Cheap and adequate supply of skilled labour**

Key Facts

- **Major Producers Globally:** Thailand, Indonesia, Malaysia, Vietnam, China and India.
- **Major Consumers Globally:** China, India, USA, Japan, Thailand, Indonesia and Malaysia.
- **Top Rubber Producing States:** Kerala, Tamil Nadu, Karnataka.
- About **40% of India's total natural rubber consumption** is currently **met through imports**.

150. Evasive nutritional support for TB patients - The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- In 2019, Secretary in the Health Ministry noted in a letter that **undernutrition at the population level contributes to 55% of annual TB incidence** in India.
- A 2022 study noted that **45% of people in India are undernourished**, accounting for nearly 1.2 million TB cases each year.

Prelims Takeaway

- Nikshay Poshan Yojana
- Tuberculosis

Key Highlights

- **nutrition support became a part of the national TB programme** only in April 2018
- In September 2022, India launched another nutrition support programme called **Ni-kshay Mitra** to consented TB patients.
- in 2022, **Tamil Nadu became the first and only State to launch the Differentiated TB Care programme** to reduce the mortality rate among TB patients.
- **Severe undernutrition** is one of the three parameters used for triaging TB patients at the time of diagnosis.
- **undernutrition** among TB patients is so **high even in Tamil Nadu**
- The situation might be **far worse in many northern States** which have higher levels of undernutrition in the general population.

- All the **three initiatives provide nutrition support only to TB patients** to reduce mortality and not to the family members also to prevent TB disease.
- The RATIONS trial in Jharkhand has underscored the importance of providing nutrition support to family members to prevent TB disease.
- In the trial, **TB disease among household contacts was prevented in 39%** (all forms of TB) to 48% (pulmonary TB) through nutritional support.

Issues with Nikshay Poshan Yojana

- As per the India TB report 2023, of the **2.4 million notified TB cases, only 1.6 million (66%) received at least one month's payment in 2022** under the Ni-kshay Poshan Yojana programme.
- There has been **very little increase in the number of beneficiaries** in the last three years.
- For instance, in 2021, **only 62.1% of the 2.1 million notified cases** in India received at least one payment.
- In 2020 too, **only 62% of notified TB cases received at least one month payment.**
- In 2022, in Delhi, which has the highest rate of TB burden at nearly 546 cases per 100,000 people, only 44% of beneficiaries received at least one payment.
- Among the large States, **Uttar Pradesh, Madhya Pradesh, and Gujarat** had high case notification rates of 218, 214 and nearly 213, respectively.
- But only 64%, 82%, and 63% of beneficiaries in **Uttar Pradesh, Madhya Pradesh, and Gujarat**, respectively received at least one payment.
- TB patients perceived the assistance provided under the Ni-kshay Poshan Yojana programme was **"insufficient to buy nutritious food throughout the course of treatment"**.

Nikshay Poshan Yojana

- A **direct benefit transfer (DBT) scheme for nutritional support to TB patients** — was launched.
- Under this programme, **Rs.500 per month is credited into the account** of a person with TB for the duration of treatment.

151. Cheetah project on the right path of success: govt. report - The Hindu

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- Recently, a government report said **four of the six criteria established for assessing the short-term success of India's cheetah reintroduction programme** have already been met.
- The project is on the right path to becoming a **successful large carnivore conservation translocation** and population establishment endeavour, it stated.
- **The Cheetah Action Plan**, published last year, **lists six short-term success criteria:**
 - 50% survival of the introduced cheetahs for the first year
 - establishment of home ranges in Kuno National Park
 - successful cheetah reproduction in the wild
 - survival of wild-born cheetah cubs past one year
 - successful F1 generation breeding,
 - cheetah-based revenues contributing to community livelihoods.
- **F1 stands for the first generation of offspring.**
- The report noted that the **project has achieved four of these criteria:**
 - 50% survival of the introduced cheetahs
 - establishment of home ranges, birth of cubs in Kuno National Park
 - direct revenue contributions to local communities through the engagement of cheetah trackers and indirect appreciation of land value in surrounding areas.
- India's ambitious **initiative to reintroduce cheetahs** after their extinction in the country marked its first anniversary recently.
- The project began on September 17 last year when the Prime Minister released a group of **cheetahs from Namibia into an enclosure at Madhya Pradesh's Kuno National Park.**

Prelims Takeaway

- The Cheetah Action Plan
- Madhya Pradesh's Kuno National Park.

- Conservationists and experts worldwide have **closely monitored the project since its inception.**
- Twenty cheetahs were **imported from Namibia and South Africa to Kuno in two batches.**
- A few mortalities of **cheetah occurred from bacterial infection, maggots, renal failure, injuries and heat.**
- The report noted that **no unnatural deaths took place in free-ranging conditions** despite some cheetahs traversing long distances in human-dominated areas.

152. Unified Portal for Agricultural Statistics launched - Indian Express

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- Recently, **The Centre launched the Unified Portal for Agricultural Statistics (UPAg)**, an online platform for management of agricultural data.
- The **UPAg, developed by the Ministry of Agriculture and Farmers' Welfare (DA & FW)**, was launched by NITI Aayog.
- The **platform is designed to generate crop estimates** and integrate with other systems generating agriculture statistics such as price, trade, procurement, stock, said an official.
- **UPAg portal will address various challenges** including lack of standardised data, **lack of verified data, dispersed data etc.**
- "It aims to **provide real-time, standardised, and verified data** on
 - agricultural commodities
 - facilitating data-driven decision-making for policymakers
 - researchers, and stakeholders.
- This initiative aligns with the **principles of e-governance**, bringing smartness, transparency, and agility to India's agriculture sector.

Prelims Takeaway

- Unified Portal for Agricultural Statistics (UPAg)
- NITI Aayog

Unified Portal for Agricultural Statistics (UPAg).

- It is an **advanced agricultural data management platform** designed to generate crop estimates and integrate with other systems generating Agriculture Statistics.
- The portal **serves as a centralized hub for near real time information** on crop production, market trends, pricing, and other vital agricultural data.
- It was developed by the Department **of Agriculture and Farmers Welfare.**

153. NASA's Juno spacecraft captures spectacular portrait of Jupiter and its moon Io - Indian Express

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News:

- Recently **NASA's Juno mission** completed its **53rd close flyby of Jupiter**, sped past the gas giant's **volcanic Moon Io**, and captured a stunning frame of both of them together.

Prelims Takeaway

- JUNO Mission
- Jupiter
- NASA

Moon Io

- Io is the **most volcanically active world in the solar system.**
- It has hundreds of volcanoes that **often erupt with molten lava and sulphurous gases.**
- It is **slightly larger than the Earth's Moon** and has a **diameter** that is about **one-quarter that of our planet.**
- It is **tidally locked to Jupiter**, meaning that **one side of the Moon always faces the planet.**
- It takes around **1.8 Earth days to both rotate on its axis and revolve once around Jupiter.**
- It has a **very thin atmosphere** that is primarily made of **sulphur dioxide.**

JUNO Mission

- JUNO is an acronym for **Jupiter's Near-Polar Orbiter**, a **NASA spacecraft orbiting the planet Jupiter.**

- **Objective**
 - Understand the **origin and evolution of Jupiter**
 - Look for a **solid planetary core**
 - Map the **magnetic field**
 - Measure **water and ammonia** in the deep atmosphere
 - Observe **auroras**
- **Launched in 2011**, it initially embarked on a **5-year journey** to the largest planet in our solar system.
- Towards the end of its primary mission, the spacecraft's objectives evolved, and it transitioned into a **full Jupiter system explorer with flybys of Jovian moons**.

Unique Features

- Usually, **radioisotope thermoelectric generators** are commonly used for missions to the **outer solar system and beyond**.
- And **solar panels are commonly used by satellites** orbiting Earth and working in the inner Solar System.
- But unlike all earlier spacecraft sent to the outer planets, **Juno is powered by solar panels**.
- The **three largest solar panel wings** ever deployed on a planetary probe play an integral role in **stabilising the spacecraft as well as generating power**.

154. Cybercrime Investigation Tool developed can track cyberattacks targeting human - DST

Relevance: Achievements of Indians in science & technology; indigenization of technology and developing new technology.

News:

- **I-hub NTIHAC foundation (c3ihub) at IIT Kanpur** recently developed a **TTPs-based cybercrime investigation framework**.
- It would soon be able to **track cyberattacks targeting humans**, like insurance fraud, online matrimonial fraud and so on.

Prelims Takeaway

- Cyber Security
- TTPs

TTPs based Cybercrime Investigation Framework

TTPs

- TTPs stands for Tactics, Techniques, and Procedures.
- It is the term used by cybersecurity professionals to describe the behaviours, processes, actions, and strategies used by a threat actor to develop threats and engage in cyberattacks.
- It is a tool for **apprehending cybercriminals' modes of operations** in a crime execution lifecycle.
- It was developed by the **I-hub NTIHAC foundation (c3ihub) at IIT Kanpur** with support from the **Department of Science and Technology (DST)** under the **National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)**.
- The **framework can help in**
 - Tracking and classifying cyber crimes
 - Identifying the chain of evidence required to solve the case
 - Mapping evidence onto the framework to convict criminals
- It can create an **approximate crime execution path** and suggest a crime path based on a **user-derived set of keywords**.
- It can also **compare modus operandi used in different crimes** and **manage user roles and track activity for crime paths**.
- It could be highly effective as it **restricts the number of forms and methods the investigation can be conducted** and primarily relies on criminals' TTPs.
- This leads to **precise and rapid conviction of cybercriminals**.

155. Solar storm alert! A CME just hit the Earth today and more are coming - Hindustan Times

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News:

- Recently, on September 17th, **Earth was hit by a Coronal Mass Ejection (CME)** that was spewed out by the Sun earlier.
- **Solar activity has been on the rise**, with recent developments stoking concerns about **potential repercussions** for our planet.

Prelims Takeaway

- Coronal Mass Ejections (CMEs)
- Solar Flares
- Auroras

Coronal Mass Ejections (CMEs)

- These are **large expulsions of plasma and magnetic fields from the Sun's corona** that propagate outward into interplanetary space.
- During a CME, the Sun releases a **colossal amount of material** that **travels at high speeds into space**.
 - These include electrons, protons, and heavier ions as well as magnetic fields.

Causes

- CMEs are typically triggered by the **destabilisation of the Sun's magnetic fields**.
- They often involve the **reconfiguration or disruption of magnetic loops** on the Sun's surface.
- CMEs are **distinct from solar flares**, although they often occur together.
 - **Solar flares** are **sudden and intense bursts of energy and radiation**.
 - CMEs involve the **expulsion of solar material**.

Impacts on Earth

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

156. New 'string' technology could revolutionise lithium production - Indian Express

Relevance: Science and Technology- developments and their applications and effects in everyday life.

News:

- The researchers at the **University of Princeton** have developed a **new "string-based" technique for extracting lithium**.
- It can drastically **reduce the amount of land and time** needed for the **production of Lithium**.

Prelims Takeaway

- Lithium
- String Technology
- Lithium-ion Batteries

String Technology

- Researchers used a set of **porous fibres twisted into strings and engineered** them to have a **water-loving (hydrophilic) core and water-repelling surface**.
- When **one end is dipped in a salt-water solution**, the **water travels up the string** because of **capillary action**.
- Then, the **water evaporates quickly** from the string's surface **leaving behind salt ions** like sodium and lithium.
- The **water will continue to evaporate** like this as the **salts become increasingly concentrated**, eventually forming **sodium chloride and lithium chloride crystals**.
- Also, since **lithium and sodium have different physical properties**, they **crystallise at different locations** on the strings.

- **Sodium**, with its low solubility, **crystallises on the lower part**, while the highly soluble **lithium salts crystallise near the top**.

Current Technology

- A large **majority** of the lithium produced in the world is **extracted from “brine reservoirs” located in salt flats**.
- It relies on a **series of massive evaporation ponds** that **concentrate lithium from saltwater reservoirs and salt flats of underground aquifers**.
- This method of production can **require hundreds of square kilometres**.
- And it **often takes months or even years to produce lithium** that can be used in batteries.
- It is **commercially viable in a few locations** around the world.

157. Montreal Protocol: Fixing the Ozone Layer and Reducing Climate Change - PIB

Relevance: Conservation, environmental pollution and degradation

News:

- The **Ministry of Environment, Forest and Climate Change (MoEFCC)** recently celebrated the 29th **World Ozone Day**.

Prelims Takeaway

- Montreal Protocol
- Kigali Agreement
- Ozone Layer

World Ozone Day

- It is celebrated on **16th September each year** to commemorate the **signing of the Montreal Protocol**.
- It aims to **spread awareness among people** about the **depletion of the Ozone Layer** and the **measures taken or to be taken to preserve it**.
- The **theme** for World Ozone Day 2023 is **“Montreal Protocol: fixing the ozone layer and reducing climate change”**.

Ozone Layer

- It is a special form of oxygen **made up of three oxygen atoms (O₃)**.
- It is both a **natural and a man-made product** that occurs in the Earth's
 - Upper atmosphere (the stratosphere)
 - Lower atmosphere (the troposphere)
- About 90% of ozone occurs **naturally in the Earth's upper atmosphere (Stratosphere)**.
- There, it **forms a protective layer** that shields us from the **sun's harmful ultraviolet rays**.
- This “good” ozone is **gradually being destroyed** by man-made chemicals called **Ozone-Depleting Substances (ODS)**.
 - It includes CFCs, HCFCs, halons, methyl bromide, carbon tetrachloride, and methyl chloroform.
- Ozone layer depletion leads to an **uptick in the incidence of skin cancer and cataracts in humans**.
- **Ground-level ozone** is formed primarily from **photochemical reactions between two major classes of air pollutants** viz. volatile organic compounds (VOC) and nitrogen oxides (NO_x).

Montreal Protocol

- Adopted in **1987**, it is a worldwide agreement to **phase out the production and consumption of substances causing ozone-depletion**.
 - Primarily chlorofluorocarbons (CFCs), halons, carbon tetrachloride and other chemicals
 - Used commonly in refrigeration, air conditioning, and aerosol propellants.
- It is the **only UN treaty** ever that has been **ratified by every country on Earth - all UN Member States**.
- It has led to the **phase-out of 99% of ozone-depleting chemicals** in refrigerators, air-conditioners and many other products.
- **India is a party** to the Montreal Protocol **since June 1992**.

Kigali Agreement

- Adopted on October 15, 2016, it is an **amendment to the Montreal Protocol**.

- It addresses the **phase-down of Hydrofluorocarbons (HFCs)** used as **replacements for the ozone-depleting substances**.
- **Objective:** To reduce the production and consumption of HFCs with the aim of mitigating their contribution to global warming.

158. Inflows in Gold ETF hit 16-month high at ₹1,028 crore in August - Indian Express

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- According to data, **Gold exchange-traded funds (ETFs)** attracted **Rs 1,028 crore in August**, making it the **highest inflow in 16 months**.
- Apart from inflow, the **asset base of Gold ETFs and investors' account** or folio numbers **increased in the period** under review.

Prelims Takeaway

- Exchange Traded Fund (ETF)
- Gold Exchange Traded Funds

Gold Exchange Traded Funds

- They are **commodity-based exchange-traded funds** with an **underlying asset as gold**.
- They are **passive investment instruments** that are **based on gold prices and invest in gold bullion**.
- Gold ETFs are **units representing physical gold** which may be in paper or dematerialised form.
 - One Gold ETF unit is equal to 1 gram of gold and is backed by physical gold of very high purity.
- They combine the **flexibility of stock investment** and the **simplicity of gold investments**.
- They are **listed and traded on the National Stock Exchange of India (NSE) and Bombay Stock Exchange Ltd. (BSE)** like a stock of any company.
- It can be **bought and sold continuously at market prices**.
- There is a **complete transparency on the holdings** of a Gold ETF due to its **direct gold pricing**.
- ETFs have **much lower expenses** as compared to physical gold investments.

Exchange Traded Fund (ETF)

- An ETF is a **collection of investments** such as equities or bonds.
- It is a **basket of securities that trades on an exchange** just like a stock does.
- ETF **share prices fluctuate all day** as the ETF is bought and sold, unlike **mutual funds**, which only **trade once a day after the market closes**.
- They have **cheaper fees than other types of funds**.

159. 'Stabilising core inflation shows ease in price pressures across economy' - Indian Express

Relevance: Indian Economy and issues relating to planning, mobilisation, of resources, growth, development and employment.

News:

- Recently RBI said that **retail inflation**, which eased in August, is **expected to decline sharply in September** driven by **corrections in vegetable prices**.
- However, **core inflation remained steady** at 4.9 percent in August.

Prelims Takeaway

- Inflation
- Inflation Targeting
- Retail Inflation
- Core Inflation

Inflation

- A **long-term increase** in the **general price level** of goods and services in a given economy.
- It considers the **pricing of most everyday or standard products and services**, such as food, clothes, housing, recreation, transportation, consumer staples, etc.

- It is **positive** when it helps **improve consumer demand** and **consumption**, and **operate economic growth**.
- Even inflation is meant to keep **deflation** in check and is a **drag** on the economy.

Inflation Targeting

- It is a **central banking policy** that focuses on **altering monetary policy to attain a set annual inflation rate**.
- It is founded on the assumption that **preserving price stability**, which is achieved by managing inflation, is the greatest way to **generate long-term economic growth**.
- Under the RBI Act, 1934, the **Central Government, in consultation with the RBI**, determines the **inflation target** in terms of the **Consumer Price Index (CPI), once in five years**.
- It provides for the constitution of a **six-member Monetary Policy Committee (MPC)** to determine the **policy rate required to achieve the inflation target**.
- Currently, the RBI aims to **keep inflation at 4%** but will tolerate inflation between the **range of 2% to 6%**.

Retail Inflation

- Also known as **Consumer Price Index (CPI) inflation**.
- It is the rate at which the **prices of goods and services that consumers buy for personal use increase over time**.
- It **measures the change in the cost of a basket of goods and services** that are **typically purchased by households**.
 - These include food, clothing, housing, transportation and medical care.

Core Inflation

- It is the **change in the costs of goods and services but does not include those from the food and energy sectors**.
- Food and energy prices are **exempt** from this calculation because their **prices can be too volatile or fluctuate wildly**.

160. India denies any role in Nijjar's killing in Canada - The Hindu/ Trudeau claims Indian Govt link to Khalistan leader's killing; Delhi says absurd - Indian Express

Relevance: Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.

News:

- Recently, a **DIPLOMATIC standoff erupted between India and Canada**
- The Canadian Prime Minister **alleged a "potential link" between the Indian government and the killing of a pro-Khalistan leader** in Canada earlier this year.

Prelims Takeaway

- Operation Blue Star
- Anandpur Sahib Resolution (1973)

Khalistan movement

- It is a **Sikh separatist movement** seeking to create a homeland for Sikhs.
- Movement wanted to establish a **sovereign state called Khalistan** ('Land of the Khalsa'), in the Punjab region.

Background

- Its origins have been traced back to **India's independence and subsequent Partition along religious lines**.
- **The Punjab province**, which was divided between **India and Pakistan**, witnessed **communal violence** and generated millions of refugees.
- The historic Sikh Empire's capital, **Lahore**, as well as **sacred Sikh sites like Nankana Sahib, the birthplace of Guru Nanak, went to Pakistan**.
- The political struggle for greater autonomy began with the **Punjabi Suba Movement for the creation of a Punjabi-speaking state**.
- **The States Reorganisation Commission report (1955) rejected this demand**.
- The state of **Punjab was reorganised** (trifurcated into the Hindi-Hindu-majority HP and Haryana, and Punjabi-Sikh-majority Punjab) in 1966.

- The Punjabi Suba movement had **galvanised the Akali Dal**, which concluded the **Anandpur Sahib Resolution (1973) demanding autonomy** (not secession from India) for the state of Punjab.

The rise of Jarnail Singh Bhindranwale

- By the 1980s, the **appeal of Jarnail Singh Bhindranwale and his followers** (mostly from the lower rungs of the social ladder) were getting increasingly violent.
- In 1982, with support from the Akali Dal's leadership, he **launched a civil disobedience movement called the Dharam Yudh Morcha**.
- He **took up residence inside the Golden Temple**, directing demonstrations and clashes with the police.

Government action

- The Khalistan movement **was crushed in India following Operation Blue Star**.
- the **Indian Army to flush out militants from the Golden Temple** and neutralise Bhindranwale in 1984
- The **operation gravely wounded (by the desecration of the Golden Temple)** the Sikh community around the world.

Afterward

- **PM Indira Gandhi was assassinated** (on October 31, 1984), triggering the worst communal violence since Partition.
- Punjab **became the hub of a long drawn-out insurgency** (allegedly supported by Pakistan) that lasted till 1995.

Today, the movement is fuelled by:

- vote bank politics
- social issues (unemployment, drug menace in Punjab)
- dissatisfaction among the Sikh diaspora
- support from non-state actors.

161. Centre floats new science awards - The Hindu

Relevance: Achievements of Indians in science & technology; indigenization of technology and developing new technology

News:

- The **Rashtriya Vigyan Puraskar** to have **three Vigyan Ratna, 25 Vigyan Shri, 25 Vigyan Yuva-Shanti Swarup Bhatnagar and three Vigyan Team awards**.

