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Educrat IAS
India's Best Mentorship for Civil Services

> CYCLONE MOCHA

> 6TH INDIAN OCEAN CONFERENCE

> SENGOL TO BE INSTALLED IN NEW PARLIAMENT BUILDING

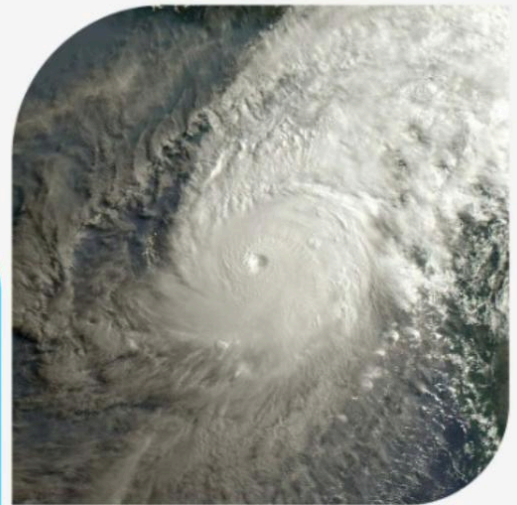> INDIA'S FISHERIES SECTOR

> ISRO'S NEW NAVIC SATELLITE NVS-01

6th INDIAN OCEAN CONFERENCE-2023
Dhaka, Bangladesh
12-13 May 2023

Prosperity & Pa
llient Future

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1. India's Climate and Weather Trends

Why in News?

Although India has received some rain recently, experts predict that the **year 2023 will be hotter and drier.**

- The **Indian Meteorological Department (IMD)** has predicted a normal monsoon, but the development of **El Nino could lead to a reduction in monsoon rainfall.**
- Additionally, the **IMD has released data on fatalities caused by extreme weather events**, marking the first time they have done so.

What is the Current Situation in India?

- **Uneven Rainfall Distribution:** Despite the recent showers, the entire country has received ample rainfall, except for the **north-eastern states, Jharkhand, and West Bengal.** Some areas in **Maharashtra, Gujarat, Uttar Pradesh, and Madhya Pradesh** have experienced up to **15 times more rainfall than expected** due to various local weather phenomena.
- **El Nino and Global Warming:** The **IMD** has predicted normal monsoon, but the development of **El Nino could suppress rainfall over India.** Globally, 2023 is expected to be **one of the top four warmest years on record due to the rapid development of the El Nino event,** which has an overall warming impact on the planet.
- **India's Warming Trend: India's warming trend is slightly lower than the global average**, with the year 2022 being **1.15 degree Celsius warme**r than pre-industrial times. The warming over India is not uniform across regions. Some states like **Himachal Pradesh, Goa, and Kerala have become much hotter than others,** while eastern states such as **Bihar, Jharkhand, and Odisha have experienced the least warming.** Sea surface temperatures in the tropical **Indian Ocean have risen by almost one degree Celsius between 1950 and 2015.**

What do the Climate Models Say about the Impact of Upcoming El Nino?

- **Weak Monsoon for India:** The development of an El Nino in May or June 2023 may cause a **weakening of the southwest monsoon season, which brings around 70% of the total rainfall** India receives and on which most of its farmers still depend. However, sub-seasonal factors such as the **Madden-Julian Oscillation (MJO) and monsoon low-pressure systems** can temporarily enhance rainfall in some parts as witnessed in the year 2015.
- **Hot Temperatures**: It may also cause **heat waves** and **droughts** in India and other regions around the world such as **South Africa, Australia, Indonesia and the Pacific Islands**.
- **Heavier Rainfall in the West:** It brings heavy rainfall and flooding to other regions such as California in the United States and could cause **bleaching and death of coral reefs.**
- **Rising Global Average Temp:** The El Nino in 2023 and going into 2024 may push the global average temperature towards **1.5°C warmer than the preindustrial average.** The **warming of the oceans** is also one of the **major impacts of an El Nino event**. This is when ocean heat content is already at a record high, according to the **World Meteorological Organization (WMO).**

TABLE 4	
DEATHS CAUSED BY EXTREME WEATHER EVENTS	
Lightning	1,608
Floods and Heavy Rains	917
Cyclones	6
Snowfall	33
Gale	8
Heat Wave	30
Cold Wave	1
Dust Storm	22
Thunderstorm	32
Based on data from 29 states	Total 2,657

Which Weather Event Causes the Most Fatalities?

- **Lightning strikes** caused more deaths than any other weather event in India.

- In 2022, **lightning strikes were responsible for 60% of weather event-related deaths in India** (1,608 out of 2,657 recorded deaths).
- Floods and extreme rainfall events claimed 937 lives.
  The actual number of casualties could be higher, as IMD and state governments relied on media reports to compile the list

What are India's Climate Change Mitigation Initiatives?
- **National Action Plan on Climate Change (NAPCC):**
  - Launched in 2008 to **address climate change challenges** in India.
  - Aims to **achieve low-carbon and climate-resilient development for India.**
  - There are **8 national missions** forming the core of the NAPCC which represent multi-pronged, long term and integrated strategies for achieving key goals in climate change. These are-
- **National Solar Mission**
- **National Mission for Enhanced Energy Efficiency**
- **National Mission on Sustainable Habitat**
- **National Water Mission**
- **National Mission for Sustaining the Himalayan Ecosystem**
- **National Mission for A Green India**
- **National Mission for Sustainable Agriculture**
- **National Mission on Strategic Knowledge for Climate Change.**
- **Nationally Determined Contributions (NDC):**
  - India's commitments to reduce greenhouse gas emissions and adapt to climate change.
  - Pledged to r**educe the emissions intensity of GDP by 45%** by 2030 from 2005 levels and generate **50% of electricity from non-fossil fuel sources by 2030.**
  - Pledged to create additional carbon sink and **achieve net zero emissions by 2070.**
- **National Adaptation Fund on Climate Change (NAFCC):**
  - Established in 2015 **to provide financial assistance to state governments for implementing adaptation projects** in various sectors.
- **State Action Plan on Climate Change (SAPCC):**
  - Encourages all states and union territories **to prepare their own SAPCCs based on their specific needs and priorities.**
  - SAPCCs outline strategies and actions for addressing climate change at the sub-national level.
  - **Aligned with the objectives of the NAPCC and the NDC.**

2. Sludge Management
Why in News?
The **sludge found in Indian sewage treatment plants (STPs)** plays a significant role in the efforts to treat polluted water from the **Ganga River.** A recent study of this sludge revealed its potential for **use as fertilizer and a potential biofuel.**
- The **National Mission for Clean Ganga**, aimed at preventing pollution and rejuvenating the Ganga River, has introduced an emerging initiative called **'Arth Ganga' (economic value from Ganga).**
- This initiative **aims to derive livelihood opportunities from the river rejuvenation program** and includes measures to monetize and **reuse treated wastewater and sludge.**

What is Sludge?
About:
- Sludge is the **thick residue generated during the treatment of wastewater or sewage in sewage treatment plants.**
- It is the **semi-solid material** remaining after the liquid portion of the sewage has been separated and treated.

- The composition of sludge can vary depending on the source and treatment processes used.
- It typically **contains organic compounds, nutrients (such as nitrogen and phosphorus), and microorganisms.**
- However, sludge can also contain **contaminants like heavy metals, industrial pollutants, and pathogens.**
- Treatment and processing of sludge **can yield organic fertilizers, biogas for energy production, or construction materials.**
- **Contaminants in sludge require careful handling to avoid negative impacts** on water bodies and agricultural land.

Classification of Treated Sludge:
- Sludge can be classified as **class A or class B** according to the **standards of the United States Environment Protection Agency.**
- Class A sludge is **safe for open disposal** and **serves as organic fertilizer.**
- Class B sludge can be used in **restricted agricultural applications,** with **precautions to avoid exposure of edible parts of crops** to sludge-mixed soil and to limit contact with animals and people.
- **India does not have established standards for classifying sludge as class A or B.**

State of Sludge in Indian STPs:
- Contractors under the **Namami Ganga Mission** are assigned land for **sludge disposal.**
- Inadequate treatment of sludge by these contractors leads to its **release into rivers and local water sources during rainfall.**
- Data on the chemical characteristics of sludge is essential to **incentivize private players to treat and dispose of sludge properly.**
- This study marks the first of its kind initiative in India, **aimed at effectively addressing the issue of sludge disposal.**

What are the Findings from the Study?
Findings:
- Most of the **dried sludge analyzed falls into the class B category.**
- **Nitrogen and phosphorus levels** exceed **India's fertilizer standards,** while **potassium levels are lower than recommended.**
- Total organic **carbon content is higher than recommended**, but **heavy metal contamination and pathogen levels surpass fertilizer standards.**
- Calorific value of sludge **ranges from 1,000-3,500 kcal/kg**, lower than that of Indian coal.

Recommendations for Improving Sludge Quality:
- **Storage of sludge** for at least three months is recommended to **kill pathogens**.
- **Blending sludge with cattle manure,** husk, or local soil can reduce heavy metal content.
- These measures, however, would still categorize sludge as class B.
- Converting sludge into class A would require more extensive treatment.

What is the Arth Ganga Project?
About:
- 'Arth Ganga' implies a sustainable development model with a focus on economic activities related to Ganga.
- **Prime Minister of India first introduced the concept during the first National Ganga Council meeting in Kanpur in 2019**, where he urged for a shift from **Namami Gange** to the model of **Arth Ganga.**
- Under **Arth Ganga**, the Government is working **on six verticals:**

- The first is **Zero Budget Natural Farming**, which involves **chemical-free farming** on 10 km on either side of the river, and the **promotion of cow dung as fertilizer through the Gobardhan scheme.**
- The **Monetization and Reuse of Sludge & Wastewater** is the second, which seeks to reuse treated water for irrigation, industries and revenue generation for Urban Local Bodies (ULBs).
- Arth Ganga will also involve **Livelihood Generation Opportunities**, by **creating haats where people can sell local products, medicinal plants and Ayurveda.**
- The fourth is to **increase public participation** by increasing synergies between the stakeholders involved with the river.
- The model also wants to **promote the cultural heritage and tourism of Ganga** and its surroundings, through boat tourism, adventure sports, and by conducting yoga activities.
- Lastly, the model seeks to promote institutional building by **empowering local administration for improved water governance.**

3. Polygamy in India

Why in News?

Recently, the Chief Minister of Assam has said that the state government will move to ban the practice of Polygamy through **"Legislative Action",** and that an **"Expert committee" would be formed to examine the issue.**

What is Polygamy?
About:
- Polygamy comes from two words: **"poly,"** which means **"many,"** and **"gamos,"** which means **"marriage**." As a result, polygamy **relates to marriages that are several.**
- Thus, polygamy is marriage in which **a spouse of either sex may have more than one mate** at the same time.
- **Traditionally, polygamy** — mainly the situation of a **man having more than one wife** — was practiced widely in India. The **Hindu Marriage Act, 1955 outlawed** the practice.
- The **Special Marriage Act (SMA), 1954** allows individuals to perform **inter-religious marriages**, but **it forbids polygamy.** The Act has been used by **many Muslim women to help them stop practicing polygamy.**

Types:
a. **Polygyny:**
- It is the matrimonial structure in which a **male individual has numerous wives.** Polygamy in this form is more common or widespread.
- Monarchs and emperors in the **Indus Valley Civilisation** were believed to have several wives.
b. **Polyandry:**
- It is a type of marriage in which a **female has several husbands.**
- Nevertheless, this can be an extremely uncommon occurrence.
c. **Bigamy:**
- When one is already married additionally, the marriage continues to be valid, then married with someone else is known as bigamy plus the **person committing this will be called bigamist.**
- It is considered a criminal offense in many countries, including India. In other words, it is the **act of entering into a marriage with someone else while still being in a valid marriage** with another person.
Prevalence in India:
- The **National Family Health Survey-5 (2019-20)** showed the **prevalence of polygamy was 2.1% among Christians, 1.9% among Muslims, 1.3% among Hindus**, and 1.6% among other religious groups.
- The data showed that the highest prevalence of polygynous marriages was in the **North-eastern states with tribal populations.**
- A list of 40 districts with the highest polygyny rates was dominated by those with high tribal populations.

What are the Various Religious Laws Pertaining to Marriage in India?

i.   **Hindus:**
o   The Hindu Marriage Act, which came into **effect in 1955,** made it clear that **Hindu polygamy would be abolished and criminalized.**
o   Under **Section 11 Act**, which states that polygamous marriages are void, the **Act cautiously mandates monogamous relationships.**
o   When someone performs it, they are punished under **Section 17** of the very same Act, as well as Sections **494 and 495 of the Indian Penal Code, 1860.**
●   Because **Buddhists**, **Jains**, and **Sikhs** are all considered Hindus and do not have their own laws, the provisions in the Hindu Marriage Act apply to these **three religious denominations as well.**

ii.   **Parsi:**
o   The **Parsi Marriage and Divorce Act, 1936, had already outlawed bigamy.**
o   Any Parsi, who has been married during his or her life, is subject to the penalties provided for by the India Penal Code for an offence to return to marriage during the lifetime of a Parsi or not, without being legally divorced by a wife or husband or having his or her previous marriage declared invalid or dissolved.

iii.   **Muslims:**
o   The clauses under the **'Muslim Personal Law Application Act (Shariat) of 1937**, as construed by the All India Muslim Personal Law Board, apply to Muslims in India.
o   Polygamy is **not prohibited in Muslim legislation** because it is recognised as a **religious practice,** hence they tend to preserve and practice it.
o   It is, nevertheless, clear that if this **method is determined to violate the constitution's basic rights**, it can be overturned.
●   When there is a disagreement between the Indian Penal Code and personal laws, the **personal laws are implemented since it is a legal principle that a specific law supersedes the general law.**

What are the Judicial Perspectives Related to Polygamy?
▪   **Parayankandiyal v. K. Devi & Others (1996):**
o   The **Supreme Court (SC)** concluded that **monogamous relationships** were the **standard and ideology of Hindu society,** which scorned and condemned a second marriage.
o   Polygamy was not allowed to become a part of Hindu culture due to the influence of religion.
▪   **State of Bombay v. Narasu Appa Mali (1951):**
o   The Bombay High Court ruled that the **Bombay (Prevention of Hindu Bigamy Marriage) Act, 1946 was not discriminatory.**
o   The SC ruled that a state legislature has the authority to enact measures for public welfare and reforms, even if it **violates the Hindu religion or custom.**
▪   **Javed & Others v. State of Haryana & Others (2003):**
o   The SC decided that under Article 25 freedom is **subjected to social harmony, dignity, and wellness.**
o   **Muslim law allows for the marriage of four women**, but it is not compulsory.
o   This will not be violating religious practice to not marry four women.

What is the Impact of Polygamy on Indian Society and the Constitutional Standpoint?
●   Polygamy has a significant impact on **Indian society and has been debated for its validity from a constitutional standpoint**, particularly in relation to religions such as Islam and Hinduism.
●   India is a secular state, where **no religion is considered superior or subordinate to another, and each religion** is treated equally under the law.
●   The Indian Constitution guarantees **fundamental rights to all citizens**, and any legislation that conflicts with these rights is deemed unconstitutional.
●   **Article 13 of the Constitution** specifies that any law that contravenes Part III of the Constitution is invalid.

- In **R.C. Cooper v. Union of India (1970)**, the SC observed that the theoretical approach that the component and construct of state intervention ascertain the **severity of the safeguard that an underprivileged group** may purport is incompatible with the constitutional provision, which aims to provide the ordinary citizen with the broadest possible safeguards of his fundamental rights.
- **Article 14 of the Constitution** guarantees equal treatment and protection under the law to every individual within the territory of India.
- The state is prohibited from discriminating against any person based on their religion, ethnicity, gender, or place of birth, **according to Article 15(1)** of the Constitution.

In Which Countries Polygamy Legal?
- **Polygamy is permissible** and legal exclusively for Muslims in nations such as **India, Singapore, as well as Malaysia.**
- Polygamy is still recognised and practiced in nations such as **Algeria, Egypt, and Cameroon.** These are the only areas in the world where polygamy is still legal.

Conclusion
- It is true that **polygamy has existed in Indian society** for a long time, and while it is **now illegal**, it is still practiced in some areas.
- The practice of polygamy is not **unique to any one religion or culture** and has been justified in the past for various reasons.
- However, as society has evolved, the **justifications for polygamy are no longer valid, and the practice should be abandoned.**

4. Cyclone Mocha

Why in News?

Cyclone Mocha that made landfall recently in Myanmar has been categorized as an **Extremely Severe Cyclonic Storm** by the **IMD (Indian Meteorological Department)** and as a **'Super Cyclone' by global weather website Zoom Earth.**
- It became the **strongest cyclone on earth** so far in 2023 according **to Typhoon Research Center in South Korea's Jeju National University.**
- There have been **16 cyclones** so far this year in **both Northern and Southern Hemispheres.**

What is Mocha?
- **Naming:**
  - Yemen suggested the name **'Mocha', which is supposed to be pronounced as Mokha.**
  - The cyclone has been named after a **Red Sea port city known for its coffee production.** The city also gave its name to the popular beverage, café Mocha.

Origin:
- It originated in the **Bay of Bengal.**
- **Intensity:**

With a **recorded wind speed of 277 kmph**, Mocha became the strongest cyclone for all seasons in both **Arabian Sea and Bay of Bengal,** since 1982, in the North Indian Ocean, tying with **Cyclone Fani in terms of speed and intensity**
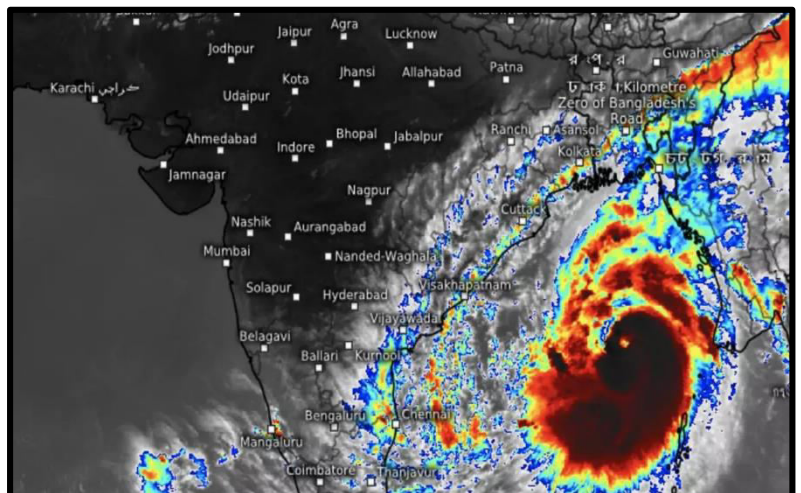
- **Amphan,** witnessed in 2020, was 268 kmph while **Tauktae** in 2021 it was 222 kmph and Gonu in 2007 recorded a speed of 268 kmph.

What is a Cyclone?
About:
- Cyclones are **rapid inward air circulation around a low-pressure area.** The air circulates in an **anticlockwise direction in the Northern hemisphere** and clockwise in the Southern hemisphere.
- Cyclones are usually **accompanied by violent storms** and bad weather.
- The word Cyclone is derived from the **Greek word Cyclos meaning the coils of a snake.** It was coined by **Henry Peddington** because the tropical storms in the Bay of Bengal and the Arabian Sea appear like coiled serpents of the sea.

Types:
- **Tropical Cyclones:** The **World Meteorological Organisation** (WMO) uses the term 'Tropical Cyclone' to cover weather systems in which **winds exceed 'Gale Force' (minimum of 63 km per hour).**
- Tropical cyclones develop in the **region between the Tropics of Capricorn and Cancer.**
- **Extra Tropical cyclones:** They are also called **Temperate cyclones or middle latitude cyclones or Frontal cyclones or Wave Cyclones.**
- They occur in **temperate zones and high latitude regions,** though they are known to originate in the Polar Regions.

What are Tropical Cyclones?
About:
- A **tropical cyclone** is an **intense circular storm** that originates over warm tropical oceans and is **characterized by low atmospheric pressure, high winds, and heavy rain.**
- A **characteristic feature of tropical cyclones is the eye,** a central region of clear skies, warm temperatures, and low atmospheric pressure.

- Storms of this type are called **hurricanes in the North Atlantic and eastern Pacific and typhoons in South-east Asia and China.** They are called tropical **cyclones in the southwest Pacific and Indian Ocean** region and **Willy-willies in north-western Australia.**
- Storms **rotate counter clockwise in the northern hemisphere** and clockwise in the southern hemisphere.

Conditions for Formation:
The **conditions favourable** for the formation and intensification of tropical storms are:
- Large sea surface with **temperature higher than 27° C.**
- Presence of the **Coriolis force.**
- Small variations in the vertical wind speed.
- A **pre-existing weak low- pressure area** or low-level-cyclonic circulation.
- Upper divergence above the sea level system.

How are Low-Pressure Systems Classified based on their Intensity?
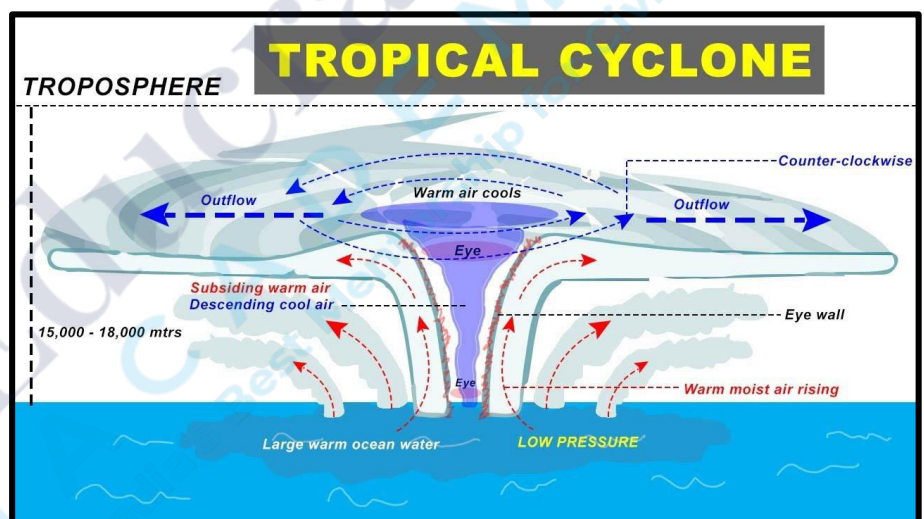
The IMD has developed criteria for **classifying low-pressure systems in the Bay of Bengal and the Arabian Sea** based on their potential for causing damage which have been adopted by the WMO.

Type of Disturbances	Wind Speed in Km/h	Wind Speed in Knots
Low Pressure	Less than 31	Less than 17
Depression	31-49	17-27
Deep Depression	49-61	27-33
Cyclonic Storm	61-88	33-47
Severe Cyclonic Storm	88-117	47-63
Super Cyclone	More than 221	More than 120

Note: 1 knot - 1.85 km per hour

How are Names of Cyclones Decided?
- Cyclones that form in every ocean basin across the world are named by the regional **specialised meteorological centres (RSMCs)** and **Tropical Cyclone Warning Centres (TCWCs).**
- There are **six RSMCs in the world**, including the **India Meteorological Department (IMD), and five TCWCs**.
- In **2000, a group of nations called WMO/ESCAP** (World Meteorological Organisation/United Nations Economic and Social Commission for Asia and the Pacific), which comprised Bangladesh, India, the Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand, decided **to start naming cyclones in the region.**
- After each country sent in suggestions, the **WMO/ESCAP Panel on Tropical Cyclones (PTC) finalised the list.**
- The WMO/ESCAP **expanded to include five more countries in 2018 — Iran, Qatar, Saudi Arabia, United Arab Emirates and Yemen.**

What is the Occurrence of Cyclones in India?
- India has a **bi-annual cyclone season** that occurs between **March to May and October to December.** But on rare occasions, cyclones do **occur in June and September months.**
- Typically, **tropical cyclones in the North Indian Ocean region** (Bay of Bengal and Arabian Sea) develop during the **pre-monsoon (April to June)** and **post-monsoon (October to December) periods.**
- **May-June and October-November** are known to produce **cyclones of severe intensity** that affect the Indian coasts.