Prelims Takeaway

- National Research Foundation
- Rashtriya Vigyan Puraskar

- the winners will be announced every year on **May 11, which is National Technology Day**

Key Points

- Nearly a year after deciding to cut the number of prizes annually awarded by its Ministries, **the Union government is set to institute the Rashtriya Vigyan Puraskar**
 - 56 prizes to felicitate scientists, technologists and innovators.
- Akin to the prestigious Padma awards, **these awards will not include any cash component**
- they will likely bestow a **certificate and a medallion on the awardee**,

Multidisciplinary prizes

- These prizes **will be awarded annually for:**
 - sciences, mathematics and computer science, medicine, agricultural science, technology and innovation
 - atomic energy, space science and technology, and a 13th category, simply called "others".
- "It may be ensured that **each domain may be represented**."
- Adequate **representation of women** may also be ensured.
- The **56 proposed awards are a stark reduction from the almost 300 science prizes** that used to be given by Union Ministries.
- In their previous avatar, **the prizes also had a significant cash component**.
- The **Shanti Swarup Bhatnagar (SSB) awards** now includes ₹5 lakh per winner, as well as a salary perk.
 - It is given by the Council of Scientific and Industrial Research (CSIR) since 1958,

- In fact, the government announced the names of **12 winners of the SSB awards just last week, after a year's delay.**
- The **National Technology Awards**, given to teams by the **Technology Development Board (a DST entity)**, also include cash prizes worth ₹25 lakh.

Eligibility

- The new awards will also be **open to persons of Indian origin (PIOs)**
 - a maximum of one such may be awarded the Vigyan Ratna
 - three PIOs each can be selected for the Vigyan Shri and the VY-SSB.
- However, **PIOs will not be eligible for the Vigyan Team awards.**
- There are **no age limits for any prizes except the SSB**, for which recipients must be 45 years or younger.

The Vigyan Ratna awards

- The award shall be for **“lifetime contributions along with excellence made in any field of science.**

the Vigyan Shri award

- The award is for **“distinguished contribution to any field.**

The SSB

- It is for **“exceptional contribution by young scientists”.**

About Rashtriya Vigyan Puraskar

- The awards will be announced **annually on May 11, which is National Technology Day**
- It will be **awarded on National Space Day, August 23.**
- These are the days on which India successfully conducted its second **nuclear test in 1998, and then catapulted the Chandrayaan-3's Vikram lander on the moon this year.**
- The RVP awards, **which will commence from 2024, will be given by the President or the Vice President.**
- A **committee will be constituted every year** comprising:
 - the Secretaries of six Science Ministries
 - up to four presidents of science and engineering academies
 - six distinguished scientists and technologists from various fields.
- The CSIR will coordinate the administration of the **awards process for two years**
- After which it will be taken over **by the proposed National Research Foundation.**

162. Govt may soon tweak PLI schemes for three sectors - Indian Express

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- The government may **soon tweak the PLI scheme for pharmaceuticals, drones and textiles sectors.**
- This move **aims to encourage investment and boost manufacturing.**
- The changes include **extending some time for the pharma sector and adding some additional products** in some sectors.

PLI Scheme

- The PLI scheme was conceived to **scale up domestic manufacturing capability**, accompanied by **higher import substitution and employment generation.**
- Launched in **March 2020**, the scheme initially targeted **three industries** namely
 - Mobile and allied Component Manufacturing
 - Electrical Component Manufacturing and
 - Medical Devices
- So far, the government has announced **PLI schemes for 14 sectors .**

Objectives

- To **reduce India's dependence** on China and other foreign countries.
- It **supports the labour-intensive sectors** and aims to **increase the employment ratio** in India.
- **Reduce the import bills and boost up domestic production.**

Prelims Takeaway

- PLI Scheme
- Make In India

- However, PLI Yojana **invites foreign companies** to set up their units in India and **encourages domestic enterprises to expand** their production units.

Incentives Under the Scheme

- The incentives, calculated on the basis of **incremental sales**, range from
 - **as low as 1%** for the **electronics and technology products**
 - **as high as 20%** for the **manufacturing of critical key starting drugs and certain drug intermediaries**.
- In some sectors such as advanced chemistry cell batteries, textile products and the drone industry, the incentive to be given will be **calculated on the basis of sales, performance and local value addition** done over the period of five years.

163. Aditya L1 spacecraft embarks on 110-day journey to L1 point - Indian Express

Relevance: Achievements of Indians in science & technology; indigenization of technology and developing new technology.

News:

- Recently, **ISRO carried out the Trans-Lagrangian 1 Insertion (TL1I) manoeuvre**.
- **India's first space-based observatory to study the Sun, Aditya-L1, is headed to the Lagrangian 1 (L1) point.**
- **The TL1I manoeuvre marks the beginning of Aditya-L1's 110-day journey towards the L1 point which lies between the Sun-Earth line.**

Prelims Takeaway

- Aditya-L1 Mission
- Lagrange Points
- ISRO

Aditya-L1 Mission

- **Launched by ISRO to the L1 orbit which is about 1.5 million km** from the Earth.
- It is expected to **take more than 120 days** for the spacecraft to reach the L1.
- The **orbit allows Aditya-L1 to look at the Sun continuously** without any occultation/eclipses.

Objective

- To study the **Sun's corona, Sun's photosphere, chromosphere, solar emissions, solar winds and flares and Coronal Mass Ejections (CMEs)**.
- To carry out **round-the-clock imaging of the Sun**.

Launch Vehicle and Payloads

- **Aditya L1 will be launched using the Polar Satellite Launch Vehicle (PSLV)**
- It also **launched the Chandrayaan-1 in 2008 and the Mars Orbiter spacecraft in 2013.**
- The mission will **have 7 payloads (instruments) on board viz.**
 - VELC
 - Solar Ultraviolet Imaging Telescope (SUIT)
 - Solar Low Energy X-ray Spectrometer (SoLEXS)
 - Aditya Solar wind Particle Experiment (ASPEX)
 - High Energy L1 Orbiting X-ray Spectrometer (HEL1OS)
 - Plasma Analyser Package for Aditya (PAPA)
 - Advanced Tri-axial High Resolution Digital Magnetometers

What is L1?

- It refers to **Lagrangian/Lagrange Point 1, one of the five points in the orbital plane of the Earth-Sun system.**
- These are **positions in space where the combined gravitational pull** of two large masses roughly balance each other.
- These **can be used by spacecraft to reduce fuel consumption** needed to remain in position.

164.ADB lowers India GDP growth outlook for this fiscal to 6.3% - The Hindu

Relevance: Indian Economy and issues relating to planning, mobilisation, of resources, growth, development and employment.

Prelims Takeaway
<ul style="list-style-type: none"> • Asian Development Bank • Gross Domestic Product

News:

- The **Asian Development Bank (ADB)** recently **pared its forecast for India’s economic growth** in the current fiscal year to **6.3%**, from 6.4% estimated earlier.
- The ADB’s economists also **raised their inflation forecast** for the year to **5.5%**, from 5% estimated earlier.
- They, however, **retained their real GDP growth projection for 2024-25 at 6.7%**, on expectations that **private investment and industrial output would increase.**

Asian Development Bank

- ADB, **established in 1966 is owned by 68 members** - 49 from the region.
- **Objective:**
 - to achieve a prosperous, **inclusive, resilient, and sustainable Asia** and the Pacific while sustaining its efforts to eradicate extreme poverty.
 - It assists **members and partners by providing loans**, technical assistance, grants, and equity investments to promote social and economic development.
 - To **promote social and economic development in Asia** and the Pacific.
- As of 31st December 2019, **ADB’s five largest shareholders** are:
 - Japan the United States (each with 15.6% of total shares)
 - the People’s Republic of China (6.4%)
 - India (6.3%),
 - Australia (5.8%).
- It is **headquartered in Manila, Philippines.**

Tempering expectations

ADB pares its FY24 GDP growth view on concerns that the erratic rains in this year’s monsoon could hit farm output

- Erratic rainfall has resulted in damage to rice crop, lower kharif sowing for pulses, says Bank
- Lender slashes its farm sector growth outlook for the year by almost 1 percentage point
- Says uptick in capacity utilisation in several industries reflects better policy environment



165.Study throws light on how gravitational instabilities affect evolution of galaxies - The Hindu

Relevance: Achievements of Indians in science & technology; indigenization of technology and developing new technology.

News:

- A study conducted by the **Indian Institute of Astrophysics (IIA)** could help **understand how gravitational instabilities are connected to galaxy evolution.**

Prelims Takeaway
<ul style="list-style-type: none"> • Dark Matter • Dark Energy • Indian Institute of Astrophysics

The Study

- It tried to explore **how gravitational instabilities are connected** with
 - star formation
 - gas fraction
 - timescale for growth of gravitational instabilities
 - the observed morphology
- They **compared the star formation rate, gas fraction and timescale for the growth of gravitational instabilities** of nearby galaxies.
- They **investigated the stability levels of a sample of 175 galaxies** taken from the **Spitzer Photometry and Accurate Rotation Curves (SPARC) database**.
- This **helped** them to
 - **trace the role of dark matter** in regulating the stability levels of the galaxies
 - understand if stars and gas can **self-regulate the stability levels**

Key Findings

- **Spiral galaxies** like the Milky Way exhibit a
 - Higher median star formation rate
 - Lower stability
 - Lower gas fraction
 - Smaller timescale for the growth of gravitational instabilities
- This indicates that **gravitational instabilities in spirals** rapidly **convert a substantial amount of gas into stars**, depleting the gas reservoirs.

166. New marine tardigrade species named after former President A.P.J. Abdul Kalam - The Hindu

Relevance: Conservation, environmental pollution and degradation

News:

- Recently, researchers have identified a **new species of marine tardigrade**, which they have named after the **late former President and scientist A.P.J. Abdul Kalam**.

Prelims Takeaway

- Batillipes kalami
- Tardigrades

Tardigrades

- These are **extremely tiny animals** whose **size is measured in micrometres**.
- Their **microscopic size, however, belies their toughness**.
- They are known for their **extraordinary resilience and survival instincts**.
- Studied using microscopes, these water-dwelling animals are **also known as 'water bears.'**

Batillipes kalami

- Batillipes kalami, the new species, **discovered from Mandapam in southeast Tamil Nadu** belongs to the **genus Batillipes**.
- It is the **second marine tardigrade** to be **discovered from Indian waters** and the **first one from the east coast**.
- It is also the **first taxonomically described species** belonging to the **genus Batillipes from India**.
 - **Three species were reported** from Indian waters in the past.
 - However, they **lack proper taxonomic descriptions** making verification impossible.

Key Features

- Size-wise it **averages 170 micrometres in length** and around **50 micrometres in width**.
- It has a **trapezoid-shaped head** with **sharp-tipped filament-like appendages (cirri)** extending from it.
- All four pairs of legs possess **sensory spines** of varying lengths.
- The **females are slightly bigger** compared to the males.

167. China, U.S. and India absent at U.N.'s Climate Ambition Summit- The Hindu

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- Recently the **Climate Ambition Summit (CAS)** concluded in New York
- as part of the United Nations General Assembly, was marked by the **absence of major economies whose actions significantly influence the future of global emissions.**

Key Highlights

- **China, United States and India** — who collectively account for about **42% of global greenhouse gas emissions** and are the top three emitters in that order
- The **criteria for countries** to be considered for a speaking slot at the summit were:
 - they would be expected to present **updated pre-2030 Nationally Determined Contributions (as agreed in Glasgow)**
 - updated **net-zero targets**
 - energy transition plans with commitments to no new coal, oil and gas
 - fossil fuel **phase-out plans**
 - more ambitious **renewable energy targets**
 - Green **Climate Fund pledges**
 - economy-wide plans on **adaptation and resilience.**
- All the **“main emitters” and notably all G-20 governments would be asked to:**
 - commit to presenting, by 2025, more ambitious economy-wide Nationally Determined Contributions/

Transition plans

- India last **updated its climate pledges in 2022:**
 - of reducing emissions intensity or the volume of emissions per unit of gross domestic product (GDP) by 45% from 2005 levels by 2030
 - a 10% increase from what it agreed to in 2015.
- The government committed to **meet 50% of its electric power needs from renewable, non-fossil fuel energy sources**
 - Up from 40% committed at the Paris agreement.
- It assured to create an **additional carbon sink of 2.5 to 3bn tonnes of CO₂-equivalent [GtCO₂e]** through additional forest and tree cover by 2030.
- In 2021, **Prime Minister committed to India achieving net zero by 2070.**

Is India's commitment sufficient?

- The scientific assessment is that India's **commitment is insufficient** to keep temperatures from keeping below 2C by the end of the century.
- However, **India's low per capita emissions** and contribution to the carbon already in the atmosphere suggest its **effort “more than its fair share.”**

Prelims takeaway

- Nationally Determined Contributions
- Climate Ambition Summit

168. On Govt table: proposal to have quotas within SC quotas- The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- The Government is weighing its options on a controversial and far-reaching step: introducing **“sub-categorisation” among Scheduled Castes (SC).**

Prelims takeaway

- National Commission for Scheduled Castes (NCSC)
- Rohini Commission

- This entails fixing a separate quota for some castes within the SC category ostensibly to ensure that a few “influential SC communities” don’t corner most of the benefits.

Key Highlights

- Unlike OBCs, there is no creamy layer for SCs and STs.
- Backwardness among SCs also draws from the practice of untouchability.
- sub-categorisation may sharpen differences within and bring in competitive affirmative action.
- If the government decides to go ahead with sub-categorisation of SCs in any state or across the country
- it will need to amend Article 341 of the Constitution.
- The Government has already set up the Rohini Commission whose report was submitted on July 31 on sub-categorisation of OBCs.

State wise data of SCs

- Of the nearly 17 per cent SC population in Telangana, Madigas account for nearly 50 per cent but they argue that most opportunities are cornered by another influential SC community Mala.
- So they have launched an agitation asking for a distinct quota for them.
- There are Mala-like examples in other states, too: the Paswans in Bihar or the Jatavs in UP.

Background

- In 2004, a Constitution Bench of the Supreme Court struck down an Andhra Pradesh law for sub-categorisation of SCs
- in 2020, a five-judge bench of the SC held that the state has the power to do so
 - It requested the Chief Justice to refer the matter to a bench of seven or more judges.
 - That is still pending.
- States like Haryana in 1994, Punjab in 2006 and Tamil Nadu in 2008 moved to bring about sub-categorisation within their SCs but all these are on hold pending the SC decision.
- Way back in 2006-07, the Centre had set up the National Commission to examine the issue of Sub-categorisation of SCs (NCSCSC) in Andhra Pradesh.
- It recommended sub-categorisation but the National Commission for Scheduled Castes (NCSC) did not agree.

169. ‘Oil price a concern but no alarm yet’ - The Hindu

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- The Finance Ministry stated that **The run-up in global crude oil prices is a concern for the Indian economy**
- Apart from “steadily climbing” oil prices, the ministry identified the **monsoon deficit which could impact both Kharif and Rabi crops**, as another risk to the economic outlook.

Inflation

- It is defined as the rise in the price of goods and services within an economy over a period of time due to which each unit of currency has less purchasing power.

Types of inflation

Creeping or Mild Inflation

- When the speed of upward thrust in prices is slow but small
- It is helpful for economic development.

Walking or Trotting Inflation

- **When prices rise moderately**, and the annual inflation rate rises by a single digit.
- It is the time when the government should focus on the issue.

Gallop and Hyperinflation

- When creeping and walking inflation are left unchecked, the rate will rise above 10%.

Prelims Takeaway

- Core Inflation
- Headline Inflation

- This leads to instability of the economy.
- It is the last stage of inflation.

Stagflation

- It is a situation in which the **rate is high, the economic growth rate slows**, and unemployment remains steadily high.
- It is also known as recession inflation.

Core Inflation

- Price rise in **all goods and services except food and energy** due to high price fluctuations is core inflation.
- It is calculated as **the government needs a stable** and true picture of the rate of price rise.

Headline Inflation

- This measure considers total inflation in an economy, including food and energy prices, which are more volatile.

170. 'Data show textile exports likely reviving' - The Hindu

Relevance: Food processing and related industries in India- scope' and significance, location, upstream and downstream requirements, supply chain management.

News:

- **Textile and apparel exports turned positive last month** after more than six months of degrowth.
- **textile exports increased 13.98%**, apparel exports declined 8.15%. shows data shared by the Confederation of Indian Textile Industry.

Prelims Takeaway

- SAMARTH (Scheme For Capacity Building In Textile Sector)
- Textiles Sector

Textiles & garments industry

- It is a **labour-intensive sector that employs 45 mn people** in India is second only to the agriculture sector in terms of employment.
- India's **textiles sector is one of the oldest industries** in the Indian economy, and is a storehouse and carrier of traditional skills, heritage and culture.
- India **is the 6th largest producer of Technical Textiles** with 6% Global Share, largest producer of cotton & jute in the world.
- India **is also the second largest producer of silk** in the world and 95% of the world's hand woven fabric comes from India.

Challenges of the Textiles Sector

- The Indian textile industry is **highly fragmented** and is being dominated by the **unorganized sector and small and medium industries**.
- The **Indian textile industry has its limitations of access to the latest technology** (especially in small-scale industries) and failures to meet global standards in the highly competitive market.
- **The tax structure GST (Goods and Service Tax) makes the garments expensive** and uncompetitive in domestic as well as international markets.
- **Another threat is rising labour wages** and workers' salaries.

Major Initiatives

- Amended Technology Upgradation Fund Scheme (**ATUFS**)
- Scheme for Integrated Textile Parks (**SITP**)
- **SAMARTH** (Scheme For Capacity Building In Textile Sector)
- North East Region Textile Promotion Scheme (**NERTPS**)

171. Defence Board discusses plan for second Vikrant-like carrier-The Hindu

Relevance: Various Security forces and agencies and their mandate.

News

- Recently, **The Defence Procurement Board (DPB) discussed** the Indian Navy's proposal for **acquiring a second Vikrant-like aircraft carrier**

Prelims Take Away

- INS Vikrant (IAC-I)
- MiG-29K

- However, the **DPB is yet to clear it after which it will be put for final approval** by the Defence Acquisition Council (DAC) headed by the Defence Minister, a source said.

Key Points

- The **262m long and 62m wide INS Vikrant displacing 44,800 tonnes** is powered by four General Electric LM2500 engines
 - Which gives it a maximum speed of 28 knots and an endurance of 7,500 Nautical Miles.
- The ship **uses an aircraft-operation mode known as Short Take Off But Arrested Recovery (STOBAR)** for which it is equipped with:
 - a ski-jump for launching aircraft,
 - a set of three 'arrestor wires' for their recovery onboard.
- The **Navy also operates the 44,500-tonne carrier INS Vikramaditya**, which also employs the STOBAR mechanism, procured from Russia

INS Vikrant (IAC-I)

- **It is the first aircraft carrier built in India and the first Vikrant-class aircraft carrier built by Cochin Shipyard (CSL) in Kochi, Kerala for the Indian Navy.**
- The **motto of the ship is Jayema Sam Yudhi Sprdhah** which is taken from Rig Veda and is translated as "I defeat those who fight against me".
- The carrier is **262 m long, 62 m at the widest part and with a depth of 30 m** minus the superstructure.
- There are **14 decks in all**, including five in the superstructure.
- The deck is **designed to enable aircraft such as the MiG-29K** to operate from the carrier.
- It is expected to **carry an air group of up to thirty aircraft**, which will include up to 24–26 fixed-wing combat aircraft, primarily the Mikoyan MiG-29K.

172. Galactic tides: Pushing and pulling the heavens. What is it?

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News

- Recently, researchers discovered that like the earth's oceans at their shores, **the universe's galaxies also experience tides, but on a much larger scale.**
- The **Andromeda galaxy is heading towards the Milky Way at 110 km/s** and will collide in four billion years.

Prelims Take Away

- Galactic tides
- Milky Way

Galactic tides

- They are **caused by gravitational forces within a galaxy**, arising in the interactions between celestial objects like stars and gas clouds.
- These **tidal forces influence various aspects of a galaxy's evolution.**
- They can **reshape a galaxy structure by creating tidal tails and bridges**, promoting star formation, and disrupting smaller star systems.

Effect of Galactic tides

- Over aeons, **galactic tides also disrupt the orbits of stars**, leading to long-term changes in galactic structure.
- they also have a say in **the ways in which proximate galaxies do and don't interact.**
- In fact, **researchers have observed the closest galaxy to the Milky Way**, the colossal Andromeda,
 - It was found that tidal streams near its edges could be signatures of dwarf galaxies that were later devoured.
- It also **affects the supermassive black holes at galaxy centres**, leading to events that change the ways in which these cosmic beasts interact with nearby stars.

- In astronomy, understanding galactic tides is crucial if we are to truly **understand the complex dynamics and evolution of galaxies over cosmological time.**

173. NIA confiscates properties of Sikhs for Justice founder, seizure notice on Nijjar house too - Indian Express

Relevance: Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.

Notes

- The National Investigation Agency (NIA) **confiscated land** and part of a **house belonging** to Gurpatwant Singh Pannu, the **US-based founder and lawyer** of the **banned Sikhs for Justice**, in Amritsar and Chandigarh.

Prelims Take Away

- NIA
- NIA (Amendment) Act, 2019

National Investigation Agency

- The **National Investigation Agency Act, 2008** was enacted and the National Investigation Agency was born.
- The Act gives the NIA powers to:
 - Take **Suo motu** cognisance of terror activities in any part of India and register a case,
 - Enter any state without permission from the state government, and
 - Investigate and arrest people.
- At present NIA is functioning as the **Central Counter-Terrorism Law Enforcement Agency** in India.
- **Objectives:**
 - To set the **standards of excellence in counter terrorism** and other national security related investigations at the national level by **developing into a highly trained, partnership oriented workforce.**
 - To create **deterrence for existing and potential terrorist groups/individuals.**
- **Jurisdiction:**
 - Provisions of the NIA Act **extend to the whole of India** and also applies to **Indian citizens outside the country./**
- **Headquarters:** New Delhi
- **Nodal Ministry:** Ministry of Home Affairs

Functions of NIA:

- In-depth **professional investigation** of scheduled offences using the latest scientific methods of investigation and setting up such standards as to **ensure that all cases entrusted to the NIA are detected.**
- Ensuring effective and **speedy trial.**
- Maintaining **professional and cordial relations** with the governments of States and Union Territories and other law enforcement agencies in compliance of the legal provisions of the NIA Act.
- **Assist** all States and other **investigating agencies** in investigation of terrorist cases.
- Build a **data base** on all **terrorist related information** and **share the database** available with the States and other agencies.

NIA (Amendment) Act, 2019:

- The 2019 NIA Amendment Act **expanded the type of offences that the investigative body could investigate and prosecute.**
- The agency can now investigate offences related to human trafficking, counterfeit currency, manufacture or sale of prohibited arms, cyber-terrorism, and offences under the Explosive Substances Act, 1908.
- The amendment also enables the Central government to designate sessions courts as special courts for NIA trials.

Can NIA Conduct Raids & Seize Properties?

- The **Unlawful Activities (Prevention) Amendment Act (UAPA)**, also passed in 2019, allows an NIA officer to conduct raids, and seize properties that are suspected to be linked to terrorist activities.
- The NIA does not have to take permission of the Director General of Police of a state.
- The investigating officer only requires sanction from the Director General of NIA.

174. What are the reasons for rise in global debt? - Indian Express

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News

- According to the **Institute of International Finance (IIF)**, **global debt rose** to an **all-time high** of \$307 trillion in the 2nd quarter (April-June 2023), rising by about \$100 trillion over the last decade.

Prelims Take Away

- GDP
- Debt

What is Global Debt?

- Global debt refers to the **borrowings of governments as well as private businesses** and individuals.
- **Governments borrow to meet various expenditures** that they are unable to meet through tax and other revenues.
- Governments may also borrow **to pay interest on the money** that they have already borrowed to fund past expenditures. **The private sector borrows predominantly to make investments.**
- Both global debt in nominal terms and global debt as a share of GDP **have been rising steadily over the decades.**
- **The rise came to a halt during the pandemic** as economic activity turned sluggish and lending slowed down.
- But global debt levels have started to rise again in the last few quarters. During the first half of 2023, total global debt rose by \$10 trillion.
- **Most (over 80%) of the rise in global debt** in the first half of the year **has come from advanced economies** such as the US, UK, Japan, and France.
- **Among emerging market economies**, China, India and Brazil have seen the most growth in debt.

Why is Global Debt Rising?

- **This has happened amid rising interest rates**, which was expected to adversely affect demand for loans.
- What is more interesting than rising debt levels is the **drop in global debt as a share of GDP over seven consecutive quarters prior to 2023.**
 - **The IIF attributes this to the rise in price inflation**, which it claims has helped governments to inflate away the debts denominated in their local currencies.
 - **Inflating away of debt refers** to the phenomenon wherein the central bank of a country either directly or indirectly uses freshly created currency to effectively pay off outstanding government debt.
 - **But the creation of fresh money causes prices to rise**, thus imposing an **indirect tax on the wider economy** to pay the government's debt.
- A further rise in debt levels over time is to be expected **since the total money supply usually steadily rises** each year in countries across the globe.

Is the Rising Global Debt a Cause for Worry?

- Rising global debt levels **usually leads to concerns about the sustainability of such debt.**
 - The IIF has warned that the international financial infrastructure is **not equipped to handle unsustainable domestic debt levels.**
 - This is particularly so in the case of government debt which is prone to rise rapidly due to **reckless borrowing by politicians to fund populist programmes.**

- When central banks raise interest rates, **servicing outstanding debt becomes a challenge for governments with a heavy debt burden.**
 - **Rising interest rates can increase pressure on governments** and force them to either default outright or inflate away their debt.
- **Rapidly rising private debt levels** also lead to worries among analysts about their sustainability.
 - This is because such a rise is linked to **unsustainable booms** that end in economic crises when such lending is not backed by genuine savings.
 - The most recent example of the same was the **2008 global financial crisis**, which was immediately preceded by an economic boom fueled by the US Federal Reserve's easy credit policy.

175. Department of Fisheries is promoting Artificial Reef (AR) under PMMSY for rejuvenating coastal fisheries - PIB

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News

- To **promote sustainable practises**, the **Department of Fisheries** has **sanctioned 732 artificial reef units** for 10 coastal states as a sub-activity **under the “Integrated Modern Coastal Fishing Villages”** of Pradhan Mantri Matsya Sampada Yojana (PMMSY).

Prelims Take Away

- PMMSY
- Artificial Reefs
- Integrated Modern Coastal Fishing Villages

Artificial Reefs (AR)

- An artificial reef is a **manmade structure** that **may mimic** some of the **characteristics of a natural reef.**
- These are **engineering technology interventions** used to rehabilitate and/or improve natural habitats, increase **productivity, and manage aquatic resources**, including habitat enhancement (FAO, 2015).
- Materials used to construct artificial reefs have included rocks, cinder blocks, and even wood and old tyres, which come in an infinite number of shapes and styles.
- The projects are being implemented with the technical support of **the Fisheries Survey of India (FSI)** and **ICAR-Central Marine Fisheries Research Institute (CMFRI).**
- **Advantages of AR**
 - It boosts marine biodiversity.
 - It encourages fish population growth.
 - It reduces pressure on natural reefs.

Pradhan Mantri Matsya Sampada Yojana

- It is a flagship scheme for **focused and sustainable development** of the **fisheries sector** in the country, with an estimated investment of Rs. 20,050 crores for its implementation during a period of 5 years from FY 2020-21 to FY 2024-25 in all States/Union Territories.
- **What are the aims of the scheme?**
 - It aims at enhancing fish production by an additional 70 lakh tonnes by 2024-25.
 - Increasing fisheries export **earnings to Rs.1,00,000 crore by 2024-25.**
 - Doubling the incomes of fishers and fish farmers, reducing post-harvest losses from 20-25%.
- **Nodal Ministry:** Ministry of Fisheries, Animal Husbandry and Dairying

176. ISRO tests engine for Gaganyaan mission - The Hindu

Relevance: Achievements of Indians in science & technology; indigenization of technology and developing new technology.

News:

- The **Indian Space Research Organisation (ISRO)** has **successfully completed the CE20 E13 engine** hot test for the Gaganyaan qualification and 22-tonne thrust qualification.
- Recently, The engine was tested at **ISRO Propulsion Complex (IPRC), Mahendragiri**

Prelims Takeaway

- Geosynchronous Satellite Launch Vehicle GSLV Mk III
- Vyom Mitra

Key Points

- **The CE20 engine** is a vital component, **servings as the powerhouse of the Cryogenic Upper Stage (CUS)** responsible for propelling the upper stage (C25) of the LVM3 vehicle.
- It has demonstrated its capability by successfully operating at a thrust level of 19 tonnes in six successive LVM3 missions, including:
 - the Chandrayaan-2
 - Chandrayaan-3
 - two commercial OneWeb missions.
- To **enhance the payload capacity of the LVM3 vehicle**, ISRO is upgrading the CE20 engine.
- The **CE20 engine hardware referred to as E13** was selected for both Gaganyaan qualification and 22-tonne thrust level operations,” the space agency said.

Gaganyaan

- It is a mission by the Indian Space Research Organisation (ISRO) to send a **three-member crew to space for a period of five to seven days.**
- The **first trial (uncrewed flight) for Gaganyaan is being planned by the end of 2023 or early 2024.**
- This will be followed by **sending Vyom Mitra, a humanoid and then with the crew onboard.**
- The Gaganyaan spacecraft will be **placed in a low earth orbit (LEO) of 300-400 kilometers.**
- It is the first indigenous mission **that will send Indian astronauts to space.**
- **If it succeeds, India will be the fourth country to have sent a human to space,** the other three being the US, Russia and China.
- ISRO is developing the **spacecraft and Russia is helping in the training of the astronauts.**
- It will be launched by ISRO's **Geosynchronous Satellite Launch Vehicle GSLV Mk III** (3 stages heavy-lift vehicle).

177. Philippines removes China's barrier in disputed shoal - The Hindu

Relevance: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

News:

- **Philippine officials vowed to remove a floating barrier placed by China's coast guard** to prevent Filipino fishing boats from entering a disputed lagoon in the South China Sea.
- They said the **300 meter-long barrier at the entrance to the lagoon at Scarborough Shoal** is “illegal and illegitimate.

Prelims Takeaway

- UNCLOS
- South China Sea
- ASEAN

South China sea

- An arm of the **western Pacific Ocean that borders the Southeast Asian mainland.**
- Bordered by **Brunei, Cambodia, China, Indonesia, Malaysia, the Philippines, Singapore, Taiwan, Thailand and Vietnam.**
- It is connected by **the Taiwan Strait with the East China Sea and by the Luzon Strait with the Philippine Sea**
- It Comprises three archipelagos, namely, **the Spratly Islands, Paracel Islands, Pratas Islands and Macclesfield's Bank and Scarborough Shoal.**
- **China's Nine Dash Line:** Defines area claimed by China in the South China Sea - by far the largest portion of the Sea.

United Nations Convention on the Law of the Sea (UNCLOS), 1982

- Also known as **Law of the Sea**, it is an **international agreement** that establishes the legal framework for marine and maritime activities.
- It divides marine areas into **five main zones namely Internal Waters, Territorial Sea, Contiguous Zone, Exclusive Economic Zone (EEZ) and the High Seas.**
- It not **only zones coastal states’ offshore areas** but also provides specific guidance for states’ rights and responsibilities in the five concentric zones.
- While **UNCLOS has been signed and ratified by nearly all the coastal countries** in the South China Sea, its interpretation is still hotly disputed.

178. Docking of first ship at Vizhinjam port to be delayed by 10 days

Relevance: Distribution of key natural resources across the world (including South Asia and the Indian sub-continent); factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).

News:

- The docking of the first ship **at the Vizhinjam International Seaport in Thiruvananthapuram has been deferred from October 4 to 15**, said Ports Minister.

Prelims Takeaway
<ul style="list-style-type: none"> • Vizhinjam International Seaport

Vizhinjam International Seaport

- It is **located at Vizhinjam**, a coastal town in Thiruvananthapuram District, Kerala.
- It is designed primarily to **cater to container transshipment besides multi-purpose and break bulk cargo.**
- It is **developed in a landlord model with a Public Private Partnership** component on a design, build, finance, operate and transfer (“DBFOT”) basis.
- The Port is merely a 10 NM diversion from the international east-west shipping route and is also **close to the national/regional road and rail network.**

Significance

- It is the **only transshipment hub in the Indian subcontinent**, closest to the international shipping routes, and is centrally located on the Indian coastline.
- Around **95 per cent of India’s foreign trade is conducted through the sea route.**
- In value terms, this **works out to 70 per cent of the foreign trade.**
- Nearly 30 percent of the **freight movement takes place through the international shipping route South of the Indian peninsula**, which passes 10 nautical miles off Vizhinjam.
- Currently, **India does not have a deep-water container transshipment terminal and depends on Colombo, Singapore and Salalah ports.**
- This results in a **significant loss of foreign currency and revenue**, estimated to be about Rs 2,500 crore a year.

179. IISER Bhopal Scientists identify a circular RNA that helps in replication of HIV-1 virus- Indian Express

Relevance: Achievements of Indians in science & technology; indigenization of technology and developing new technology.

News:

- Recently, **researchers from the Indian Institute of Science Education and Research Bhopal (IISER Bhopal)** identified a specific circular RNA (circRNA) called ‘ciTRAN’.

Prelims Takeaway
<ul style="list-style-type: none"> • circRNA • HIV

- It plays a crucial role in the multiplication of the AIDS-causing HIV-1 virus within the human body.
- **circular RNA**
- **Ribonucleic acid is a molecule in living cells** that carries genetic information and helps in the production of proteins.
- **RNAs are in general straight-chain, free-end structures** but these circular RNA (‘circRNA’) forms a closed-loop.

- **The circRNA plays a pivotal role in regulating gene expression** and is essential for various biological processes.
- **Its role in HIV-1 replication has remained unclear** for a long time.
- Characterizing **circular RNA can be tricky** because it usually is less abundant, making it further challenging to detect in the native form.
- During **viral infections, there's so much information from the virus** that it can make it hard to find the less common ones like circular RNA.

Key Point

- The researchers developed a **novel approach called 'circDR-Seq'**, to successfully capture circRNAs from T-cells (white blood cells) infected with the HIV-1 virus and identified a specific circRNA named ciTRAN,
- It **plays an important role in the multiplication of the virus.**
- HIV-1 **viral protein R (VpR) is a multifunctional protein** that plays specific roles at multiple stages of the HIV-1 viral life cycle and affects anti-HIV functions of the immune cells.
- Further found that **HIV-1 infection induces ciTRAN expression in a Vpr-dependent manner** and that ciTRAN interacts with serine/arginine-rich splicing factor 1 (SRSF1), a protein known to repress HIV-1 transcription,"
- The results **suggest that HIV-1 hijacks ciTRAN which is generally altered during immunological signaling, inflammation, and viral infection.**
- It further **prevents (SRSF1) from doing its job, thereby promoting efficient viral transcription.**
- In addition, **researchers demonstrated that an SRSF1-inspired mimic can inhibit viral transcription regardless of ciTRAN induction.**
- The **hijacking of a host circRNA** thus represents a previously unknown facet of primate lentiviruses in overcoming transmission bottlenecks.

180. Taliban seek recognition, monetary aid from India - The Hindu

Relevance: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

News:

- Ahead of the Moscow format discussion at Kazan in Russia, **the Taliban have called upon India to help in the economic recovery of Afghanistan.**

Prelims Takeaway

- The Taliban
- Moscow format

Key Highlights

- A Taliban **delegation led by 'Foreign Minister' had reached Moscow** where they were holding discussion with Kremlin officials.
- The delegation **will then head to Kazan.**
- The upcoming meeting is significant as it is being **held in the backdrop of growing engagement between Kabul under the Taliban and Moscow and Beijing.**
- The Taliban had **refused to participate in the previous round of Moscow format talks in November 2022.**
- India has **refused to recognise the Taliban's "Islamic Emirate"** urging its leaders to respect human rights, and ensure protection of minority communities.
- During the same time, **the Taliban's diplomatic engagement has deepened with Russia, China, Pakistan and Turkmenistan**
 - though no country has so far accepted a full-fledged Ambassador from Kabul under the current circumstances.
- **It was earlier reported that India will send representatives for the Kazan meeting.**

The Moscow format

- **It is one of the several dialogue platforms started to attain reconciliation in Afghanistan** where the Taliban clashed against the U.S.-supported government of President Ashraf Ghani.
- **It consisted of six member countries** — Russia, Afghanistan, China, Pakistan, Iran and India. The first round of consultations took place on April 14, 2017

- It included 11 countries Russia, Afghanistan, China, Pakistan, Iran, Kazakhstan, India, Tajikistan, Kyrgyzstan, Turkmenistan and Uzbekistan.
- Since the **Taliban takeover of Kabul in August 2021**, the Moscow format consultations were held in October that year and in November 2022.
- The Taliban however **did not participate in the November 2022 meeting**.
- India **evacuated its embassy in Kabul in August 2021** and has maintained a “technical team” in the mission to assist its large-scale humanitarian assistance to Afghan people.

181. AFSPA to stay in Nagaland, Arunachal-The Hindu

Relevance: Security challenges and their management in border areas – linkages of organized crime with terrorism.

News:

Prelims Takeaway

- Map based question

- The **Ministry of Home Affairs (MHA) extended the Armed Forces (Special Powers) Act (AFSPA) in parts of Nagaland and Arunachal Pradesh** for another six months, beginning October 1.

Key Points

- On April 1, 2022, the **MHA had considerably reduced “disturbed areas” in Assam, Manipur and Nagaland**.
- The **AFSPA has been applicable in the whole of Nagaland since 1995**.
- Both the **State and Central governments can issue notification regarding the AFSPA**.
- The MHA issues periodic “disturbed area” notification to extend the AFSPA only for Nagaland and Arunachal Pradesh.
- The notification for **Manipur and Assam is issued by the State governments**.
- Tripura revoked the Act in 2015 and Meghalaya was under the AFSPA for 27 years, until it was **revoked by the Ministry from April 1, 2018**.

Armed Forces (Special Powers) Act (AFSPA)

- **Started during British-era legislation** that was enacted to quell the protests during the Quit India movement
- After independence, the **AFSPA was issued by way of four ordinances in 1947**.
- The ordinances were replaced by an Act in 1948 and **the present law effective in the Northeast was introduced in Parliament in 1958** by the then Home Minister, G.B. Pant.
- It was **known initially as the Armed Forces (Assam and Manipur) Special Powers Act, 1958**.
- After the **States of Arunachal Pradesh, Meghalaya, Mizoram, and Nagaland came into being, the Act was adapted to apply to these States as well**.
- The Act **gives unbridled power to the armed forces and the Central Armed Police Forces** deployed in “disturbed areas” to:
 - kill anyone acting in contravention of law
 - arrest and search any premises without a warrant
 - protection from prosecution
 - legal suits without the Central government’s sanction.
- The **law first came into effect in 1958 to deal with the uprising in the Naga**
- The **Act was amended in 1972 and the powers to declare an area as “disturbed”** were conferred concurrently upon the Central government along with the States.
- Tripura **revoked the Act in 2015 and Meghalaya was under AFSPA for 27 years, until it was revoked by the MHA from 1st April 2018**.

182. Humans of Bombay vs People of India: What is copyright infringement and when does it apply? - Indian Express

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News:

- The **Delhi High Court has issued summons to an Instagram account called People of India (POI)**, in a copyright infringement suit filed by the storytelling platform Humans of Bombay (HOB).
- Besides copyright infringement, **HOB's plea said that the similarities between the infringing content and its own amounted to "passing off and unfair competition."**

Copyright

- it refers to the right given by the law to creators of literary, dramatic, musical, and artistic works and producers of cinematograph films and sound recordings.
- **The Copyright Act 1957 aims to safeguard creative works**, which are considered to be the creator's intellectual property (IP).
- A copyrighted work will be **considered "infringed" only if a substantial part is made use of without authorisation.**
- In cases of infringement, the **copyright owner can take legal action against any person who infringes on or violates their copyright** and is entitled to remedies such as injunctions, damages, etc.
- An **injunction is an official order given by a law court**, usually to stop someone from doing something.

Passing Off

- Passing off is a **common law tort which can be used to enforce unregistered trade mark rights.**
- The **tort of passing off protects the goodwill of a trader from misrepresentation.**
- The court also said that **passing-off is a species of unfair trade competition or of actionable unfair trading.**
- By **passing-off one person, through deception, attempts to obtain an economic benefit of the reputation which another has established for himself in a particular trade or business.**

Governing regulations:

- **The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)**
- **IP rights in India are governed under the:**
 - The Trade Marks Act 1999
 - The Patents Act 1970 (amended in 2005)
 - The Copyright Act 1957
 - The Designs Act 2000
 - The GI of Goods (Registration and Protection) Act 1999, etc.

Prelims Takeaway

- The Trade Marks Act 1999
- The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)

183. NHRC seeks action taken report on welfare of transpersons from govt.

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- Recently, The **National Human Rights Commission (NHRC)** issued an advisory to the Centre, State governments and Union Territory administrations **to ensure the welfare of transgender persons.**
- The **welfare measures include provision of separate toilets, free sex reassignment surgery, pension rights and inheritance rights.**

Prelims Takeaway

- National Human Rights Commission (NHRC)
- Transgender Persons (Protection of Rights) Act, 2019

Key points of recommendation

- A **single transchild of a deceased government employee** or pensioner may be treated as an **unmarried daughter for the family pension** and other benefits.
- It also recommended that **transgender persons be allowed to inherit ancestral agricultural land.**
- A **multi-purpose identity card may be provided to the people** of this community to help them access government schemes and other benefits.
- **Insurance companies may be advised to consider and accept the Transgender Certificate** issued by the appropriate authority for document verification purposes.
- The **Ministry concerned should ensure the timely release of the funds** allocated to Garima Greh [shelter scheme].
- The **Transgender Persons (Protection of Rights) Act, 2019**, aims to safeguard and uphold their rights.

Garima Greh

- In November 2020, the **Ministry of Social Justice and Empowerment inaugurated Garima Greh**, a shelter home for transgender persons.
- The **Scheme of 'Shelter Home for Transgender Persons'** includes shelter facility, food, clothing, recreational facilities, skill development opportunities, yoga, physical fitness, library facilities.
- The **scheme will rehabilitate a minimum of 25 transgender persons** in each home identified by the Ministry.
- 10 cities have been identified to set up the 13 Shelter Homes.

184. Bihar's second tiger reserve to come up in Kaimur sanctuary- The Hindu

Relevance: Distribution of key natural resources across the world (including South Asia and the Indian sub-continent); factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).

News:

- After the **Valmiki Tiger Reserve (VTR) in West Champaran district, Bihar is set to get a second tiger reserve in Kaimur district (Kaimur Wildlife Sanctuary)** by the end of the year
- The **State Forest Department officials said they were working to obtain the National Tiger Reserve Conservation Authority's (NTCA) approval** for declaring it a tiger reserve.