5. 6th Indian Ocean Conference

Why in News?
Improving and enhancing connectivity in the **Indian Ocean region** emerged as a top priority during the **6th Indian Ocean Conference held in Dhaka, Bangladesh.**

▪ The conference, with the theme **"Peace Prosperity and Partnership for a Resilient Future,"** brought together delegates from over 25 countries to discuss ways to promote **economic development while maintaining peace and stability in the region.**

India's Presence in the Indian Ocean

What are the Major Highlights of the Conference?
- **Connectivity**: India, being a significant player in the **Indian Ocean region**, faces distinct challenges in achieving enhanced connectivity.
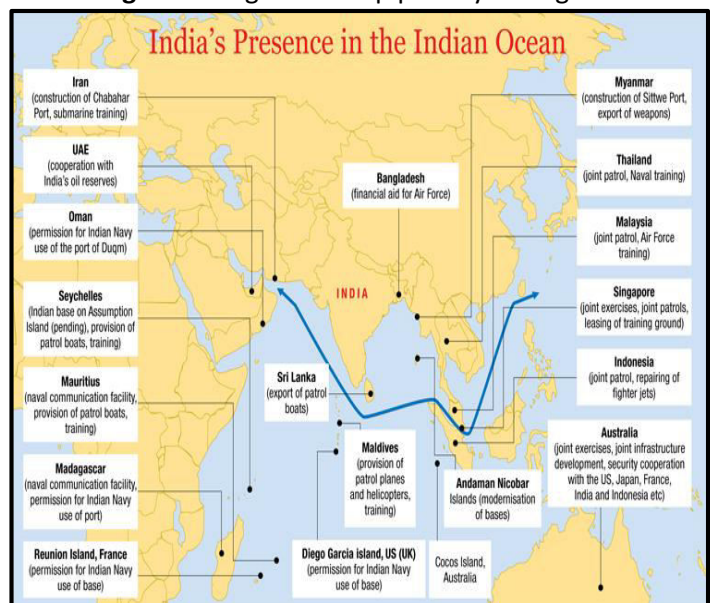
- **Establishing a land connection with Southeast Asia** poses unique difficulties for India**. Despite the challenges, there is a call for collective efforts to overcome obstacles and improve connectivity,**
- The Indian Foreign Minister emphasized the potential game-changing impact of establishing an effective and efficient connectivity with the **Association of Southeast Asian Nations (ASEAN).**
- India also aspires to develop **multi-model connectivity to the Gulf and Central Asia**
- To **tackle the connectivity challenges and promote regional development**, countries in the Indian Ocean region need to embrace cooperation and adopt a **long-term perspective:**
- Examples like the **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)** demonstrate the significance of deeper cooperation and shared efforts.
- **Upholding Legal Obligations and Agreements:** Disregarding legal obligations or violating long-standing agreements can **undermine trust and confidence among member nations**. Taking a long-term view of cooperation is essential to ensure sustained progress.
- Adherence to international law, norms, and rules is vital for building a stable international order.
- **Sustainable Projects and Debt:** Unsustainable debt generated by unviable projects is a concern for countries in the region. **(Example-Sri Lanka).**
- **Encouraging transparent lending practices** and considering market realities are necessary to avoid future complications.
- **Shared Responsibility and Focus:** The Indian Ocean region requires shared responsibility and focused efforts to ensure its stability and prosperity:
- **Ensuring maritime security is a collective responsibility** that should not be compromised for individual dominance. Practical action is needed, complementing diplomatic positions.
- The conference also highlighted the **importance of climate action and counter-terrorism initiatives**. Nations must also address the threats posed by **extremism and fundamentalism, safeguarding their social fabrics.**

What is Indian Ocean Conference?
- Indian Ocean Conference is a **flagship consultative forum of the Indian Ocean countries** to deliberate upon the prospects of regional cooperation for **Security and Growth for All in Region (SAGAR).**
- The **first edition of the Indian Ocean conference was held in Singapore in 2016** and fifth in 2021 in Abu Dhabi, United Arab Emirates.

What are the Major Challenges Related to the Indian Ocean Region?
- **Geopolitical Competition**: The **Indian Ocean region is a hotspot for geopolitical competition** among **major powers and regional actors. The** competition involves **strategic interests, influence, and access to resources, leading to tensions and potential conflicts.**
- The **Indian Ocean** occupies a central position between the major global powers, including **India, China, the United States**, and countries of the Middle East and Africa.
- Its location allows for power projection and influence over regional affairs. The presence of key chokepoints such as the **Strait of Hormuz, the Bab el-Mandeb Strait, and the Malacca Strait** further enhances its strategic significance.
- **China's Militarization Move:** China has been a **challenge to India's interests and stability in the Indian Ocean.**
- India's neighbours are receiving **military and infrastructural assistance from China,** including **submarines for Myanmar, frigates for Sri Lanka, and its overseas military base in Djibouti (Horn of Africa).**
- Also, **China has a hold over Hambantota port (Sri Lanka)**, which is just a few hundred miles off the shores of India.
- **Maritime Security Threats:** The IOR is vulnerable to various maritime security threats, **including piracy, smuggling, illegal fishing, and terrorism.**
- Also, the vastness of the Indian Ocean makes it challenging to **monitor and secure its maritime domain effectively.**

- **Environmental Challenges: Climate change, rising sea levels, coral reef degradation, and marine pollution** are significant environmental challenges in the IOR.
- These issues affect **coastal communities, marine ecosystems,** and the livelihoods of millions of people.

Way Forward
- **Driving Blue Economy Initiatives**: The IOR is rich in marine resources, and leveraging the blue economy can drive sustainable economic growth. There is a need to include **promoting renewable energy generation** from ocean resources, supporting sustainable fisheries, **developing marine biotechnology, and fostering eco-tourism.**
- **Maritime Security Collaboration:** Given the strategic importance of the IOR, **enhancing maritime security is crucial.**
- There is a need to involve **strengthening information-sharing mechanisms, leveraging technology for maritime domain awareness, promoting joint naval exercises and patrols,** and fostering cooperation in countering maritime threats such as **piracy, illegal fishing, and smuggling.**
- **Climate Change Resilience:** The IOR is highly vulnerable to the impacts of climate change, including rising sea levels, extreme weather events, and ocean acidification. Innovative strategies could focus on **implementing climate-resilient infrastructure, developing early warning systems**, promoting **sustainable coastal management practices,** and facilitating **regional cooperation for climate change adaptation and mitigation.**

6. Sengol to be installed in New Parliament Building

Why in News?
On **May 28th 2023**, the Prime Minister will inaugurate the **new Parliament building,** which is part of the **Central Vista redevelopment project.**
- One of the highlights of the event will be the installation of a **historic golden sceptre, called Sengol, near the Speaker's seat.**
- The Sengol is a **symbol of India's independence and sovereignty**, as well as its **cultural heritage and diversity.**

What is the Historical Significance of Sengol?
- The **Sengol** is profound in meaning, derived from the Tamil word **"Semmai",** it means **"Righteousness".** It was made of **gold or silver** and was often decorated with precious stones.
- A Sengol sceptre was carried by **emperors on ceremonial occasions, and used to represent their authority.**
- It is **associated with the Chola Empire**, one of the longest-ruling and **most influential dynasties in South India.**
- The Cholas ruled over parts of **Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Telangana, Odisha, and Sri Lanka** from the 9th to 13th century CE.
- They were known for their **military prowess, maritime trade, administrative efficiency, cultural patronage, and temple architecture.**
- The Cholas had a tradition of **handing over the Sengol sceptre from one king to another as a mark of succession and legitimacy.**
- The ceremony was usually performed by a **high priest or a guru who blessed the new king and conferred him with the Sengol.**

How did Sengol Become a Part of India's Independence?
- **Before independence from the British rule in 1947,** the then Viceroy - Lord Mountbatten posed a question to the to-be Prime Minister Jawaharlal Nehru: **"What is the ceremony that should be followed to symbolise the transfer of power from British to Indian hands?"**
- PM Nehru then consulted **C. Rajagopalachari,** commonly known as Rajaji, who went on to **become the last Governor-General of India.**

- Rajaji suggested that the **Chola model of handing over the Sengol sceptre could be adopted as a suitable ceremony for India's independence.**
- He said that it would reflect **India's ancient civilisation and culture,** as well as its **unity in diversity.**
- The Sengol sceptre was presented to **PM Nehru by Thiruvavaduthurai Adheenam (a 500-year-old Saivaite monastery) on August 14, 1947.**
- A golden sceptre was crafted by **Vummidi Bangaru Chetty,** a famous jeweller in Madras (now Chennai).
- The **Nandi,** with its unyielding gaze as the beholder of **"Nyaya", is hand-carved at the top.**

Where is Sengol Now and Why is it Being Installed in the New Parliament Building?

- After receiving the **Sengol sceptre in 1947**, Nehru kept it at his residence in Delhi for some time.
- He then decided to donate it to **Anand Bhavan Museum in Allahabad (now Prayagraj),** his ancestral home.
- The museum was established by his **father Motilal Nehru in 1930** to preserve the history and legacy of India's freedom movement.
- The Sengol sceptre **remained at Anand Bhavan Museum for over seven decades.**
- In **2021-22,** when the **Central Vista redevelopment project was underway,** the government decided to **revive this historical event and install the Sengol sceptre in the new Parliament building.**
- It will be placed near the Speaker's seat in the new Parliament building and will be accompanied by a **plaque that will explain its history and meaning.**
- The installation of Sengol in the new Parliament building is not just a **symbolic gesture but also a meaningful message.**
- It signifies that **India's democracy is rooted in its ancient traditions and values** and that it is **inclusive and respectful of its diversity and plurality.**

What is the Central Vista Redevelopment Project?

- The **Central Vista Redevelopment Project** is a project that **aims to revamp the Central Vista**, India's central administrative area located near Raisina Hill, New Delhi.
- The area was originally designed by **Sir Edwin Lutyens and Sir Herbert Baker** during British colonial rule and was retained by Government of India after independence.
- In **Union Budget 2022-23**, the **Ministry of Housing and Urban Affairs** was allocated an amount of **Rs 2,600 crore for the construction of non-residential office buildings of the ambitious Central Vista project, including the Parliament as well as the Supreme Court of India.**

7. Census

Why in News?

The **2021 Census in India** had to be postponed for **the first time in the past 150 years** due to the **Covid-19 pandemic**. Despite the pandemic ending and the return to normalcy, the Census is still pending.

- It was initially proposed to be **an entirely digital exercise**, with all the information being fed into a mobile app by the enumerators. However, owing to **'practical difficulties', it was later decided to conduct it in 'mix mode',** using either the mobile app or the traditional paper forms.

Note: According to the State of **World Population report 2023** released recently by the **UN Population Fund (UNFPA)**, India will overtake China to become the world's most populous country by the middle of 2023.

What is the Census?

Definition:

- **Population Census** is the total process of **collecting, compiling, analyzing and disseminating demographic, economic and social data pertainin**g, **at a specific time, of all persons in a country or a well-defined** part of a country.
- Census is the basis for **reviewing the country's progress in the past decade,** monitoring the ongoing schemes of the government and plan for the future.
- It **provides an instantaneous photographic picture of a community**, which is valid at a particular moment of time.

Phases: The Census Operations in India are carried out in two phases:

- **Houselisting/Housing Census** under which details of all buildings, **permanent or temporary**, are noted with their type, amenities, and assets.
- **Population Enumeration** where more detailed information on each individual residing in the country, Indian national or otherwise is noted.
- It is carried out after making a list of all households that are surveyed.

Frequency:

- The **first synchronous census was taken in 1881, by W.C. Plowden**, Census Commissioner of India. Since then, **censuses have been undertaken uninterruptedly once every ten years.**
- The **Census of India Act of 1948** provides the legal framework for carrying out the Census however, **it does not mention its timing or periodicity.**
- Hence, a Census is **constitutionally mandated in India but there is no Constitutional or legal requirement** that it needs to be conducted decennially.
- The 10-year frequency is followed in many countries (Ex. the US and the UK) but some countries like **Australia, Canada, Japan conduct it every five years.**
- **Nodal Ministry:**
- The decennial Census is conducted by the **Office of the Registrar General and Census Commissioner**, Ministry of Home Affairs.
- Until 1951, the Census Organisation was set up on an **ad-hoc basis for each Census.**

What is the Significance of Census?

- **Primary and Authentic Data:** It generates primary and authentic data that **forms the foundation of various statistical analyses.** This data is essential for **planning, decision-making, and development initiatives in various sectors, such as administration, economy, and social welfare.** It is **not the legal requirement but the utility of the Census** that has made it a permanent regular exercise. **Reliable and up-to-date data is vital** as it influences the accuracy of indicators used in different aspects of India's progress.
- **Demarcation:** Census data is utilized for **demarcation of constituencies** and allocation of representation in government bodies. It plays a crucial role in determining the number of **seats to be reserved for Scheduled Castes (SCs) and Scheduled Tribes (STs)** in Parliament, State legislatures, local bodies, and government services.
- In the case of panchayats and municipal bodies, the **reservation of seats for SCs and STs is based on their proportion in the population.**
- This ensures proportional representation and **promotes inclusivity in the political and** administrative systems.
- **Better Access for Businesses:** The census data is also important for **business houses and industries** for strengthening and planning their business for penetration into areas, which had hitherto remained, uncovered.
- **Giving Grants:** The **Finance Commission** provide grants to the states on the basis of population figures available from the Census data.

What can be the Consequences of Delaying Census?

- **Challenges in Framing Policy:** A break in the Census periodicity can result in data that is not comparable to previous sets, creating **challenges in analyzing trends and making informed policy** decisions.
- **Lack of reliable data** – 12-year-old data on a constantly changing metric is not reliable – has the **potential to upset every indicator on India** and affect the efficacy and efficiency of all kinds of developmental initiatives.
- **Political Misrepresentation:** Delaying the Census has consequences for the reservation of seats for SCs and STs in various governing bodies. The data from the 2011 Census **would continue to be used**, which may **result in inaccurate seat reservations.** This is particularly problematic in **towns and panchayats where there have been significant changes** in population composition over the last decade.
- **Unreliable Estimates on Welfare Measures:** The delay will **impact government schemes and programmes**, and would result in **unreliable estimates from other surveys** on consumption, health and employment, which depend on census data to determine policy and welfare measures.
- As many as 100 million people are likely to be excluded from the government's food subsidy programme— the **Public Distribution System (PDS)**—as the population figures used to calculate the number of beneficiaries are from the 2011 census.
- **Impact on Houselisting:** Houselisting takes nearly a year to complete, **as it requires enumerators to locate addresses and gather relevant information.** In India, houselisting is particularly crucial because the country lacks a robust address system. Delaying the census means that the **list becomes outdated, as changes in households, addresses, and demographics occur** over time. This can result in **incomplete or incorrect information, leading to a less reliable foundation** for subsequent population enumeration and data collection
- **Lack of Migration Data:** The outdated 2011 Census data couldn't provide answers to important questions regarding the numbers, causes, and patterns of migration.
- During the Covid lockdown, the sight of migrant workers leaving cities and walking back to **their villages highlighted their challenges.** The government lacked information on **the stranded migrants and their requirements for food relief and transportation** support.
- The upcoming Census is expected to capture the scale of migration towards smaller towns in addition to major cities, shedding light on healthcare and social service needs specific to migrants.
- This data can help in identifying the necessary support and services required by migrants and their locations.

Way Forward
- The government should prioritize conducting the Census at the **earliest possible time.**
- Efforts should be made to **leverage technology and innovative methods to streamline the data collection** process.
- The government should allocate necessary resources and manpower to ensure a smooth and **efficient Census operation.**
- Timely completion of the Census is crucial for **accurate data, informed policy decisions, effective governance,** and inclusive development in various sectors.

8. World Menstrual Hygiene Day

Why in News?
Recently, on the occasion of **World Menstrual Hygiene Day, Child Rights and You (CRY)** an NGO released the findings of a study conducted to assess the **awareness and knowledge of menstrual hygiene and health among adolescent girls in India.**
The study conducted for two months with the participation of nearly 4,000 girls aged 10-17 years from 38 districts across the country, sheds light on the **perceptions, practices, and challenges faced by young girls regarding menstruation.**

What is World Menstrual Hygiene Day?
About:

- World Menstrual Hygiene Day, also known as **Menstrual Hygiene Day,** is an annual global advocacy day **celebrated on May 28th.**
- The day aims to **raise awareness and promote good menstrual hygiene management (MHM) practices worldwide.**

Reason for May 28th:
- Menstrual Hygiene Day is observed on the 28th day of the fifth month.
- Represents the **average length of the menstrual cycle**, which is often around 28 days.
- Symbolizes the **average duration of menstruation**, which lasts **around five days each month.**

History:
- Started in 2013 by **Germany-based NGO WASH United.**
- Initially launched as a **28-day social media campaign** to raise awareness about menstruation.
- Positive response led to the **establishment of Menstrual Hygiene Day on May 28, 2014.**

Theme:
- Theme for 2023: **"Making menstruation a normal fact of life by 2030."**

Significance:
- Highlights the **importance of menstrual hygiene** for the well-being and dignity of individuals who menstruate.
- Promotes **proper menstrual hygiene practices**:
- Using clean and safe menstrual products.
- Maintaining personal hygiene during menstruation.
- Managing menstrual discomfort effectively.
- **Advocates for improved access to menstrual products**, particularly in low-income communities.
- Encourages knowledge acquisition about bodies, menstrual cycles, and reproductive health.

What are the Key Findings from the Study?
- Close to 12% of young girls believed **menstruation is a curse from God** or caused by disease.
- 4.6% of the **girls had no knowledge about the cause of menstruation.**
- 84% of the girls correctly identified menstruation as a **biological process.**
- 61.4% of the girls acknowledged the existence of societal embarrassment related to periods.
- 44.5% of the girls used **homemade absorbents or cloth instead of sanitary pads.**
- Hesitation or shyness, **difficulty in disposing of pads, poor availability**, and lack of knowledge were reasons for not using sanitary pads.
- The girls received information about menstruation from their mothers, female friends and elder sisters.

What are the Challenges Faced by Young Girls Regarding Menstruation?
- Lack of knowledge and awareness about menstruation.
- **Social stigma** and **taboos surrounding menstruation.**
- Limited access to **sanitary products and proper menstrual hygiene resources.**
- Financial constraints to **afford sanitary pads or other menstrual products**.
- Inadequate **sanitation facilities, especially in schools and public places.**
- **Lack of privacy and suitable disposal methods** for used sanitary products.
- Unequal access to **menstrual health education and support.**
- Peer pressure and embarrassment related to discussing menstruation.
- **Absence of open dialogue and support** from family members and community.
- **Disruption of daily activities** and **restrictions on participation** due to menstrual discomfort or pain.

What are India's Initiatives for Menstrual Hygiene?

- The **Menstrual Hygiene Scheme**, launched in 2011 by the **Ministry of Health and Family Welfare**, aims to **promote menstrual hygiene among adolescent girls in rural areas.**
- **Swachh Bharat guidelines** in 2015 included **menstrual hygiene management (MHM) in schools**, providing sanitary pads, vending, and disposal mechanisms, and exclusive washrooms for girl students.
- **MHM was released by the Ministry of Drinking Water and Sanitation.**
- Department of Pharmaceuticals under Ministry of Chemicals and Fertilizers implements the **Pradhan Mantri Bharatiya Janausadhi Pariyojna (PMBJP)**, an important step in ensuring the **health security for women.**
- Under the project, over 8700 **Janaushidhi Kendras** have been set up across the country that provides **Oxo-biodegradable sanitary napkins named Suvidha at Rs. 1/- per pad only.**
- Supreme Court of India called for a **uniform national policy in 2022 to ensure menstrual hygiene** in schools, aiming to provide sanitary pads, vending and disposal mechanisms, and exclusive washrooms for girl students.
- Various states have their own schemes to distribute subsidised or free sanitary napkins to adolescent girls, such as **Asmita Yojana (Maharashtra), Udaan (Rajasthan), Swechcha (Andhra Pradesh), She Pad (Kerala), and Khusi (Odisha).**
- Kerala and Karnataka governments have been distributing **menstrual cups as a sustainable alternative to sanitary napkins.**

Way Forward

- **Comprehensive Menstrual Health Education:** Implement engaging and interactive workshops in schools to **educate girls about menstrual hygiene, debunk myths, and promote positive attitudes.**
- Incorporate menstrual health education into the curriculum, covering topics like **menstrual cycles, hygiene practices, and emotional well-being.**
- **Accessible and Affordable Menstrual Products:** Advocate for **subsidies or free distribution of sanitary pads** in schools, community centers, and public spaces to ensure accessibility for all girls. Encourage innovative solutions such as **reusable menstrual products or eco-friendly alternatives to address affordability and environmental concerns.**
- **Sanitation Facilities:** Raise funds or seek partnerships to **install sanitary pad vending machines** or **dispensers in public spaces** for easy access to menstrual products.
- **Engaging Male Allies:** Conduct workshops and **awareness programs for boys and men** to foster empathy and **understanding about menstruation, reducing stigma and promoting supportive attitudes.**
- **Sports and Physical Activities:** Promote physical activities, sports, and yoga as means to **alleviate menstrual discomfort and improve overall well-being**, breaking the stereotype that **menstruation restricts girls' participation.**

1. National Medical Device Policy 2023

Why in News?

Recently, the Union Cabinet has approved the **National Medical Devices (NMD) Policy, 2023.**

Policy lays down a **roadmap for accelerated growth of the medical devices sector** to achieve the following missions viz, **Access & Universality,** Affordability, Quality, **Patient Centred & Quality Care,** Preventive & Promotive Health, Security, Research and Innovation and Skilled manpower.

What are the Key Features of NMD Policy 2023?

- **Regulatory Streamlining:** To make it easier to do research and business while balancing patient safety and product innovation, a **"Single Window Clearance System" for licensing medical devices will be created**.
- This system will involve all relevant departments and organizations, such as **MeitY (Ministry of Electronics and Information Technology), and DAHD (Department of Animal Husbandry & Dairying).**
- **Enabling Infrastructure:** Large medical device parks with world-class infrastructure facilities will be established, near economic zones.
- It will be done as envisioned under the **National Industrial Corridor Program** and the proposed **National Logistics Policy 2021** under the ambit of **PM Gati Shakti**, and in collaboration with state governments and the industry, to improve convergence and integration with the medical device industry.
- **Facilitating R&D and Innovation**: The policy aims to promote Research & Development in India, complementing the proposed **National Policy on R&D and Innovation in the Pharma-MedTech sector.**
- It also **aims at establishing Centres of Excellence in academic and research institutions**, innovation hubs, 'plug and play' infrastructures and support to start-ups.
- **Attracting Investments:** The policy encourages private investment and **Public-Private Partnerships (PPP)** to complement existing schemes such as **Make in India**, **Ayushman Bharat program**, **Heal-in-India, and Start-up mission.**
- This includes funding from **venture capitalists** to support the growth of the medical device industry.
- **Human Resources Development:** The policy aims to ensure a **skilled workforce in the medical device sector** by providing skilling, reskilling and upskilling programs through the Ministry of Skill Development and Entrepreneurship.
- It will also support dedicated courses for medical devices in existing institutions to produce skilled manpower for futuristic technologies, manufacturing and research.
- **Brand Positioning and Awareness Creation:** The policy envisages the creation of a **dedicated Export Promotion Council** for the sector which will be an enabler to deal with various market access issues.

What is the Significance of the Policy?

- The policy is expected to provide the required support and directions to strengthen the **medical devices industry into a competitive, self-reliant, resilient and innovative industry** that caters to the healthcare needs of not only India but also of the world.
- It can place India's medical devices sector on an accelerated path of growth with a **patient-centric approach** to **meet the evolving healthcare needs of patients.**
- **It envisions an accelerated growth path with a patient-centric approach** and to emerge as the global leader in the manufacturing and innovation of medical devices by achieving 10-12% share in the expanding global market over the next 25 years.
- With the new policy in place, the Centre aims to **reduce India's import dependence to nearly 30%** in the next couple of years; and become **one of the top five global manufacturing hubs.**
- Policy is expected to help the **Medical Devices Sector grow from present USD 11 Bn to USD 50 Bn by 2030.**

What is the Scenario of the Indian Medical Device Sector?
About:
o The **medical devices sector in India is a sunrise sector**, growing at a fast pace and essential component of the healthcare industry.
o Its importance was highlighted during the Covid-19 pandemic when India produced **medical devices and diagnostic kits like ventilators**, **RT-PCR** kits, and PPE kits on a large scale.
o **It is a multi-product sector, with the following broad classifications:**
- Electronics Equipment
- Implants
- Consumables and Disposables
- In Vitro Diagnostics (IVDs) reagents
- Surgical Instruments
o The Sector has remained largely unregulated till 2017 when Medical Device Rules, 2017 were framed by the **Central Drugs Standard Control Organisation (CDSCO).**

Status:
o **India is the 4th largest Asian medical devices market** after **Japan, China,** and South Korea, and among the **top 20 medical devices markets globally.**
o **India's current market share** in the medical device category is **1.5% of the global space** or $11 billion (that is ₹90,000 crore) in 2020.
- **US dominates** the global market with a 40% market share, followed by **Europe and Japan at 25% and 15%** respectively.

Government Initiatives:
o The **Production Linked Incentive (PLI) scheme** for promoting domestic manufacturing of Medical Devices. NMDP 2023 will be in addition to the existing PLI schemes.
- The GoI India has already initiated implementation of PLI Scheme for medical devices and support for **setting up of four medical devices parks** – one each in **Himachal Pradesh, MP, TN and UP.**
o Promotion of Medical Devices Parks intends to encourage the domestic manufacturing of Medical Devices.
o In June 2021, the **Quality Council of India (QCI)** and the Association of Indian Manufacturers of Medical Devices (AiMeD) launched the **Indian Certification of Medical Devices (ICMED)** 13485 Plus scheme to undertake verification of the quality, safety and efficacy of medical devices.

What are the Issues with the Medical Device Sector in India?
- **Inconsistent Regulations:** The **complex regulatory environment** is one of the most significant challenges faced by the medical device industry. **Manufacturers have to navigate inconsistent regulations that use varying standards and wordings,** making it difficult to understand and comply with the requirements.

- **Research and Development Struggles:** The adoption of cutting-edge technologies such as **artificial intelligence**, **cloud computing**, and **robotics** is still **limited in the Indian medical device sector.** Embracing these technologies could help companies overcome challenges related to R&D, production, and distribution.
- **Import Dependency:** India relies heavily on imports for medical devices, which leads to a high import **bill and adds to the cost of healthcare.** To reduce import dependency, India needs to increase domestic manufacturing of medical devices and encourage innovation in the sector.
- **Limited Access to Capital:** Access to funding is a critical challenge for medical device startups in India, as **investors are often reluctant to invest in a sector with a long gestation period** and regulatory uncertainties.

Way Forward
- Policy makers in India will need to set out an action **plan to reduce the country's dependency on medical devices**/technology imports.
- Medical device companies should develop India as a manufacturing hub for domestic and international markets, undertake India-based innovation in combination with indigenous manufacturing, collaborate across the Make in India and Innovate in India schemes, and produce low to medium technology products to cater to the underpenetrated domestic markets.