Prelims Takeaway

- Valmiki Tiger Reserve
- National Tiger Reserve Conservation Authority'

Geographical location

- The **Kaimur district is divided into two parts:**
 - hilly area which is also known as Kaimur plateau
 - the plain area on the western side which is flanked by the rivers Karmnasa and Durgavati.
- The district has a **large forest cover and is home to tigers, leopards and chinkaras.**
- The district **shares its boundary with neighboring States of Jharkhand, Uttar Pradesh and Madhya Pradesh.**
- Earlier, the **district was considered a safe haven for Maoists** and also a safe passage for them to enter into the neighboring States.

The Valmiki Tiger Reserve

- It is the **only tiger reserve in Bihar**, which forms the easternmost extent of the Himalayan Terai forests in India.
- Situated in the Gangetic plains bio-geographic region, **the vegetation of this Tiger Reserve is a combination of Bhabar and Terai regions.**
- According to the **Tiger Census, 2018, the number of tigers in Valmiki Tiger Reserve is 32.**
- According to the **Forest Survey of India Report 2021, 85.71% of its total area is covered by forest cover.**
- **Wild mammals found in the forests of Valmiki Tiger Reserve** include tiger, sloth bear, leopard, wild dog, bison, wild boar etc.

185. Why are tigers dying in Nilgiris district? -The Hindu

Relevance: Distribution of key natural resources across the world (including South Asia and the Indian sub-continent); factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).

News:

- A total of **10 tigers (six cubs and four adults) have died in the Nilgiris** since the middle of August.
- The **inability of the state forest department to trace the whereabouts** of the two mother tigresses has raised **concerns among conservationists about the welfare of the animals.**

Prelims Takeaway

- Nilgiri Biosphere Reserve

Nilgiri Biosphere Reserve

- It harbours a **wide spectrum of ecosystem** types such as tropical evergreen forests, Montane sholas and grasslands, semi-evergreen forests, moist deciduous forests, dry deciduous forests and thorn forests.
- The **major part of the core areas spread over Kerala and Tamil Nadu States.**
- This range of ecosystem occurs from **hilly terrain to the meadows extending from 300 to 2670 m constituting an excellent habitat for the flora, fauna and other microbial forms.**
- The **varied habitats of the NBR house a sizeable number of species of animals and plants** including a large number of endemics having special relevance to conservation.
- **Animals like Nilgiri tahr, Nilgiri langur, slender loris, blackbuck, tiger, gaur, Indian elephant and marten** are found here.
- Tribal groups like the **Todas, Kotas, Irullas, Kurumbas, Paniyas, Adiyans, Edanadan Chettis, Cholanaickens, Allar, Malayan, etc.,** are native to the reserve.
- **Protected Areas** within the **Nilgiri Biosphere Reserve** are
 - The Mudumalai Wildlife Sanctuary
 - Wayanad Wildlife Sanctuary
 - Bandipur National Park
 - Nagarhole National Park
 - Mukurthi National Park
 - Silent Valley.

186. US Trade Commission's Lawsuit Against Amazon Inc- The Hindu

Relevance: Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth

News:

- The **United States' Federal Trade Commission (FTC),** along with other regulators, **has filed a lawsuit against online retail giant Amazon.**
- The lawsuit alleges that the company uses punitive and coercive tactics to unlawfully maintain its monopoly.
- The United States' Federal Trade Commission (FTC) and 17 state attorneys general **have sued Amazon Inc.**
- The **lawsuit alleges that the company's actions allow it to stop rivals and sellers from lowering prices,** degrade quality for shoppers, overcharge sellers, stifle innovation, and prevent rivals from fairly competing against Amazon.
- It also **alleges that the company engages in a course of "exclusionary conduct" that prevents current competitors from growing and new competitors** from emerging.
- They **said that Amazon's anticompetitive conduct occurs in two markets:**
 - online superstore market that serves shoppers and
 - market for online marketplace services purchased by sellers.

Prelims Takeaway

- Quasi-judicial body
- Competition Commission of India (CCI)

India's Laws on Competition

Competition Act, 2002

- The **Competition Act, 2002, as amended by the Competition (Amendment) Act, 2007**, follows the philosophy of modern competition laws.
- The Act **prohibits anti-competitive agreements, abuse of dominant position** by enterprises and regulates combinations (acquisition, acquiring of control and M&A),
- The **objectives of the Act are sought to be achieved through the Competition Commission of India.**

Competition Commission of India (CCI)

- It is a **statutory body of the Government of India** responsible for enforcing the Competition Act, 2002, it was duly constituted in March 2009.
- The **Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act)** was repealed and replaced by the Competition Act, 2002, on the recommendations of the Raghavan committee.
- The **Commission consists of one Chairperson and six Members** who shall be appointed by the Central Government.
- The **commission is a quasi-judicial body** which gives opinions to statutory authorities and also deals with other cases.
- The Chairperson and other Members shall be whole-time Members.

187. High level of military tension with China over past three years: Minister -The Hindu

Relevance: Security challenges and their management in border areas – linkages of organized crime with terrorism.

News:

- There has been a **“high level of military tension” with China over the last three years**, External Affairs Minister has said.
- He emphasized **on the overall state of “very abnormal” relations** between New Delhi and Beijing since the border clashes of 2020.

India-China border dispute

- India-China relations have gone **through cycles of conflict and cooperation over nearly 75 years.**
- The most serious recent episodes of **conflict were in Galwan Valley in Ladakh in 2020 and in Tawang in Arunachal Pradesh in 2022.**
- Observers on both sides of the border—**the Line of Actual Control (LAC)—agree that the number of serious military confrontations has increased since 2013.**
- The **border between India and China is not clearly demarcated** throughout and there is **no mutually agreed Line of Actual Control (LAC)** along certain stretches.
- **LAC came into existence after the 1962 Indo China war.**
- **India-China border is divided into three sectors.**
 - Western Sector : Ladakh
 - Middle Sector : Himachal Pradesh and Uttarakhand
 - Eastern Sector: Arunachal Pradesh and Sikkim



- Partnerships with each other's main enemies, including the Soviet Union/Russia and the United States, have prevented them from becoming strategic partners and cooperating on strategic matters.
- The growing power gap between China and India, with China's GDP being five times that of India's, has made it difficult for India to be accommodative without appearing to surrender.
- Infrastructure build-up, particularly in Tibet, has led to a security dilemma in which military relations go into a spiral that could tempt one side or both to go to war.

188. Hot, dry August lifts core sector growth to a 14-month high - The Hindu

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- Output at **India's eight core infrastructure sectors** climbed by a combined 12.1% in August, the fastest pace in 14 months,
- five of them **reported double-digit growth, spurring hopes of a healthy uptick** in industrial production last month.

Eight Core Sectors

- These **comprise 40.27% of the weight of items included in the Index of Industrial Production (IIP).**
- The eight core sector industries in decreasing order of their weightage: **Refinery Products> Electricity> Steel> Coal> Crude Oil> Natural Gas> Cement> Fertilizers.**

Index of Industrial Production

- **IIP is an indicator that measures** the changes in the volume of production of industrial products during a given period.

- It is compiled and **published monthly by the Central Statistical Organization (CSO)**, Ministry of Statistics and Programme Implementation.
- It is a composite indicator that measures **the growth rate of industry groups classified under:**
 - Broad sectors, namely, Mining, Manufacturing, and Electricity.
 - Use-based sectors, namely Basic Goods, Capital Goods, and Intermediate Goods.
- Base Year for IIP is **2011-2012**.

189. FinMin notifies Oct 1 date for implementing amended provisions for e-gaming- Indian express

Relevance: Science and Technology- developments and their applications and effects in everyday life.
News:

- The Finance Ministry has notified October 1 as the date for implementation of the amended Goods and Services Tax (GST) law provisions for taxing e-gaming, casinos and horse racing.

Prelims Takeaway

- Online gaming

Key Points

- According to the changes to the Central GST Act, these supplies will be treated as “**actionable claims**” that are similar to lottery, betting and gambling and subject to 28 per cent GST on full face value of bets.
- **The amendments to Integrated GST (IGST) Act makes it mandatory** for offshore online gaming platforms to take registration in India and pay taxes in accordance with domestic law.
- In its meetings in July and August, **the GST Council, comprising finance ministers of Centre and states**, had approved amendments to the law to include:
 - online gaming
 - casinos and horse racing as taxable actionable claims,
- clarified that such **supplies would attract 28 per cent tax on full bet value**.
- Parliament last month **passed amendments to the Central GST and Integrated GST laws to give effect to the Council’s decision**.

the Draft Rules for Online Gaming (as an amendment to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021)

- Online gaming companies must **register with a self-regulatory body**.
- The body must have a **board of directors with five members from diverse fields, including online gaming, public policy, IT, psychology, and medicine**.
- Online gaming companies must undertake **additional due diligence**, including KYC of users, transparent withdrawal and refund of money, and a fair distribution of winnings.
- Gaming companies must **secure a Random Number Generation Certificate**, which is typically used by platforms that offer card games to ensure that game outputs are statistically random and unpredictable.
- Online gaming **companies will not be allowed to engage in betting on the outcome of games**.
- Online gaming **platforms must appoint a compliance officer, a nodal officer, and a grievance officer**.

190. Damselfly species found in Western Ghats named after climate impact on insects

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment

News:

- Recently, researchers from MIT-World Peace University from Pune **discovered a new damselfly species in Kerala’s southern Western Ghats and named it as ‘Armageddon reedtail’**.

Prelims Takeaway

- Western Ghats

Armageddon Reedtail

- The **species was discovered northeast of Thiruvananthapuram**.
- It has a **captivating dark brown to black body with vibrant greenish-blue eyes**, and half of its eight abdominal segments are marked with delicate pale blue markings.

- Its **only habitat is primary montane streams**, where it thrives beneath dense canopy cover.
- The name, **Armageddon Reedtail**, is a **direct reference to the concept of “Ecological Armageddon”**, a term used to describe the devastating decline of insect populations around the world.
- This **species faces the threat of extinction due to habitat loss** and changing environmental conditions.

Western Ghats

- It is also known as the **Sahyadri Hills**, are well known for their rich and unique assemblage of **flora and fauna**.
- The range is **called Sahyadri in northern Maharashtra and Sahya Parvatham in Kerala**.
- The northern **portion of the narrow coastal plain between the Western Ghats and the Arabian Sea is known as the Konkan Coast**.
- The central portion is **called Kanara and the southern portion is called Malabar region or the Malabar Coast**.
- The foothill region east of the Ghats in Maharashtra is known as **Desh**, while the eastern foothills of central Karnataka state **is known as Malanadu**.
- In the south the range is known as **the Nilgiri malai in Tamil Nadu**.
- It is recognized as a **UNESCO World Heritage Site**.
- **It is one of the eight hotspots of biological diversity in the world** due to its high level of biological diversity and endemism.

191. IAF to buy 156 more 'Prachand' Light Combat choppers for deployment along China, Pak border

Relevance: Various Security forces and agencies and their mandate.

News:

- Indian Air Force (IAF) is set to place orders for **156 'Made-in-India' Prachand attack helicopters from Hindustan Aeronautics Limited (HAL)**.

Prelims Takeaway

- Prachand attack helicopters

Prachand attack helicopters

- It is an **indigenously developed Light Combat Helicopter (LCH)**.
- It is **developed by state-run aerospace major Hindustan Aeronautics Ltd**.
- The **multi-role attack helicopter** has been customized as per the requirements of the Indian armed forces to operate both in desert terrains and high-altitude sectors.
- It is the **only attack helicopter in the world** that can land and take off at an altitude of 5,000 metres (16,400 ft).
- It is **fitted with a 5.8-tonne twin-engine named Shakti engine**, primarily designed for deployment in high-altitude areas.
- Its **maximum speed is 268 kilometres per hour**.
- It has a range of **550 kilometres and endurance of over three hours**.
- It has the **best stealth features, armored-shield systems**, and dark-mode attack capability.
- A pressurized **cabin offers protection from nuclear, biological, and chemical contingencies**.
- It is equipped **with a countermeasure dispensing system that protects it from enemy radars or infrared seekers of enemy missiles**.
- The weapon complement **includes a 20mm nose gun in the front, capable of firing 800 rounds per minute from a range of up to 2 km**.

192. Current account deficit widens QoQ to \$9.2 bn on trade gap

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- India's **current account deficit (CAD) widened to \$9.2 billion** (1.1% of GDP) in the April-June quarter, from \$1.3 billion (0.2% of GDP) in the preceding three months,

Prelims Takeaway

- Current Account Deficit

- **exports of goods shrank even as imports rose** and net receipts from services also declined quarter-on-quarter, data released by the Reserve Bank of India (RBI)

Current Account Deficit

- Current account deficit (CAD) is when the value of a country's imports of goods and services is greater than its exports.
- CAD and fiscal deficit together make up twin deficits that can impact the stock market and investors.
- Fiscal Deficit is the gap between the government's expenditure requirements and its receipts.
- This equals the money the government needs to borrow during the year.

Implication

- The CAD is significant because it affects the economy, stock markets, and people's investments.
- A lower CAD can boost investor sentiment and make the country's currency more attractive to investors.
- A surplus in the current account indicates that money is flowing into the country, which can boost foreign exchange reserves and the value of the local currency.

193. From Rajasthan to Haryana, a pest is wreaking havoc on cotton fields

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- The **Pink Bollworm is more widespread and serious than ever** before in the states of Rajasthan and Haryana which is affecting cotton crop.

Prelims Takeaway

- Pink bollworm

Pink bollworm

- It is one of the **most destructive pests of cotton**.
- Originally native to India, it is now recorded in nearly all the cotton-growing countries of the world.
- The adults are small moths about 3/8 inch long and are dark brown with markings on the fore wing.
- The larval stage is the destructive and identifiable stage.
- The larvae have distinctive pink bands and can reach a length of ½ inches right before they pupate.
- Adults lay eggs on cotton bolls; once hatched, the larvae eat the seeds and damage the fibers of the cotton, reducing the yield and quality.
- When the larvae mature, they cut out the boll and drop to the ground and cocoon near the soil surface.
- It has also been observed to attack hibiscus, okra, and hollyhock plants.
- The PBW larvae burrow into the developing fruits (bolls) of cotton plants, and the damage affects both the weight and quality of the harvested bolls containing the lint fibre and seeds inside.

194. Tobacco warnings on OTT: Amid pushback from platforms, Govt looking for a solution

Relevance: Science and Technology- developments and their applications and effects in everyday life.

News:

- the Government is working to find "pragmatic solutions" to the OTT industry's concerns over the practicability of the order mandating display of anti-tobacco warnings,
- Under the new rules, which came into force September 1,

Prelims Takeaway

- OTT or over-the-top platforms,

OTT or over-the-top platforms,

- These are **audio and video hosting and streaming services which started out as content hosting platforms**,
- It soon **branched out into the production and release of short movies, feature films, documentaries and web-series themselves**.
- These platforms **offer a range of content and use artificial intelligence** to suggest to users the content they are likely to view based on their past viewership on the platform.
- Most **OTT platforms generally offer some content for free** and charge a monthly subscription fee for premium content which is generally unavailable elsewhere.
- Examples: Netflix, Disney+, Hulu, Amazon Prime Video, Hulu, Peacock, CuriosityStream, Pluto TV, and so many more.
- In February 2022, **the government had notified the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021** to regulate OTT platforms.
- The rules establish a **soft-touch self-regulatory architecture with a Code of Ethics and three-tier grievance redressal mechanism for OTT platforms**.

195. Glaciers in Switzerland lose 10% of their ice volume in two years

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- according to figures released recently, **Glaciers in Switzerland are shrinking**
- it have lost **a total of ten per cent of their ice volume** over a period of two years as a combination of low snowfall and soaring temperatures which caused unprecedented melting,

Prelims Takeaway

- REDD+

Key points

- **The glaciers lost four per cent of their total volume in 2023**, according to data from the Swiss Commission for Cryosphere Observation of the Swiss Academy of Sciences.
- This level of **melting is second only to the record set in 2022** when six per cent of glaciers were destroyed.
- Swiss **glaciers have lost as much ice** over this two-year period as was lost over the three decades between 1960 and 1990.
- Even **though glaciers have constantly and quickly been** losing mass for many decades, this is a tremendous acceleration, these extremes "would have been impossible without climate change.
- **The St. Anna firn glacier**, for example, in the Uri canton in central Switzerland, has shrunk.

melting of glaciers:

- **Greenland Ice Sheet** - losing about 280 billion tons of ice per year;
- **Himalayan glaciers** could disappear entirely by 2100.
- **Glaciers in the European Alps** have been in retreat since the mid-19th century,

Reason

- **Rising temperatures cause glaciers to melt** faster than they can accumulate new snow.
- **Deforestation, burning of fossil fuels**, and industrial processes etc. contribute to the emission of greenhouse gases, which are a key driver of global warming, which in turn leads to the melting of glaciers.
- **Natural factors such as volcanic activity** and changes in solar radiation can also affect glacier melting.

Impact

- **Melting glaciers contribute** to rising sea levels, which can have devastating effects on coastal communities and infrastructure.
- **Glaciers are an important source** of freshwater for many communities around the world.
- **As glaciers melt and retreat**, it can lead to water scarcity and affect agriculture and other industries.

- **Melting glaciers can affect** weather patterns, leading to changes in temperature, precipitation, and other weather-related phenomena.
- **As glaciers melt, they reduce the earth's ability** to reflect sunlight back into space, leading to increased absorption of solar radiation and warmer temperatures.

Way forward

- **Carbon emissions reduction can be done** by increasing the use of alternative energy sources such as wind and solar power, and by implementing policies to reduce energy consumption. e.g. fulfilling the net zero emission targets.
- **measures such as improving building insulation** and promoting the use of energy-efficient appliances. e.g. Green Housing Scheme by National Housing Bank.
- **Public transportation can reduce** the use of private cars and consequently the emission of greenhouse gases.
- **Deforestation causes** a loss of natural carbon sinks, decreasing the earth's capacity to absorb carbon dioxide. e.g. REDD+



Mentorship
India

Quick Look

1. National Investigation Agency (NIA)

- It was constituted under the National Investigation Agency (NIA) Act, 2008.
- It is a central agency to investigate and prosecute offences
 - affecting the sovereignty, security and integrity of India, security of State,
 - friendly relations with foreign States.
 - against atomic and nuclear facilities.
 - smuggling in High-Quality Counterfeit Indian Currency.
- It implements international treaties, agreements, conventions and resolutions of the United Nations, its agencies and other international organisations.
- Its objective is also to combat terror in India.
- It acts as the Central Counter-Terrorism Law Enforcement Agency.
- Headquarters: New Delhi
- Branches: Hyderabad, Guwahati, Kochi, Lucknow, Mumbai, Kolkata, Raipur and Jammu

2. Phishing

- It is a cybercrime in which a target or targets are contacted by email, telephone, or text message.
- This is done by someone posing as a legitimate institution to lure individuals into providing sensitive data such as personally identifiable information, banking and credit card details, and passwords.

3. Long Period Average (LPA)

- It is the average rainfall recorded during the months from June to September, calculated during the 50-year period.
- It is kept as a benchmark while forecasting the quantitative rainfall for the monsoon season every year.
- IMD maintains an independent LPA for every homogeneous region of the country, which ranges from 71.6 cm to 143.83 cm.
- IMD maintains five rainfall distribution categories on an all-India scale.
 - Normal or Near Normal: When per cent departure of actual rainfall is +/-10% of LPA, that is, between 96-104% of LPA.
 - Below Normal: When departure of actual rainfall is less than 10% of LPA, that is 90-96% of LPA.
 - Above Normal: When actual rainfall is 104-110% of LPA.
 - Deficient: When departure of actual rainfall is less than 90% of LPA.
 - Excess: When departure of actual rainfall is more than 110% of LPA.

4. Kokborok

- Kokborok is the official language of Tripura.
- Kok means language and borok means people.
- Kokborok (Tripuri) is one of the most widely spoken Tibeto-Burman languages.
- The language is widely spoken by the Tripuri tribes such as Debbarma, Kalai, Reang, Jamatia, Tripura, Noatia, Rupini, Murasing and Uchoi.
- Kokborok Day is a festival celebrated in Tripura to celebrate the development of the Kokborok language.

5. Ramon Magsaysay Award

- It was established in 1957 and is considered Asia's premier prize and highest honour.
- It is named after Ramon Magsaysay, the third president of the Republic of the Philippines.
- Recognises and honours individuals and organisations in Asia, regardless of race, creed, gender, or nationality, who have achieved distinction and have helped others generously without aiming for public recognition.
- Awardees are presented with a certificate, a medallion with an embossed image of Ramon Magsaysay and cash prize.
- The award is internationally-recognized as the Nobel Prize counterpart of Asia.
- Surgical oncologist R. Ravi Kannan, Assam, is one of the Ramon Magsaysay award winners for 2023.
- He is credited with revolutionising cancer treatment in Assam through people-centric and pro-poor healthcare.

6. Jaya Verma

- The Union government recently appointed Jaya Verma Sinha Chairperson of the Railway Board, the top decision-making body of the Railway Ministry.
- She becomes the first woman to head the Board in its 118-year history.
- She was at the forefront in handling the aftermath of the Balasore train accident which killed 291 people.

7. Kakrapar Atomic Power Project (KAPP-3), Gujarat

- It is the country's first 700 MWe unit and the biggest indigenously developed variant of the Pressurised Heavy Water Reactor (PHWR).
- A PHWR is a nuclear power reactor, commonly using unenriched natural uranium as its fuel, that uses heavy water (deuterium oxide D₂O) as its coolant and moderator.
- PHWR technology was started in India in the late 1960s with the construction of the first 220 MWe reactor, Rajasthan Atomic Power Station (RAPS-1).