2. Freedom of Religion

Why in News?
Recently, the Tamil Nadu (TN) Government has stated that the **Article 25 (Freedom of Religion)** of the Indian Constitution guarantees every citizen the right to propagate his religion, while replying to a petition in the **Supreme Court (SC).**
- The petitioner complained about the **instances of forceful conversion in TN,** violating the **Fundamental Rights.**

What is the Case About?
- The petitioner sought an **NIA (National Investigation Agency)/CBI (Central Bureau of Investigation)** investigation into the "root cause" of the death of a 17-year-old girl in Tamil Nadu amidst a **swirl of accusations that she had been forced to convert to Christianity.** The petition argued that **forcible or deceitful conversion** was a violation of fundamental rights.
- TN Government has replied that the acts of **missionaries to spread Christianity by themselves cannot be seen as illegal,** since the Constitution guarantees every citizen the right to propagate his religion under Article 25.
- However, if their act of spreading their religion is against public order, morality and health and against other provisions of **Part III of the Constitution,** it has to **be viewed seriously.**

What is understood by the Freedom of Religion?
About:
- Every citizen is entitled with this right and liberty **to preach, practice and propagate the religion** of his choice.
- An **opportunity is also provided by this right** to spread it among everyone **without any fear of government intervention.**
- But also, it is expected by the state to practice it amicably within the jurisdiction of the country.

Need:
- India is home to people following different religions and having different faiths. As per the Pew Research Centre 2021 data, **there are 4,641,403 people who follow other religions apart from the six major religions** which are Hinduism, Jainism, Islam, Buddhism, Sikhism, and Christianity.
- So with such a diverse population, following different religions and beliefs, it becomes necessary to **protect and secure rights regarding the faith** of each and every religion.

Secularism:

- The **42nd Constitutional amendment** in 1976 added the word **'secular' to the preamble of the Constitution.** India being a secular state, is a no state religion which means **that it follows no particular religion.**

- In Ahmedabad **St. Xavier's College v. State of Gujarat (1975),** the SC held that Secularism neither means anti-god nor pro-god. It just ensures that no one is differentiated on the basis of religion eliminating the concept of God in matters of the state.

Constitutional Provisions Related to Freedom of Religion:

- **Article 25:** It imparts freedom of conscience and free profession, practice and propagation of religion.
- **Article 26:** It gives freedom to manage religious affairs.
- **Article 27:** It sets freedom as to **payment of taxes for promotion** of any particular religion.
- **Article 28:** It gives freedom as to attendance at religious instruction or religious **worship in certain educational institutions.**

Secularism in India v/s US:

- **India follows the concept of 'neutrality' and 'positive role' towards** religion. The State can introduce **religious reforms, protect minorities** and formulate policies on religious matters.
- **The US follows the principle of 'non-interference' in the matters** of religion. The State **cannot take any action** in religious matters.

What are the Major Judicial Pronouncements on Freedom of Religion

- **Bijoe Emmanuel and Ors. v. State of Kerala (1986):** In this case, three children of Jehovah's Witnesses sect were suspended from the school as they refused to sing the national anthem claiming that it is against the tenets of their faith. The court held that **expulsion is violative of fundamental rights and the right to freedom of religion.**
- **Acharya Jagdishwaranand v. Commissioner of Police, Calcutta (1983):** The Court held that **Ananda Marga is not a separate religion but a religious denomination**. And the performance of **Tandava on public streets is not an essential practice** of Ananda Marga.
- **M. Ismail Faruqui v. Union of India (1994):** The apex court held that the **mosque is not an essential practice of Islam, and a Muslim can offer namaz (prayer) anywhere even in the open.**
- **Raja Birakishore v. State of Orissa (1964.):** The validity of the Jagannath Temple Act, 1954 was challenged as it enacted provisions to manage the affairs of Puri temple on the grounds that it is violating Article 26. The court held that the Act only regulated the secular aspect of seva puja, **therefore, it is not violative of Article 26.**

Note:

- States like **Karnataka, Arunachal Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Odisha, Uttar Pradesh and Uttarakhand** have passed laws restricting **religious conversion.**
- In March 2022, Haryana State Assembly passed the **Haryana Prevention of Unlawful Conversion of Religion Bill, 2022**, against **religious conversion by allurement, coercion or fraudulent means.**
- In August 2022, the Himachal Pradesh government also passed the **Himachal Pradesh Freedom of Religion (Amendment) bill 2022**, seeking to criminalise mass religious conversions.

## 3. Decarbonisation of Steelmaking

Why in News?

Hydrogen is a crucial part of the world's plans to **greenify** its manufacturing and **automobile industries** as a fuel whose production and use **needn't emit carbon.**

- **Hydrogen** can also be used as a reducing agent instead of **carbon monoxide (CO),** which would result in **much lower greenhouse gas emissions.**

What is the Direct Reduction Process by Hydrogen in Steel Making?
Procedure:
- **Direct reduction by hydrogen (DR-H)** in steel making is a process that uses **hydrogen gas** to reduce **iron oxide (Fe_2O_3)** into **metallic iron (Fe)** without the use of a **blast furnace.**
- This method is also known as the **"green route"** for steel production, as it significantly reduces the **carbon emissions** associated with traditional **steelmaking processes.**
- The **Direct Reduction process** typically involves **mixing iron ore pellets or lumps with hydrogen gas** in a reactor vessel at temperatures ranging from **600 to 800°C.**
- The **hydrogen reacts** with the **iron oxide** to form **metallic iron** and **water vapour,** as shown in the following chemical equation:

$$Fe_2O_3 + 3H_2 \rightarrow 2Fe + 3H_2O$$
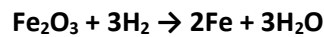
Significance:
- **Lower Carbon Emissions:** Using **Hydrogen as a reducing agent** **produces only water vapour as a by-product** making it a much cleaner alternative to **coal/coke.** This process has the potential to reduce **carbon emissions** by up to **97%.**
- **Energy Efficiency:** The process is more efficient because it **eliminates the need for heating** and melting large quantities of iron ore in a **blast furnace.**
- **Higher Quality Steel:** The direct reduction process produces **high-quality iron** that is purer and has lower levels of impurities, resulting in **higher-quality steel.**
- **Flexibility:** Direct reduction by hydrogen can be used to produce steel from a wide range of iron ores, including those with **lower iron content.**
- **Cost-Effectiveness:** The direct reduction process can be more **cost-effective** than traditional steelmaking methods, especially when **natural gas prices are high.**

What is the Use of Hydrogen in Industries other than Steel Making?
- **Energy Production:** Hydrogen can be used as a fuel for power generation, either through combustion or fuel cells. In fact, **hydrogen fuel cells** are already used in some vehicles and are being explored as a **renewable energy** source for buildings.
- **Chemical Production:** Hydrogen is used as a **feedstock for the production of chemicals** like ammonia, methanol, and other hydrocarbons which are used in various industries (agriculture, transportation, and construction).
- **Electronics:** Hydrogen is used in the **manufacturing of electronic components, such as semiconductors,** and in the production of flat panel displays and **light-emitting diodes (LEDs).**
- **Food Processing:** Hydrogen is used in the food processing industry **as a reducing agent to preserve the quality and appearance** of food products.
- **Medical Applications:** Hydrogen is being **investigated as a potential medical gas with anti-inflammatory and antioxidant properties**. It is also used as a tracer gas in medical diagnostics.

Note:
- The **National Green Hydrogen Mission** is a program to incentivise the commercial production of green hydrogen and make India a net exporter of the fuel.
- The **National Hydrogen Energy Mission (NHEM)** was announced in **Union Budget 2021-22** for promoting the **development and deployment of hydrogen energy technologies** in the country.

What is the Status of Steel Production in India?

- **Production and Consumption:** India is **currently the world's 2ⁿᵈ largest producer** of crude steel (as of 2021) and also the **2ⁿᵈ largest consumer of finished steel in 2021** (preceded in both cases by China).
- **Important Steel-Producing Centers in India: Bhilai** (Chhattisgarh), **Durgapur** (West Bengal), **Burnpur** (West Bengal), **Jamshedpur** (Jharkhand), **Rourkela** (Odisha) and **Bokaro** (Jharkhand).
- **Export:** India is a **significant exporter of steel products,** with major export destinations including the US, the UAE, and Nepal.
- **Government Policies**: The **National Steel policy was launched in 2017 which** projects **crude steel capacity** of **300 million tonnes (MT),** production of **255 MT** and a robust finished steel per capita consumption of **158 Kgs by 2030-31.**

- **Steel Industry and GHG Emissions:**
- According to the **International Energy Agency (IEA),** the **steel industry** is responsible for around **7% of global CO2 emissions,** making it one of the largest industrial emitters of **greenhouse gases.**

- **Pollutants from Steel Industries:**
- **Particulate Matter (PM2.5 and PM 10)**
- **Oxides of Sulphur**
- **Oxides of Nitrogen**
- **Carbon Monoxide (CO)**
- **Carbon Dioxide (CO_2)**
- **Solid Waste**

    Green Steel:
- The Ministry of Steel seeks to reduce CO2 in steel industry through promotion of **Green Steel (manufacturing steel without using fossil fuels).**
- This can be done by using **low-carbon energy sources** such as **hydrogen, coal gasification, or electricity** instead of the traditional **carbon-intensive manufacturing route of coal-fired plants.**
- It **eventually lowers GHG emissions**, cuts cost and improves the quality of steel.

    What are the Challenges Associated with Using Hydrogen in Steel Production?
- **High Capital Costs:** The initial capital costs of building and operating a direct reduction plant are typically higher than traditional steel making methods. This can be a **barrier to entry for smaller steel producers**.
- **Availability of Hydrogen:** The availability and cost of hydrogen can be a challenge, especially if it is produced using fossil fuels. The development of low-cost, **green hydrogen production technologies** will be critical for the widespread adoption of this process.
- **Scale-up Challenges:** Scaling up the direct reduction process can be challenging, especially **when producing large volumes of** steel as it requires careful management of the reactor and the supply of hydrogen gas.
- Also, it **requires a high degree of technical expertise** and process control to ensure the quality and consistency of the iron product.
- **Infrastructure Requirements:** The process requires **specialized infrastructure, including storage and handling facilities for hydrogen gas.** The development of this infrastructure can be **costly and time-consuming.**

    Way Forward
- **Better Investment:** Governments and the private sector should **increase investment in R&D of green hydrogen production technologies** to reduce the cost and increase the availability of hydrogen.
- **Encourage Collaboration:** Collaboration between steel producers, hydrogen producers, and other stakeholders can **help address technical challenges and promote the development of necessary infrastructure.**
- **Policy Support:** Governments can provide policy support through incentives such as **tax credits, grants, and loan guarantees** to encourage the adoption of this technology.

- Also, **developing standards for the production/use of green hydrogen** can help **ensure the quality and consistency of the product, reduce costs, and promote market acceptance.**

4. WTO Needs to Relook at Farm Subsidies

Why in News?

The finance minister of India has urged the **World Trade Organisation (WTO)** to look at the **issue of farm subsidies** with an open mind as it **impacts the food security needs of emerging economie**s in the backdrop of COVID-19 pandemic and the Russia-Ukraine war.

▪ The FM said this while Speaking at the **Asian Development Bank (ADB)** Governor's seminar on 'Policies to support Asia's rebound.

Note:

- The Asian Development Bank (ADB) Governor's Seminar is an **annual event that brings together the Governors of ADB's member countries,** leading policy makers, development experts, etc. to discuss developmental issues in the Asia-Pacific region.
    - **Headquartered in Manila (Philippines), the ADB** is a **regional development bank established in 1966** to promote economic and social development in Asia and the Pacific.
- **The Board of Governors** is ADB's highest policy-making body; comprised of one representative from each member nation.

What are the Subsidies under WTO?

- **Amber Box:**
    - Amber box subsidies are those **that can distort international trade by making a country's products cheaper** in comparison to those of other countries.
- **Examples:** Subsidies for inputs such as **fertilisers, seeds, electricity, irrigation,** and **Minimum Support Price (MSP).**
    - According to the WTO, agriculture's **amber box is used for all domestic support measures** that are deemed to distort production and trade.
- As a result, the trade **agreement requires signatories to commit to reducing trade-distorting domestic supports** that fall into the amber box.
    - Members who do not make these commitments must keep their amber box support within 5-10% of their value of production. **(Di Minimus Clause)**
- **10% for developing countries**
- **5% for developed countries**

- **Blue box:**
    - It is the **"amber box with conditions"** — conditions, designed to reduce distortion.
    - Any support that would normally be in the amber box is placed in the blue box if **it requires farmers to limit production.**
- These subsidies aim to limit production by imposing production quotas or requiring farmers to set aside part of their land.
    - At present there are **no limits on spending on blue box subsidies.**

- **Green Box:**
    - Green Box is domestic support **measures that don't cause trade distortion or at most cause minimal distortion.**
    - The Green box subsidies are **government funded without any price support to crops.**
- They also **include environmental protection and regional development programmes**.

- o "Green box" subsidies are therefore **allowed without limits** (except in certain circumstances).

Why is there a Need to Relook into Subsidy Norms?
- **Unequal Opportunities to Global South**: Ever since the establishment of WTO, there has been a **complaint regarding the export of agricultural goods,** and in general, the viewpoints of the **Global South and emerging markets have not been given equal weight** as those of the developed nations in trade discussions. The **'Global South' largely refers to countries in Asia, Africa and South America.**
- **Issues with Food Subsidy Limit:** There is an **issue with the reference price adopted under global trade norms** - a WTO member country's **food subsidy bill should not breach the limit of 10%** of the value of production based on the reference price of 1986-88. Subsidies for agriculture and poor farmers in developing countries were not counted at all and were frozen by the WTO.
- **Food security is comparatively stronger in developed nations** than in developing countries because of **the unbalanced nature of trade agreements.**
- **Rising Food Insecurity: The challenges on food security posed by the Covid-19** pandemic and **Russia-Ukraine conflict** have once again emphasized to relook the subsidy norms as food and fertilizer security have become more important now.
- **India's Demand:** As part of permanent solution, **India has asked for measures like amendments in the formula** to calculate the food subsidy cap and **inclusion of programmes implemented after 2013** under the ambit of **'Peace Clause'.**

What is the WTO's Peace Clause?
- As an interim measure, the WTO members agreed on a mechanism called the **'Peace Clause'** in **December 2013** and **pledged to negotiate a permanent solution.**
- Under the Peace Clause, WTO members **agreed to refrain from challenging any breach in prescribed ceiling** by a developing nation at the dispute settlement forum of the WTO.
- This clause will stay till a permanent solution is found to the food stockpiling issue.

What is the World Trade Organisation (WTO)?
About:
- WTO is an international organization that **regulates and promotes global trade.**
- It was **established in 1995** and currently has **164 member countries** (including **the European Union**).
- It provides a forum for member countries to **negotiate and enforce trade agreements, resolve disputes, and promote economic growth and development.**
- It's headquartered in **Geneva, Switzerland.**

Origin of WTO:
- The WTO is the successor to the **General Agreement on Tariffs and Trade (GATT)**, which was created in 1947.
- The **Uruguay Round (1986-94)** of the GATT led to the WTO's creation.
- **WTO began operations on 1st January 1995.**
- The Agreement Establishing the WTO, commonly known as the **"Marrakesh Agreement",** was signed in **Marrakesh, Morocco in 1994.**
- **India** was **one of the founding members** of the 1947 GATT and its successor, the WTO.
- Main difference between GATT and WTO was that **GATT mostly dealt with trade in goods, the WTO and its agreements could not only cover goods but also trade in services and other intellectual properties** like trade creations, designs, and inventions.

5. Demand of Meities for ST Status

Why in News?

Recently, the **All-Tribal Students' Union of Manipur (ATSUM)** has carried out a solidarity march in order to oppose the demand of **Meitei Community** be included in the **List of State's Scheduled Tribes (ST).**

- The march broke into **violent clashes after an order from the Manipur High Court,** directing the State to pursue a 10-year-old recommendation to grant ST status to the **non-tribal Meitei community.**

Why does the Meitei Community want ST Status?

- The Meitei community, led by the **Scheduled Tribes Demand Committee of Manipur (STDCM),** has been demanding ST status since 2012, asking to provide them with **constitutional safeguards to preserve their culture, language, and identity.**
- The Meiteis argue that they were **recognised as a tribe before the merger of Manipur with India in 1949 but** lost their identity after the merger in India.
- As a result of being left out of the ST list, the Meitei community **feels marginalized and victimized without any constitutional protections.**
- The STDCM has stated that the Meitein/Meetei have been gradually marginalised in their ancestral land.
- Their population, which was **59% of the total population of Manipur in 1951,** has now been reduced to **44% as per 2011 Census** data.
- They believe that **granting ST status would help preserve their ancestral land, tradition, culture, and language,** and safeguard them against outsiders.

What is the Process of Inclusion under List of STs?

- The process for including a community in the **list of ST follows a set of modalities established in 1999.**
- The respective State or Union Territory government must initiate the proposal for inclusion, which then goes to the **Union Tribal Affairs Ministr**y and subsequently to the **Office of the Registrar General of India (ORGI).**
- If the ORGI approves the inclusion, the proposal is then sent to the **National Commission for Scheduled Tribes, and if they concur, the proposal is forwarded to the Cabinet for amendment to the Constitution (Scheduled Tribes) Order, 1950.**
- In September 2022, the government approved the **inclusion of certain communities in the lists of Scheduled Tribes.** These include:
  - **Binjhia** in Chhattisgarh
  - **Narikoravan** and **Kurivikkaran** in Tamil Nadu
  - **'Betta-Kuruba'** in Karnataka,
  - **Hattis** from Himachal Pradesh
  - **Gond** Community in Uttar Pradesh

Why are Other Tribal Groups in Manipur opposing the Demand of Meiteis?

- **Meitei's already in Majority:** One reason for this is that the **Meitei community is already dominant in terms of population and political** representation, as most of the Assembly constituencies are in the **valley where the Meiteis live.** The ST communities fear that granting ST status to the Meiteis **would result in them losing job opportunities** and other affirmative actions meant for STs.
- **Meitei Culture has Recognition:** Meitei language is already included in the **8th Schedule of the Constitution,** and some sections of the Meitei community are already classified under **Scheduled Castes (SC)** or **Other Backward Classes (OBC),** which **gives them access to certain opportunities.**
- **More Political Influence:** They also think that the demand for ST status is a way for the dominant Meitei community from the valley area to **gain political influence and control over the hill areas of the state by** diverting attention from the political demands of **other tribal groups like the Kukis and Nagas.**
- The Kukis are an ethnic group including multiple tribes originally inhabiting the NE states such as **Manipur, Mizoram and Assam; parts of Burma** (now Myanmar), and **Sylhet district and Chittagong hill tracts of Bangladesh.**

- Wanting to dominate trade and cultural activities in these areas, **Kukis and Nagas often engaged in violent standoffs,** with villages being torched, civilians killed and so on.
- **Eviction of Tribal Groups:** One of the other reasons for the discontent has been the state government's notices since August 2022 claiming that 38 villages in the Churachandpur-Khoupum Protected Forest area are **"illegal settlements"** and its residents are **"encroachers".** Following this, the government set out on an eviction drive which resulted in clashes. Kuki groups have claimed that the **survey and eviction is a violation of Article 371C,** which confers some **administrative autonomy to the tribal-dominated hill areas of Manipur.**

What is the Ethnic Composition of Manipur?
About:

- Meiteis are the largest community in Manipur and there are **34 recognized tribes** broadly classified as **'Any Kuki Tribes'** and **'Any Naga Tribes'.**
- The Imphal valley in the state, at the centre of Manipur, accounts for **about 10% of its landmass and** is home primarily to the **Meitei and Meitei Pangals** who constitute roughly **64.6% 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 **35.4% of the state's population.**

- While a **majority of the Meiteis are Hindus followed by Muslims** (8%), the 33 recognised tribes, broadly classified into **'Any Naga tribes' and 'Any Kuki tribes'** are largely Christians.
- Manipur, along with Dimapur district of Nagaland, was brought under the purview of the **ILP System** in December 2019. **ILP is a special permit obligatorily required by "outsiders" from other regions** of the country to enter the notified states.
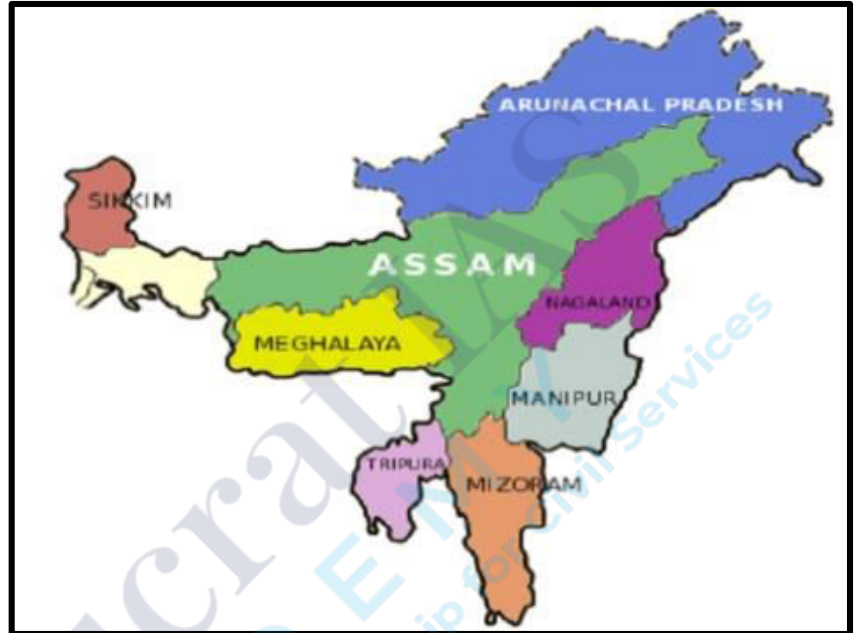
Key Points of Meitei Community:
- The Meitei people are also **known as Manipuri people**.
- Their primary language is the **Meitei language, which is also called Manipuri** and is the **only official language** of Manipur.
- They are predominantly settled in the **Imphal Valley**, although a significant number **reside in other Indian states, such as Assam, Tripura, Nagaland, Meghalaya**, and Mizoram.
- There is also a notable presence of **Meitei in the neighboring countries of Myanmar and Bangladesh.**
- The Meitei people are divided into clans, and members of the **same clan do not intermarry.**

What are the Special Provisions under Article 371?
- **Article 371** of the Constitution provides **"special provisions" for 11 states,** including six states of the Northeast (excluding Tripura and Meghalaya).
- **Articles 369-392** (including some that have been removed) appear in **Part XXI of the Constitution,** titled **'Temporary, Transitional and Special Provisions'.**
- **Article 370** deals with 'Temporary Provisions with respect to the State of Jammu and Kashmir';
- Articles **371 and 371A-371J** define special provisions with regard to another state (or states).
- **Article 371I deals with Goa,** but it does not include any provision that can be deemed 'special'.

Article (Amendment)	For State	Provision
Article 371	Maharashtra and Gujarat	The Governor has "special responsibility" to establish **"separate development boards"** for "**Vidarbha, Marathwada, and the rest of Maharashtra",** and Saurashtra and Kutch in Gujarat.
Article 371A (13th Amendment Act, 1962)	Nagaland	**Parliament cannot legislate in matters of Naga religion** or social practices, **Naga customary law and procedure, administration of civil and criminal justice** involving decisions according to Naga customary law, and ownership and transfer of land without concurrence of the state Assembly.
Article 371B (22nd amendment Act, 1969)	Assam	The President may provide for the **constitution and functions of a committee of the Assembly** consisting of members elected from the state's tribal areas.
Article 371C (27th Amendment Act, 1971)	Manipur	The President may provide for the **constitution of a committee of elected members** from the Hill areas in the Assembly and entrust "special responsibility" to the Governor to ensure its proper functioning.
Article 371D (32nd Amendment Act, 1973; Substituted by The Andhra Pradesh Reorganisation Act, 2014)	Andhra Pradesh and Telangana	The President must ensure **"equitable opportunities and facilities"** in **"public employment** and **education to people from different parts of the state"**. He may require the state government to organise "any class or classes of posts in a civil service of, or any class or classes of civil posts under, the State into different local cadres for different parts of the State". **Article 371E is for Andhra Pradesh but not a special provision.**

Article 371F (36th Amendment Act, 1975)	**Sikkim**	The members of the Legislative Assembly of **Sikkim shall elect the representative of Sikkim in the House of the People**. To protect the rights and interests of various sections of the population of Sikkim, Parliament may provide for the number of seats in the Assembly, which may be filled only by candidates from those sections.
Article 371G (53rd Amendment Act, 1986)	**Mizoram**	**Parliament cannot make laws on "religious or social practices of the Mizos, Mizo customary law and procedure,** administration of civil and criminal justice involving decisions according to **Mizo customary law, ownership and transfer of land**… unless the Assembly… so decide
Article 371H (55th Amendment Act, 1986)	**Arunachal Pradesh**	The **Governor has a special responsibility with regard to law and order,** and "he shall, after consulting the Council of Ministers, exercise his individual judgment as to the action to be taken".
Article 371J (98th Amendment Act, 2012)	**Karnataka**	There is a **provision for a separate development board for the Hyderabad-Karnataka** region. There shall be **"equitable allocation of funds for developmental expenditure over the said region",** and "equitable opportunities and facilities" for people of this region in government jobs and education.

6. River-Cities Alliance Global Seminar

Why in News?
National Mission for Clean Ganga (NMCG) in association with the **National Institute of Urban Affairs (NIUA)** organized the **'River-Cities Alliance (RCA) Global Seminar:** Partnership for Building International River-Sensitive Cities'.

- The purpose of the RCA Global Seminar was to **provide a platform to discuss and learn good practices for managing urban rivers.**
- Previously, a meeting of **RCA - DHARA 2023 (Driving Holistic Action for Urban Rivers)** was held in February 2023, featuring sessions on International best practices and examples for urban River Management.
National Institute of Urban Affairs
- NIUA is an institute for research, **training and information dissemination in urban development and management.** It is located in New Delhi, India.
- It was established in **1976 as an autonomous body under the Societies Registration Act 1860.**

- The Institute **is supported by the Ministry of Housing and Urban Affairs,** Government of India, State Governments, urban and regional development authorities and other agencies concerned with urban issues.

What is RCA?
About:

- The RCA is a **joint initiative of the Ministry of Jal Shakti (MoJS) & the Ministry of Housing and Urban Affairs (MoHUA),** with a vision to connect river cities and focus on sustainable river centric development.
- The Alliance focuses on three broad themes- **Networking, Capacity Building and Technical Support.**
- Beginning with 30 member cities in November 2021, **the Alliance has expanded to 110 river cities** across India and **one international member city from Denmark.**

Objective:

- The RCA intends to facilitate **knowledge exchange (online) for Indian cities** to learn new practices and approaches for urban river management.
- It will also be an opportunity for **international cities to learn about experiences in Indian cities**, which may be relevant to their contexts.