8. Green Crackers

- These are dubbed as 'eco-friendly' crackers and are known to cause less air and noise pollution as compared to traditional firecrackers.
- These crackers were first designed by the National Environmental and Engineering Research Institute (NEERI), under the aegis of the Council for Scientific and Industrial Research (CSIR) in 2018.
- Most green crackers do not contain barium nitrate, which is the most dangerous ingredient in conventional crackers.
- Green crackers use alternative chemicals such as potassium nitrate and aluminium as well as carbon instead of other harmful pollutants.

9. Fiscal Deficit

- It is the difference between the government's total expenditure and its total revenue (excluding borrowings).
- It is an indicator of the extent to which the government must borrow in order to finance its operations.
- It is expressed as a percentage of the country's Gross Domestic Product (GDP).
- A high fiscal deficit can lead to inflation, devaluation of the currency and an increase in the debt burden.

- While a lower fiscal deficit is seen as a positive sign of fiscal discipline and a healthy economy.
- As per recent data, the Centre's fiscal deficit in the first four months of 2023-24 touched 33.9% of the full-year target.
- In the Union Budget, the government projected to bring down the fiscal deficit to 5.9% of the gross domestic product (GDP) in the current 2023-24 financial year.

10. The Organized Crime and Corruption Reporting Project (OCCRP)

- OCCRP has made fresh allegations of stock manipulation against the Adani Group.
- OCCRP is a global network of investigative journalists with staff on six continents.
- It was founded in 2006 and specialises in organised crime and corruption.
- It works with and supports 50+ independent media outlets in Europe, Africa, the Caucasus, and Central Asia.
- Initially funded by the United Nations Democracy Fund (UNDEF), the OCCRP network first opened an office in Sarajevo.
- The idea is to have a global network of journalists with easy communication and information-sharing so that global networks of corruption and crime can be better understood and exposed.
- The OCCRP is supported both by state and non-state institutional actors, as well as smaller individual donors.

11. People for the Ethical Treatment of Animals (PETA)

- It is an American animal rights organization led by Ingrid Newkirk, its international president.
- The nonprofit corporation claims 6.5 million supporters.
- It focuses on four core issues viz. opposition to factory farming, fur farming, animal testing, and the use of animals in entertainment.
- It also campaigns for a vegan lifestyle and against eating meat, fishing, the killing of animals regarded as pests, the keeping of chained backyard dogs, cock fighting, dog fighting, beekeeping, and bullfighting.

12. Mangri Orang

- Mangri Orang is an unsung hero of India's struggle for freedom from British rule.
- She was gunned down in 1921 for leading a fight against foreign liquor and opium pushed during the colonial period
- She is said to be the first female martyr of India's freedom movement.

13. Dasara Festival

- Mysore Dasara is the "Nadahabha" or the state festival of Karnataka.
- It is celebrated for 10 days and concludes with Vijayadashami.
- In Mysuru, Dasara marks the slaying of demon Mahishasura by Goddess Chamundeshwari and symbolises the triumph of good over evil.
- The world-famous JumboSavari (Mysore Dasara procession) is held on the street of Mysore city on Vijayadashami.
- The idol of the Goddess chamundeshwari is placed on a golden mantapa on the top of a decorated elephant.
- Though the festival is celebrated across India, Dasara in Mysuru is a legacy of the Vijayanagara emperors who ruled between the 14 th and 17 th centuries.

14. Goods and Services Tax (GST)

- In India, the GST Bill was first introduced in 2014 as The Constitution (122nd Amendment) Bill.
- This got an approval in 2016 and was renumbered in the statute by Rajya Sabha as The Constitution (101st Amendment) Act, 2016.

- It is a value-added tax levied on most goods and services sold for domestic consumption. The GST is paid by consumers, but it is remitted to the government by the businesses selling the goods and services.
- GST is applicable on 'supply' of goods or services as against the old concept on the manufacture of goods or on sale of goods or on provision of services.
- GST is based on the principle of destination-based consumption taxation as against the present principle of origin-based taxation.
- It is a dual GST with the Centre and the States simultaneously levying tax on a common base.
- The GST to be levied by the Centre is called Central GST (CGST) and that to be levied by the States is called State GST (SGST).
- Import of goods or services would be treated as inter-state supplies and would be subject to Integrated Goods & Services Tax (IGST) in addition to the applicable customs duties.
- CGST, SGST & IGST are levied at rates to be mutually agreed upon by the Centre and the States.
- The schedule or list of items that would fall under these multiple slabs are worked out by the GST council.

15. Laser Interferometer Gravitational-Wave Observatory (LIGO) project

- It is an international network of laboratories that detect gravitational waves.
 - Gravitational waves were first postulated (1916) in Albert Einstein's General Theory of Relativity, which explains how gravity works.
 - These waves are produced by the movement of massive celestial bodies, such as black holes or neutron stars, and are the ripples in spacetime that propagate outward.
- LIGOs are designed to measure changes in distance that are several orders of magnitude smaller than the length of the proton.
- Such high precision Instruments are needed because of the extremely low strength of gravitational waves that make their detection very difficult.

16. Entazia

- It is a bio fungicide crop protection product formulated with Bacillus subtilis.
- It was developed by FMC India.
- It will provide farmers with a powerful and sustainable tool to protect their crops from fungi while maintaining environmental integrity.
- It leverages the natural capabilities of Bacillus subtilis to control bacterial leaf blight, one of the most serious diseases of rice.
- By fostering a healthy plant microbiome, it bolsters plants' resilience to stress factors and contributes to overall growth and vigour.

17. India's First AI School

- Launched by Santhigiri Vidhyabhavan in Thiruvananthapuram, Kerala.
- This establishment is the result of a collaboration between iLearning Engines (ILE) USA and Vedhik eSchool.
- The school's curriculum aligns with the National School Accreditation Standards, which are based on the New National Education Policy (NEP 2020).
- Objective: Deepening students' understanding of Artificial Intelligence (AI) and advanced technologies, enhancing their learning journey.
- It seamlessly integrates AI components such as machine learning, natural language processing, and data analysis into various educational facets like curriculum design, personalised assessments, and student support.

18. Kukis

- They are an ethnic group comprising multiple tribes who originally inhabited the North-Eastern states of India, parts of Myanmar, and Bangladesh.
- They are present in all Northeast Indian states except Arunachal Pradesh.

- The Chin people of Myanmar and the Mizo people of Mizoram are kindred tribes of the Kukis and are collectively known as the Zo people.
- In Manipur, Kuki tribes comprise around 30% of the population and mainly reside in the hills.
- Culture
 - Normally they do not arrange any marriage alliance outside their community.
 - They have their own customary laws and village council.
 - LAL is a term used to denote village chief.
 - The village chief generally looks up all sorts of social and religious disputes, including disputes related to marriage and divorce

19. First Information Report (FIR)

- It is a written document prepared by the police when they receive information about the commission of a cognizable offence.
- It is a report of information that reaches the police first in point of time and that is why it is called the First Information Report.
- It is generally a complaint lodged with the police by the victim of a cognizable offence or by someone on his/her behalf.
- Anyone can report the commission of a cognizable offence either orally or in writing.
- The term FIR is not defined in the Indian Penal Code (IPC), Code of Criminal Procedure (CrPC), 1973, or in any other law.
- However, in police regulations or rules, information recorded under Section 154 of CrPC is known as First Information Report (FIR).
- Three important elements of an FIR
 - The information must relate to the commission of a cognizable offence,
 - It should be given in writing or orally to the head of the police station,
 - It must be written down and signed by the informant, and its key points should be recorded in a daily diary.

20. Kumki

- Kumki (also known as Thappana in Malayalam) is a term used in India for trained captive Asian elephants.
- They are used in operations to trap wild elephants, sometimes to rescue or to provide medical treatment to an injured or trapped wild elephant.
- Kumkis are used for capturing, calming and herding wild elephants or to lead wild elephants away in conflict situations.

21. Dementia

- It is a syndrome, usually of a chronic or progressive nature that leads to deterioration in cognitive function beyond what might be expected from the usual consequences of biological ageing.
- It affects memory, thinking, orientation, comprehension, calculation, learning capacity, language, and judgement.
- However, the consciousness is not affected.
- Symptoms
 - Memory loss, Difficulties with thinking, Visual perception, Self-management, Problem solving or language and the ability to focus and pay attention.
 - Personality changes, like depression, agitation, paranoia, and mood swings.
- Causes
 - When brain cells are damaged then dementia may occur.
 - It can be caused by a head injury, a stroke, a brain tumour or due to HIV infection.
- Treatment: There is currently no treatment available to cure dementia.

22. Sherpa

- A Sherpa is a personal representative of the leader of a member country at an international Summit meeting such as the G8, G20, the Nuclear Security Summit etc.
- The term is derived from the Nepalese Sherpa people, who serve as guides for mountaineers in the Himalayas.
- The Sherpa engages in planning, negotiation and implementation tasks through the Summit.
- They coordinate the agenda, seek consensus at the highest political levels, and participate in a series of pre-Summit consultations to help negotiate their leaders' positions.
- Sherpas are career diplomats or senior government officials appointed by the leaders of their countries.

23. Archaeological Survey of India (ASI)

- ASI under the Ministry of Culture is the premier organization for archaeological research and protection of the cultural heritage of the nation.
- It was founded in 1861 by Alexander Cunningham.
- Maintenance of ancient monuments and archaeological sites and remains of national importance is the prime concern of the ASI.
- Besides, it regulates all archaeological activities in the country as per the provisions of the Ancient Monuments and Archaeological Sites and Remains Act, 1958.
- It also regulates the Antiquities and Art Treasure Act, 1972.

24. Rule of Law

- It states that 'the Law is supreme and no human being has authority over it'.
- In India, the Rule of Law is guaranteed by the Constitution (Article 14), which means that all authorities must strictly adhere to it.
- Three principles of Rule of Law as defined by A.V. Dicey
- Supremacy of Law: All individuals, including government officials, are subject to the law and no one is above the law.
- Equality Before the Law: All individuals are equal under the law and are entitled to the same legal rights and protections, regardless of their social status or wealth.
- Individual Rights: The Rule of Law protects individual rights and freedoms, including property rights, freedom of speech, and personal liberty.

25. Hirakud Dam

- It is built across the Mahanadi River, close to Sambalpur city in Odisha in India.
- It is a composite structure of earth, concrete and masonry.
- It is the longest major earthen dam in India.
- With successful irrigation provided by the dam, Sambalpur is called the rice bowl of Odisha.

26. United Nations Development Programme (UNDP)

- The UNDP is a United Nations agency tasked with helping countries eliminate poverty and achieve sustainable economic growth and human development.
- UNDP was established in 1966 by the General Assembly of the United Nations.
- UNDP's work is concentrated in three focus areas namely
 - Sustainable development
 - Democratic governance and peace building
 - Climate and disaster resilience
- It is funded entirely by voluntary contributions from member nations.
- Headquarters: New York, USA

- Reports published by UNDP
 - Human Development Index
 - Sustainable Development Goals
 - Gender Inequality Index

27. Anti Dumping Duty

- Dumping is said to occur when the goods are exported by a country to another country at a price lower than the price it normally charges in its own home market.
- This is an unfair trade practice which can have a distortive effect on international trade.
- Imposition of Anti-dumping duty is a measure to rectify the situation arising out of the dumping of goods and its trade distortive effect.
- It is a protectionist tariff that a domestic government imposes on foreign imports that it believes are priced below fair market value.
- The use of anti-dumping measures as an instrument of fair competition is permitted by the World Trade Organisation.

28. Kerch Bridge

- The Kerch bridge, across the Kerch Strait, is 19 km long and has two parallel rail and roadways.
- It was opened in 2018 by Russian President Vladimir Putin, four years after Russia annexed Crimea from Ukraine through a contested referendum.
- It is also a symbol of Russia's control over Crimea, annexed in 2014.
- It holds symbolic importance for Russia, as it provides direct connectivity between the mainland and the annexed Crimea.

29. POCSO Act

- Enacted in 2012 in consequence to India's ratification of the UN Convention on the Rights of the Child in 1992.
- Objective: To address offences of sexual exploitation and sexual abuse of children, which were either not specifically defined or in adequately penalised.
- The Act defines a child as any person below the age of 18 years.
- The Act provides punishment as per the gravity of offence.
- The Act recognizes that both girls and boys can be victims of sexual abuse and that such abuse is a crime regardless of the gender of the victim.

30. Unified Payments Interface (UPI)

- It is an advanced version of Immediate Payment Service (IMPS) round-the-clock funds transfer service to make cashless payments faster, easier and smoother.
- NPCI launched UPI with 21 member banks in 2016.
- UPI is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.
- UPI is currently the biggest among the National Payments Corporation of India (NPCI) operated systems including National Automated Clearing House (NACH), Immediate Payment Service (IMPS), Aadhaar enabled Payment System (AePS), Bharat Bill Payment System (BBPS), RuPay etc.

31. Pirola

- An article published recently has noted Covid-19 infections in multiple countries are driven by a new Coronavirus variant called BA 2.86, informally termed Pirola.
- Pirola has been witnessed in the US, the UK, and other countries, in unrelated cases.

32. Tilapia Fish

- It is a common name used for certain species of fishes belonging to the family Cichlidae (order Perciformes), represented by numerous, mostly freshwater species native to Africa.
- It has emerged to be one of the most productive and internationally traded food fish in the world.
- The culture of tilapia has become commercially popular in many parts of the world.
- Experts have dubbed the tilapia as “aquatic chicken” due to its quick growth and low maintenance cultivation.

33. Lake Victoria

- It is the world’s second-largest freshwater lake.
- Location: East Africa, bordered by Tanzania, Uganda, and Kenya.
- It is a source of the White Nile River, which flows northward and eventually joins the Blue Nile in Sudan to form the Nile River.

34. Green Rating for Integrated Habitat Assessment (GRIHA) norms

- It is a rating tool that helps people assess the performance of their building against certain nationally acceptable benchmarks.
- It evaluates the environmental performance of a building holistically over its entire life cycle.
- The rating system, based on accepted energy and environmental principles, seeks to strike a balance between the established practices and emerging concepts.
- It is developed by TERI (The Energy and Resources Institute).
- This tool has been adopted by the Ministry of New and Renewable Energy.
- It assesses a building out of 34 criteria and awards points on a scale of 100.
- In order to qualify for GRIHA certification, a project must achieve at least 50 points.
- Certain criteria / sub-criteria are mandatory and have to be complied with for the project to be at all eligible for rating.

35. Nagarhole Tiger Reserve

- It is situated in the districts of Mysore and Kodagu in Karnataka.
- The reserve is named after a small river, ‘Nagarhole’.
- It is flanked by the Bandipur Tiger Reserve on its southeastern side and the Wayanad Wildlife Sanctuary of Kerala on the southwest.
- The habitat also forms part of the Nilgiri Biosphere Reserve.
- The forests of Nagarhole are primarily deciduous.
- Towards the west, with the increase in rainfall, the vegetation changes to tropical moist and semi-evergreen forests.
- The forests are interspersed with swampy fallows called ‘hadlu’, which are dominated by grasses and sedges favoured by wild herbivores.
- Commercially important rosewood, teak, sandalwood, and silver oak are the main trees here.
- Fauna: Tiger, Leopard Asiatic, Wild Dog, Sloth Bear, Asiatic Elephant, Gaur, Sambar Chital Muntjac, Four Horned Antelope etc.

36. Hypersonic Missiles

- A hypersonic missile is a weapon system that flies at least at the speed of Mach 5 i.e. five times the speed of sound and is manoeuvrable.
- These missiles are extremely fast and far harder for surface-to-air missile defence systems to target.

37. Indian Green Building Council

- Constituted in 2002, it is a part of the Confederation of Indian Industry (CII).
- It offers a wide array of services, which include developing new green building rating programmes, certification services and green building training programmes.
- It also organises the Green Building Congress, its annual flagship event on green buildings.

- It is also among the 5 countries that are on the board of the World Green Building Council, discussing global issues at COP and similar global platforms.
- The rating is based on six environmental categories, which include sustainable station facility, health, hygiene and sanitation, energy efficiency, water efficiency, smart and green initiatives and innovation and development.
- Headquarters: Hyderabad.

38. One-hour trade settlement

- In a one-hour settlement, if an investor sells a share, the money will be credited to their account in an hour, and the buyer will get the shares in their demat account within an hour.
- Settlement is a two-way process that involves the transfer of funds and securities on the settlement date.
- A trade settlement is said to be complete once purchased securities of a listed company are delivered to the buyer and the seller gets the money.
- The current cycle of T+1 means trade-related settlements happen within a day or 24 hours of the actual transactions.

39. Comets

- Comets are cosmic snowballs of frozen gases, rock and dust that orbit the Sun.
- They are leftovers from the formation of the solar system.
- Typically, they range from a few kilometres to tens of kilometres wide.
- As they orbit closer to the Sun, they spew out gases and dust, which form the tails that they are famous for.

40. Project Naman

- The Project will entail establishing facilitation and grievance redressal centres for veterans and the kin of personnel who have lost their lives.
- The first such centre will be established in Delhi Cantonment.
- It will house a Common Service Centre, which will facilitate the veterans and their relatives.
- It will offer all government-to-customer services and also facilitate the updating of pensioners' accounts on the SPARSH portal of veterans, next of kin and dependents.

41. Chitala Fish

- It is an obligate, typically nocturnal, predator feeding on smaller fishes.
- Although often reported to range throughout most of southern Asia, this species is probably restricted to the Indian subcontinent in Pakistan, India (records from the states of Manipur, Uttaranchal, West Bengal, Assam, Tripura, Uttar Pradesh, and Bihar), Nepal, and Bangladesh.
- It is mostly known from major river channels and freshwater lakes but has also been observed in swamps.
- It is found in the Indus, Ganges-Brahmaputra and Mahanadi river basins in India.
- Conservation status- Near Threatened

42. Comet Nishimura

- The comet was discovered in mid-August by amateur astronaut Hideo Nishimura.
- The comet is angularly near the Sun, so even if it is visible, it will only be able to spot it early before sunrise or late before sunset.
- The comet is currently located in the constellation Leo.
- It completes an orbit around the Sun once every 435 years.

43. Biofuels

- Any hydrocarbon fuel that is produced from an organic matter (living or once living material) in a short period of time (days, weeks, or even months) is considered a biofuel.
- Biofuels may be solid, liquid or gaseous in nature.

- Solid: Wood, dried plant material, and manure
- Liquid: Bioethanol and Biodiesel
- Gaseous: Biogas
- These can be used to replace or can be used in addition to diesel, petrol or other fossil fuels for transport.
- Some of the main reasons for shifting to biofuels are the rising prices of oil, emission of greenhouse gases from fossil fuels.

44. The Indian Coast Guard (ICG)

- It was established in August 1978 by the Coast Guard Act, 1978 as an independent Armed force of India.
- It is the maritime law enforcement and search and rescue agency of India with jurisdiction over its territorial waters.
- It is a multi-mission organization, conducting round-the-year real-life operations at sea.
- Despite being relatively small, it has a wide range of task capabilities for both surface and air operations.
- The Coast Guard works in close cooperation with the Indian Navy, the Department of Fisheries, the Department of Revenue (Customs), and the Central and State police forces.

45. The Idukki Dam

- It is a double curvature Arch dam constructed across the Periyar River in a narrow gorge between two granite hills locally known as Kuravan and Kurathi in Mariyapuram village in Idukki District in Kerala.
- At 168.91 metres it is one of the highest arch dams in Asia.
- This dam was constructed along with two other dams at Cheruthoni and Kulamavu.
- Together, the three dams and Two saddle dams, Kulamavu Saddle Dam (Near Junction) and Kulamavu Saddle Dam (Right Bank) have created an artificial lake in the area.

46. Money Laundering Act (PMLA), 2002

- The PMLA was enacted in response to India's global commitment (Vienna Convention) to combat the menace of money laundering.
- These include
 - United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances 1988
 - Basle Statement of Principles, 1989
 - Forty Recommendations of the Financial Action Task Force on Money Laundering, 1990
 - Political Declaration and Global Program of Action adopted by the United Nations General Assembly in 1990.
- It is a criminal law enacted to prevent money laundering and to provide for confiscation of property derived from, or involved in, money-laundering and related matters.
- The provisions of this act are applicable to all financial institutions, banks (Including RBI), mutual funds, insurance companies, and their financial intermediaries.

47. Horizon 2020

- It is the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness.
- It is the biggest EU Research and Innovation programme ever, with nearly €80 billion of funding available over 7 years (2014 to 2020)

- It has the political backing of Europe's leaders and the Members of the European Parliament
- It is open to everyone, with a simple structure that reduces red tape and time so participants can focus on what is really important

48. Erg Chech 002

- These are the rocks containing distinctive greenish crystals that turned out to be from outer space, left over from the dawn of the Solar System.
- They were all pieces of a meteorite known as Erg Chech 002, which is the oldest volcanic rock ever found.
- It is known as an "ungrouped achondrite," which means their parent bodies and family relationships are unknown.
 - Achondrites are rocks formed from melted planetesimals, which are what we call solid lumps in the cloud of gas and debris that formed the Solar System.
- Erg Chech 002 contains a high abundance of lead-206 and lead-207, as well as relatively large amounts of undecayed uranium-238 and uranium-235.
- Aluminium-26 was distributed quite unevenly throughout the cloud of dust and gas which formed the solar system.