What is the National Mission for Clean Ganga?
About:

- It is being implemented by the **National Council for Rejuvenation, Protection and Management of River Ganga** also known as the **National Ganga Council.**
- This mission was **established on 12th August 2011** under the **Societies Registration Act, 1860** as a registered society.
- It acted as the implementation arm of **National Ganga River Basin Authority (NGRBA)** which was constituted under the provisions of the **Environment (Protection) Act (EPA), 1986.**
- NGRBA has since been dissolved with effect from the 7th of October 2016, consequent to constitution of National Council for Rejuvenation, Protection and **Management of River Ganga (referred as National Ganga Council).**

Objectives:

- The objective of the NMCG is to reduce **pollution and ensure rejuvenation of the Ganga River.**
- The mission incorporates **rehabilitating and boosting the existing STPs (Sewage Treatment Plants)** and instant short-term steps to **curb pollution at exit points on the riverfront** in order to check the inflow of sewage.

Organizational Structure:

- The **Act envisages five tier structure at national, state and district level** to take measures for prevention, control and abatement of environmental pollution in river Ganga as below:
- **National Ganga Council** under chairmanship of Hon'ble Prime Minister of India.
- **Empowered Task Force (ETF)** on river Ganga under chairmanship of Hon'ble Union Minister of Jal Shakti (Department of Water Resources, River Development and Ganga Rejuvenation).
- **National Mission for Clean Ganga** (NMCG).
- **State Ganga Committees**
- **District Ganga Committees** in every specified district abutting river Ganga and its tributaries in the states.

What are the Other Initiatives for River Rejuvenation in India?

- **Namami Gange Programme:** It is an Integrated Conservation Mission, approved as **a 'Flagship Programme' by the Union Government in June 2014** to accomplish the twin objectives of **effective abatement of pollution and conservation and rejuvenation of National River Ganga.**

- **Ganga Action Plan:** It was the first **River Action Plan that was taken up by the Ministry of Environment, Forest and Climate Change in 1985**, to improve the water quality by the interception, diversion, and treatment of domestic sewage.
- **The National River Conservation Plan is an extension to the Ganga Action Plan**. It aims at cleaning the Ganga River under Ganga Action Plan phase-2.
- **National Water Mission (2010)**: It ensures integrated **water resource management leading to water conservation**, less wastage, equitable distribution forming better policies.
- **National River Ganga Basin Authority (NRGBA):** It was formed by the Government of India in the year 2009 under **Section-3 of the Environment Protection Act, 1986.**
- **Ganga was declared as the 'National River' of India in 2008.**
- **Clean Ganga Fund:** In 2014, it was formed for c**leaning up of the Ganga, setting up of waste treatment plants,** and conservation of biotic diversity of the river.
- **Bhuvan-Ganga Web App:** It ensures involvement of the public in **monitoring of pollution entering into the river Ganga.**
- **Ban on Waste Disposal:** In 2017, the **National Green Tribunal** banned the disposal of any waste in the Ganga.

7. Petersberg Climate Dialogue 2023

Why in News?
The **Petersberg Dialogue on Climate Change was hosted in Berlin, Germany** from May 2-3, 2023, by **Germany and the United Arab Emirates**, which is hosting the **28th Conference of Parties (COP28)** to the **United Nations Framework Convention on Climate Change (UNFCCC).**

What is Petersberg Dialogue?
- The Petersberg Climate Dialogue is an **annual high-level political and international forum held before the United Nations Climate Change Conferences (COP).**
- It was initiated in 2010 by former **German Chancellor Angela Merkel**.
- The forum aims to prepare for **successful negotiations at COP climate change conferences.**
- The central goal is to **strengthen trust in multilateral climate negotiations and between states.**
- The dialogue focuses on **climate adaptation, climate finance, and dealing with loss and damage.**

What are the Key Takeaways from the Petersberg Climate Dialogue?
- **Need for Clean Energy Transition: UN Secretary-General** emphasized the need to **"break our fossil fuel addiction and drive decarbonization in every sector"** to achieve a **1.5°C global warming pathway.**
- **Global Renewables Target:** German Foreign Minister initiated discussions around a **potential global target for renewables at the next climate conference.** And stressed the need to make **sharp cuts in greenhouse gas emissions to limit global warming to 1.5°C.**
- **Fossil Fuel Phaseout: COP28** President called for a **tripling of renewable energy capacity by 2030** followed by a **doubling in 2040.** And urged participants to **ramp up renewable energy capacity building** and **focus on phasing out fossil fuel emissions** while phasing up viable, affordable **zero-carbon alternatives.**
- **Status of Climate Finance:** The developed countries are **"on a good track"** to deliver the **USD 100 billion per year** they had promised to mobilize by **2020 during COP15 in 2009.**
- However, a recent estimate pegs climate finance needs at **1 trillion USD annually by 2030** for emerging markets alone, highlighting the urgent need for financial reparations.
- **Urgent Global Financial Systems Transformation:** The need for an urgent global financial systems transformation was underlined so that **crucial climate finance** can be unlocked for the most **climate vulnerable countries in the world.**
- The burden of keeping global temperatures from rising beyond 1.5°C **cannot fall on the poorest countries**, who are **least responsible for the stock of greenhouse gases** in the atmosphere.

- **Global Stocktake:** 2023 is the year for the Global Stocktake, which a**ims to assess whether current efforts will enable us to reach the objectives set out in the Paris Agreement.** The report has been underway for the past two years and is set to be **released in September of 2023**.
- **Union Minister for the Indian Ministry of Environment, Forest and Climate Change**, stated that the outcome of the first Global Stocktake should focus on **how climate change impacts, actions, and responses** have a bearing on the **developmental priorities of developing countries**, including **eradication of poverty.** It should also seek to convey a message on **sustainable lifestyles and sustainable consumption** to inform the next round of **Nationally Determined Contributions** and enhanced international cooperation.

What are the India's Initiatives for Climate Change and Green Energy?
- **National Adaptation Fund for Climate Change (NAFCC):** It was **established in 2015** to meet the **cost of adaptation to climate change** for the State and Union Territories of India that are particularly vulnerable to the adverse effects of climate change.
- **National Clean Energy Fund:** The Fund was **created to promote clean energy**, and funded through an initial **carbon tax** on the use of coal by industries. It **is governed by an Inter-Ministerial Group with the Finance Secretary as the Chairman**. Its mandate is to fund research and development of innovative **clean energy technology** in the fossil and non-fossil fuel-based sectors.
- **National Adaptation Fund:** The fund was **established in 2014** with a corpus of Rs. 100 crores with the **aim of bridging the gap between the need and the available funds**. The fund is operated under the Ministry of Environment, Forests, and Climate Change (MoEF&CC).

8. 6th India-Canada Ministerial Dialogue on Trade and Investment

Why in News?
Recently, the **6th India-Canada Ministerial Dialogue on Trade and Investment (MDTI)** was held in **Ottawa, Canada.**

What are the Major Outcomes of the MDTI?
- **Support for India as G20 Chair:** The Canadian Minister expressed her support for India as the **G20 Chair and its priorities in the G20 Trade and Investment Working Group.** She expressed her intention to participate in **the upcoming G-20 Trade and Investment Ministerial meeting in India** scheduled for August 2023.
- **Enhanced Cooperation:** The Ministers highlighted the importance of cooperation in sectors such as **clean technologies for infrastructure development, critical minerals, electric vehicles and batteries**, renewable energy/hydrogen, and **artificial intelligence (AI).**
- **Critical Mineral Supply Chain Resiliency:** The Ministers emphasised the importance of **government-to-government coordination** to promote **critical mineral supply chain resiliency**.
- They committed to **an annual dialogue at the official level** during the **Prospectors and Developers Association Conference (PDAC)** in Toronto to discuss mutual interests.
- **Canada-India CEO Forum:** The Ministers agreed to **rework and relaunch the Canada-India CEO Forum** with renewed focus and priorities.
- The CEO Forum would serve as a **platform to enhance business-to-business engagement** and could be announced at an agreed-upon early date.
- **Trade Mission and Delegation:** The Canadian Minister announced her leadership of a **Team Canada trade mission to India in October 2023.** This mission **aims to strengthen trade and investment ties**, with a significant business delegation.

What are the Areas of Cooperation between India and Canada?

About:

o India established **diplomatic relations with Canada in 1947**. India and Canada have a long-standing bilateral relationship based on shared democratic values, the **multi-cultural, multi-ethnic and multi religious nature of two societies** and strong people-to-people contacts.

- **Political:**
o India and Canada share **commonalities in Parliamentary structure and procedures.**
o In India, Canada is represented by the **High Commission of Canada** in New Delhi.
- Canada also has **Consulates General in Bengaluru, Chandigarh and Mumbai,** as well as trade offices in **Ahmedabad, Chennai, Hyderabad and Kolkata.**
- **Commerce:**
o India-Canada bilateral trade in goods reached approximately **USD 8.2 billion in 2022,** showing a **25% growth compared to 2021.**
- The **services sector was emphasised as a significant contributor to the bilateral relationship,** with bilateral services trade valued at around **USD 6.6 billion in 2022.**
o **Canadian Pension Funds** have cumulatively invested around **USD 55 billion in India** and are increasingly viewing India as a favourable destination for investments.
o More than **600 Canadian companies have a presence in India and more than 1,000 companies are actively pursuing business in the Indian market.**
- Indian companies in Canada are active in the field such as **Information Technology, software, steel, natural resources and banking sectors.**
o The **India-Canada Free Trade Agreement** is also under negotiation.
- An **Early Progress Trade Agreement (EPTA)** is expected to be signed in **2023 between India and Canada.**
- The agreement will cover a wide range of areas **including goods, services, investment, rules of origin, sanitary and phytosanitary measures, technical barriers to trade, and dispute settlement.**
- **Science and Technology:**
o India's **Atomic Energy Regulatory Board (AERB)** signed an Arrangement with the **Canadian Nuclear Safety Commission (CNSC)** on September 16, 2015 to exchange experiences in **nuclear safety and regulatory issues.**
o Indo-Canadian S&T cooperation has been primarily focussed on promoting Industrial R&D which has potential for application through development of **new IP, processes, prototypes or products.**
- Canada was a **partner country for the Technology Summit** held in New Delhi in November 2017.
o The **Department of Earth Science and Polar Canada** have started a programme for exchange of knowledge and scientific research on **Cold Climate (Arctic) Studies.**
o **Under the "Mission Innovation" program**, India is collaborating with Canada in various activities in the **areas of Sustainable Biofuels (IC4).**
o **ANTRIX, the Commercial arm of ISRO**, has launched several Nano satellites from Canada.
- ISRO in its 100th Satellite PSLV launched on January 12, 2018, also **flew Canadian first LEO satellite,** from Indian spaceport **Sriharikota, Andhra Pradesh.**
- **Education and Culture:**

- o The **Shastri Indo-Canadian Institute (SICI)** is a unique bi-national organisation fostering, since 1968, **education and cultural cooperation and collaboration between India and Canada. Canada was the country of Focus at the 48th International Film Festival of India held in Goa in November 2017.**
- o **Canada Post and India Post joined hands to issue a commemorative stamp on Diwali in 2017.**
- • Canada Post **issued Diwali Stamps again in 2020 and 2021.**
- o In October 2020, **Canada announced the voluntary repatriation of the ancient Annapurna statue** which was illegally acquired by a Canadian collector and had been kept at **University of Regina.**
- • The statue has since been handed over to India and has been placed inside **Kashi Vishwanath temple in Varanasi in November 2021.**

9. India's Fisheries Sector

Why in News?
Government's Sagar Parikrama is an **evolutionary journey** envisaged in the sea across the coastal belt **aiming to resolve the issues of the fishermen and other stakeholders** and facilitate their economic upliftment through various government schemes and programs, including **PMMSY (Pradhan Mantri Matsya Sampada Yojana) and KCC (Kisan Credit Card).**

What is the Sagar Parikrama Initiative?
About:
- • **Sagar Parikrama**' program envisages to cover the maritime States/UTs in a phased manner. **The journey began on March 5th, 2022,** from **Mandvi, Gujarat.**
- • The journey focuses on bridging the gaps in the expectations of fisher communities, developing **fishing villages, and upgrading infrastructure such as fishing harbors and fish landing centers.**

Phases of Sagar Parikrama:
- • **Phase I:** The journey covered three locations in **Gujarat - Mandavi, Okha-Dwarka, and Porbandar.**
- • **Phase II:** Seven locations were covered in **Mangrol, Veraval, Diu, Jafrabad, Surat, Daman, and Valsad.**
- • **Phase III:** Coastal areas of northern **Maharashtra, including Satpati, Vasai, Versova, New Ferry Wharf (Bhaucha Dhakka), and Sasson Dock in Mumbai,** were part of this phase.
- • **Phase IV: Udupi and Dakshina Kannada** districts in Karnataka were covered during this phase.
- • **Upcoming Phase V:** Phase V of Sagar Parikrama will cover six locations: Raigad, **Ratnagiri, and Sindhudurg Districts in Maharashtra, and Vasco, Maorugoa, and Canacona in Goa.**
- • Maharashtra, with its extensive coastline of **720 km,** has immense **untapped potential in the fisheries sector.**
- • **The state ranks 7th in fish production in the country**, with marine fisheries contributing **82% and inland fisheries 18%.**
- • **Goa, with a coastline of 104 km**, also plays a vital role in the marine fishery sector, providing livelihoods to many.

What is the Status of the Fisheries Sector in India?
About:
- • As the **third-largest fish producer** and the **second-largest aquaculture producer** globally, India recognizes the significance of the fisheries and aquaculture industry.
- • The **Indian Blue Revolution** has led to a **major improvement in the fishing and aquaculture industries**. The industries are regarded as **sunrise sectors** and are anticipated to have a big impact on the Indian economy.
- • In the recent past, Indian fisheries has witnessed a paradigm shift **from marine dominated fisheries to inland fisheries**, with the latter emerging as a major contributor of fish production from **36% in the mid-1980 to 70% in the recent past.**

- The fish production reached an all-time high of **16.25 MMT** during FY 2021-22 **with marine exports touching Rs. 57,586 Crores**

Top Producing States:
- **Andhra Pradesh is the largest producer of fish in India** followed by **West Bengal**.
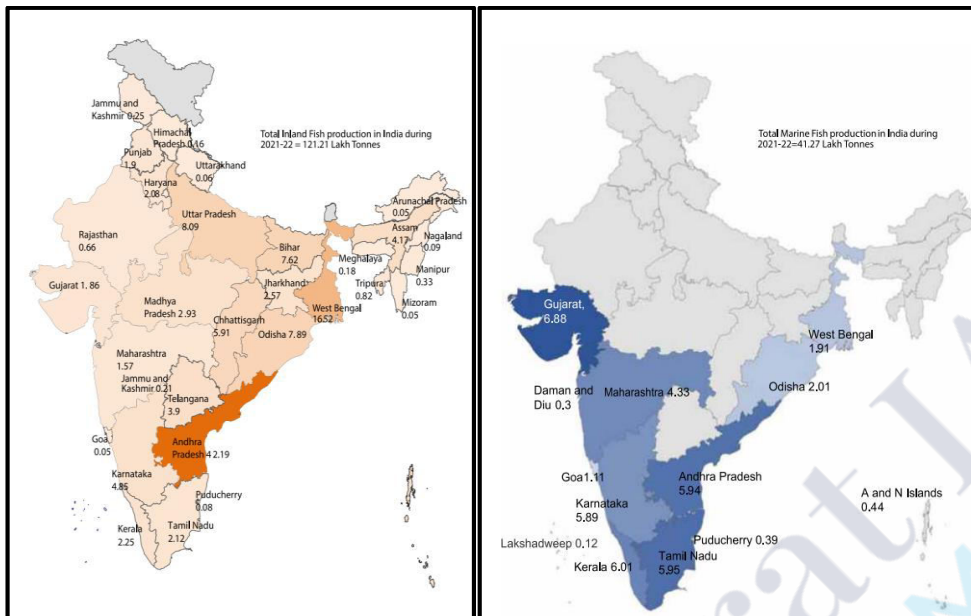
Current Challenges:
- **Illegal, Unreported, and Unregulated (IUU) fishing: IUU fishing** exacerbates overfishing and undermines the sustainability of the sector.
- IUU fishing involves activities such as **fishing without proper licenses, using banned gear, and disregarding catch limits. Weak monitoring and surveillance systems** make it difficult to combat this problem effectively.
- **Inadequate Infrastructure and Technology: Outdated fishing vessels, gear, and processing facilities hinder the efficiency and productivity of the sector.** Insufficient cold storage and transportation infrastructure result in post-harvest losses.
- Limited access to modern fishing technology, such as **fish finders and GPS navigation systems,** restricts the ability to locate fish stocks accurately.
- **Climate Change and Environmental Degradation: Rising sea temperatures, ocean acidification**, and changing currents have a profound impact on marine ecosystems and fish populations.
- Climate change leads to shifts in **fish distribution, reduced productivity, and increased vulnerability to diseases.** Pollution, habitat destruction, and coastal development further degrade marine ecosystems.
- **Socio-Economic Issues:** The fisheries sector in India is characterized by a large number of **small-scale and artisanal fishers** who face multiple socio-economic challenges.
- **Low incomes, lack of access to credit and insurance, and inadequate social security measures** contribute to the vulnerability of fishing communities.
- **Gender disparities** and the **marginalization of women** in fisheries also pose challenges.
- **Market Access and Value Chain Inefficiencies:** Despite India's significant fish production, there are challenges in accessing **domestic and international markets.**
- **Poor post-harvest handling, limited value addition, and inadequate market linkages** result in reduced profitability for fishers.

Initiatives related to Fisheries Sector:
- **Pradhan Mantri Matsya Sampada Yojana**
- **Palk Bay Scheme**

- **Fisheries and Aquaculture Infrastructure Development Fund (FIDF)**

  Way Forward
- **Embrace Aquaponics:** India can **promote the adoption of aquaponics**, a **sustainable farming technique** that combines fish farming with hydroponics. This system allows for the **simultaneous cultivation of fish and plants, utilizing fish waste as a nutrient source for plant growth. Aquaponics reduces water usage, maximizes land productivity,** and provides an additional source of income for fish farmers.
- **Enhance Cold Chain Infrastructure**: There is a need to improve the **cold chain infrastructure to minimize post-harvest losses** and maintain the quality of fish products. Also, there is a need to establish **well-equipped fish collection centers near coastal areas and integrate them with modern storage facilities,** transportation systems, and processing units. This will enable the efficient preservation and distribution of fish, **reducing spoilage and increasing market value.**
- **Support Value Addition and Diversification:** Encourage fish farmers to engage in value addition activities to increase their income. Provide training and financial assistance for **fish processing, packaging, and branding.**
- Promote the development of innovative fish-based products such as **ready-to-eat snacks, fish oil supplements, fish leather, and collagen products.** This will expand market opportunities and enhance the value chain.

10. Hysterectomy

Why in News?

Concerned about the **high risk faced by poor and less-educated women**, especially in rural areas, who undergo **unjustified hysterectomies**, the Ministry of Health and Family Welfare, Government of India has **initiated measures to address this issue.**

What is Hysterectomy?
About:

A hysterectomy is a **surgical procedure** that involves the **removal of the uterus (womb)**, the organ in a woman's body where a baby develops during pregnancy.

Types:
- When only the uterus is removed, it is called a **partial hysterectomy.**
- When the uterus and cervix are removed, it is called a **total hysterectomy.**
- When the uterus, cervix, part of the vagina, and a wide area of ligaments and tissues around these organs are removed, it is called a **radical hysterectomy.**

Indications for Hysterectomy in India:
- Hysterectomy is performed in India for gynecological conditions like **fibroids** (non-cancerous growths that develop in or around the womb), **endometriosis** (disease in which tissue similar to the lining of the uterus grows outside the uterus), **abnormal bleeding, and pelvic inflammatory disease**, when other treatments fail.
- It is also utilized **as part of cancer treatment to remove cancerous tissues** and in cases of severe, unresponsive pelvic pain.

What are the Issues Associated with Hysterectomy in India?
- **Increase Hysterectomies in Younger Women:** The recent **Supreme Court** judgment in Dr. Narendra Gupta vs Union Of India, 2023 highlighted that in **developed countries, hysterectomies are typically performed on premenopausal women aged 45 and above.** However, **community-based studies in India** have shown an increasing number of hysterectomies among younger women, ranging from **28 to 36 years old.**

- **NFHS Data:** According to the most recent **National Family Health Survey (NFHS) -5 empirical data, 3% of women aged 15-49 have had a hysterectomy.** The prevalence of hysterectomy is the highest in **Andhra Pradesh (9%), followed by Telangana (8%), and lowest in Sikkim (0.8%) and Meghalaya (0.7%)** among women aged 15–49. The prevalence of hysterectomy was highest in Southern region, i.e., **4.2%, which was also greater than the national prevalence, followed by Eastern part of India (3.8%).** On the other hand, the **lowest prevalence was observed in the Northeast region, i.e., only 1.2%**
- **Unnecessary Hysterectomies:** A **public interest litigation (PIL)** filed in 2013 highlighted the issue of "unnecessary hysterectomies". The PIL revealed that in the states of **Bihar, Chhattisgarh, and Rajasthan,** women were subjected to hysterectomies that were deemed **unnecessary, endangering their health.**
- Private hospitals were found to be involved in performing these unnecessary hysterectomies. **More than two-thirds (70%) of women who have undergone a hysterectomy had the operation in a private health facility.** Misuse of the procedure was also observed, with healthcare institutions exploiting it to **claim higher insurance fees** under **various government healthcare schemes.**

What are the Efforts to Address the Issue?
- **Supreme Court Direction:** In response to the PIL, the **Supreme Court directed states and union territories to adopt the health guidelines formulated by the Centre to monitor and prevent unnecessary hysterectomies.** The implementation of these guidelines was mandated within a **three-month timeframe.** There has been **a serious violation of the fundamental rights** of the women who underwent unnecessary hysterectomies.
  - **The SC in Dr. Narendra Gupta vs Union Of India 2023** acknowledged that the **right to health is an intrinsic part of the right to life under Article 21 of the Constitution. Life, to be enjoyed in all its diverse elements,** must be based on robust conditions of health.
  - SC also urged an action plan to tackle the problem including suggestions to **create national, state and district-level hysterectomy monitoring committees and the inauguration of a grievance portal.**
- **Health Ministry Guidelines:** In 2022, the **Health Ministry issued guidelines** aimed at preventing unnecessary hysterectomies. States were **instructed to comply with these guidelines to ensure appropriate use of the procedure.**
- Recently, the ministry has directed the states to share data on the **hysterectomies performed by medical institutions**
- **Compulsory audits for all hysterectomies** were also advised, similar to the **existing audits conducted for maternal mortality.**

11. Appointment of Judges in Supreme Court

Why in News?
The **Supreme Court of India** recently witnessed the administration of oath to two new judges, **Justice Prashant Kumar Mishra**, and **Justice K.V. Viswanathan,** by **Chief Justice of India DY Chandrachud.**
- With their induction, the court has reached its **sanctioned strength of 34 judges.**

How are Supreme Court Judges Appointed?
Composition and Strength of the Supreme Court:
- Originally, the **Supreme Court had eight judges** (one chief justice and seven others).
- The Parliament has **increased** the number of judges over time.
- The current strength of the **Supreme Court is 34 judges (one chief justice and 33 others).**

Qualifications for Appointment as a Judge:

- According to **Article 124(3) of the Constitution**, a person can be appointed as a judge of the Supreme Court if he or she:
- A person must be a **citizen of India.**
- Must have served as a **judge of a High Court for at least five years or two such courts in succession.**
- Alternatively, must have been an **advocate of a High Court for at least ten years** or two or more such courts in succession.
- Must be a **distinguished jurist in the opinion of the president.**

Appointment:
- The Judges of the Supreme Court are appointed by the **President under clause (2) of Article 124 of the Constitution.**
- The President consults with judges of the Supreme Court and High Courts to make informed appointments.
- **Oath of Office:**
- Every appointed judge must make and subscribe to an oath before the President or an appointed person.
- The oath includes commitments to uphold the Constitution, **sovereignty** and **integrity of India**, and **perform duties without fear or favor.**

Tenure and Resignation:
- There is no prescribed minimum age limit for a judge's appointment.
- A judge of the Supreme Court serves until they reach the **age of 65 years**.
- However, a judge may resign before reaching the age of 65 years by tendering their resignation to the President.

Salaries and Allowances:
- Salaries, allowances, privileges, leave, and pension of Supreme Court judges are determined by **Parliament.**
- The **Salaries, Pension, and Allowances** of the Supreme Court Judges are charged upon the **Consolidated Fund of India.**

Post-retirement Restrictions:
- After retirement, a judge of the Supreme Court is **prohibited from practicing law in any court in India** or pleading before any government authority.
- As per **Article 128 of Indian Constitution,** any **retired judge** of the Supreme Court of India **can be called back to sit and act as a Supreme Court judge** by the Chief Justice of India with the prior permission of the President of India.

Removal:
- A judge of the Supreme Court can only be removed from office by an order of the **President.**
- The removal process **requires an address by each House of Parliament, supported by a special majorit**y i.e., a majority of the total membership of that House and a majority of not less than **two-thirds of the members present and voting.**
- The grounds for removal are **proven misbehaviour or incapacity**.
- Parliament has the authority to regulate the procedure for presenting the address and investigating and proving the misbehaviour or incapacity of a judge.
- Once appointed, **judges can serve until the age of 65** and cannot be removed during their tenure except for proved misbehaviour or incapacity.