49. Zero Draft Plastic Pollution Treaty

- It is an international legally binding instrument to end plastic pollution including in the marine environment.
- The zero draft has 10 placeholders to discuss issues like the preamble, definitions, principles and scope, in addition to the institutional arrangements and the final provisions.
- Member states such as Saudi Arabia, Iran, and China at INC-2 stressed the importance of defining the scope of the legally binding instrument.
- India had agreed with this proposal.

50. Fugitive Economic Offenders Act

- The purpose of the act is to take the assets of economic criminals who have left the country to escape prosecution or refuse to return to face charges.
- Statement of FEO: After hearing the application, a special court (created under the PMLA, 2002) may designate someone as a fugitive economic offender.
- It has the right to take any property, whether in India or abroad, including Benami assets and criminal gains.
- Upon confiscation, the central government will become the only owner and own all rights and titles to the property (such as any charges on the property).
- Prohibition Against Filing or Defending Civil Claims: The Act permits any civil court or tribunal to bar a designated fugitive economic offender from filing or defending any civil claim.

51. Extradition

- Extradition is the process by which one state, upon the request of another, affects the return of a person for trial for a crime punishable by the laws of the requesting state and committed outside the state of refuge.
- The Supreme Court defined extradition as the delivery on the part of one State to another of those whom it is desired to deal with for crimes of which they have been accused or convicted and are justifiable in the Courts of the other State.
- Extradition Law in India:

- In India, the extradition of a fugitive criminal is governed under the Indian Extradition Act, 1962.
- This is for both extraditing persons to India and from India to foreign countries.
- The basis of the extradition could be a treaty between India and another country.
- At present India has an Extradition treaty with more than 40 countries and Extradition agreement with 11 countries.

52. Japan's Moon Mission

- Japan's space Agency JAXA has recently launched the SLIM moon lander.
- SLIM – It is a small-scale exploration lander designed for pinpoint landings on the Moon's surface and investigate into the Moon's origins.
- The mission was dubbed as the Moon Sniper.
- It will also test technology fundamental to exploration in low-gravity environments, an important requirement for future scientific investigation of the solar system.
- Agency - Japan Aerospace Exploration Agency (JAXA).
- Launch vehicle - H-IIA rocket.
- This is the first Moon-landing attempt being made by Japan Aerospace Exploration Agency (JAXA).
- If successful, Japan would be the 5th country to successfully soft land on the moon.
- SLIM would be the smallest and lightest spacecraft to land on the Moon.
- The chosen landing site for SLIM is near a small crater named Shioli in the equatorial region of the Moon.
- SLIM is set to touch down on the near side of the moon close to Mare Nectaris, a lunar sea that, viewed from Earth, appears as a dark spot.
- After landing, the craft aims to analyse the composition of olivine rocks near the sites in search of clues about the origin of the moon.
- Rover - No lunar rover is loaded on SLIM.

53. Fujianvenator prodigiosus

- Scientists recently said they unearthed in Fujian Province the fossil of a Jurassic Period dinosaur they named Fujianvenator prodigiosus.
- Fujianvenator is a member of a grouping called avialans that includes all birds and their closest non-avian dinosaur relatives.
- Features
 - Its lower leg bone - the tibia - was twice as long as its thigh bone - the femur.
 - Such dimensions are unique among theropods; it also had a long bony tail.
 - The forelimb is generally built like a bird's wing but with three claws on the fingers, which are absent from modern birds. So you can call it wing.

54. Indian oil sardine

- It is a very important pelagic fish species.
- It contributes to about 15% of the total marine fish production in India.
- Distribution: The entire west coast from Gujarat to Kerala and also on the Tamil Nadu, Andhra Pradesh and Orissa coasts in the east.
- Highest abundance and large-scale shoaling are observed off Kerala and Karnataka coasts.
- Local names: Mathi, Nalla mathi, Nei chala (Malayalam); Bhutai (Kannada), Tarli (Marathi and Hindi).

55. Meniere's Disease

- It is a rare inner ear disorder.
- It is the result of a build-up of fluid in the inner ear, called labyrinth, which contains the organs of balancing and hearing.
- The fluid build-up in the labyrinth interferes with the normal balance and hearing signals between the inner ear and the brain.
- It can lead to severe dizziness (vertigo), ringing in the ears (tinnitus), hearing loss, and a feeling of fullness or congestion in the ear.
- It usually affects only one ear.
- Ménière's disease can develop at any age, but it is more likely to happen to adults between 40 and 60 years of age.
- Left untreated, the symptoms get worse over time and may cause permanent hearing loss and ongoing balance problems.
- There is no cure, but lifestyle tips and medical treatments can help ease the symptoms.

56. Nation First Transit Card

- State Bank of India has launched its 'Nation First Transit Card'.
- It is a RuPay prepaid instrument under the National Common Mobility Card (NCMC) that can be used nationwide.
- Objective
 - To facilitate a seamless and convenient customer commuting experience.
 - To ensure easy digital ticketing fare payments in metro, buses, water ferries, parking, etc. through a single card.
- Individuals can also use this card for making retail and e-commerce payments.

57. Solar Orbiter Aircraft

- It was launched in 2020 and will take images of the Sun from closer than any spacecraft before.
- It contains six remote-sensing instruments and four sets of in situ instruments.
- Objectives
 - To observe the Sun's 11-year cycle of rising and subsiding magnetic activity.
 - To study the upper layer of its atmosphere, the corona.

58. Botanical Survey of India

- It is the apex taxonomic research organization of India.
- It works under the Ministry of Environment, Forest & Climate Change, Government of India.
- It was established in 1890 under the direction of Sir George King.
- The mandate of the organization has been broadened to biosystematics research, floristic studies, documentation, databasing of the National Botanical collection, digitization of herbarium specimens etc.
- Headquarters: Kolkata

59. Cherial scroll painting

- It is a popular and modified version of Nakashi art, considered highly rich in the local motifs.
- This art form is unique to the state of Telangana and made mostly in Hyderabad currently.
- The Nakashis are the artists of Telangana and the scrolls constitute a key element of the social and cultural setting of Telangana.
- This traditional art form is considered an inseparable part of the profession comprising the story-telling and balladeer community called Kaki

60. Hunga-Tonga volcano:

- Hunga Tonga–Hunga Ha’apai is a volcanic island in Tonga.
- It is located about 30 km south of the submarine volcano of Fonuafo’ou and 65 km north of Tongatapu, the country's main island.
- The volcano is part of the highly active Tonga–Kermadec Islands volcanic arc, a subduction zone extending from New Zealand north-northeast to Fiji.
- The island arc is formed at the convergent boundary where the Pacific Plate subducts under the Indo-Australian Plate.
- It is along with the caldera rim of a much larger submarine edifice in the western South Pacific Ocean.
- It has erupted regularly over the past few decades.

61. Air Quality Index

- Launched in 2014 with outline ‘One Number – One Color -One Description’ for the common man to judge the air quality within his vicinity.
- The measurement of air quality is based on eight pollutants, namely: Particulate Matter (PM10), Particulate Matter (PM2.5), Nitrogen Dioxide (NO₂), Sulphur Dioxide (SO₂), Carbon Monoxide (CO), Ozone (O₃), Ammonia (NH₃), and Lead (Pb).
- AQI has six categories of air quality. These are: Good, Satisfactory, Moderately Polluted, Poor, Very Poor and Severe.
- It has been developed by the CPCB in consultation with IIT-Kanpur and an expert group comprising medical and air-quality professionals.

62. Rudra veena

- A sizable plucked string instrument called the Rudra veena is employed in Hindustani music, particularly in the style of music known as dhrupad.
- It is one of the main veena kinds used in Indian classical music and is renowned for its deep bass resonance.
- The Rudra veena has a lengthy history and can be observed in the designs of temples built before the Mughal era.
- It first appears in court documents under the reign of Zain-ul-Abidin (1418–1470), and among Mughal court musicians it rose to prominence.
- Princely states supported Rudra veena players as dhrupad practitioners before to India’s independence.
- However, after independence, this patronage structure was abolished, which caused Dhrupad and the Rudra veena to lose some of their appeal.
- The Rudra veena has seen a rise in popularity recently, in part due to interest from practitioners outside of India.

63. Alias ‘String of Pearls’:

- SN1987A is often referred to as a "string of pearls" as it showcases a series of luminous rings composed of gases and dust expelled by the dying star in its various phases of collapse and explosion.
- This string of pearls comprises material ejected about 20,000 years before the supernova event, offering insights into the star's history and evolution.
- Unusual Facts about SN1987A:
- The star exploded when it was a blue supergiant (contrary to the theories as per which only red supergiant stars could explode).
- Emission of molecular hydrogen in the ring was not necessarily expected (also it couldn't have been revealed without JWST).

64. Odel of human embryo in the lab

- Stem cells played a pivotal role in Model of human embryos in the lab .
- These cells possess the remarkable ability to transform into different cell types

- They were programmed to simulate the characteristics of early-stage embryonic cells.
- Chemical cues were introduced into the laboratory environment
- It helps to provide the necessary signals and instructions for the stem cells to differentiate into the diverse cell types required for embryonic development.
- This process led to the spontaneous assembly of a portion of these cells into an embryo-like structure
- It underwent differentiation to represent various components of an embryo, including fetal cells, umbilical cord etc.

65. Telecom Regulatory Authority of India (TRAI)

- Established in 1997 by the Telecom Regulatory Authority of India Act, 1997.
- Objective: To create and nurture conditions for growth of telecommunications in the country.
- TRAI regulates telecom services including fixation/revision of tariffs for telecom services which were earlier vested in the Central Government.
- It also aims to provide a fair and transparent policy environment which promotes a level playing field and facilitates fair competition.
- The recommendations of the TRAI are not binding upon the Central Government.
- Composition
 - Members: The TRAI consists of a Chairperson, two whole-time members and two part-time members, all of which are appointed by the Government of India.
 - Tenure of Members: The Chairperson and other members shall hold their office for a term of three years or till the age of 65 years, whichever is earlier.
 - Removal of Members: The Central Government is empowered to remove any member of the TRAI.
- The decisions in the meetings are taken by the majority vote of the members present.
- In the event of an equality of votes, the Chairperson (or the member presiding the meeting) gives a second or casting vote.

66. Nipah virus

- It is a zoonotic virus i.e. it is transmitted from animals to humans.
- The organism which causes Nipah Virus encephalitis is an RNA or Ribonucleic acid virus of the family Paramyxoviridae, genus Henipavirus, and is closely related to Hendra virus.
- It first appeared in domestic pigs and has been found among several species of domestic animals including dogs, cats, goats, horses and sheep.
- The disease spreads through fruit bats or 'flying foxes,' of the genus Pteropus, who are natural reservoir hosts of the Nipah and Hendra viruses.
- The virus is present in bat urine and potentially, bat faeces, saliva, and birthing fluids.
- The human infection presents as an encephalitic syndrome marked by fever, headache, drowsiness, disorientation, mental confusion, coma, and potentially death.
- Currently, there are no vaccines for both humans and animals. Intensive supportive care is given to humans infected by Nipah virus.

67. Phanigiri Artefacts

- The Phanigiri artefacts, dating from 200 BCE-400 CE and discovered in 1942, are on display at the New York Metropolitan Museum of Art.
- The Phanigiri Buddhist site is considered one of the most important finds in Buddhist iconography in this millennium.
- Phanigiri (meaning hillock of snake hood) is a small village in the state of Telangana.
- The thoranas discovered at Phanigiri are very important as they are among the first found south of Sanchi.
- The same thorana has a panel that shows both Mahayana and Hinayana schools of thought.

- There is evidence from Phanigiri that shows the deification of Buddha, and we can date this change.
- From a historical and spiritual identity, there is a transition to canonisation and ritual.
- The monograph of the event has the image of the Buddha wearing what looks like a Roman toga with folds carved in limestone.

68. Anamalai Tiger Reserve

- It is located in the state of Tamil Nadu.
- It lies South of the Palakkad gap in the Southern Western Ghats.
- Vegetation: diverse habitat types viz. Wet evergreen forests, semi-evergreen forests, moist deciduous, dry deciduous, dry thorn and shola forests.
- Flora: Around 2,500 species of angiosperms are found in the Anamalai Tiger Reserve, with several species of Balsam, Crotalaria, Orchids and Kurinchi.
- Fauna: Elephant, Indian Leopard, Nilgiri Tahr, Lion-tailed Macaque, Gaur, Nilgiri Langur, Sambar Deer, Sloth Bear Malabar
- It supports 6 indigenous people viz. Malasar, Malai malasars, Kadars, Eravallars, Pulayars and Muduvars.
- The Parambikulam – Aliyar Project and Amaravathy dam are housed in this Tiger reserve.

69. Food and Agriculture Organization (FAO)

- It is a specialised agency of the United Nations that leads international efforts to defeat hunger and improve nutrition and food security.
- Its goal is to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives.
- Headquarters: Rome (Italy).
- Member countries: With 195 members - 194 countries and the European Union, FAO works in over 130 countries worldwide.
- The World Food Programme (WFP) and the International Fund for Agricultural Development (IFAD) are its sister bodies.
- Reports published by the FAO
 - The State of the World's Forests (SOFO)
 - The State of World Fisheries and Aquaculture (SOFIA)
 - The State of Agricultural Commodity Markets (SOCO)
 - The State of Food Security and Nutrition in the World (SOFI)

70. Interbank Call Money Market

- It is a short-term money market which allows large financial institutions to borrow and lend money at interbank rates, the rate of interest that banks charge when they borrow funds from each other.
- The loans in the call money market are very short, usually lasting no longer than a week.
- These loans are often used to help banks meet reserve requirements.
- Interbank call money market customers can also include other financial institutions, mutual funds, large corporations, and insurance companies.

71. Tax Haven

- It is a jurisdiction that has very low tax rates such that it varies from 2% to sometimes as low as 0.02%.
- This is done in order to increase foreign investment as well as the flow of cash flow in their economy.
- Due to lower tax rates, it provides a platform for big multinational corporations and firms to incorporate themselves in these countries which could help in the development of their economy.
- It eventually causes base erosion and profit shifting where corporations shift their profits from high-tax to low-tax jurisdictions.
- Countries that act as tax havens have no residency requirements for individuals which makes investing more favorable.

72. Gene-drive technology

- A gene drive is a type of genetic engineering technique that modifies genes.
- This technology was conceived by Austin Burt, a professor at Imperial College London.
- This technique could be an effective way to eradicate nuisance species, such as malaria-causing mosquitoes.
- Under this technique, mosquitoes will selectively inherit some genes rather than the inheritance to follow the rules of Mendelian genetics.
- In this, a protein cuts the mosquito's DNA at a part that doesn't encode a particular sequence in the genome.
- This triggers a natural mechanism in the cell containing the DNA to repair it and forces the cell to incorporate a sequence called the drive sequence into the damaged portion.

73. Shanti Swarup Bhatnagar awards

- The award is named after the founder Director of the Council of Scientific & Industrial Research (CSIR) India, the late Shanti Swarup Bhatnagar.
- The Prize is given each year for outstanding contributions to science and technology.
- It carries a prize amount of Rs 5,00,000 (Rupees five lakh only).
- It is given for notable and outstanding research, applied or fundamental in the following disciplines:
 - Biological Sciences,
 - Chemical Sciences,
 - Earth, Atmosphere, Ocean and Planetary Sciences,
 - Engineering Sciences,
 - Mathematical Sciences
 - Medical Sciences
 - Physical Sciences.

74. Great Indian Bustard

- It is mainly found in the Indian subcontinent and is the flagship grassland species of India.
- It is one of the largest flying birds in the world and India's heaviest flying bird.
- Its population of about 150 in Rajasthan accounts for 95% of its total world population.
- They are mainly in the Jaisalmer district of Rajasthan, including the Desert National Park, which is the natural habitat of the species.
- Grasslands of Kutch in Gujarat, which is home to the second-largest bustard population in India.
- Arid regions of Maharashtra (Solapur), Karnataka (Bellary and Haveri) and Andhra Pradesh (Kurnool)
- It is the State bird of Rajasthan.
- Conservation status
 - IUCN: Critically Endangered.
 - CITES: Appendix I
 - The Indian Wildlife (Protection) Act, 1972: Schedule I

75. Northern Sea Route

- It is the shortest shipping route connecting Europe and the Asia-Pacific region.
- Spanning 5,600 km, it passes through four seas of the Arctic Ocean.
- The route starts at the boundary between the Barents and Kara seas (Kara Strait) and concludes at the Bering Strait (Provideniya Bay).
- The NSR offers potential distance savings of up to 50% compared to existing shipping lanes via Suez or Panama.

76. Eastern Maritime Corridor

- The EMC is a proposed sea route between the Indian port of Chennai and the Russian port of Vladivostok.

- The corridor is estimated to bring down transportation time between Indian and Russian ports in the Far East Region by up to 40 percent (24 days from the current 40 days).
- The present trade route between Mumbai, India, and St. Petersburg, Russia, covers a distance of 8,675 nautical miles.
- The EMC will cover a distance of about 5,600 nautical miles, which is significantly shorter than the current route via the Suez Canal.
- Once complete, EMC will take 24 days, down from presently over 40 days, to transport goods from India to Far East Russia.
- For India, it will provide a shorter and more efficient route to access the markets of the Far East, such as China and Japan.

77. Dolly sheep

- Dolly the Sheep, born in 1996, marked a significant scientific breakthrough in the 20th century.
- Wilmut, along with his team, accomplished the unprecedented feat of making an adult cell behave like a cell from a newly fertilized embryo.
- It resulted in the creation of an animal genetically identical to the donor.
- They achieved this by taking a cell from the mammary gland of a deceased adult sheep, stimulating it with electricity and chemicals to transform its
- DNA into an embryo, and then implanting it into an empty sheep's egg, which was later placed into a surrogate sheep.
- Dolly's birth raised ethical debates about cloning research
- it prompted then-U.S. President Bill Clinton to announce a ban on human cloning experiments about a year later.
- Dolly's life was tragically short-lived, as she developed an incurable lung tumour and was euthanized by scientists about six years after her birth.

78. Ayushman Bhav health campaign

- Introduced during the 'Seva Pakhwada' by the Prime Minister of India.
- Launched on: 13-Sep-2023
- Ayushman Bhava is an umbrella campaign comprising:
 - Ayushman Apke Dwar 3.0 which is aimed at creation and distribution of Ayushman cards to all remaining eligible beneficiaries.
 - Ayushman Mela as part of which weekly health melas will be held at the level of AB-HWCs and Community Health Centres (CHCs)
 - Ayushman Sabha, a village/ward level sabha to be held to enhance awareness about various health care schemes and services.
- The campaign will eventually ensure gram/nagar panchayat to attain the status of 'Ayushman Gram Panchayat' or 'Ayushman Ward' with saturation of selected health indicators.

79. Patent

- A patent is the granting of a property right by a sovereign authority to an inventor.
- This grant provides the inventor exclusive rights to the patented process, design, or invention for a designated period in exchange for a comprehensive disclosure of the invention.
- The Office of the Controller General of Patents, Designs and Trade Marks (CGPDTM), also known as India Patent Office, grants patents.
- The Indian Patent Office grants patents which are governed by the Indian Patents Act, 1970.

80. NaVIC or the Indian Regional Navigation Satellite System (IRNSS)

- A seven-satellite system that makes up India's version of the American GPS (global positioning system).
- Of the seven satellites used by NaVIC at present, three are in the geostationary orbit and four in the geosynchronous orbit.

- It provides real-time positioning and timing services in India and an area extending up to 1,500 km from the country's borders.
- Its use is currently restricted for
 - Tracking and delivering information about natural disasters
 - Providing emergency warning alerts to fishermen travelling into the deep sea
 - Monitoring public traffic in India
- Currently, NavIC is only compatible with the L5 and S bands and hasn't easily penetrated into the civilian sector.

81. Bhoj Wetland

- It consists of two contiguous human-made reservoirs located in the city of Bhopal, Madhya Pradesh.
- The Upper lake is called Bhojtal (Bada Talaab) and the Lower Lake is known as Chhota Talaab.
- The lakes are very rich in biodiversity, particularly for macrophytes, phytoplankton and zooplankton.
- It has more than 15 kinds of fish and several vulnerable species, including turtles, amphibians and aquatic invertebrates.
- It was designated as the Ramsar site in 2002.

82. Epizootic Haemorrhagic Disease (EHD)

- It is an insect-borne disease caused by a virus affecting wild and domestic ruminant species.
- The causative agent, epizootic hemorrhagic disease virus (EHDV), belongs to the Orbivirus genus.
- It is a disease of animals, not humans, so there are no human or public health issues.
- EHDV is transmitted between ruminant hosts by *Culicoides* midges, tiny biting flies commonly known as "no-see-ums" or gnats that are smaller than mosquitoes and other flies.
- Clinical signs: Fever, weakness, lack of appetite, more saliva than usual, difficulty swallowing, skin rash on the udder, bleeding (skin and internal tissues), swollen red skin near hooves, swollen lining of the mouth, mouth ulcers, difficulty in breathing and sudden death (particularly in deer).
- There is no treatment for HD in wildlife populations and no commercially available vaccine to protect against EHD.
- It has become an emerging disease in cattle and was added to the World Organisation of Animal Health list of notifiable diseases in May 2008.