Collegium System for Judicial Appointments:
- Judges of the higher judiciary are appointed through the **collegium system.**

- The collegium, consisting of the **Chief Justice of India** and the **four senior-most judges** of the **Supreme Court,** decides on appointments, elevations, and transfers of Judges.
- The term "collegium" is not mentioned in the Indian Constitution but has been **established through judicial pronouncements.**

How Did Collegium Evolve?
- **First Judges Case (1981):**
  o It declared that the "primacy" of the **CJI's (Chief Justice of India)** recommendation on judicial appointments and transfers can be refused for "cogent reasons."
  o The ruling gave the **Executive primacy over the Judiciary in judicial appointments** for the next 12 years.
- **Second Judges Case (1993):**
  o SC introduced the Collegium system, holding that "**consultation" really meant "concurrence".**
  o 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.
- **Third Judges Case (1998):**
  o 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.**
- **Fourth Judges Case (2015):**
  o The **99th Constitutional Amendment Act of 2014** and the National Judicial Appointments Commission Act of 2014 has replaced the collegium system of appointing judges to the Supreme Court and High Courts with a new body called the **National Judicial Appointments Commission (NJAC).**
- However, in 2015, the Supreme Court declared both the 99th Constitutional Amendment as well as the NJAC Act as **unconstitutional and void in the fourth judge case**. Consequently, the earlier collegium system became operative again.

12. Tribal Health in India

Why in News?
Recently, the healthcare challenges faced by **tribal communities in India** have come into focus. Despite India's remarkable achievements, such as emerging as the **world's 5th-largest economy** and its contribution to the **global vaccination drive,** tribal communities continue to experience significant healthcare disparities.
As India celebrates its accomplishments at **India@75**, it is crucial to address the urgent need for equitable **healthcare access for tribal communities.**

What is the Status of Tribal Communities in India?
- **Demographic Status:**
  o Tribal communities in India constitute a significant portion of the country's population, accounting for **approximately 8.9%.**
- Out of the total Schedule Tribe population, approximately 2.6 million (2.5%) belong to **"Particularly Vulnerable Tribal Groups" (PVTGs)** known as the **"Primitive Tribes"** - the most disadvantaged of all the Schedule Tribe communities.
  o They are spread across various states, with higher concentrations in states like **Madhya Pradesh, Maharashtra, Odisha, Chhattisgarh, Rajasthan**, the NER states and the Andaman & Nicobar Islands.
- **Cultural Status:**
  o Tribal communities in India have their own **rich and diverse culture, language, and traditions.**
  o They have a **symbiotic relationship with nature** and depend on forests and hills for their livelihood.
- They have their own beliefs, practices, and preferences regarding health, education, religion, and governance.
- **Related Constitutional and Statutory Provisions:**

- o Certain tribal communities in India are recognized as **Scheduled Tribes (STs)** under **Article 342 of the Constitution of India.**
- They are entitled to special provisions and safeguards for their social, economic, educational, and political development.
- o Their interests are safeguarded by various laws and policies such as the **5th and 6gh Scheduled areas, Forest Rights Act 2006**, and the **PESA Act 1996**.
- o They also have representation in the **Parliament** and **State Legislatures through reserved seats.**
- **Draupadi Murmu is India's first tribal President.**
- **Developmental Status:**
- o Tribal communities in India face multiple challenges and disadvantages in terms of **poverty, illiteracy, malnutrition, health, employment, infrastructure, and human rights.**
- They lag behind the **national average on various indicators** of human development such as income, education, health, sanitation, and gender equality.
- They also face **discrimination, exploitation, displacement, and violence from non-tribal people and institutions.** They have limited access to resources and opportunities for their empowerment and participation.

What are the Main Tribal Health Issues?
- **Malnutrition:** Tribal people don't get enough food or the right kind of food to stay healthy. They suffer from **hunger, stunting, wasting, anemia, and lack of vitamins** and minerals.
- **Communicable Diseases:** Tribal people are more likely to catch infectious diseases such as **malaria, tuberculosis, leprosy, HIV/AIDS, diarrhoea, respiratory infections, and diseases spread by insects or animals due to several factors like** poor sanitation and hygiene, and limited access to healthcare.
- **Non-Communicable Diseases:** Tribal people are also at risk of getting chronic diseases such as **diabetes, hypertension, cardiovascular diseases, cancer, and mental disorders.** According to a study, about **13% of tribal adults have diabetes and 25% have high blood pressure.**
- **Addictions:** The above-mentioned diseases can be caused by factors such as **tobacco use, alcohol consumption, and substance abus**e. More than 72% tribal men 15–54 years of age use tobacco and more than 50% consume alcohol against 56% and 30% non-tribal men, respectively.

What are the Challenges in Tribal Health?
- **Lack of Infrastructure:** Inadequate **healthcare facilities and infrastructure** in tribal areas. Insufficient access to **clean water and sanitation facilities.**
- **Shortage of Medical Professionals: Limited presence of doctors, nurses, and healthcare professionals** in tribal regions. Difficulty in **attracting and retaining skilled healthcare personnel** in remote areas. Imbalance in the distribution of healthcare professionals, with a **concentration in urban areas.**
- **Connectivity and Geographic Barriers: Remote locations** and difficult terrain hinder access to healthcare services. Lack of proper roads, **transportation facilities, and communication networks.** Challenges in reaching tribal communities during emergencies and providing timely medical assistance.
- **Affordability and Financial Constraints:** Limited financial resources and **low-income levels among tribal communities.** Inability to afford healthcare expenses, including medical treatments, medicines, and diagnostics.
- **Lack of awareness** about available **healthcare schemes and insurance options.**
- **Cultural Sensitivities and Language Barriers:** Unique **cultural practices and beliefs that impact healthcare-seeking behavior**.
- **Language barriers** between healthcare providers and tribal communities, leading to miscommunication and inadequate care.
- Lack of culturally sensitive healthcare services that respect tribal customs and traditions.
- **Limited Access to Essential Services:** Insufficient availability of essential healthcare services, such as **maternal and child health, immunization, and preventive care.** Inadequate access to specialized care, diagnostic

facilities, and emergency medical services. Limited awareness about health issues, preventive measures, and healthcare rights among tribal communities.

- **Inadequate Funding and Resource Allocation: Limited allocation of funds for healthcare in tribal areas.** Insufficient investment in **healthcare infrastructure, equipment, and technology.** Lack of dedicated funding for addressing tribal health challenges and implementing targeted interventions.

What is the GoI's Report on Tribal Health in India?

- **In 2018,** an expert committee, constituted jointly by the Ministry of Health and Family Welfare and Ministry of Tribal Affairs released the **first comprehensive report on Tribal Health in India.**

Recommendations of the Report:

- Implement **Universal Health Assurance under the National Health Policy (2017)** in tribal areas.
- Utilize **Aarogya Mitra,** trained **local tribal youth, and ASHA workers** for primary care in tribal communities with support from the Gram Sabha.
- Provide financial protection through **government medical insurance schemes** for secondary and tertiary care.
- Introduce **ST Health Cards for tribal people** living outside scheduled areas to facilitate access to benefits at any healthcare institution.
- Implement a **Tribal Malaria Action Plan in tribal-dominated districts** under the National Health Mission.
- Strengthen **Home-Based Newborn and Child Care (HBNCC) programs** to reduce infant and child mortality.
- Enhance food security and strengthen **Integrated Child Development Services (ICDS) to address malnutrition.**
- Publish a state of tribal health report every three years and establish a Tribal Health Index (THI) to monitor tribal health.
- Establish a **National Tribal Health Council as an apex body,** along with Tribal Health Directorate and Tribal Health Research Cell, at both central and state levels.

Way Forward

- Addressing the **disparity in health-seeking behavior** and **health-care delivery among tribal populations.**
- Recognizing and acknowledging the services provided by **traditional healers** in tribal communities.
- Empowering tribal communities through **health literacy programs** to enable them to make informed decisions about their health.
- Implementing **targeted recruitment and retention strategies** to attract healthcare professionals to tribal regions. And investing in the **development of road networks, transportation facilities, and communication** networks to enhance connectivity.

13. GANHRI Defers Accreditation of NHRC

Why in News?

For the second time in a decade, **Global Alliance of National Human Rights Institutions (GANHRI)** deferred the accreditation of **National Human Rights Commission (NHRC)**, citing objections like **political interference in appointments** among others.

- The GANHRI had granted **'A' status of accreditation to NHRC in 2017,** after deferring it the year before — the first such instance since NHRC was established (1993).
- Without the accreditation, **NHRC will be unable to represent India at the UN Human Rights Council.**

What is GANHRI?

- GANHRI is **recognised and a trusted partner, of the United Nations.**
- It was established in 1993 as the **International Coordinating Committee of National Institutions** for the promotion and protection of human rights (ICC).

- It has been **known as the Global Alliance of National Human Rights Institutions (GANHRI)** since 2016 and is a member-based network organization that gathers NHRIs from all around the world.
- It is composed of 120 members, **India also is a member of GANHRI**
- Its secretariat is situated in **Geneva, Switzerland.**

Why are the Reasons for Deferment?
The GANHRI cited reasons such as:
- **Lack of diversity** in staff and leadership
- **Insufficient action** to protect marginalized groups
- **Involving the police in probes** into human rights violations
- **Poor cooperation** with civil society

- The GANHRI said the NHRC has repeatedly **failed to deliver its mandate,** in particular to protect the rights of people **from marginalized communities, religious minorities, and human rights defenders.**
- NHCR's lack of independence, pluralism, diversity and accountability are **contrary to the U.N.'s principles on the status of national institutions** (the 'Paris Principles').

What are the Paris Principles and 'A' Status?
- The **United Nations' Paris Principles**, adopted in 1993 by the UN The General Assembly provides the international benchmarks against which **National Human Rights Institutions (NHRI)** can be accredited.
- **The Paris Principles set out six main criteria that NHRIs are required to meet. These are:**
  o Mandate and competence
  o Autonomy from government
  o Independence guaranteed by a statute or Constitution
  o Pluralism
  o Adequate resources
  o Adequate powers of investigation.

- **The GANHRI is a group of 16 human rights agencies** – 4 from each region; the **Americas, Europe, Africa, and the Asia-Pacific** – that have the **Highest Rating ('A') for following the Paris Principles.**
- The 'A' rating also lets them join the **work of the GANHRI and the UN on human rights issues.**
  o **The NHRC got its 'A' rating in 1999 and kept it in 2006, 2011, and 2017 after a delay.** The GANHRI had delayed it because of some problems with the NHRC's staff and appointments. **The NHRC is led by Justice Arun Mishra, who used to be a Supreme Court judge.**

What is NHRC?
About:
- NHRC of India is an **independent statutory body established on 12th October, 1993** as per provisions of **Protection of Human Rights Act, 1993,** later amended in 2006.
- It is the **watchdog of human rights in India**, i.e. the **rights related to life, liberty, equality and dignity of the individual guaranteed** by Indian Constitution or embodied in the international covenants and enforceable by courts in India.
- It was established in conformity with the **Paris Principles, adopted for the promotion and protection of human rights in Paris (October, 1991)** and endorsed by the on 20 December, 1993.

Composition:
- **Key Members:** It is a multi-member body consisting of a chairperson, five full-time Members and seven deemed Members.
- A person who has been the **Chief Justice of India or a judge of the Supreme Court** can become a chairman.

- **Appointment:** The chairperson and members are appointed by the **President** on the recommendations of a six-member committee consisting of the Prime Minister as its head, the **Speaker of the Lok Sabha**, the Deputy Chairman of the Rajya Sabha, leaders of the Opposition in both the Houses of **Parliament** and the Union Home Minister.
- **Tenure:** The chairperson and members hold office for a **term of three years or until they attain the age of 70 years**, whichever is earlier.
- The President can remove the chairman or any member from the office under some circumstances.
- **Removal:** They can be removed only on the charges of **proved misbehavior or incapacity**, if proved by an inquiry conducted by a Supreme Court Judge.
- **Divisions:** Commission also **has five Specialized Divisions i.e. Law Division, Investigation Division, Policy Research & Programmes Division, Training Division and Administration Division.**

What are the Challenges Related to NHRC?
- **Mechanism of Investigation:** NHRC lacks a de**dicated mechanism for conducting investigations.** Instead, it relies on the **concerned Central and State Governments** to investigate cases of human rights violations.
- **Time Limit for Complaints: Complaints registered with NHRC after one year of the incident are not entertained,** resulting in many grievances going unaddressed.
- **Decision Enforcing Power:** NHRC can only make recommendations and **does not have the authority to enforce its decisions** or ensure compliance.
- **Underestimation of Funds:** NHRC is sometimes perceived as a **post-retirement destination for judges** and bureaucrats with political affiliations. Additionally, inadequate funding hampers its effective functioning.
- **Limitations of Powers:** State human rights commissions do not have **the authority to request information from the national government.** Consequently, they face challenges in investigating **human rights violations by armed forces under national control.**
- NHRC's powers are related to **violations of human rights by the armed forces** that have been largely restricted.

Way Forward
- The government should take steps to make NHRC's decisions enforceable, ensuring that **recommendations and directives are effectively implemented.** This will enhance the impact and accountability of NHRC's interventions.
- The composition of NHRC **should be diversified by including members from civil society and human rights activists.** Their expertise and perspectives will bring fresh insights and contribute to a more comprehensive approach in addressing human rights violations.
- NHRC needs to establish an **independent cadre of staff with relevant expertise** and **experience in human rights**. This will enable the commission to carry out thorough investigations, conduct research, and provide informed recommendations.

14. SC Allows Divorce on Irretrievable Breakdown

Why in News?
Recently, the **Supreme Court (SC)** ruled that under its power to do **'complete justice' granted via Article 142**, it can **dissolve a marriage on the ground that it had broken down irretrievably,** without referring the parties to a family court where they must wait 6-18 months for a decree of divorce by mutual consent.

What is SC's Ruling?
- **Ruling:**
  - In the case of **Shilpa Sailesh vs. Varun Sreenivasan (2023)**, the SC has ruled that **it has the power to dissolve a marriage** if it is **irretrievably broken down.**

- o The court can **waive the mandatory six-month waiting period** for divorce under the **Hindu Marriage Act (HMA), 1955**, and allow the dissolution of the marriage on grounds of an irretrievable breakdown **even if one of the parties was not willing.**

Significance of the Ruling:
- The process of obtaining a **decree of divorce is often time-consuming and lengthy** owing to a large number of similar cases pending before family courts.
- The ruling allows parties to **bypass the waiting period and approach the Supreme Court directly for a divorce** on grounds of irretrievable breakdown.
- As per SC, if there is no possibility of reconciliation, it would be meaningless to prolong the agony of the parties to the marriage.

Larger public, personal interest

'IRRETRIEVABLE BREAKDOWN OF MARRIAGE'
"Court should be fully convinced... the marriage is totally unworkable, emotionally dead and beyond salvation and, thus, dissolution of marriage is... the only way forward. That the marriage has irretrievably broken down is to be factually determined and firmly established."

FACTORS TO ESTABLISH BREAKDOWN
1. Time the parties lived together after marriage
2. When the parties last cohabited
3. Allegations made by parties against each other, their families
4. Orders passed in legal proceedings
5. Attempts made to settle disputes by court intervention, mediation
6. The separation period should be above six years

- Dissolving such a marriage, even if one of the parties agree, would provide a **speedy solution for parties who are unable to live together** and have mutually agreed that the marriage should be dissolved.
- The judgment is significant as **irretrievable breakdown of marriage is not yet a ground for divorce** under the **Hindu Marriage Act (HMA) 1955.**
- Till date, there is still **no codified law for irretrievable breakdown of marriage.** Though, the HMA 1955 recognizes a few grounds for dissolution of marriage in Section 13.

Implication of the Judgement:
- The recent SC judgement **does not imply** that people can rush straight to the SC for a quick divorce.
- The **grant of divorce by the SC on the ground of irretrievable breakdown** of marriage is **"not a matter of right, rather a discretion** which needs to be exercised with great care and caution".
- The SC also clarified that a **party cannot file a writ petition under Article 32 (or Article 226)** of the Constitution of India and **seek relief of dissolution of marriage** on the ground of irretrievable breakdown of marriage directly from it.

Need to Shift away from Fault Theory:
- The 5-judge bench **highlighted the need of the SC to move away from "fault theory" and "accusatorial principle of divorce"** under Section 13 (1) of HMA 1955, which prescribes divorce on grounds where one of the spouses can be held guilty of certain misdeeds such as cruelty, adultery or desertion.
- **The HMA 1955** and the **Special Marriage Act 1954** are **premised on the 'fault' or 'matrimonial offence' theory for the purpose of divorce.**
- It allows the **innocent party to obtain a divorce if the other party has committed a matrimonial offense.**
- Under HMA 1955, there are **7 fault grounds** for divorce: **adultery, cruelty, desertion, conversion, insanity, leprosy, venereal disease, and sanyasa.**
- ▪ There are 4 grounds on which the wife can sue alone: **rape, sodomy, bestiality, non-resumption of cohabitation after maintenance order, and decree for maintenance.**
- The innocent party must prove that they are blameless for the divorce to be granted under this theory.

Note:
- The **Law Commission of India,** in its reports in 1978 and 2009 recommended **adding irretrievable breakdown as an additional ground of divorce.**
- o The Law Commission in its 71st report (1978), dealt with the concept of **irretrievable breakdown of marriage**.

- The Report also mentions that as far back as 1920, **New Zealand was the first of the Commonwealth countries** to introduce the provision that a **three-year or more separation agreement** was grounds for filing a petition in the courts for divorce.
  - It has become a classic enunciation of the breakdown principle in matrimonial law.

What is HMA 1955?
About:
- The Hindu Marriage Act 1955 (HMA) is an act of the Parliament of India that **codifies and amends the law relating to marriage among Hindus and others.**
- It **applies to Hindus, Buddhists, Jains, Sikhs and anyone who is not a Muslim, Christian, Parsi, or Jew by religion.**

Current Procedure for Divorce under the HMA:
- Section 13B of the HMA provides for **"divorce by mutual consent"** under which both parties to the marriage **must together file a petition to the district court.**
- This will be done on the grounds that they have been **living separately for a period of one year or more, that they have not been able to live together** and have mutually agreed that the marriage should be dissolved.
- The parties must **move a second motion** before the court **at least 6 months after the date of the presentation** of the first petition and **not later than 18 months** after the said date (provided, the petition is not withdrawn in the meantime).
- The **mandatory six-month wait is intended** to give the parties time to **withdraw their plea.**
- **A petition for divorce by mutual consent** can be **moved only after a year** of the marriage.
- However, section 14 of the HMA allows a divorce petition sooner in case of **"exceptional hardship to the petitioner or of exceptional depravity on the part of the respondent".**
- A waiver of the six-month waiting period under Section 13 B (2) can be sought in an exemption application filed before the **family court.**

What are the Other Judgements Related to Divorce?
- **Amit Kumar vs Suman Beniwal (2021):** The SC said, "Where there is a chance of reconciliation, however slight, the **cooling period of six months from the date of filing of the divorce petition should be enforced.** However, if there is no possibility of reconciliation, it would be **meaningless to prolong the agony of the parties to the marriage."**
- **Bhagwat Pitambar Borse vs. Anusayabai Bhagwat Borse (2018):** The Bombay HC held that desertion by the wife for more than seven years without any reasonable cause and without any intention to return is a valid ground for divorce.
  - In June 2016, **a two-judge bench referred to the larger bench of 5 judges** the matter regarding the **court's exercise of powers under Article 142 to grant a divorce without sending the parties to a family court.**
  - Citing conflicting views taken by different benches of the top court, it also sought clarity on the broad parameters for the exercise of powers under Article 142 to dissolve a marriage between the consenting parties.
  - The **smaller bench had in 2016 appointed senior advocates** Indira Jaising, Dushyant Dave, V Giri, and Meenakshi Arora as **amici curiae (friends of court)** to assist the Constitution bench.

What is Article 142 (1) of the Constitution?
- Subsection 1 of **Article 142** confers sweeping **power on the Supreme Court** to pass such decree or **make such order as is necessary for doing 'complete justice' in any cause or matter.**
- The decision to exercise the power under Article 142(1) must be **"based on considerations of fundamental general and specific public policy".**

- The fundamental general conditions of public policy refer to the **fundamental rights, secularism, federalism, and other basic features of the Constitution;** specific public policy was defined by the court to mean **"some express pre-eminent prohibition** in any substantive law, and **not stipulations and requirements** to a particular statutory scheme".

What is the Status of Marriage Equality in India?
- **Divorce Rate and Trends in India:** A 2018 survey of 160,000 households revealed that **93% married Indians had 'an arranged marriage',** as against the **global average of about 55%.**
- India has a **low annual divorce rate** of **1.1 per 1,000 people**, with only **13 out of every 1,000 marriages** resulting in divorce, and **men are usually the initiators.**
- Prevailing **social norms discourage women from seeking a divorce,** and when they do, they face **legal hassles and socio-economic isolation,** especially if they are financially dependent on their spouses.
- **Women's Economic Dependency:** Indian **women's low labor-force participation** rate translates to **high levels of financial dependency,** forcing them to **'adjust' to bad marriages.**
- **Women's Socio-Economic Challenges after Divorce:** The dissolution of a marital union disproportionately affects women, who suffer from chronic strains of divorce, including **disproportionate losses in household income**, higher risk of **losing homeownership, lower chances of re-partnering,** and greater responsibilities of single parenting.

1. Advisory Committee Suggests Ban on Diesel 4-Wheelers

Why in News?

Recently, the **Energy Transition Advisory Committee** formed by **Union Ministry of Petroleum and Natural Gas** has recommended that India should **ban diesel-powered 4-wheeler vehicles by 2027** and switch to electric and gas-fuelled vehicles in **cities with more than a million people** and polluted towns **to reduce emissions**.

- The Committee, headed by former petroleum secretary **Tarun Kapoor,** also suggested **phasing out motorcycles, scooters, and three-wheelers** with **internal combustion engines by 2035.**

What are the Recommendations of the Committee?

- **Move Towards Renewable Energy:** India is **one of the largest emitters of greenhouse gases globally,** and to achieve its **net-zero goal for 2070**, it wants to produce **40% of its electricity from renewables.** In line with this, the panel report suggests that **no city buses should be added that are not electric by 2030,** with **diesel buses for city transport not to be added from 2024 onwards.** It called to **partially shift to electric and partially to ethanol-blended petrol** with almost **50% share in each category.**
- **Incentives to Boost EV Use:** To boost **electric vehicle (EV)** use in the country, the report calls for the targeted extension of incentives under the **Faster Adoption and Manufacturing of Electric and Hybrid Vehicles scheme (FAME).**
- **Transition to Gas-Powered Trucks and Railways:** The panels also recommended that **new registrations of only electric-powered city delivery vehicles should be allowed from 2024**, with higher use of railways and gas-powered trucks for the movement of cargo. The **railway network** is anticipated to be **fully electric in two to three years.** The panel recommended that **long-distance buses in India be powered by electricity** in the long term, with gas used as a transition fuel for 10-15 years.
- **Increase in Share of Gas in its Energy Mix:** India aims to raise the **share of gas in its energy mix to 15% by 2030** from the **current 6.2%.**
- To achieve this goal, the panel suggests building **underground gas storage equivalent to two months' demand.**
- The panel also recommends the use of **depleted oil and gas fields, salt caverns, and aquifers for building gas storage** with the participation of foreign gas-producing companies.

What about Diesel Consumption in India?

- **Consumption Trends:**
  - **Diesel currently accounts for about 40%** of India's petroleum products consumption with 80% of that being used in the transport sector.
  - **Petrol and diesel demand in India is expected to peak in 2040** and decline post that due to **electrification of vehicles.**

Sector-wise Diesel Consumption (2021)

Reasons for High Preference of Diesel:

- The **higher fuel economy of diesel engines over petrol powertrains** is one factor. This stems from the **greater energy content per litre of diesel,** and the inherent efficiency of the diesel engine.
- **Diesel engines do not use high-voltage spark ignition** (spark plugs), and thus **use less fuel per kilometre,** as they have higher compression ratios, making it the **fuel of choice for heavy vehicles.**
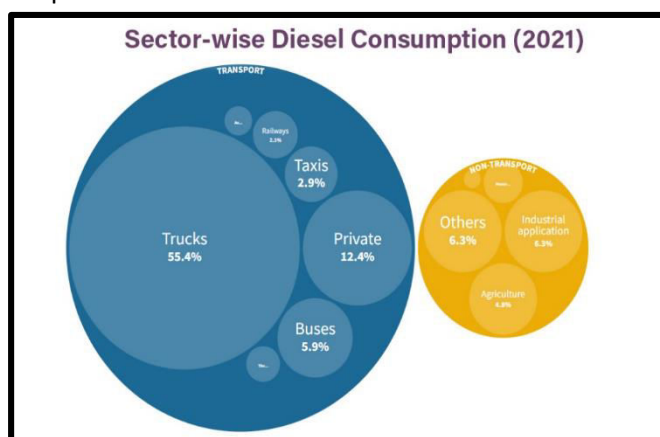
- Also, diesel engines **offer more torque** (rotational or turning force) and **are less likely to stall** as they are controlled by a mechanical or electronic governor, thereby proving to be **better for haulage.**

Impact of Diesel-Powered Vehicle:
- **Air Pollution:** Diesel engines emit **higher levels of particulate matter and nitrogen oxides**, which contribute to air pollution and can have negative health impacts on **humans and wildlife.**
- **Greenhouse Gas Emissions:** While diesel engines are **more fuel-efficient,** they also **emit higher levels of carbon dioxide,** which contributes to **climate change**.
- **Noise Pollution:** Diesel engines are **typically louder than gasoline engines,** which can contribute to noise pollution and negatively impact quality of life in urban areas.
- **Environmental Damage: Diesel spills** can cause significant environmental damage, especially if they occur near **water sources or sensitive ecosystems.**

Why is Implementing a Diesel Ban for Commercial Vehicles Challenging?
- **Practicality and Implementation:** Uncertainty about **the practicality of the proposed ban** vis-a-vis **medium and heavy commercial vehicles.** It may result in **disruption in the transport of goods and public transportation services.**
- **Dominance of Diesel in Transport Segment:** High dependency on diesel for long-haul transportation and city bus services. **Diesel sales account for around 87% in the transport sector;** trucks and buses contribute to **approximately 68% of diesel fuel sales.**
- **Conversion Challenges:** Transitioning diesel trucks to **compressed natural gas (CNG) poses limitations.**
- **CNG** usage is primarily suited for shorter distances and **has lower tonnage carrying capacity.**
- **Compliance with Current Emission Norms:** Automakers argue that diesel vehicles comply with existing emission norms. Significant investments made by car manufacturers to **transition diesel fleets to BS-VI emission norms**; diesel ban might imply that all the time, money and efforts were in vain.