83. BrahMos Missile

- The BrahMos missile, an Indo-Russian joint venture, has a range of 290 km and is the fastest cruise missile in the world with a top speed of Mach 2.8 (nearly three times the speed of sound).
- BrahMos is named for the rivers Brahmaputra and Moskva.
- It is a two-stage missile with solid propellant engine in the first stage and liquid ramjet in second .
- It is a multiplatform missile i.e., it can be launched from land, air, and sea and multi capability missile with pinpoint accuracy that works in both day and night irrespective of the weather conditions.
- It operates on the "Fire and Forgets" principle i.e it does not require further guidance after launch.

84. Unique Disability Identification (UDID) Portal

- Objective: To create a National Database for persons with disabilities (PwDs), and to issue a Unique Disability Identity Card to each PwDs.
- The project will not only encourage transparency, efficiency and ease of delivering the government benefits to the person with disabilities, but also ensure uniformity.
- The project will also help in stream-lining the tracking of physical and financial progress of beneficiaries at all levels of hierarchy of implementation – from village level, block level, District level, State level and National level.

85. Dhanush

- It is the indigenously upgraded gun of the Swedish Bofors gun procured in the 1980s.
- Dhanush is the first ever indigenous 155 mm, 45-calibre towed artillery gun with a range of 36 km and has demonstrated a range of 38 km with specialised ammunition.
- It is compatible with all North Atlantic Treaty Organisation (NATO) 155 mm ammunition systems.
- The gun is equipped with an inertial navigation-based sighting system, auto-laying facility, on-board ballistic computation and an advanced day and night direct firing system.
- The guns can travel in all terrains viz desert and high altitude.
- The self-propulsion unit allows the gun to negotiate and deploy itself in mountainous terrains with ease.
- 'Dhanush' is the product of joint efforts by the Ordnance Factory Board (OFB) and the Indian Army with contributions from DRDO, DGQA, DPSUs such as BEL, PSUs such as SAIL and several private enterprises.
- The weapon is the first long range artillery gun to be produced in India and it is a major success story of the 'Make in India' initiative.

86. H1B Visa

- It is a multiple entry non-immigrant visa which allows foreign workers employed by US companies to work in the United States.
- The workers under H1B visas should be engaged in specialised occupations such as science, medicine, engineering and mathematics.
- H1B applicants must have at least a US bachelor's degree or equivalent.
- Generally this visa is granted for a period of three years and can be extended for an additional three years for special circumstances.
- H-1B visa requires the employer to apply on the person's behalf.
- Holders of H1B visas can sell or buy property and invest in the stock market in the United States.

87. Meitei Community

- The Meitei people, also known as the Manipuri people, are the predominant ethnic group of Manipur State.
- They speak the Meitei language (officially called Manipuri), one of the 22 official languages of India and the sole official language of Manipur State.
- The Meiteis primarily settled in the Imphal Valley region in modern-day Manipur, though a sizable population has settled in the other Indian states of Assam, Tripura, Nagaland, Meghalaya, and Mizoram.
- There is also a notable presence of Meitei in the neighbouring countries of Myanmar and Bangladesh.
- Clans: They are divided into clans, the members of which do not intermarry.
- Economy: Rice cultivation on irrigated fields is the basis of their economy.
- Religion: A majority follow Hinduism, while more than 8% are Muslims.

88. Assam Rifles

- It is one of the six central armed police forces (CAPFs) under the administrative control of the Ministry of Home Affairs (MHA)
- It is tasked with the maintenance of law and order in the North East along with the Indian Army and also guards the Indo-Myanmar border in the region.
- It came into being in 1835, as a militia called the 'Cachar Levy', to primarily protect British Tea estates and their settlements against tribal raids.
- It is the only paramilitary force with a dual control structure

- While the administrative control of the force is with the MHA, its operational control is with the Indian Army, which is under the Ministry of Defence (MoD)
- Major role post-Independence
 - Conventional combat role during the Sino-India War 1962.
 - Operations in a foreign land as part of the Indian Peace Keeping Force to Sri Lanka in 1987 (Operation Pawan).
 - Peacekeeping role in the North-Eastern areas of India.

89. TrailGuard AI camera

- These are slim devices that can be inconspicuously set up within the foliage of trees.
- It is Shaped like a pen, 13.8 cm long and 1.4 cm wide wired to another 'communications' unit, the size of a notepad.
- The system has embedded software that can be instructed to take pictures of specific species of interest.
- It is incredibly small – the head of the camera, along with the passive infrared sensor, is only about the size of a person's index finger.
- It can be set to specifically capture humans or species of interest — lions, tigers, cheetahs.
- If the camera is located in a place within the range of cellphone towers, it can send pictures within 30 seconds.
- If it is out of this range, it can rely on a longer protocol that can take from 3-10 minutes.
- The 'AI' element, or 'embedded AI' as it is technically known, in this system is that instead of transmitting every image captured, the camera only sends pictures of interest to forest officials.
- The product was developed by RESOLVE, an international non-profit, in which the operative AI processor is Intel's Myriad chip.

90. Tuberculosis (TB)

- TB is caused by a bacterium called *Mycobacterium tuberculosis*, belonging to the *Mycobacteriaceae* family.
- Some of *Mycobacteria* cause diseases like TB and Leprosy in humans and others infect a wide range of animals.
- In humans, TB most commonly affects the lungs (pulmonary TB), but it can also affect other organs (extra-pulmonary TB).
- TB is a very ancient disease and has been documented to have existed in Egypt as early as 3000 BC.
- TB spreads from person to person through the air.
- When people with lung TB cough, sneeze or spit, they propel the TB germs into the air.
- Common symptoms of active lung TB are cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats.
- TB is a treatable and curable disease.

91. Yashobhoomi

- The convention center boasts of having one of the world's largest MICE (Meetings, Incentives, Conferences, and Exhibitions) facilities and the largest LED media facade in the country.
- The Convention Center Comprises 15 convention rooms including the Main auditorium, the Grand ballroom and 13 meeting rooms with a total capacity of holding 11,000 delegates.
- It is the second convention center with world class infrastructure for exhibitions and conferences, after the Bharat Mandapam.
- Consisting of materials and objects inspired from Indian culture, the center incorporates terrazzo floors and brass inlay representing rangolis patterns.
- Yashobhoomi is equipped with a state-of-the-art wastewater treatment system with 100% wastewater reuse and provisions of rainwater harvesting.
- Also its campus has received Platinum certification from CII's Indian Green Building Council (IGBC).
- YashoBhoomi also offers one of the largest exhibition halls in the world, which could be utilized for hosting exhibitions, trade fairs, and business events.

92. Broadnose Sevengill Shark

- It is a large seven-gilled with a wide head and short, blunt snout shark.
- It is related to sharks that lived in the Jurassic Period about 300 million years ago.
- They prefer tropical, temperate, shallow waters
- It is found in all oceans except the North Atlantic and the Mediterranean Sea.
- In the eastern Pacific Ocean, they are found from southeastern Alaska to southern Baja California, Mexico and from Colombia to Chile.
- They feed on anything, such as other sharks, rays, chimaeras, bony fish, hagfish, dolphins and porpoise meat, seals, shark egg cases and sea snails.
- IUCN Red List: Vulnerable

93. Pralay ballistic missiles

- It is a quasi-ballistic surface-to-surface missile developed by the Defence Research Development Organisation (DRDO).
- It can hit targets 150-500 km away and can carry 350-700 kg of high-grade explosives.
- It is powered by a solid propellant rocket motor and other new technologies.
- The missile guidance system includes state-of-the-art navigation and integrated avionics.
- It can change its path after covering a certain range in mid-air.

94. Tungareshwar Wildlife Sanctuary

- Location: Palghar district of Maharashtra
- It forms a corridor between Sanjay Gandhi National Park and Tansa Wildlife Sanctuary.
- Characterised by hilly terrain, dense forests, and small rivers or streams.
- Vegetation: Dry Deciduous, Moist Deciduous and Semi Evergreen.
- It is home to several species of trees, including teak, bamboo, and mango.
- Some commonly spotted animals in the sanctuary include Leopard, Wild Boar, Barking Deer, Langur, Bonnet and Rhesus Macaque, and Black-naped Hare.
- A multitude of birds, including the Crested Serpent-eagle, Jungle Owlet, White-eyed Buzzard, Oriental Honey-buzzard, Emerald Dove and Heart-spotted Woodpecker, can be found here.
- Several ancient temples are within its boundaries including the Tungareshwar Temple, dedicated to Lord Shiva.

95. Narmada River

- It is the largest west-flowing river in peninsular India.
- It rises from Narmada Kund, located at Amarkantak, in the Anuppur district of Madhya Pradesh in the Maikala range.
- The river flows through Madhya Pradesh, Maharashtra and Gujarat between Vindhya and Satpura hill ranges before falling into the Gulf of Cambay in the Arabian Sea.
- The river has numerous waterfalls, notably the Dhuandhar Falls, southwest of Jabalpur.
- Tributaries: Tawa, Barna, Hiran and Orsang

96. P-7 Heavy Drop Parachute System

- It is a military parachute system primarily used for the airdrop of heavy equipment, vehicles, and supplies from aircraft.
- It was indigenously designed and developed by the Defence Research and Development Organisation (DRDO).
- Weighing approximately 500 kg, the parachute guarantees the secure delivery of heavy cargo, even under challenging conditions.
- It comprises a platform and a specialised parachute system, promising to enhance the operational capabilities of the armed forces.
- It boasts eight main canopies, three extractor parachutes, one drogue parachute, and a suite of electrical, electronic, and mechanical systems.

- Its compact design allows seamless integration onto various aircraft, including the C-17, C-130, and other cargo aircraft of the IAF, providing versatility in deployment.

97. Samudra Prahari

- It is an Indian Coast Guard Ship (ICGS) specially designed for pollution control.
- It is the first pollution control vessel of its kind in Southeast Asia.
- It is equipped with the most advanced pollution Response and Control equipment for mitigating oil spills in the Exclusive Economic Zone.
- It has tanks and inflatable barges for storage of oil spills.
- The ship is capable of unhindered oil recovery operations with a storage capacity of 500 KL.
- The vessel is designed to operate a twin-engine Advanced Light Helicopter and to operate and embark Chetak helicopter.
- Special features include
 - integrated platform management system
 - power management system
 - high power external fire fighting system
 - one indigenous gun mount with fire fighting system
- The ship has unmanned machinery operation capabilities.

98. Operation Sajag

- It is a coastal security drill conducted by the Indian Coast Guard along the west coast.
- It involved all stakeholders of the Indian coastal security construct.
- The drill facilitates revalidation of the coastal security mechanism and brings awareness among the fishermen at sea.
- During the drill, extensive checking and verification of documents and crew passes of all fishing boats, barges and craft at sea was undertaken.
- Biometric card readers have also been issued to security agencies.
- Besides monitoring of dhows, island security and community interaction programmes have been institutionalised under the coastal security construct.

99. YES-TECH Manual

- It is a comprehensive guide developed after extensive testing and piloting in 100 districts of India.
- It facilitates the implementation of YES-TECH, a technology-driven yield estimation system (YES).
- The manual offers methodologies, best practices, and integration insights for accurate yield assessments.
- It helps in enhancing yield estimation and decision-making processes in the agricultural sector.

100. Samudrayaan Mission

- It is India's first manned mission to explore the deep ocean.
- It is designed to study the deep ocean resources and conduct biodiversity assessments as well.
- The mission will not disturb the ecosystem as the submersible is used solely for exploration purposes.
- The project is part of the larger Deep Ocean Mission, which supports the Central Government's Blue Economy policy.
- The Ministry of Earth Sciences (MoES) is the nodal ministry to implement this multi-institutional ambitious mission.

101. Vibhav Anti-Tank Munition

- It is a self-neutralising anti-tank mine.
- Designed and developed completely indigenously in a joint venture with the Defence Research and Development Organisation (DRDO) in India, "Vibhav" is a point-attack anti-tank munition.
- It is designed to provide mobility kill against all enemy armoured vehicles.

- The anti-tank mine is made of new-age plastic, which gives it adequate strength and durability to withstand the requirements of storage, handling and operating in varying field conditions.
- The munition can be laid both mechanically or manually.
- A host of safety and actuation mechanisms have been incorporated in “Vibhav” to make it safe to handle, lethal against targets and reliable.
- The munition also incorporates an electronic anti-handling and anti-lift device (EAHALD) that stays active for 120 days once armed.
- It has mechanical timers, due to which, after 120 days, it will be self-neutralised.
- It has a storage life of 10 years with no special storage requirements.

102. Kisan Rin Portal

- The portal helps farmers avail subsidised loans under the Kisan Credit Card (KCC).
- It was developed in collaboration with multiple government departments.
- It offers a comprehensive view of farmer data, loan disbursement specifics, interest subvention claims and scheme utilisation progress.
- It fosters seamless integration with banks for more focused and efficient agriculture credit.

103. Nagorno-Karabakh Region

- Nagorno-Karabakh is a mountainous and heavily forested region lying south of Caucasus mountains.
- The region includes the north-eastern flank of the Karabakh Range of the Lesser Caucasus and extends from the crest line of the range to the margin of the Kura River lowland at its foot.
- Under international law, this region is recognised as part of Azerbaijan.
- However, ethnic Armenians who constitute the vast majority of the population there reject Azeri rule.
- In 1990s, Azerbaijan’s troops were pushed out of the region following a war.
- Since then, these ethnic Armenians have been in administrative control of Nagorno-Karabakh, with support from Armenia.

104. Insurance Regulatory and Development Authority of India (IRDAI)

- IRDAI is a statutory body formed under an Act of Parliament, i.e., Insurance Regulatory and Development Authority Act, 1999.
- It was established for overall supervision and development of the Insurance sector in India.
- IRDAI's duties include:
 - Regulating the insurance business
 - Promoting the orderly growth of the insurance business
 - Protecting the interests of policyholders

105. Digital Public Infrastructure (DPI)

- It is an open-source identity platform that can be used to access a wide variety of government and private services.
- It builds applications and products on a set of application programming interfaces (APIs) like India Stack.
- It includes digital forms of ID and verification, civil registration, payment (digital transactions and money transfers), data exchange, and information systems.
- It is customisable, localisable, interoperable and leverage public data for open innovation models.

106. UFO

- A UFO is an unidentified flying object which is generally considered anomalies that are completely unidentifiable.
- UFO is an object in the sky that is not identifiable as any known object or even a natural phenomenon.
- The title of UFO was originally created in 1953 by the United States Air Force to record and review any instances where a flying object was logged in official reporting.

107. Mithun

- The Mithun or gayal (*Bos frontalis*), is considered a descendant of the Indian Gaur or bison.
- It is distributed in Northeast India, Bangladesh, northern Myanmar and in Yunnan, China.
- Reared under free-range conditions in hilly forests, the mithun is known as the 'cattle of the mountain'.
- It plays an important role in the socio-economic and cultural life of tribes such as the Nyishi, Apatani, Galo and Adi in Arunachal Pradesh.
- The gayal is the state animal of Arunachal Pradesh and Nagaland.
- It is listed in CITES Appendix I.

108. Tasmanian Tiger

- The Tasmanian tiger (*Thylacinus cynocephalus*) was a marsupial mammal.
- It was the only animal in the Thylacinidae family to survive in modern times.
- It was widespread over continental Australia, extending North to New Guinea and south to Tasmania Island.
- It had disappeared from mainland Australia over 2000 years ago and later was confined to Tasmania till its extinction.
- It earned its nickname because of the stripes along its back.
- It was also known as the Tasmanian Wolf as it had a dog-like head.
- It was a slow-paced carnivorous and ate kangaroos, other marsupials, small rodents and birds.
- It went extinct in the wild in the 1930s and the last one died in captivity in Tasmania's Hobart Zoo in 1936.
- It went extinct mainly because of over-hunting by humans, diseases and competition from the Dingo (*Canis lupus*), a wild dog native to Australia.
- It was also widely persecuted because it was believed to be a threat to sheep.

109. Abraham Accord

- The Abraham Accords Peace Agreement is the official name for the Israel-UAE normalisation agreement.
- On August 13, 2020, the United States, Israel, and the United Arab Emirates (UAE) agreed to it in a joint statement.
- After Egypt in 1979 and Jordan in 1994, the UAE became the third Arab country to agree to formally normalise relations with Israel.
- The agreement formalized the two countries' long-standing but robust foreign relations.
- The treaties are named after Abraham, the patriarch whom both Judaism and Islam view as a prophet.
- The UAE and Bahrain will create embassies and swap ambassadors, according to the accords and will cooperate with Israel in a variety of fields, including tourism, trade, healthcare, and security.
- It also allows Muslims from all over the world to visit Israel's ancient monuments and quietly pray at Al-Aqsa Mosque in Jerusalem, Islam's third holiest site.

110. National Green Tribunal (NGT)

- It is a specialised body set up under the National Green Tribunal Act (2010) for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.
- With the establishment of the NGT, India became the third country in the world to set up a specialised environmental tribunal, only after Australia and New Zealand
- NGT is guided by the principles of 'natural justice'.
- It is mandated to make disposal of applications or appeals finally within 6 months of filing the same.
- An order/decision/award of Tribunal is executable as a decree of a civil court.
- An appeal against order/decision/ award of the NGT lies to the Supreme Court, generally within ninety days from the date of communication.
- The NGT deals with civil cases under the seven laws related to the environment, these include:
 - The Water (Prevention and Control of Pollution) Act, 1974,

- The Water (Prevention and Control of Pollution) Cess Act, 1977,
- The Forest (Conservation) Act, 1980,
- The Air (Prevention and Control of Pollution) Act, 1981,
- The Environment (Protection) Act, 1986,
- The Public Liability Insurance Act, 1991 and
- The Biological Diversity Act, 2002.

111.SIMBEX 23

- It is an annual bilateral Naval exercise between the Indian Navy and the Republic of Singapore Navy (RSN).
- It has been conducted since 1994.
- It holds the distinction of being the longest continuous naval exercise that the Indian Navy has conducted with any other country.
- SIMBEX-2023 is being conducted in two phases:
 - a harbour Phase at Singapore from September 21 to 24, 2023
 - Sea Phase.
- Besides Ranvijay, Kavaratti, and Sindhukesari, Long-Range Maritime Patrol Aircraft P8I is also participating in the exercise.
- The Harbour Phase will witness a wide range of professional interactions, cross-deck visits, Subject Matter Expert Exchanges (SMEE), and sports fixtures.
- The Sea Phase of SIMBEX 23 will involve complex and advanced air defence exercises, gunnery firings, tactical manoeuvres, anti-submarine exercises, and other maritime operations.

112.Supra Thermal & Energetic Particle Spectrometer (STEPS)

- It is a sub-system of the ASPEX (Aditya Solar Wind Particle Experiment) payload on the spacecraft.
- Objective: STEPS is to study the environment of energetic particles from the spacecraft's position on the L1 point till it will function.
- The data from STEPS in the long term will also help us understand how space weather changes.
- It comprises six sensors, each observing in different directions and measuring supra-thermal and energetic ions.
- The data collected during the Earth's orbit helps scientists analyse the behaviour of particles surrounding the planet, especially in the presence of its magnetic field.
- It was developed by the Physical Research Laboratory (PRL) with support from the Space Application Centre (SAC) in Ahmedabad.

113.Nuakhai Juhar

- It is an important social festival of Western Odisha and adjoining areas of Simdega in Jharkhand.
- The word "nua" means new, and "khai" means food.
- It is an agricultural festival which is observed to welcome the new rice of the season.
- It is observed on the fifth day of the lunar fortnight of the month of Bhadrapada or Bhadra (August-September), the day after the Ganesh Chaturthi festival.

114.Feline Panleukopenia Virus:

- It is a highly contagious viral disease of cats.
- It is also known as Feline Distemper, which is a life-threatening infectious disease.
- It infects and kills the rapidly growing and dividing cells in the body, including cells in the bone marrow, intestines, and skin, and in a developing fetus.

Symptoms

- Once infected by Feline panleukopenia virus, the intestine of the animal gets completely affected.
- They develop severe diarrhoea, vomiting and dehydration, which ultimately leads to death.
- It spreads faster, and the infected animal dies within four to five days.

Treatment

- There is no specific treatment for feline panleukopenia.

- Dehydration is treated with aggressive intravenous fluid therapy, while clinical signs of vomiting and diarrhea are treated with prescription medications.
- Antibiotic therapy is often instituted to help control any secondary bacterial infections due to low white blood cell counts.

115. Rafflesia

- Rafflesia is a genus of parasitic flowering plants native to Southeast Asia.
- These plants are renowned for producing the largest individual flowers in the world, both in terms of size and weight.
- They are often referred to as "corpse flowers" due to their foul odour.
- Distribution: They inhabit specialised localities in the tropical rainforests of Sumatra, Java, Borneo, Peninsular Malaysia, southern Thailand and the Philippines.
- There are 42 known species of Rafflesia, and the most famous species within this genus is Rafflesia arnoldii.

Features

- They are massive and can reach up to 3 feet (almost 1 meter) in diameter and weigh up to 7 kg.
- Parasitic Lifestyle:
 - They are parasitic, meaning they do not have leaves, stems, or roots like traditional plants.
 - Instead, they depend on a host vine called Tetrastigma for nutrients and support.
 - Rafflesia's only visible part is the flower.
- Limited Blooming Period: They have a short blooming period, often lasting only a few days to a week

116. Adi Shankaracharya

- Adi Shankaracharya also called Shankara (Born in 738 AD, Kaladi village, in Kerala) was a Devotee of Shiva, Philosopher and Theologian
- He was the most renowned exponent of the Advaita Vedanta school of philosophy.
- He wrote commentaries on the Brahma-sutra, (the principal Upanishads), and the Bhagavadgita and Gayatri Mantra among others.
- Shankara also authored Upadesasahasri, his most important original philosophical work.
- He established four Mathas in the four cardinal directions of Bharat to spread his teachings.
- Jyotirmath: Joshimathi Chomoli, Uttarakhand.
- Shringeri Math: Chikmagalur, Karnataka.
- Govardhan Math: Puri, Odisha.
- Dwarka Math: Dwarka, Gujrat.
- Advaita Vedanta (non-dualism): It is a monistic school of Hindu philosophy that teaches that there is only one reality, Brahman and that everything else is an illusion (Maya).