What are India's Initiatives for a Renewable Energy based Transport Sector?
- **FAME Scheme:**
  - Provides fiscal incentives for **EV manufacturing and adoption.**
  - Aims to achieve **30% EV penetration by 2030.**
  - Supports **deployment of charging technologies and stations in urban centers.**
- **National Mission on Transformative Mobility and Battery Storage:**
  - Aims to **improve air quality,** reduce **oil import dependence,** and enhance uptake of renewable energy and storage solutions.
  - Drives strategies for **transformative mobility and phased manufacturing programs for EVs,** EV components and batteries.
- **Customs Duty Exemption for Lithium-ion Cell Batteries:**
  - The government has **exempted the import of lithium-ion cell batteries from customs duties** to bring down their cost and scale up their production in India.
- **National Green Hydrogen Mission:**
  - This mission aims to develop **green hydrogen as a clean and affordable energy source** for various sectors such as **industry, transport, and power.**
- It envisages setting up of **green hydrogen production plants, storage and distribution infrastructure**, and end-use applications.
- **Ethanol blending**
  - It involves **mixing ethanol with petrol to reduce reliance on fossil fuels** and **decrease greenhouse gas emissions.**
  - The level of **ethanol blending in petrol in India has reached 9.99%**. The target for **20% ethanol blending** in petrol (also called **E20**) has been advanced to 2025 from 2030.
- **Incentives under PLI Scheme:**

- o It has been rolled out for **various industries** including the **automobile and auto-component industry.**
- o Around Rs.18,000 crore was approved for development of **advanced cell chemistry battery storage manufacturing.**
- o These incentives further aim to **encourage indigenous development of Electric Vehicles (EVs) so as to bring down their upfront cost.**
- **SATAT Scheme:**
- o Sustainable Alternative Towards Affordable Transportation (SATAT) **initiative aims to promote Compressed Bio-Gas (CBG) as an alternative, green transport fuel.**

2. Carbon Border Adjustment Mechanism

Why in News?
The **European Union (EU)** has announced that its **Carbon Border Adjustment Mechanism (CBAM)** will be introduced in its transitional phase from October 2023, which will levy a carbon tax on imports of products made from the **processes which are not environmentally sustainable or non-Green.**
- CBAM will translate into a **20-35 % tax on select imports into the EU starting 1st January 2026.**

What is CBAM?
About:
- CBAM is part of the **"Fit for 55 in 2030 package"**, which is the EU's plan to reduce greenhouse gas emissions **by at least 55% by 2030** compared to 1990 levels in line with the **European Climate Law.**
- The CBAM is a **policy tool aimed at reducing Carbon Emissions** by ensuring that imported goods are subject to the same carbon costs as products produced within the EU.

Implementation:
- The CBAM will be implemented by **requiring importers to declare the quantity of goods imported into the EU** and their embedded Greenhouse Gas (GHG) emissions on an annual basis.
- To offset these emissions, importers **will need to surrender a corresponding number of CBAM certificates,** the price of which will be based on the weekly average auction price of **EU Emission Trading System (ETS)** allowances in **€/tonne of CO2 emitted.**

Objectives:
- CBAM will ensure its **climate objectives are not undermined by carbon-intensive imports** and spur cleaner production in the rest of the world.

Significance:
- It can encourage **non-EU countries to adopt more stringent environmental regulations**, which would reduce global carbon emissions.
- It can **prevent carbon leakage** by discouraging companies from relocating to countries with weaker environmental regulations.
- The revenue generated from CBAM will be **used to support EU climate policies, which** can be learned by other countries to support **Green Energy.**

How can it Impact India?
- **Impact India's Export:**
- o It will have an adverse impact on India's exports of metals such as **Iron**, **Steel and aluminum products to the EU**, because these will face extra scrutiny under the mechanism.
- o India's major exports to the EU, such as iron ore and steel, face a significant threat due to the **carbon levies ranging from 19.8% to 52.7%.**

- From 1st January 2026, the EU will start collecting the carbon tax on each consignment of steel, aluminum, cement, fertilizer, hydrogen and electricity.
- **Carbon Intensity and Higher Tariffs:**
- o The carbon intensity of Indian products is **significantly higher than that of the EU and many other countries** because coal dominates the overall energy consumption.
- The proportion of coal-fired power in **India is close to 75%**, which is much higher than the EU (15%) and the global average (36%).
- o Therefore, direct and indirect emissions **from iron and steel and aluminium are a major concern for India as higher emissions** would translate to higher carbon tariffs to be paid to the EU.

RISING TENSION

The proposed tax has raised concerns among Indian metal producers, who fear it will create a new trade barrier for exports to Europe.

Share (%) of CBAM products in India's exports

To world: 6.9
To EU: 11.2

India's total exports of CBAM products to EU: $8.22 bn

Impact on sectors covered under CBAM	Number of tariff lines affected	EU's share (%) in India's exports of CBAM products
↑ HIGH		
Iron ore, concentrates	16	19.9
Steel products	163	20
Iron and steel	473	31.4
Aluminium and products	85	27.7
↓ LOW		
Cement	14	6.1
Fertilizer	24	0.7
Hydrogen	1	0
Electrical energy	1	0

CBAM: Carbon Border Adjustment Mechanism

- **Risk to Export Competitiveness:**
- o It will initially affect a few sectors but may expand **to other sectors in the future,** such as refined petroleum products, organic chemicals, pharma medicaments, and textiles, which are **among the top 20 goods imported from India by the EU.**
- o Since India has no domestic carbon pricing scheme in place, **this poses a greater risk to export competitiveness,** as other countries with a carbon pricing system in place might **have to pay less carbon tax** or get exemptions.
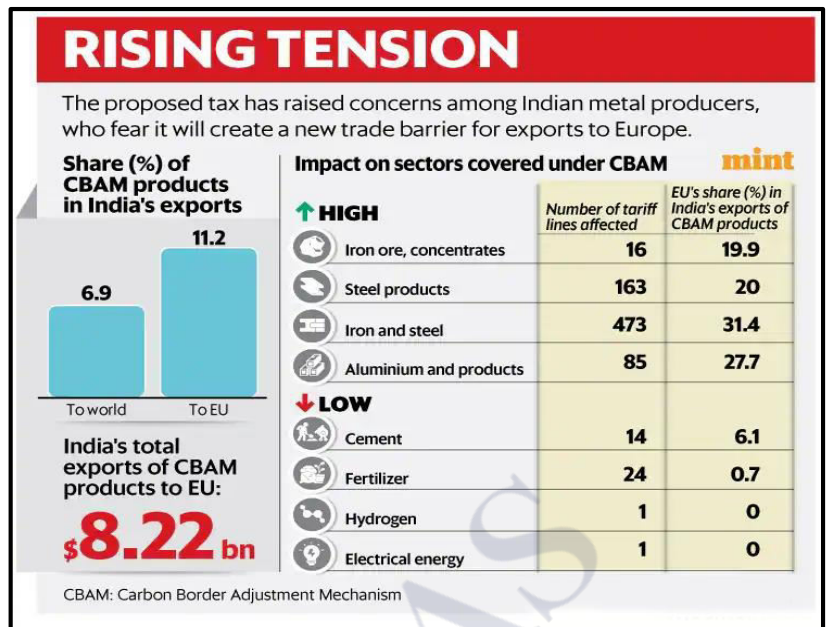
What Measures can India Take to Mitigate the Impact of CBAM?
- **Decarbonization Principle:**
- o On the domestic front, the government has schemes like **National Steel Policy**, and the **Production Linked Incentive (PLI)** scheme aims to increase India's production capacity, but carbon efficiency has been out of the objectives of such schemes.
- o The government can **complement these schemes with a Decarbonization Principle.**
- **Decarbonization** refers to **the process of reducing or eliminating greenhouse gas emissions, especially carbon dioxide (CO_2)**, from human activities such as transportation, power generation, manufacturing, and agriculture.
- **Negotiation with EU for Tax Reduction:**
- o India could negotiate with the EU to recognize **its energy taxes as equivalent to a carbon price,** which would make its exports **less susceptible to CBAM.**
- o For example, India could argue that its **tax on coal is a measure to internalize the costs of carbon emissions**, and therefore equivalent to a carbon tax.
- **Transfer of Clean Technologies:**
- o India should negotiate with the **EU to transfer clean technologies and financing mechanisms** to aid in making India's production sector more carbon efficient.
- One way to finance this is to propose to the EU to set aside a portion of their CBAM revenue for supporting India's climate commitments.
- Besides, India should also begin preparing for the new system just as China and Russia are doing by establishing a **Carbon Trading System.**
- **Incentivizing Greener Production:**

- India can **begin preparations** and in fact, seize the opportunity to make production greener and sustainable **by incentivizing cleaner production which will benefit India** in both remaining competitive in a more carbon-conscious future.
- International economic system and achieving its **2070 Net Zero Targets** without compromising on its developmental goals and economic aspirations.
- **Take on EU's Tax Framework:**
- India, as the leader of the **G-20 2023**, should use its position to advocate for other countries and urge them to **oppose the EU's carbon tax framework.**
- India should not only focus on its own interests but also consider the negative impact that the CBAM will have on **poorer countries that heavily rely on mineral resources.**

Conclusion
- The CBAM is a policy to **reduce carbon emissions from imported goods and create a fair-trade environme**nt.
- It can encourage other countries to have **stricter environmental regulations and reduce global carbon emissions.**

3. India's Power Sector in 2030: Shift to Renewables and Coal's Decline

Why in News?
Recently, the **Central Electricity Authority (CEA)** (Ministry of Power) released a new publication titled **Report on Optimal Generation Mix 2030 Version 2.0.**
- This is an **updated version of the report published in 2020** titled **Report on Optimal Generation Capacity Mix for 2029-30.**
- The report highlights the changes expected in India's energy mix, with a **decline in coal's share and a rise in renewable energy (RE) sources.**
- Earlier, the **CEA released the latest draft of the National Electricity Plan (NEP) 2022-27.**

What are the Key Highlights?
- **Coal Share in Power Mix:** Coal's share in the power mix is projected to **decline from 73% in 2022-23 to 55% in 2030.**
- **Impact on Coal Usage:** Although the share of coal in power generation is set to reduce, in absolute terms, **coal power capacity and generation will increase between 2023 and 2030.** Coal capacity is projected to **rise by 19%**, and generation is expected to **increase by 13%** during this period.
- **Solar Energy Contribution: Solar energy** is expected to play a significant role in the power mix, lifting the overall load. Projections indicate a **quadrupling of solar capacity** from 109 GW to 392 GW by 2030. Solar generation is expected to increase from 173 BU to 761 BU in the same period.

Note:
- **Power capacity differs from generation.** Capacity is the maximum power a plant can produce and is expressed in watts (or gigawatts or megawatts).
- Generation is the actual amount of power produced in one hour, expressed in **watt-hours or billion units (BU).**

Contribution of Other RE Sources:
- Projections for large **hydropower** and **wind energy** remain **modest in the future power mix.**
- Large hydro generation is expected to **increase from 8% to 9% by 2030.**
- **Wind generation,** on the other hand, is **projected to decrease to 9%** in the updated version (from **12% in the previous report**).
- Renewable sources, including small hydro, pumped hydro, solar, wind, and biomass, are expected to account for **31% of the power mix in 2030, compared to the current 12%.**

- **Role of Natural Gas in the Power Generation Mix:** Despite aspirations to increase the share of **natural gas**, its contribution to power generation remains small. The report estimates the likely retirement of 2,121.5 MW of coal plants by 2030, with 304 MW set to be retired during 2022-23.
- **Greenhouse Gas Emissions:** The **power sector contributes approximately 40%** of India's total **greenhouse gas emissions.** Power sector emissions are projected to **rise by 11%, reaching 1.114 Gt CO2 in 2030**, accounting for 10% of global power sector emissions.
- **Climate Commitments In terms of climate commitments,** CEA's projections indicate that India is likely to **over-achieve on its pledge to the Paris Agreement** - to have 50% of installed power capacity from non-fossil sources by 2030. As per the report, India's share of capacity from non-fossil sources will be 62% by 2030. The share will be 64% if **nuclear powe**r is considered.

What are India's Targets of Renewable Energy Power Generation?
- **India's Renewable Energy Targets:**
  - **175 GW Renewable Energy Capacity by 2022:**
    - 100 GW of Solar Power.
    - 60 GW of Wind Power.
    - 10 GW of Biomass Power.
    - 5 GW of Small Hydro Power.
  - **500 GW Non-Fossil Fuel Based Energy by 2030:**
    - Announced by Prime Minister Narendra Modi at COP26 summit.
  - **50% Electricity from Non-Fossil Fuel Sources by 2030:**
    - Pledged in India's **Nationally Determined Contributions (NDCs)** under the **Paris Agreement.**

- **India's Global Ranking:**
  - The **4ᵗʰ largest installed capacity of solar and wind power in the world**.
  - The 4ᵗʰ most attractive renewable energy market in the world.

What is CEA?
About:
- The **CEA is a statutory organization** that advises the government of India on policy matters and formulates plans for the development of **electricity systems in the country.**
- It was established in 1951 under the Electricity Supply Act 1948, which has been now superseded by the **Electricity Act 2003.**

Functions:
- **Policymaking:** Preparing the **national electricity plan and tariff policy. Advising** the central government on matters relating to the **national electricity policy, rural electrification, hydropower development, etc.**
- **Technical Standards:** Specifying the technical standards for construction, operation, and maintenance of electrical plants and electric lines. Specifying the **grid standards and safety requirements** for operation and maintenance of transmission lines.
- **Data Collection and Research:** Collecting and recording data **on generation, transmission, distribution**, and utilization of electricity and **promoting R & D in the field of electricity**.
- **Implementation Monitoring and Coordination:** Monitoring the implementation of power projects and schemes. Coordinating with state governments, state electricity boards, regional power committees, etc. on matters relating to electricity.

What are India's Initiatives for Power Generation from RE Sources?
- **Solar Power:**
  - National Solar Mission

- o International Solar Alliance
- o PM Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM)
- **Wind Power:**
- o National Wind-Solar Hybrid Policy
- o National Offshore Wind Energy Policy
- **Hydropower:**
- o National Hydroelectricity Policy
- o **Renewable Energy Status:** The government has declared **large hydropower projects (>25 MW) as renewable energy sources,** which will enable them to avail the benefits of renewable energy such as **waiver of inter-state transmission charges, renewable purchase obligation, green energy certificates, etc.**
- **Hydrogen:**
- o **National Hydrogen Energy Mission**
- o **National Green Hydrogen Mission**

What are the Challenges in Adopting Renewable Energy?
- **Intermittency and Variability:**
- o RE sources are intermittent and variable due to **weather conditions.**
- o **Matching energy supply** with demand and **maintaining grid stability** becomes challenging.
- **Grid Integration:**
- o Integrating large-scale renewable energy into existing power grids can be complex.
- o **Upgrading grid infrastructure** and balancing mechanisms is necessary for reliable power supply.
- **Land and Resource Availability:**
- o Scaling up renewable energy installations requires significant land and resource availability.
- o Identifying suitable locations, acquiring land, and addressing environmental concerns can be challenging.
- **Transition from Coal-dependent Economy:**
- o Coal still dominates the power sector in India, as it accounts for about **70% of the electricity generation.**
- o Also, coal sector in India is estimated to provide about **1.2 million** direct jobs and up to **20 million** indirect and dependent jobs.
- Transition from it can lead **to job losses in the coal sector** and ensuring a smooth transition for affected communities needs to be addressed.

4. Carbon Dating

Why in News?
Recently, the Allahabad High Court allowed the **Archeological Survey of India (ASI)** to conduct **Carbon Dating** of a 'Shivling' inside the **Gyanvapi Mosque** in Varanasi, Uttar Pradesh.
- The petitioners have claimed the object inside **the Gyanvapi mosque to be a "Shivling".** The claim was disputed by the Muslim side, which said the object was part of a "fountain".
- It set aside an order of the **Varanasi District Court** that rejected a plea for scientific investigation, including carbon dating, of the structure.

What is Carbon Dating?
About:
- Carbon dating is a widely used method to **establish the age of organic materials,** things that were once living.
- Living things **have carbon in them in various forms.**
- The dating method is based on the fact that **Carbon-14 (C-14) is radioactive,** and decays at a well-known rate.
- C-14 is an isotope of carbon with an **atomic mass of 14.**
- The most abundant isotope of **carbon in the atmosphere is C-12.**
- A very small amount of C-14 is also present.

- The ratio of C-12 to C-14 in the atmosphere is almost static and **is known.**

Half Life:
- Plants get their carbon through photosynthesis; **animals get it mainly through food.** Because plants and animals get their carbon from the atmosphere, they **too acquire C-12 and C-14 in roughly the same proportion** as is available in the atmosphere.
- When they die, **their interactions with the atmosphere stop.** While C-12 is stable, the radioactive C-14 reduces to one half of itself in about 5,730 years — **known as its 'half-life'.**
- The changing ratio of C-12 to C-14 in the remains **of a plant or animal after it dies can be measured and** can be used to deduce the approximate time when the organism died.

Age Determination of Inanimate Things:
- Carbon dating **cannot be applied in all circumstances.** It cannot be used to determine the age of non-living things like rocks, for example.
- Also, the age of things that are more than **40,000-50,000 years old cannot be arrived at through** carbon dating.
- This is because **after 8-10 cycles of half-lives,** the amount of C-14 becomes almost very small and is almost undetectable.
- For determining the age of inanimate things, instead of carbon, **decays of other radioactive elements that might be present** in the material become the basis for the dating method.
- These are known as **Radiometric Dating Methods.** Many of these involve elements with **half-lives of billions of years,** which enable scientists to reliably estimate the age of very old objects.

What are the Radiometric Methods for Age Determination of Non-living Things?
- **Potassium-Argon and Uranium-Thorium-Lead:** Two commonly employed methods for **dating rocks are Potassium-Argon dating** and **Uranium-Thorium-Lead** dating.
- The radioactive isotope of potassium **decays into argon,** and their ratios can **give a clue about the age** of rocks.
- **Uranium and thorium have several radioactive isotopes,** and all of them decay into the **stable lead**

Radiometric Dating

o Radiometric dating uses radioactive decay of minerals in rocks and fossils to determine a rock or fossil's absolute age.

o Isotope: Element with the same number of protons and electrons but different number of neutrons.

o Primary radioactive isotopes used in geology are:

o Carbon 14 decays to Nitrogen 14

o Uranium 238 decays to Lead 206

o Uranium 235 decays to Lead 207

o Thorium 232 decays to Lead 208

o Rubidium 87 decays to Strontium 87

o Potassium 40 decays to Argon 40

atom. The ratios of these elements present in the material **can be measured and used to make estimates about age.**
- **Exposure to Sunlight:** There are also methods to determine how long an object has remained exposed to sunlight. These apply different techniques but are **again based on radioactive decay and are particularly useful** in studying buried objects or changes in topology.
- The most common of these is called **cosmogenic nuclide dating**, or CRN, and is regularly applied to study the **age of ice cores in polar regions.**
- **Indirect Carbon Dating:** In some situations, carbon dating can be used indirectly as well.
- A way in which the **age of ice cores in glaciers and polar regions is determined** by studying carbon dioxide molecules trapped inside large ice sheets.

- The trapped molecules have no interaction with the outside atmosphere and are found in the **same state as when they were trapped.** Determining their age gives a rough estimate of the time when the ice sheets were formed.

What are the Limitations of Determining Age of Gyanvapi Shivling?
- There are specific limitations in the case that **prevent disruptive methods or uprooting** of the structure, as directed by the SC.
- Therefore, traditional methods like carbon dating, which involve analyzing trapped organic material beneath the structure, **may not be feasible in this particular situation.**

What is the Gyanvapi Dispute?
- The Gyanvapi dispute revolves around the **Gyanvapi Mosque complex in Varanasi.** Hindu petitioners claim that the mosque was built on the site of an ancient Hindu temple. They argue that the presence of a **"Shivling"** serves as evidence of the temple's existence. The Petitioners have sought the **right to worship Maa Shringar Gauri** on the outer wall of the mosque complex.
- The management committee of the mosque, however, maintains that the land is Waqf property and argues that **The Places of Worship Act of 1991 prohibits** any changes to the character of the mosque.
- Historically, the Gyanvapi Mosque was built in **1669 during the reign of Mughal emperor Aurangzeb.** It was constructed after the demolition of the existing Vishweshwar temple. The plinth of the temple was **left intact and served as the courtyard of the mosque,** while one wall was preserved as the qibla wall facing Mecca. **The present Kashi Vishwanath Temple, dedicated to Lord Shiva, was later built adjacent to the mosque by Rani Ahilyabai Holkar in the 18th century.**
- Various claims have been made over the years, with some asserting that the mosque remains the original sacred place of Hindu worship.

5. Gaps in AePS Exploited by Cybercriminals

Why in News?
- The **Aadhaar-enabled Payment System (AePS)** in India has recently faced exploitation by **cybercriminals**, leading to **unauthorized access to users' bank accounts**
- Scammers have been **using leaked biometric details to bypass the need for One Time Passwords (OTPs)** and drain funds from unsuspecting victims.
- A series of recent scams have exposed the **vulnerabilities of the AePS** and how cybercriminals are exploiting the loopholes in the system to defraud unsuspecting customers.

What is AePS?
About:
- The AePS is a bank-led model that allows **online interoperable financial transactions at Point of Sale (PoS) or micro-ATMs** through the **Business Correspondent (BC)** of any bank using the **Aadhaar authentication.**
- It was taken up by the **National Payments Corporation of India (NPCI)** - a joint initiative of **Reserve Bank of India (RBI) and Indian Banks' Association (IBA).**
- The AePS is meant to provide **easy and secure access to banking services** for the poor and marginalized sections of society, especially in rural and remote areas.
- It **eliminates the need for OTPs, bank account details,** and other financial information.
- Transactions can be carried out with only the **bank name, Aadhaar number, and captured fingerprint during Aadhaar enrollment.**

Benefits:
- **Deepening Social Security:**

- The AePS helps in deepening social security by facilitating cash **transfers from various government schemes such as PM-KISAN, MGNREGA**, etc., directly into the beneficiaries' bank accounts.
- **Enabling Interoperability:**
- The AePS enables interoperability among different banks and financial institutions, **allowing customers to access their bank accounts through any BC or micro-ATM** of any bank.

Drawbacks:
- Neither Unique Identification Authority of India (UIDAI) **nor NPCI mentions clearly whether AePS is enabled by default.**

How is AePS Exploited?
- **Leaked Biometric Details: Cybercriminals obtain leaked biometric information,** which includes fingerprints captured during Aadhaar enrollment.
- They use this stolen data to **operate biometric POS devices and ATMs** without the need for **two-factor authentication or OTPs.** By bypassing these security measures, they can transfer money from users' bank accounts.
- **Silicone Thumbs:** Scammers have been known to use silicone thumbs to deceive biometric devices.
- They **place the artificial thumb on the fingerprint sensor,** tricking the system into authenticating their fraudulent transactions.
- This method allows them to perform unauthorized financial activities on behalf of the account holder.
- **Lack of Transaction Notifications:** In some cases, victims of AePS scams **do not receive any notification** from their banks **regarding unauthorized transactions.** They remain **unaware of the fraudulent activity until they notice discrepancies** in their bank account balance.
- This lack of immediate alerts enables scammers to continue draining funds undetected.
- **Exploiting Weak Security Measures:** Gaps in the AePS system's security protocols, such as **inadequate identity verification or authentication processes,** provide opportunities for cybercriminals to carry out their fraudulent activities. They take advantage of these weaknesses to exploit the system and access users' bank accounts.
- **Systemic Issues:** The AePS also faces issues such as **biometric mismatches, poor connectivity, weaker systems of certain banking partners**, etc., that affect its performance and reliability.
- Sometimes, the **transactions fail** due to these reasons but the money gets debited from the customers' accounts without their knowledge.

How to Prevent AePS Frauds?
- **Amendments to Aadhar Regulations 2016:**
  - UIDAI proposes an amendment to the **Aadhaar (Sharing of Information) Regulations, 2016.**
- The amendment requires entities in possession of an Aadhaar number to not share details unless Aadhaar numbers have been redacted or blacked out.
- **Aadhaar Lock:**
  - Users are advised to **lock their Aadhaar information** using the **UIDAI website or mobile app.**
  - Locking Aadhaar prevents the **unauthorized use of biometric information** for financial transactions.
  - Aadhaar can be unlocked when **biometric authentication is required,** such as for property registration or passport renewals.
- After the necessary authentication, Aadhaar can be locked again for security purposes.
- **Other Preventive Measures:**
  - It is advisable **to avoid scanning QR codes or clicking on links** sent by unknown or suspicious sources.
  - Exercise caution and **refrain from trusting individuals who offer assistance in withdrawing money** from locations other than authorized bank branches or ATMs.
  - Prior to providing a fingerprint on a PoS machine, it is recommended **to verify the displayed amount and request a receipt for every transaction.**

- o Regularly **check the balance and transaction alerts of the bank account** linked to the mobile number.
- o In the event of any suspicious or fraudulent activity, promptly report it to both the bank and the police.
- ● According to the **RBI**, customers are entitled to **zero liability for unauthorized transactions if promptly reported within three working days.**

What are the Challenges of AePS?
- ● **Lack of Awareness and Literacy:** Many customers are not aware of the benefits and features of the AePS or how to use it safely and securely. They also **lack financial literacy and digital skills**, which makes them vulnerable to fraud and errors.
- ● **Inadequate Infrastructure and Connectivity:** The AePS depends on the availability and quality of infrastructure and connectivity, such as **biometric devices, PoS machines, internet, power supply,** etc. However, these are often lacking or unreliable in rural and remote areas, where the AePS is most needed.
- ● **Regulatory and Policy Issues:** The AePS also faces some regulatory and policy issues, such as **the legal validity of Aadhaar authentication, the privacy and security of biometric data,** the MDR charges for transactions, the grievance redressal mechanism for customers, etc.

Way forward
- ● **Strengthening the Security and Authentication of AePS Transactions:**
- o **Implement encryption** and digital signatures to protect transaction data.
- o Incorporate **biometric liveness detection to prevent cloning or spoofing** of biometric data.
- o **Certify devices used for AePS transactions** and monitor transactions for suspicious activity.
- ● **Raising Awareness:**
- o **Educate users about the risks associated** with sharing Aadhaar number and biometrics.
- o Utilize the **Aadhaar lock/unlock feature to control access to biometrics.**
- o **Ensure service providers follow guidelines** and standards issued by authorities and comply with data protection laws.
- ● **Enhancing Coordination and Cooperation among Stakeholders:**
- o Facilitate information sharing among UIDAI, **NPCI**, RBI, banks, **fintech companies**, law enforcement agencies, and civil society organizations.
- o Develop joint strategies and action plans to **address cybercrime challenges**.
- o Provide technical assistance and capacity building to stakeholders.
- o Establish a platform for reporting and resolving grievances related to AePS.

6. 25th Anniversary of Pokhran-II

Why in News?
India recently celebrated the **25th anniversary of Pokhran-II on 11th May 2023** marking the successful nuclear bomb test explosions which became a significant **milestone in its journey to become a nuclear power.**
- ▪ May 11 is also celebrated as the **National Technology Day** to honour Indian scientists, engineers and technologists, who worked for the country's scientific and technological advancement and **ensured the successful conduct of Pokhran tests.**

What is Pokhran-II and India's Journey as a Nuclear Power?
- ▪ **Origin:**
- ● In 1945, renowned physicist **Homi J. Bhaba** lobbied for the establishment of the **Tata Institute of Fundamental Research (TIFR)** in Bombay, dedicated to nuclear physics research.
- ● TIFR became India's **first research institution dedicated to the study of nuclear physics.**
- ● Post-independence, Bhaba convinced the then PM Jawaharlal Nehru about the importance of nuclear energy and in 1954, the **Department of Atomic Energy (DAE) was founded, with Bhabha as the director.**

- The **DAE operated autonomously, away from significant public scrutiny.**

Reasons for India's Pursuit of Nuclear Weapons:
- India's pursuit of nuclear weapons was motivated by concerns over its **sovereignty and security threats from China and Pakistan.**
- The **1962 Sino-Indian War and China's nuclear test in 1964** heightened the need for India to safeguard its national security.
- The **war with Pakistan in 1965,** with **Chinese support,** further emphasized the need for self-sufficiency in defense capabilities.

Pokhran- I:
About:
- By the 1970s, India was capable of conducting a nuclear bomb test.
- Pokhran-I was **India's first nuclear bomb test** conducted on **May 18, 1974,** at the **Pokhran Test Range in Rajasthan.**
- It was code-named **Smiling Buddha and** officially described as a **"peaceful nuclear explosion"** with **"few military implications".**
- India became the **6th country in the world to possess nuclear weapons** capability after the US, Soviet Union, Britain, France and China.

Implications of Test:
- The tests faced near-**universal condemnation** and significant sanctions especially from **US and Canada**.
- It **hindered India's progress in nuclear technology** and slowed down its nuclear journey.
- Domestic political instability, such as the **Emergency of 1975** and opposition to nuclear weapons also hindered progress.

- **After Pokhran-I:**
- The 1980s saw **a resurgence of interest in nuclear weapons development** due to Pakistan's progress.
- India increased funding for its missile program and **expanded its plutonium stockpiles.**

Pokhran-II:
About:
- Pokhran-II refers to a sequence of **five nuclear bomb test explosions conducted by India** on **between 11-13th May 1998 at Rajasthan's Pokhran desert.**
- Code name - Operation **Shakti,** this event marked **India's 2nd successful attempt.**

Significance:
- Pokhran-II cemented **India's status as a nuclear power.**
- It demonstrated **India's ability to possess and deploy nuclear weapons,** thus enhancing its **deterrence capabilities.**
- The Indian government led by **Prime Minister Atal Bihari Vajpayee** officially declared itself as a state possessing nuclear weapons following Pokhran-II.

Implication:
- While the tests in 1998 also invited sanctions from some countries (like the US), the **condemnation was far from universal like in 1974.**
- In context of India's fast-growing economy and market potential, India **was able to stand its ground and thus cement its status as a dominant nation state.**
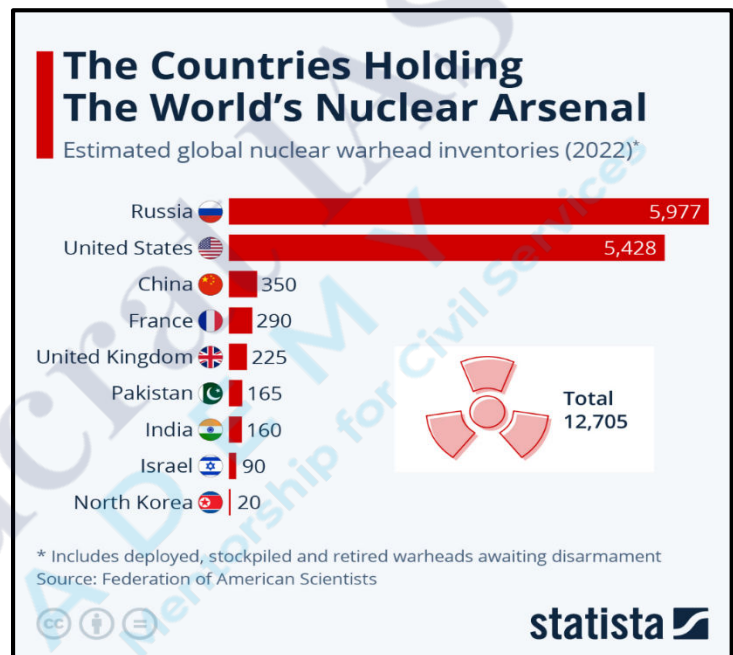
India's Nuclear Doctrine:

- India adopted a policy of **credible minimum deterrence,** stating that it would maintain a **sufficient nuclear arsenal for deterrence purposes but would not engage in an arms race.**
- In 2003, India officially came out with its nuclear doctrine that clearly elaborated on the **'no first use' policy.**

India's Current Nuclear Capability:

- India currently possesses approximately **160 nuclear warheads, according to the Federation of American Scientists (FAS).**
- **India has achieved an operational nuclear triad capability, allowing for the launch of nuclear weapons from land, air, and sea.**
- The triad delivery systems include **Agni, Prithvi, and K series ballistic missiles,** fighter aircraft, and nuclear submarines.

What is India's Status on Various International Treaties about Nuclear Weapons?

- **Non-Proliferation Treaty (NPT) 1968:**
- o **India is not a signatory; it declined to accede to the NPT,** citing concerns about the treaty's perceived discriminatory nature and lack of reciprocal obligations from nuclear weapons states.
- **Comprehensive Nuclear-Test-Ban Treaty (CTBT):**
- o India has **not signed the CTBT** as it is a **strong advocate for a time-bound disarmament commitment from nuclear weapon states (NWS)** and may use the lack of a commitment as a reason to refrain from signing the CTBT.
- The **Treaty on the Prohibition of Nuclear Weapons (TPNW):**
- o It entered into force on 22 January 2021 and **India is not a member of this treaty.**
- **Nuclear Suppliers Group(NSG):**
- o India is not a member of the NSG.
- **Wassenaar Arrangement:**
- o India joined the arrangement on December 2017 as its 42nd participating state.

The Countries Holding The World's Nuclear Arsenal

Estimated global nuclear warhead inventories (2022)*

Country	Warheads
Russia	5,977
United States	5,428
China	350
France	290
United Kingdom	225
Pakistan	165
India	160
Israel	90
North Korea	20

Total 12,705

* Includes deployed, stockpiled and retired warheads awaiting disarmament
Source: Federation of American Scientists

statista

7. G7 Summit: Climate Goals, Gandhi Statue & Quad Climate Initiatives

Why in News?
During the recent **49th G7 summit, member countries** had outlined key milestones in their **climate Wishlist** in response to ongoing studies and reports that continue to raise alarms about the **worsening state of climate change, urging immediate action.**

- Furthermore, at the same summit, the **Prime Minister of India** unveiled a bust of **Mahatma Gandhi in Hiroshima, Japan.**
- Additionally, the **Quad Leaders' Summit** also took place on the sidelines of the G7 summit, emphasizing shared democratic values, strategic interests, and initiatives for the **Indo-Pacific region.**

What are the Main Climate Wishlist of the G7?

- **Global Peak in Emissions by 2025:**
- o The G7 emphasized the need for a **global peak in emissions by 2025.**

- While this is not mandated under the **Paris Agreement**, achieving it is not implausible.
- Developed countries are witnessing a **decline in emissions,** although not at the required pace while developing countries' emissions are still increasing.
- If all countries only fulfill their existing commitments, emissions in 2030 would be about **11% higher than 2010 levels.**
- **Ending Fossil Fuel Use:**
- The G7 does not set a specific deadline for **ending fossil fuel** use but commits to accelerating the **phase-out of "unabated fossil fuels"** in line with **1.5 degree Celsius trajectories.**
- They aim to eliminate **"inefficient fossil fuel subsidies"** by 2025 or earlier without specifying the definition of **"inefficient subsidies."**
- The G7 countries claim to have stopped financing new fossil fuel-based energy projects, except in limited circumstances.
- **Net-Zero Targets:**
- The G7 reiterates its commitment to achieve **net-zero status by 2050** and urges other major economies to do the same.
- The world as a whole must become **net-zero by mid-century to meet the 1.5-degree Celsius target.**
- China aims for **net-zero by 2060, while India has set 2070 as its target.**
- Post-2050 targets of major developing countries may change with evolving technologies and cleaner energy adoption.

What are the Challenges in Implementing the G7 Climate Wishlist?
- **Insufficient Action and Inconsistencies:**
- G7 countries account for **20% of global emissions** but have not effectively fulfilled their pledges.
- Lack of sufficient and consistent actions to align with the **1.5-degree Celsius** and **2-degree Celsius temperature goals.**
- G7 member countries Failure to update **nationally determined contributions (NDCs) . Paris Agreement targets.**
- **Inadequate Climate Finance Support:**
- G7 countries have been **slow and insufficient in providing climate finance** to developing nations agreed under the **Paris Agreement targets.**
- Developing countries, disproportionately affected by climate impacts, require support for adaptation and resilience.
- Oxfam reports that only **20% of climate finance from rich countries in 2019** was allocated for adaptation, with minimal reaching least developed countries.
- **Continued Reliance on Fossil Fuels:**
- Criticism directed at the G7 countries for their **ongoing dependence on fossil fuels, particularly coal**.
- Fossil fuels, especially coal, are **highly carbon-intensive energy sources exacerbating climate change**.
- Oil Change International highlights that G7 countries provided significant **public finance for fossil fuels, surpassing investments in clean energy.**

Why did the PM of India Unveil Gandhi's Bust in Hiroshima?
- Mahatma Gandhi was one of the most influential leaders of the twentieth century, who championed the principles of **non-violence, peace, justice and human dignity.** His statue was unveiled at **Hiroshima Peace Memorial Park**, as a tribute to his legacy and a reminder of his relevance in today's world.
- The symbolic gesture was meant to highlight the shared commitment of the **G7 and its partners to prevent another nuclear catastrophe** and to pursue **nuclear disarmament and non-proliferation.**
- It was also meant to **acknowledge the suffering and resilience of the Hibakusha, the survivors of the atomic bombings of Hiroshima and Nagasaki** in 1945.

- The statue was also seen as a recognition of **India's role and contribution to global peace and security,** as well as its **partnership with Japan on various issues, including climate change.**
- The unveiling ceremony was attended by the **G7 leaders**, as well as **the Prime Minister of India,** who was invited as a guest to the summit along with other leaders from Australia, South Korea, and South Africa.

What Were the Outcomes of the Quad Leaders' Summit?
- The Quad Leaders' Summit was held on May 23, 2023, on the sidelines of the G7 summit. It was attended by the **Prime Minister of India, President Joe Biden of the US, Prime Minister Scott Morrison of Australia and Prime Minister Yoshihide Suga of Japan.**
- The Quad is an **informal strategic dialogue among four democracies** that share common interests and values in the **Indo-Pacific region.**
- One of the key areas of cooperation among the Quad members is **climate change**. The leaders issued a joint statement that reaffirmed their **commitment to the Paris Agreement and its full implementation.**
- They also announced several initiatives to enhance collaboration on clean energy transition, innovation, adaptation, and resilience. **Some of these initiatives are:**
  o Launching a **new Quad Climate Working Group** to coordinate their efforts on domestic and international climate policies.
  o Establishing a **Quad Clean Energy Partnership** to support the deployment of clean energy technologies in Indo-Pacific countries through technical assistance, capacity building, and financing mechanisms.
  o Supporting a **Quad Green Shipping Network** to promote **decarbonization** of maritime transport through information sharing, best practices, and standards development.
  o Expanding cooperation on **disaster risk reduction** and management through **joint exercises,** training, and information sharing.
  o Supporting nature-based solutions for **climate mitigation** and adaptation through the conservation and restoration of **ecosystems** such as forests, **wetlands**, and **mangroves.**

**What is the Group of Seven (G7)?**
- It is an **intergovernmental organization** that was **formed in 1975.**
- The bloc meets annually to discuss issues of common interest like **global economic governance, international security and energy policy.**
- The G7 countries are the **UK, Canada, France, Germany, Italy, Japan and the US**.
- **All the G7 countries and India are a part of G20.**
- **The G7 does not have a formal charter or a secretariat.** The presidency, which rotates among member countries each year, is in charge of setting the agenda. **Sherpas, ministers and envoys hammer out policy initiatives before the summit.**
- **The 49th G7 summit was held in Hiroshima, Japan.**

What is QUAD?
- It is the grouping of four democracies –**India, Australia, the US, and Japan.**

- All four nations find a common ground of being democratic nations and also support the common interest of unhindered maritime trade and security.
- The Quad is billed as four democracies with a **shared objective to ensure and support a "free, open, and prosperous" Indo-Pacific region.**
- **The idea of Quad was first mooted by Japanese Prime Minister Shinzo Abe in 2007.** However, the idea couldn't move ahead with Australia pulling out of it, apparently due to Chinese pressure.
- **Finally in 2017, India, Australia, the US and Japan, came together and formed this "quadrilateral" coalition**.
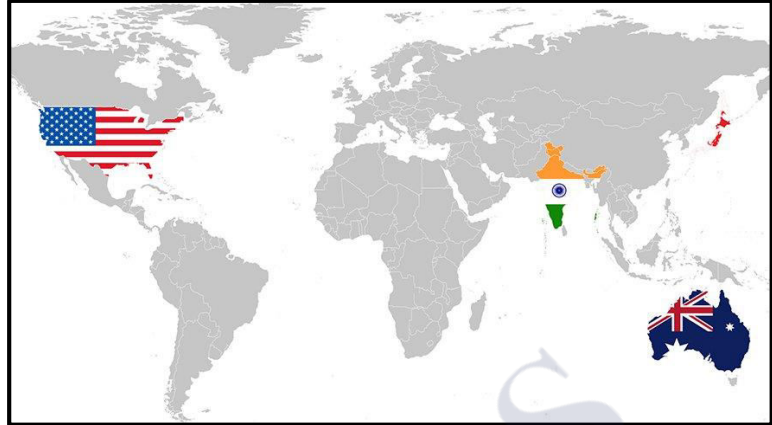
8. Economics of Climate Change in India

Why in News?

Over the past months there have been **several stories about how extreme weather events have disrupted normal life in India.** The **Global Climate Risk Index 2021** had ranked **India 7th in the list of most affected countries** in terms of exposure and **vulnerability to climate risk events.**

- Climate change being one of the most **pressing challenges of the 21st century** poses significant risks not only to the **environment, human health and food security**, **but also economic development.**

How does Climate Change Affect India's Macro economy?
About:

- Climate change can **adversely affect both the supply side (the productive potential) and the demand side (the consumption and investment) of the economy.**
- It can also have spill over effects across regions and sectors, as well as **cross-border impacts and contagion risks.**

Chart II.1: Risks Emanating from Climate Change across Geographical Regions in India

Thar Desert — Heatwaves	**Great Himalayas** — Landslides, Cloudbursts, Melting of glaciers
Indo-Gangetic Plains — River floods, Heatwaves, Thunderstorms	
Coastal Plains and Ghats — Heavy precipitation, Urban floods, Cyclones, Landslides	**Central Peninsular Plateau** — Heatwaves, Forest fires, Droughts

Note: Map not to scale.

Impacts:

- **Reduced Agricultural Output:** Climate change can severely **disrupt crop cycles and cause low agricultural yield due to changes in temperature, precipitation patterns, pest infestation, soil erosion, water scarcity,** and extreme weather events such as floods and droughts.
- **Agriculture, with its allied sectors,** is the largest source of livelihood in India and contributes significantly to the economy. **Low yields can hit the rural economy and push inflation in urban areas as well.**
- **Disruption of the Fisheries Sector:** Rising sea surface temperatures due to climate change can disrupt the **distribution and behaviour of fish species.**
- **Some species may move to cooler waters or shift their migratory patterns,** affecting the availability of fish in certain regions. This can **lead to changes in fish catch composition and abundance, impacting the livelihoods of fishermen.**
- **Increased Health Costs:** Climate change can increase the **incidence and severity of diseases such as malaria, dengue, cholera, heat stroke, respiratory infections,** and mental stress.
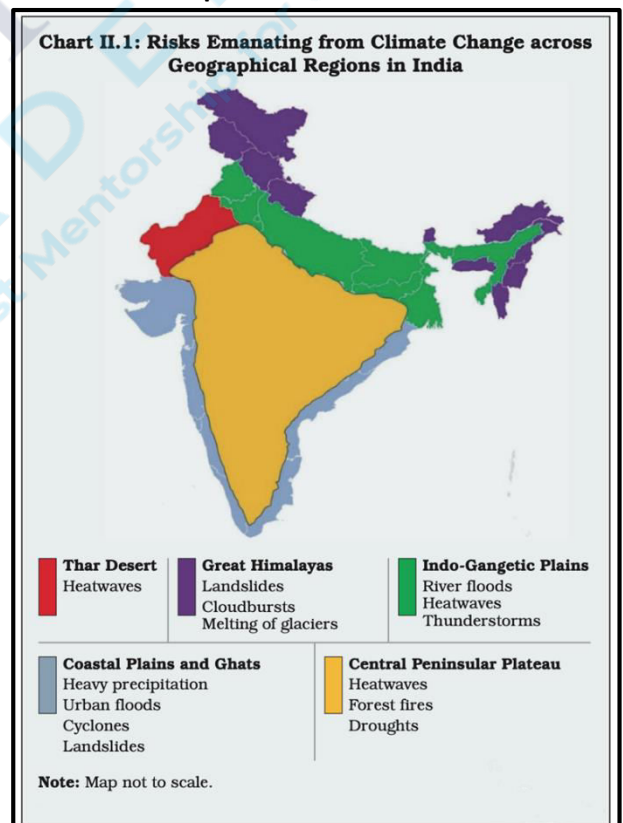
- It can also **affect the nutrition and well-being of vulnerable groups such as children, women, elderly, and poor.** Health costs can reduce disposable income, lower labour productivity, and increase public expenditure.
- According to the **WHO, between 2030 and 2050**, climate change is expected to **cause approximately 2,50,000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress.**
- **Damaged Infrastructure**: Climate change can damage physical infrastructure such as **roads, bridges, railways, ports, airports, power plants, water supply systems,** and buildings due to **sea level rise, coastal erosion, landslides, storms, floods, and heat waves.**
- Damaged infrastructure can disrupt **economic activity, trade, and connectivity and increase maintenance and replacement costs.**
- **For instance,** India **spent USD 3 bn of economic damage caused by floods in the last decade** which is 10% of the global economic loss.
- **Reduced Industrial Output:** Climate change can **increase operational costs** and reduce profits in the industrial sector due to factors such as new **climate-friendly regulations, reduced utilisation of old stock,** relocation of production processes and activities due to climate-related losses.
- India could contribute to **34 million out of 80 million global job losses due to heat stress-associated productivity decline by 2030.**
- **Energy Crisis:** According to the the **International Energy Agency (IEA),** India's primary energy demand will double by 2030.
- Energy and climate share a distinctive relationship such that rising temperatures demand a surge in energy usage to assist the process of mitigating the heat effects.
- **Impact on Financial Services:** Climate change can put pressure on financial services due to increased **credit risk** for banks and financial institutions. It can **affect borrowers' ability to repay loans due to climate-related events such as floods, hurricanes, or droughts.**
- These events can damage properties, **disrupt supply chains, and impact businesses' profitability, potentially leading to loan defaults and credit losses.**
- It can also **increase insurance claims and disrupt travel and hospitality services** due to reduced demand, cancellations, and safety concerns.

What are India's Initiatives to Tackle Climate Change?
- **Panchamrit**: India has presented the following five nectar elements (Panchamrit) of India's climate action:
  o **Reach 500 GW Non-fossil energy capacity by 2030.**
  o **50% of its energy requirements from renewable energy by 2030.**
  o **Reduction of total projected carbon emissions by 1 billion tonnes from now to 2030.**
  o **Reduction of the carbon intensity of the economy by 45% by 2030, over 2005 levels.**
  o **Achieving the target of net zero emissions by 2070.**
- **National Action Plan on Climate Change:**
  o It aims at creating awareness among the representatives of the public, different agencies of the **government, scientists, industry and the communities** on the threat posed by climate change and the steps to counter it.

What More can India do to combat the Impacts of Climate Change?
- **Enhancing Carbon Sequestration:** India can enhance its **carbon sequestration** potential by expanding its **forest and tree cover**, **restoring degraded lands, promoting agroforestry, and adopting low-carbon farming practices.**
- Carbon sequestration can **not only offset emissions but also provide multiple co-benefits such as biodiversity conservation, soil fertility improvement, water security,** livelihood support, and disaster risk reduction.
- **Building Climate Resilience**: India can build its climate resilience by strengthening its disaster management systems, improving its early warning and forecasting capabilities, **investing in climate-proof infrastructure,**

- developing climate-smart agriculture, enhancing health care services, and empowering local communities and institutions.
- **Driving India's Green Transportation Revolution:** There is a need to **promote electric vehicles (EVs)** by establishing a robust charging infrastructure network and offering incentives for EV adoption.
- Introducing **innovative public transportation solutions such as electric buses, shared mobility services, and smart traffic management systems** can reduce congestion and emissions.
- **Climate Smart Agriculture**: There is a need to **encourage sustainable farming** practices by promoting organic farming, agroforestry, and precision agriculture.
- Integrating technology-driven solutions such as **remote sensing, IoT devices, and AI-based analytics can optimise resource utilisation, reduce water consumption, and enhance crop productivity.**

9. G20 Countries and Disaster Risk Reduction

Why in News?
Recently, the First **G20 Disaster Risk Reduction Working Group (DRR WG) meeting** under India's G20 Presidency took place, where India highlighted the importance of **Disaster Risk Reduction (DRR).**

What are the Highlights of the Meeting?
- The G20 Disaster Risk Resilience Working Group has called upon governments to build **a social protection system** with an **effective and preferred instrument for disaster risk financing.**
- It emphasised the **need for new-age Social Protection Systems that invest in local risk resilience** to mitigate, prepare and recover from disasters.
- The five **priorities outlined:**
- Global coverage of **Early Warning Systems**
- Increased commitment towards making infrastructure systems disaster resilient
- Stronger **national financial frameworks** for DRR
- Strengthened national and global disaster response system
- Increased application of ecosystems-based approaches to DRR
- The G20 DRR WG intended to include considerations for the **Sendai Framework's mid-term review,** renew multilateral cooperation at all levels, and inform future global policies and initiatives related to DRR.

What is the Need for Creating a Collective G20 Framework for Disaster Risk Reduction?
- The G20 nations, with a population of 4.7 billion, have large exposure, **risk from asset concentration, and vulnerability to natural disasters.**
- In the current World Risk Index, **four out of the top 10 vulnerable countries are G20 nations**.
- The combined estimated annual average loss in the G20 countries alone is USD 218 billion, equivalent to **9% of the average annual investment in infrastructure** made by them.
- Disaster risk reduction measures can play an important role in preventing such losses.

What can be the key Strategies for Reducing Disaster Risk?
- **Better Economic and Urban Development:**
- Reducing risk can be achieved mainly by reducing vulnerability and exposure to risk through measures such as **better economic and urban development choices** and practices, protection of the environment, reduction of poverty and inequality, etc.
- For example, in India, effective implementation of flood risk management strategies can **help in reducing and managing Extreme Weather Conditions.**
- **Financing:**
- There is a need to re-imagine **financing disaster risk reduction.** The financing requirements flowing through government budgets are not independent of a country's fiscal position and hence may be limited.