117. Non-Performing Assets (NPAs)

- A NPA is a loan or advance for which the principal or interest payment remained overdue for a period of 90 days.
- For banks, a loan is an asset because the interest paid on these loans is one of the most significant sources of income for the bank.
- When customers, retail or corporates, are not able to pay the interest, the asset becomes 'non-performing' for the bank because it is not earning anything for the bank.
- Therefore, the RBI has defined NPAs as assets that stop generating income for banks.
- Banks are required to make their NPAs numbers public and to the RBI as well from time to time.
- Classification of assets: As per the RBI guideline, banks are required to classify NPAs further into: Substandard assets, Doubtful assets, Loss assets

118. Zoological Survey of India

- It was established in 1916 as the premier Indian organisation in zoological research and studies.
- Nodal Ministry: the Ministry of Environment, Forest and Climate Change.
- Objectives:
 - Exploration, survey, and monitoring of faunal (animal) diversity in various states, ecosystems and protected areas of India.
 - Periodic review of the status of threatened and endemic species.
 - Preparation of databases for the recorded species of the country.

119. Ethanol Blending

- Ethanol is an agricultural by-product, mainly obtained from the processing of sugar.
- It can also be obtained from other sources such as rice husk or maize.
- Blending ethanol to a certain extent with petrol (or diesel) that makes it burn fewer fossil fuels while running vehicles is called ethanol blending.
- Since ethanol contains oxygen, it aids in more complete combustion, lowers emissions, and improves the fuel's environmental performance.
- By 2023, all vehicles in India will have E20 (20% ethanol in petrol) compatible material, as committed by the auto industry.
- Therefore, in order to carry or store fuel that contains 20% ethanol, the fuel points, plastics, rubber, steel, and other components in cars would need to be compatible.

120. Dhanush Artillery Guns

- It is the first long-range artillery gun to be produced in India.
- The 155 mm/45-calibre gun system is a towed howitzer designed indigenously by the Ordnance Factory Board (OFB).
- It is an upgrade of the existing 155 mm, 39-calibre Bofors FH 77 gun.
- It is based on schematics supplied by Bofors/BAE Systems under a technology transfer agreement concluded in the late 1980s.
- It has demonstrated a range of 38 km with specialised ammunition.
- It is capable of firing eight rounds per minute and needs a crew of six to eight artillerymen.

121. Dudhwa Tiger Reserve

- It is located on the Indo-Nepal border in the district of Lakhimpur-Kheri in Uttar Pradesh.
- It includes the Dudhwa National Park and two nearby Sanctuaries, viz. Kishanpur and Katerniaghat, besides forest areas of North Kheri, South Kheri and Shahjahanpur forest divisions in its buffer.
- The Sharda River flows by the Kishanpur WL Sanctuary, the Geruwa River flows through the Katerniaghat WL Sanctuary, and the Suheli and Mohana streams flow in the Dudhwa National Park, all of which are tributaries of the mighty Ghagra River.
- The vegetation is of the North Indian Moist Deciduous type, containing some of the finest examples of Sal forests (*Shorea robusta*) in India.
- The flora is predominantly Sal forest along with its associate tree species like *Terminalia alata* (Asna), *Lagerstroemia parviflora* (Asidha), *Adina cordifolia* (Haldu), etc.

122. Perovskite

- Perovskites are a class of materials that share a similar structure and display a myriad of exciting properties like superconductivity, magnetoresistance, etc.
- It is a material that has the same crystal structure as the mineral calcium titanium oxide (CaTiO_3), the first-discovered perovskite crystal.

- It is characterised by a three-dimensional arrangement of atoms.
- It has the general formula ABX_3 , where "A" and "B" represent cations (positively charged ions) and "X" represents anions (negatively charged ions).
- The mineral was discovered in the Ural Mountains of Russia by Gustav Rose in 1839 and is named after Russian mineralogist Lev Perovski.
- Due to its compositional flexibility, scientists can design perovskite crystals to have a wide variety of physical, optical, and electrical characteristics.

123. World Federation for Medical Education (WFME)

- WFME is a global organisation concerned with the education and training of medical doctors.
- WFME's mission is to strive for better health care for all mankind.
- WFME's primary objective is to enhance the quality of medical education worldwide, with the promotion of the highest scientific and ethical standards in medical education.
- It was founded in 1972 and is headquartered in Ferney-Voltaire, France.
- It is the organisation that officially and globally represents medical teachers and medical teaching institutions before the World Health Organization (WHO).
- WFME's accreditation program plays a pivotal role in ensuring that medical institutes meet and uphold the highest international standards of education and training.

124. Norman E. Borlaug Award

- Indian agriculture scientist Swati Nayak won the prestigious Norman E. Borlaug Award for 2023.

Norman E. Borlaug Award:

- The award recognises exceptional scientists under 40 and someone who works in the field of food and nutrition security and hunger eradication.
- It is given in memory of the Nobel awardee and Green Revolution's chief architect Dr Norman Borlaug.
- The award will honour an individual who is working closely and directly "in the field" or at the production or processing level with farmers, animal herders, fishers or others in rural communities in any discipline or enterprise across the entire food production, processing, and distribution chain.
- The award diploma incorporates the image of Dr. Borlaug at work in the fields of Mexico and a cash prize of \$10,000.
- It is endowed by the Rockefeller Foundation and will be presented every October in Des Moines, Iowa, by the World Food Prize Foundation.
- Other Indian recipients: Aditi Mukherji (2012) and Mahalingam Govindaraj (2022).

Contributions of Swati Nayak

- She introduced Sahbhagi Dhan', a drought-tolerant variety rice suitable for hilly uplands, and 'BINA Dhan-11', which is flood-tolerant.
- BINA-Dhan-11', which contains a submergence-tolerant Sub1 gene identified from an indigenous land race of Odisha.
- The Sub1 gene has been incorporated into many existing popular high-yielding varieties such as 'Samba Mahsuri', 'Swarna' and 'Ranjit'.
- There are, likewise, other drought-tolerant varieties, such as 'DRR Dhan 42' and 'DRR Dhan 44'.

125. Pink Diamond

- Pink diamonds, also known as fancy pink diamonds, are some of the rarest and most coveted gemstones in the world.
- Pink diamonds have uniquely bent crystalline structures.
- More than 90% of all the pink diamonds ever found come from a single mine in the Kimberley region of Western Australia.

- All diamonds are found in pipelike volcanoes or in their eroded remnants.

How did they form?

- Around 1.8 billion years ago, Western Australia and Northern Australia collided in a cataclysmic event.
- This impact is believed to have been the catalyst that transformed once-colourless diamonds into their pink variants.
- Scientists found that at Argyle, diamonds crystallised deep in Earth's interior were brought to the surface when a supercontinent, Nuna, began to break apart.
- As continents break up, their edges stretch, allowing small pockets of diamond-rich magma to rise to the surface.

126.Nuna

- It is an ancient supercontinent that graced our planet's surface.
- Scientists believe Nuna existed around 1.6 to 2.5 billion years ago, predating even the famous Pangea by a considerable margin.
- Researchers actively map Nuna's formation by piecing together geological and paleomagnetic data.
- These clues suggest that Nuna brought together fragments of what we now identify as North America, northern Europe, and parts of Siberia.
- This supercontinent experienced multiple cycles of coming together and breaking apart. Each phase of assembly and dispersal reshaped the Earth's surface.
- These changes gave rise to new geological formations, laying the groundwork for subsequent continents.
- One of the most intriguing findings about Nuna lies in its connection to Earth's atmospheric evolution.
- As Nuna formed, volcanic activities increased. These volcanoes released vast amounts of carbon dioxide, playing a pivotal role in shaping the planet's early atmospheric conditions and potentially influencing the course of life.

127.Mt. Semeru volcano

- It is an active volcano in East Java, Indonesia.
- It is located in a subduction zone, where the Indo-Australia plate subducts under the Eurasia plate.
- It is the highest mountain on the island of Java.
- The name "Semeru" is derived from Meru, the central world mountain in Hinduism, or Sumeru, the abode of gods.
- Indonesia sits on the Pacific Ring of Fire, where the meeting of continental plates causes high volcanic and seismic activity.

Pacific Ring of Fire

- It, also known as the Circum-Pacific Belt, is a path along the Pacific Ocean characterised by active volcanoes and frequent earthquakes.
- Its length is approximately 40,000 kilometres.
- It traces boundaries between several tectonic plates—including the Pacific, Juan de Fuca, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates.

128.Bolson tortoises

- It is the largest and rarest land reptile, as well as the rarest of the six Gopherus species native to the North American Continent.
- Adult males are generally smaller than females in this species.

- The tortoise is a land-dwelling reptile that spends more than 95% of its time in a burrow that it constructs with its shovel-like front feet.
- All foraging, nesting and mating activities take place during the tortoise's active season from roughly April to October.
- The average life span of a Bolson tortoise is not known but probably lies upward of a century.

Distribution:

- This species at present, is restricted to a relatively small area of the grasslands of north-central Mexico in the states of Chihuahua, Coahuila and Durango, where it exists in disjunct sub-populations.
- Conservation status
- IUCN: Critically Endangered

129. Jhelum River

- It is a river that flows in India and Pakistan.
- It is a tributary of the Indus River.
- The Jhelum (Vyeth in Kashmiri, Vetesta in Sanskrit and Hydaspes in Greek) is the main waterway of the Kashmir valley.
- It is the largest and most western of the five rivers of Punjab and passes through the Jhelum District in the North of Punjab province, Pakistan.

Course

- Origin: It originates at the Verinag Spring at Anantnag, at the foot of the Pir Panjal range in the Kashmir Valley.
- It then flows via Srinagar and Wular Lake prior to entering Pakistan.
- The river makes a deep, narrow gorge on its way to Pakistan.
- It joins the Chenab River near Trimmu, Pakistan.
- Length: It has a total length of about 725 km (450 mi).

Major Tributaries

- The largest tributary of the Jhelum is the Kishenganga (Neelum) River, which joins near Muzaffarabad and enters the Punjab province, Pakistan.
- Kunhar River is the second largest tributary of the river, which connects Pakistan-occupied Kashmir (PoK) and Pakistan on the Kohala Bridge of Kangan Valley.
- Other tributaries include Sandran River, Bringi River, Arapath River, Watlala River, Lidder River and Veshaw River.

130. NASA's first asteroid samples land on Earth

- NASA's first asteroid samples fetched from deep space was parachuted into the Utah desert on September 24.
- The asteroid hunting spacecraft OSIRIS-Rex dropped a capsule containing pristine asteroid material in the Utah desert.
- In a flyby of Earth, the spacecraft released the sample capsule from 100,000 km out.
- The small capsule landed four hours later on a remote expanse of military land, as the mother-ship set off after another asteroid.
- Osiris-Rex is already chasing the asteroid Apophis, and will reach it in 2029.

131. Sarcophagus

- It is an above-ground stone container for a coffin or dead body that often is often decorated with art, inscriptions, and carvings.

- The word sarcophagus comes from the Greek "sarx" meaning "flesh," and "phagien" meaning "to eat," so that sarcophagus literally translates as "eater of flesh."
- First used in Ancient Egypt and Ancient Greece, the sarcophagus gradually became popular throughout the ancient world.
- It carried over through the later years of European society, often used for high status members of the clergy, government, or aristocracy.

132. Polyethylene Terephthalate (PET)

- It is the most commonly used thermoplastic polymer in the world.
- It belongs to the family of polyesters.
- PET is produced by the polymerization of ethylene glycol and terephthalic acid.
- When heated together under the influence of chemical catalysts, ethylene glycol and terephthalic acid produce PET in the form of a molten, viscous mass that can be spun directly to fibres or solidified for later processing as plastic.
- It is highly flexible, colorless and semi-crystalline resin in its natural state.
- It shows good dimensional stability, resistance to impact, moisture, alcohols and solvents.
- It exhibits excellent electrical insulating properties.
- It is very lightweight, which reduces transportation costs.
- It has good gas (oxygen, carbon dioxide) and moisture barrier properties.
- It is recyclable. It can be commercially recycled by thorough washing and re-melting, or by chemically breaking it down to its component materials to make new PET resin.

133. Brent Crude

- It serves as the most widely used benchmark that defines oil prices around the world.
- The term "Brent" refers to the Brent oil field, which was discovered in the 1970s and became a significant source of oil production.
- About two-thirds of all internationally traded crude oil supplies are priced relative to Brent, making it the most widely used marker of all.
- It is a light, sweet crude oil extracted from different oil fields in the North Sea.
- Its unique properties, low density and low sulphur content, make Brent crude oil simpler to process into products such as gasoline.
- As its supply is water-borne, Brent crude oil is easy to transport to distant locations.
- The Brent Crude oil price is influenced by various factors, including supply and demand dynamics, geopolitical events, production disruptions, and economic factors.

134. Psyche mission

- The journey to the asteroid, also named Psyche, will span nearly six years and cover approximately 3.6 billion kilometers.
- The asteroid orbits the Sun between Mars and Jupiter.
- It is believed to be a remnant core of a planetesimal, composed primarily of iron-nickel metal.
- Studying it from orbit could provide invaluable insights into the composition of Earth's core.
- In addition to its primary mission, the Psyche spacecraft will also host a pioneering technology demonstration known as NASA's Deep Space Optical Communications (DSOC) experiment.
- This laser communications system aims to test high-bandwidth optical communications back to Earth during the first two years of Psyche's journey.
- This experiment could revolutionise how data is transmitted across vast distances in space, potentially enhancing our ability to explore the farthest reaches of the solar system.
- NASA's Jet Propulsion Laboratory is responsible for mission management, operations and navigation.

135. Mukurthi National Park

- It is located in the western corner of the Nilgiris Plateau in the northwest corner of Tamil Nadu.
- The park was created to protect its keystone species, the Nilgiri tahr.
- Pykara and Kundah rivers flow through the park along with several perennial streams that originate in the park and drain into the Bhavani Puzha.
- It is designated as the UNESCO World Heritage Site
- Vegetation: The Park is characterised by montane grasslands and shrublands interspersed with sholas in a high altitude area of high rainfall.
- Here one can find shrubs like Gaultheria fragrantissima, Helichrysum and Berberis Other plants which can be seen here are Rhododendrons, Cinnamon, Mahonia, Satyrium, Raspberries etc.
- The park is home to some of the endangered wild species like Nilgiri tahr, Indian elephants, Nilgiri Langur, Bengal tiger and bonnet macaque etc.

136. The UIDAI

- It is a statutory authority established under the provisions of the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016 (“Aadhaar Act 2016”).
- It issues a unique 12-digit identification number to each individual in India.
- It serves as proof of identity and proof of address for residents of India.
- Nodal Ministry : The Ministry of Electronics and Information Technology (MeitY)
- Function
- UIDAI is responsible for Aadhaar enrolment and authentication.

137. Paris Climate Accord

- It is a legally binding international treaty on climate change.
- It was adopted by 196 countries at the Conference of the Parties COP 21 in Paris in December 2015.
- To limit global warming to well below 2° Celsius, and preferably limit it to 1.5° Celsius, compared to pre-industrial levels.
- To achieve the long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate-neutral world by mid-century.
- India is a signatory to the Paris Agreement. India reaffirmed its commitment to the agreement in August 2022 by submitting an updated NDC to the UNFCCC.
- The NDC outlines India's goals for 2021–2030.

138. Vibrio vulnificus

- Is a bacterium that can cause severe infections in humans. It can result from eating undercooked seafood, especially oysters, which may contain the bacteria.
- Carriers:
- It is typically contracted through two main routes: consuming infected raw shellfish and exposing wounds to contaminated waters.
- It spreads through marine organisms like fish like eel, derbio, tilapia, trout, and shrimp.
- In 2018, India documented an outbreak of V vulnificus in a tilapia farm in Kerala.
- Originally from Africa and West Asia, tilapia is one of the most traded food fish globally.

139. Artificial Insemination

- Artificial insemination is a novel method of bringing about impregnation in female breeds.
- It prevents the spread of certain diseases which are genital in nature, thereby enhancing the efficiency of the breed.
- Shortcomings:
- Bypassing and preventing natural mating, and artificially reproducing as a principle/policy is cruel, not to mention the cruelty or pain inflicted by the artificial insemination process.

140. Chincholi Wildlife Sanctuary

- It is located around the Chandrampalli Dam in the Kalaburagi district of Karnataka.
- It was declared a sanctuary in 2011.
- It is the first dry land Wildlife Sanctuary in South India.
- This is the only area in the Hyderabad Karnataka Region with rich floristic diversity
- The Sanctuary has good dry deciduous and Moist deciduous forest in the core with Acacia and Teak plantations on the fringes.
- Apart from medicinal herbs and trees, species like Red Sanders and Sandalwood are found abundantly.
- It is home Black Buck, Common Fox, Four-horned Antelope, Fruit bat, Hyena, Indian Wolf etc. Over 35 species of birds, including Black Drongo, Black-winged Kite, Blossom – headed Parakeet, Blue pigeon, Black-headed Oriole and Grey partridge are also found in this Sanctuary.
- Chincholi is also home to Lambani Tandas, a protected tribal community that lives in the forests in harmony with nature.

141. Naganathaswamy Temple

- It was built by Rajendra Chola I (1012-1044 CE).
- It is referred as Kailasamudaiyar temple in inscriptions.

Features

- It is known for its exquisite stone sculptures and important inscriptions.
- It consists of an ekatala vimana and a mukha mandapa.
- The walls of both structures are divided into three bays.
- The central bays of the vimana have niches to accommodate Dakshinamurthi in the south, Lingodhbava in the west and Brahma in the north.
- The mukha mandapa is provided with three niches on the south and the north.
- Excellent sculptures of Bikshatana, Adavallan and Ganapathi decorate the south, whereas Gangadarara, Durga and Ammaiappar are in the north.
- All the niches have well carved and distinctive makara thoranas (ceremonial arches) with relief sculptures in the centre.
- Inscriptions: The temple is known for its important inscriptions belonging to the periods of Rajendra Chola I and Kulothunga I (regnal years 1070-1120 CE).
- Nine interesting and informative inscriptions have been recorded from this temple.
- The earliest among them belongs to the fourth regnal year of Rajendra Chola I.
- It refers to a grant of land free of taxes by the nagarathar of Ilaichikkudi for raising a flower garden named after the king for the use of the temple.

142. Armageddon Reedtail

- The species was discovered northeast of Thiruvananthapuram.
- Features: It has a captivating dark brown to black body with vibrant greenish-blue eyes, and half of its eight abdominal segments are marked with delicate pale blue markings.
- Its only habitat is primary montane streams, where it thrives beneath dense canopy cover.
- The name, Armageddon Reedtail, is a direct reference to the concept of “Ecological Armageddon”, a term used to describe the devastating decline of insect populations around the world.
- Threat: This species faces the threat of extinction due to habitat loss and changing environmental conditions.

143. Toto language

- It is a Sino-Tibetan language spoken by the tribal Toto people and is written in the Bengali script
- A prominent community member Dhaniram Toto developed a script as recently as in 2015.
- It is spoken by barely 1,600 people living in parts of West Bengal bordering Bhutan.

Toto Shabda Sangraha

- The dictionary has been compiled by Bhakta Toto, a bank employee-cum-poet, and published jointly by the trust and Bhasha Samsad
- The dictionary is a step in the direction of preserving the language, alive so far only orally, by putting its vocabulary in print.
- Toto words, to be translated into Bengali and English, will be composed in the Bengali script, considering that the Toto script is still in a nascent stage and members of the tribe are more familiar with the Bengali script.

144. Greater sand-plover

- It is known for long distance migration.

Appearance

- It is a medium-sized plover with a long hefty bill.
- Breeding adults have a dark mask and orangish chest, neck, and forehead; females duller than males.
- Non-breeding birds and immatures are sandy brown above and white below, with a white throat and “eyebrows.”
- Additionally, unlike some Lesser Sand-Plovers, Greater never has a black boundary around the throat.
- It breeds in high-elevation areas, where it favors arid, open habitats, sometimes near water. Winters on coastal mudflats and estuaries.
- It breeds during April to May in central Asia, late March to late May in Turkey and upto late June in Armenia.
- It winters in the shores of Indian and Australian Oceans after the breeding.
- Diet: The bird’s diet consists of beetles, worms, crustaceans, molluscs, other insects and their larvae.
- Habitat: Mudflats and sandy shores.
- Behaviour/Ecology: Associates with other feeding shorebirds, especially Lesser Sand Plover.
- Conservation status
 - IUCN: Least Concern

Mentorship India

Our mission is crystal clear – to provide the finest UPSC mentorship and guidance available in India. We recognize that the path to success in the UPSC examination is both demanding and multifaceted. This is precisely why we have developed a comprehensive approach that goes beyond conventional coaching. Our commitment lies in fostering excellence by equipping aspirants with the necessary tools, knowledge, and unwavering support to not only excel in the examination but also in life itself.

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