- Innovative financing tools including creating **reserve funds, dedicated lines of credit and tapping resources globally** should be explored.
- **Infrastructure:**
- Infrastructure, such as roads, rails, airports, and electricity lines created through public revenues **need to be resilient to disasters and may require** more funds incrementally.
- There is a need to finance this additionally using **options that are reflective of the social benefits** of such disaster-resilient infrastructure.
- **Dealing with Extensive and Intensive Risk:**
- Differential strategies to deal with extensive risk (risk of losses from frequent but moderate impacts) and intensive risk (from low frequency and high impact events), should be worked out.
- A large portion of the losses accumulate from extensive events.
- Cumulatively, dispersed events such as **Heat waves**, lightning, local floods, and landslides cause enormous losses. Implementing targeted approaches to reducing losses from extensive risk events can have an impact in the short to medium-term horizon.
- **Multi-tiered, Multi-sectoral Effort:**
- There is a need to view disaster risk reduction as a multi-tiered, multi-sectoral effort.
- If efforts are integrated vertically from **local to sub-national to national to global,** and horizontally across sectors, the level of readiness to manage unknown risks will be enhanced.
- The world is interlinked and interdependent, and the **G20 can help develop such strategies.**

What are the Initiatives for Disaster Risk Reduction?
- **Global:**
- **Sendai Framework for Disaster Risk Reduction 2015-2030**
- **The Climate Risk and Early Warning Systems (CREWS)**
- **International Day for Disaster Risk Reduction - 13th October**
- Green Climate Fund's Sectoral Guide on Climate Information & Early Warning Systems

- **India's Initiatives:**
- **Coalition for Disaster Resilient Infrastructure Society (CDRIS)**
- **National Disaster Management Plan (NDMP)**

Way Forward
- The G20 should foster **collaboration and coordination among its members** and other stakeholders on early warning systems, disaster-resilient infrastructure, financial frameworks and response systems for disaster risk reduction.
- They should **promote innovation and research on disaster risk reduction**, especially on the **use of technology, data and ecosystems-based approaches.**
- There is a need to align disaster risk reduction efforts with the **2030 Agenda for Sustainable Development**, the **Paris Agreement on Climate Change** and the New Urban Agenda and ensure that no one is left behind.
- The **Working Group on Disaster Risk Reduction** is an opportunity for the G20 to take a lead in the implementation of the Sendai framework over the next seven years.

10. IRDAI Vision 2047

Why in News?
The **Insurance Regulatory and Development Authority of India (IRDAI)**, as part of its Vision **Insurance for all' by 2047,** has allotted states and union territories to every insurer to increase **insurance penetration in India.**
- **IRDAI** is also planning to launch **Bima Trinity** - Bima Sugam, Bima Vistar, Bima Vaahaks – in collaboration with general and life insurance firms to make insurance activities hassle free.

What is IRDAI Vision 2047?
Objective:

- Insurance for All by 2047 aims that every citizen has an appropriate **life, health and property insurance cover** and every enterprise is **supported by appropriate insurance solutions.**
- It also aims to make the **Indian insurance sector globally attractive**

- **Pillars:**
- Insurance customers (Policyholders)
- Insurance providers (insurers)
- Insurance distributors (intermediaries)
- **Focus Areas:**
- Making available right products to right customers
- Creating **robust grievance redressal mechanism**
- Facilitating ease of doing business in the insurance sector
- Ensuring the regulatory architecture is aligned with the market dynamics
- Boosting innovation
- Competition and distribution efficiencies while mainstreaming technology and moving towards principle based regulatory regime.

- **Significance:**
- It can help people in households all over the country to have **access to an affordable insurance policy** that covers health, life, property, and accidents.
- These policies would offer faster claim settlements, sometimes within hours, and additional **benefits like gym or yoga memberships.**

Cover drive for the uninsured

The Insurance Regulatory and Development Authority is driving multi-pronged changes to expand citizens' safety nets

- A new bundled insurance product Bima Vistar to provide life, health, accident and property cover through a single, simple policy
- A Bima Sugam platform as a one-stop shop for customers, integrating insurers and distributors
- Linking digital death registries to platform so claims can be settled within hours or a day
- Permitting insurers to sell value-added services with policies; for example, a yoga class bundled with a health scheme
- Women to lead campaign to spur insurance penetration in each Gram Sabha
- Roping in States to form insurance committees and expand coverage across districts
- Move will also allow smaller, micro and regional insurers to reach different strata of society

What is Bima Trinity?
- **Bima Sugam:**
- It is a unified platform that **combines insurers and distributors.** It simplifies policy purchases, service requests, and claims settlement for customers in one convenient portal.
- **Bima Vistar:**
- It is a comprehensive bundled policy that covers life, health, property, and accidents. It provides **defined benefits for each risk category**, ensuring quick claim payouts without surveyors.
- **Bima Vaahaks:**
- It is a **women-centric workforce operating** at the Gram Sabha level. They will educate and convince women about the **benefits of comprehensive insurance, particularly Bima Vistar.** By addressing concerns and emphasizing advantages, Bima Vaahaks empower women and enhance their financial security.

What is the State of Insurance Sector in India?
- According to the Economic Survey 2022-23, life insurance density in the country increased from USD 11.1 in 2001 to USD 91 in 2021. Total global insurance premiums in 2021 **increased 3.4% in real terms, with the non-life insurance sector registering 2.6% growth,** driven by rate hardening in commercial lines in developed markets.

- According to the **Economic Survey 2022-23**, India's insurance market is poised to emerge as one of the fastest-growing markets globally in the coming decade.
- As per the IRDAI, insurance penetration in India **increased from 3.76% in 2019-20 to 4.20%in 2020-21, registering a growth of 11.70%.**
  - Also, the insurance density increased from USD 78 in 2020-21 to USD 91 in 2021-22.
- **Life insurance penetration in 2021 was 3.2%**, almost twice as high as the emerging markets and slightly above the global average.
- India is at **present the 10th biggest market in the world** it is projected to be 6th biggest by 2032.

What are the Challenges Related to Insurance Sector
- **Lower Adoption Rate:**
  - Insurance is **not widely adopted in India compared to other countries.** This is because many people are not aware **of insurance or don't trust it.**
  - In rural areas, where a large portion of the population lives, only a small percentage **have life insurance coverage.**
- The insurance industry's contribution **to India's GDP (Gross Domestic Product) is less than 5%,** which is lower than the global average. In simple terms, insurance is not widely used in India, and efforts are needed to increase awareness and trust in insurance products.
- **Lack of Product Innovation:**
  - The insurance sector in India has **been slow in product innovation.** Many insurance companies offer similar products, which leads to a lack of differentiation in the market.
- **Fraudulence:**
  - Fraud includes things like **making false claims and lying about** information.
  - The use of digital technology and customer-focused policies may have unintentionally given fraudsters **more chances to steal identities and make fake claims.**
- Over 70% of Indian insurers have seen an increase in fraud cases in the past two years.
- **Talent Management:**
  - The insurance sector in India faces a talent shortage. The industry needs skilled professionals in areas such as actuarial science, underwriting, claims, and risk management.
  - Attracting and retaining talented professionals is a challenge for the industry.
- **Slow Rate of Digitalization:**
  - The insurance sector in India **has been slow to adopt digitalization compared to other industries,** which has resulted in several challenges such as inefficient processes, lack of transparency, and poor customer experience.
- **Claims Management:**
  - The claims process in India is often seen as **complicated, slow, and opaque,** which can lead to customer dissatisfaction and loss of trust in the insurance industry.
  - This can be due to a lack of transparency, inefficient processes, and poor communication with customers.

What is IRDAI?
- IRDAI, founded in 1999, is a regulatory body created with the **aim of protecting the interests of insurance customers.**
- It is a **statutory body under the IRDA Act 1999** and is **under the jurisdiction of Ministry of Finance.**
- It regulates and sees to the **development of the insurance industry** while monitoring insurance-related activities.
- The **powers and functions** of the Authority are laid down in the **IRDAI Act, 1999 and Insurance Act, 1938.**

Way Forward

- To improve the insurance sector in India, **several steps can be taken to leverage technology, align with customer behavior,** optimize data usage, simplify claims management, adopt hybrid distribution models, and tackle fraud.
- **Digitalization should be a priority across the value chain to reduce costs, improve efficiency, and support ecosystem development.** This involves using technology to enhance employee skills and productivity through upskilling programs.
- Insurers need to align with dynamic changes in customer behavior and preferences. By offering quick personalized products and prioritizing flexibility over mass offerings, insurers can better meet customer needs and manage perceptions.

11. ISRO's new NavIC Satellite NVS-01

Why in News?
The NVS-01 satellite was successfully launched by t**he Indian Space Research Organisation (ISRO)** using the GSLV-F12, and after a 19-minute flight, it was accurately placed into a Geosynchronous Transfer Orbit.
- GSLV-F12 is the 15th flight of India's **GSLV (Geosynchronous Satellite Launch Vehicle)** and the 9th flight with indigenous cyro stage. This is the 6th operational flight of GSLV with indigenous cryogenic stage.

What is NVS-01?
About:
- This satellite is the **first of the second-generation satellites of ISRO's** NVS (Navigational Satellite) series of payloads.
- It weighs 2,232 kg, making it the heaviest in the constellation.
- The NVS-01 carried **navigation payloads L1, L5 and S bands.**
- Its purpose is to provide continuity for the **NavIC (Navigation in Indian Constellation)** services, which is an Indian Regional Navigation Satellite System (similar to GPS) that offers accurate and real-time navigation within India and **up to a 1,500 km region around the country.**
- In the First generation, there are seven satellites in the Indian Regional Navigation Satellite System (IRNSS) constellation, operationally named NavIC, weighing much less — around 1,425 kg — at liftoff.
- **Atomic Clock:**
- The satellite will have a **Rubidium atomic clock onboard,** a significant technology developed by India.
- Some of the existing satellites in the navigation constellation **lost their ability to provide accurate location data** due to failed atomic clocks. Satellite-based positioning systems rely on precise time measurements from atomic clocks to determine object locations. When the clocks fail, the satellites cannot provide accurate location information anymore.
- **L1 signals for better use in wearable devices:**
  - It will send signals in a **third frequency, L1,** besides the L5 and S frequency signals that the existing satellites provide, **increasing interoperability with other satellite-based navigation systems.**
  - The L1 frequency is **among the most commonly used in the Global Positioning System (GPS),** and will increase the use of the regional navigation system in wearable devices and personal trackers that use low-power, single-frequency chips.
- **Longer Mission Life:**
- It will have a **longer mission life of more than 12 years**. The existing satellites have a **mission life of 10 years.**

What is NavIC?
About:
o NavIC or the **IRNSS is designed with a constellation of 7 satellites** and a network of ground stations operating 24×7.

● There are a **total of eight satellites however only seven remain active.**

● Three satellites in geostationary orbit and four satellites in geosynchronous orbit.

o **The constellations' first satellite (IRNSS-1A) was launched on 1st July 201**3 and the eighth satellite IRNSS-1I was launched in April 2018.

● With the seventh launch of the constellation's satellite (IRNSS-1G), IRNSS was renamed **NavIC by India's Prime Minister in 2016.**

o It was recognised by the **International Maritime Organization (IMO)** as a part of the World-Wide Radio Navigation System (WWRNS) for operation in the Indian Ocean Region in 2020.

IRNSS
Indian Regional Navigation Satellite System
IRNSS (NavIC) is designed to provide accurate real-time positioning and timing services to users in India as well as region extending up to 1,500 km from its boundary

NAVIGATION CONSTELLATION CONSISTS OF SEVEN SATELLITES
3 in geostationary earth orbit (GEO) and
4 in geosynchronous orbit (GSO) inclined at 29 degrees to equator

Each sat has three rubidium atomic clocks, which provide accurate locational data

IT WILL PROVIDE TWO TYPES OF SERVICES
1 Standard positioning service | Meant for all users
2 Restricted service | Encrypted service provided only to authorised users (military and security agencies)

Applications of IRNSS are: Terrestrial, aerial and marine navigation; disaster management; vehicle tracking and fleet management; precise timing mapping and geodetic data capture; terrestrial navigation aid for hikers and travellers; visual and voice navigation for drivers

While **American GPS has 24 satellites** in orbit, the number of sats visible to ground receiver is limited. In **IRNSS, four satellites** are always in geosynchronous orbits, hence always visible to a receiver in a region **1,500 km** around India

Geostationary earth orbit
Geosynchronous orbit

Potential Uses:
● Terrestrial, aerial and marine navigation;
● Disaster management;
● Vehicle tracking and fleet management (especially for mining and transportation sector);
● Integration with mobile phones;
● Precise timing (as for ATMs and power grids);
● Mapping and geodetic data capture.

What is the Advantage of Having a Regional Navigation System?
▪ **Regional Navigation System:**
o NavIC is India's own regional navigation system developed by ISRO. It covers the **Indian landmass and extends up to 1,500 km around it.** The primary purpose of NavIC is to cater to the positioning and navigation needs of users in this specific region.
▪ **Ground Stations:**
o ISRO is working on setting up ground stations in countries like Japan, France, and Russia. These additional ground stations will enhance the accuracy and coverage of NavIC signals through better triangulation.
▪ **Signal Reception:**
o NavIC signals reach India at a **90-degree angle, making it easier for the signals to penetrate** congested areas, dense forests, and mountainous terrain. In contrast, GPS signals arrive at an angle, which can sometimes pose challenges for reception in certain locations.
▪ **Availability:**
o NavIC signals are primarily designed to serve the Indian region. Therefore, users within the coverage area can expect reliable access to NavIC signals, even in remote or hard-to-reach areas.
Which are the other Navigation Systems operational in the world?
▪ **Four Global Systems:**

- o GPS from the U.S.
- o GLONASS from Russia.
- o Galileo from European Union
- o BeiDou from China.
- ▪ **Two Regional Systems:**
- o NavIC from India
- o QZSS from Japan.

12. The World's Worst Animal Disease Killing Frogs Worldwide

Why in News?
For the past 40 years, a devastating **fungal disease, called chytridiomycosis or chytrid,** has been ravaging frog populations around the world, wiping out 90 species. This is a **"panzootic" – a pandemic in the animal world.**
- Transboundary and Emerging Diseases, a multinational study has **developed a method to detect all known strains of this disease,** caused by the amphibian chytrid fungus.

What is Chytridiomycosis or Chytrid?
About:
- **Chytrid infects frogs by reproducing in their skin, affecting their ability to balance water and salt levels,** and eventually leading to death if infection levels are high enough.
- The **high mortality rate** and the high number of species affected **make chytrid unequivocally the deadliest animal disease known to date.**

Origin:
- **Chytrid originated in Asia** and was unwittingly spread to other continents through global travel and trade in amphibians.
- ▪ **Infection:**
- Chytrid has been devastating frog populations for the past 40 years, **wiping out 90 species, including seven in Australia,** and causing severe **declines in over 500 frog species.**
- Many species' immune systems were simply not equipped to defend against the disease, and **mass mortalities ensued.**
- In the 1980s, amphibian biologists began **to notice sharp population declines, and in 1998, the chytrid fungal pathogen** was finally recognised as the culprit.
- ▪ **Diagnosis of Disease:**
- **Researchers use a qPCR test to detect chytrid in frogs by swabbing their skin,** and the new test is more sensitive, meaning it can detect very low infection levels, thereby broadening the scope of species that can be studied.
- **qPCR stands for quantitative polymerase chain reaction.** It is a way to measure the volume of DNA from a species of interest. **The test was developed at CSIRO, Australia in 2004;** unlike a COVID test, however, scientists swab the frog's skin, not the nose.
- CSIRO, which stands for **Commonwealth Scientific and Industrial Research Organisation,** is **Australia's national science agency.**
- Over the past years, researchers from the **Council of Scientific and Industrial Research (CSIR)– Centre for Cellular and Molecular Biology** in India also has been working on a new qPCR test that can detect strains of chytrid from Asia.
- In collaboration **with researchers in Australia and Panama,** India have now verified the qPCR test also reliably detects chytrid in these countries.
- The **new qPCR test can detect strains of** chytrid from Asia and another closely related species of **chytrid that infects salamanders.**

Immunity to Some Amphibians:

- **Some amphibian species don't become sick** when they carry the fungus, which is puzzling.
- So far, no clear trend has been found between resistance and immune function. There is also evidence chytrid can suppress a host's immune response.

Research about the Species:

- Asia is lagging the rest of the world in chytrid research.
- A multinational study has **developed a method to detect all known strains of chytrid,** which will advance our ability to detect and research the disease, working towards a widely available cure.

What is CSIR – Centre for Cellular and Molecular Biology?

- The **Centre for Cellular & Molecular Biology (CCMB)** is a premier research organization in frontier areas of modern biology and promotes centralised national facilities for new and modern techniques in the inter-disciplinary areas of biology.
- **CCMB was set up initially as a semi-autonomous Centre on April 1, 1977** with the Biochemistry Division of the then Regional Research Laboratory (presently, Indian Institute of Chemical Technology, IICT) Hyderabad forming its nucleus.

Prelims Booster- The Hindu & The Indian Express

8TH MAY

1. **Article 355:** Recently, unrest in Manipur was triggered by a **decision of the High Court to pursue a 10-year old recommendation to grant Scheduled Tribe (ST) status to the non-tribal Meitei community.** In view of the prevailing unprecedented burning situation, the **Centre imposed Article 355 in the state to control the situation**. It is a provision that **empowers the Union government to protect every state in India against external aggression and internal disturbances**. It can also be employed when a state fails to comply with or to give effect to any of the directions given by the Union under the Constitution. **Under this Article, the Union Government has the power to issue directions to any state to ensure compliance with the Union's laws and regulations**. However, the directions should be of an immediate nature and cannot extend beyond the period necessary to remedy the failure of state machinery. **The duration of the assistance provided under Article 355 is not specified in the Constitution**. The duration of the assistance provided is **subject to judicial review**. The State Government should also be given an opportunity to submit its views before the issuance of such directions. The Union government cannot use this power to intervene in the internal affairs of a state unless there is a failure of the state machinery.

2. **Lithium reserves found in Rajasthan:** After J&K, **lithium reserves have been traced in Rajasthan's Degana (Nagaur district).** These lithium reserves are higher than the ones recently found in J&K. The amount of lithium present in these reserves can satisfy 80% of India's total demand. **The discovery of these reserves may help in reducing the dependency of India on China for lithium.** Lithium is a **non-ferrous metal,** which is used to make mobile-laptops, electric vehicles and other chargeable batteries. **Lithium reserves are concentrated in the lithium triangle in South America – Argentina, Bolivia and Chile**, with 50% of the deposits concentrated in these regions. **The world's largest Lithium reserves of 21 million tonnes are currently in Bolivia.** Despite this, China, which has reserves of 5.1 million tonnes of lithium, continues to have a monopoly in the global market. **India's plan to increase EV penetration by 30% by 2030 relies heavily on lithium**. According to **World Bank, by 2050, the global demand for lithium metal will increase by 500%.**

3. **Phase-III Of Thalassemia Bal Sewa Yojana:** Recently, 3rd phase of **Thalassemia Bal Sewa Yojana (TBSY)/ Hematopoietic Stem Cell Transplantation (HSCT) Program** was launched, along with Thalassemia Bal Sewa Yojana Portal, on **World Thalassemia Day (8th May).**

Scheme Funding: Provided by **Coal India Limited as part of its Corporate Social Responsibility (CSR).** The program provides **one-time financial assistance** of Rs 10 lakhs per **Hematopoietic Stem Cell Transplantation (HSCT) in case of underprivileged thalassemia patients** who have a matched family donor.

9TH MAY

1. **Gopal Krishna Gokhale Birth Anniversary:** Born on 9 May 1866, in Maharashtra, Gopal Krishna Gokhale was an Indian **liberal political leader and a social reformer**. He led the moderate nationalists in the early years of the Indian Independence Movement. Being one of the first generations of Indians to receive a university education, he graduated from Elphinstone College in 1884. He had a **great influence of the social works of Justice Mahadev Govind Ranade on his life.** He was **named as the Protégé Son i.e., Manas Putra of Justice Mahdev Govind Ranade.** Apart from being a

senior leader of the Indian National Congress (INC), he was the **founder of the Servants of India Society**. Through the Society as well as the Congress and other legislative bodies he served in, **he campaigned for Indian self-rule and for social reforms**. **Gokhale's deposition before the Welby Commission on the financial condition of India won him accolades.** His speeches on the budget in the Central Legislative Council were unique, with thorough statistical analysis. **He played a leading role in bringing about Morley-Minto Reforms in India**. He died on 19 February 1915, leaving a void in the lives of those who greatly admired him.

2. **Cyclone Mocha:** According to India Meteorological Department (IMD), cyclonic or low-pressure area is developing in the Bay of Bengal. **The name 'Mocha' was provided by Yemen**.

Formation of Tropical Cyclones: Tropical Cyclones are **rapid inward air circulation around a low-pressure area**. They are usually accompanied by **violent storms, bad weather and large-scale destruction** and originate over oceans in tropical areas.

Direction of air circulation: Anticlockwise in the Northern Hemisphere, Clockwise in the Southern Hemisphere

Types of cyclones: Tropical and Extra Tropical (or Temperate/Mid-Latitude/Frontal) Cyclones

	CHARACTERISTICS	
	Mid-latitude cyclone	
Other names	Frontal depression, temperate cyclone, extra tropical cyclone	Hurricane, typ alphabetically
Occurrence	30–60° N and S	Over tropical
Movement	West to east (driven/pushed by Westerlies)	East to west
Season	All year round in both hemispheres, affects South Africa in winter	Mid- to late s
Identifying features	Warm front, warm sector, cold front, cold sector	Stormy weath intense low p
Weather	Weather associated with a cold front: overcast, low temperatures, strong winds, heavy rain	Warm to hot, thunderstorm
Areas affected	Western side of continents in mid-latitudes	Eastern side latitudes

Conditions for formation of tropical cyclones:

- Large sea surface with temperature higher than 27o C
- Presence of the Coriolis Force
- Small variations in the vertical wind speed
- A pre-existing weak low-pressure area or low-level cyclonic circulation
- Upper divergence above the sea level system

Naming of cyclones: They are named by the **regional specialized meteorological centres (RSMCs) and Tropical Cyclone Warning Centres (TCWCs).**

- There are **6 RSMCs in the world, including IMD**. IMD names the cyclones developing over the north Indian Ocean.
- Eight countries in the region – **Bangladesh, India, Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand** – all contribute a set of names which are assigned sequentially whenever a cyclonic storm develops.

3. **International Criminal Court (ICC):** For the 1st time, the I**CC issued an arrest warrant against one of the P5 members of the UNSC. Established under a 1998 treaty called the Rome Statute**. Became functional since 2002

- **Headquarters:** The Hague, Netherlands
- **Role:** investigates and, where warranted, tries individuals charged with the gravest crimes of concern to the international community: genocide, war crimes, crimes against humanity and the crime of aggression

Unlike the International Court of Justice (ICJ), which deals with countries and inter-state disputes, **the ICC prosecutes individuals. The ICC is not a component of the UN framework**

- **Jurisdiction**: The offences should be committed either in a country that ratified the agreement or by a national of a ratifying country. **The ICC can also practice its jurisdiction over cases referred to it by the UN Security Council (UNSC)**

Non-member States can be prosecuted if the alleged crimes were perpetrated by non-members in member states, or if the non-members accept the court's jurisdiction, or when the UNSC authorises it

- **Significance**: World's first permanent international criminal court
- **Members**: 123 countries. Russia, India, USA and China have abstained from membership
- **Methodology**: The court has **18 judges**, who hold non-renewable **9-year terms**

1. **Tungnath Temple:** Tungnath Temple, the **3rd of the five Panchkedars of Uttarakhand**, will be **declared a national monument by the Archaeological Survey of India**. The temple is thought to be >1000 years old. It is situated at an altitude of 12800 ft. **It is connected to the root of the Panch Kedar Circuit (Lord Shiva Temples) which were built by the Pandavas**. Located in Rudraprayag district**, it is the only 'Shivalaya' of its kind located at the highest point above sea level in Asia.**

2. **Arab League Readmits Syria:** Recently, the Arab League voted to reinstate Syria's membership after its suspension more than 10 years ago, underlining the thawing relations between Damascus and other Arab countries. **Syria was ousted from the Arab League in 2011 following President Bashar al-Assad's brutal crackdown on pro-democracy protests,** which led to the ongoing civil war in the country. The ruling, which allows Syria's President to attend the upcoming Arab League Summit in Saudi Arabia on May 19, has also called for a resolution of the country's civil war and the resulting refugee and drug smuggling crises. **A committee involving Egypt, Saudi Arabia, Lebanon, Jordan and Iraq will soon be created to ensure Syria achieves these goals**. However, the League's Secretary-General, Ahmed Aboul Gheit, stressed that the move does not equal normalization of relations and that sovereign countries can make their own decisions.

The Arab League/League of Arab States:

- **Established Year:** 1945
- **Members**: From 6 members initially viz., Egypt, Iraq, Jordan, Lebanon, Saudi Arabia and Syria, there are 22 members at present
- **Decision-making:** decisions are made on a majority basis, but there is no mechanism to compel members to comply with resolutions

3. **Rabindranath Tagore Birth Anniversary:** Rabindranath Jayanti is celebrated across the country on the **25th day of the Bengali month Boisakh**. Tagore was the youngest son of Debendranath Tagore, a **leader of the Brahmo Samaj**. He was educated at home, and although at 17 he was sent to England for formal schooling, he did not finish his studies there. He published several books of poetry in the 1880s and completed Manasi (1890), a collection that marks the maturing of his genius. **In 1901, Tagore founded an experimental school in rural West Bengal at Shantiniketan (Abode of Peace)**. In 1913, he became the **first non-European to receive the Nobel Prize for Literature**. **Tagore was knighted by the ruling British Government in 1915**, but within a few years he resigned the honour as a **protest against British policies in India.** He is the author of several volumes of short stories and a number of novels, among them **Gora (1910), Ghare-Baire (1916), and Yogayog (1929).**

4. **Mercy Petition:** Recently, President Droupadi Murmu has rejected the mercy petition of a man convicted for raping and stoning to death a four-year old girl in 2008. **Mercy Petition is a formal request made by someone who has been sentenced to death or imprisonment seeking mercy from the President or the Governor as a last constitutional resort.** Under **Article 72**, the **President shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offense**:

-In all cases where the punishment or sentence is by a **Court Martial**

-In all cases where the punishment or sentence is for an offence against any law relating to a matter to which the executive power of the Union extends

-In all cases where the sentence is a sentence of death

- Similarly, the **power to grant pardon** is conferred upon the **Governors of States under Article 161 of the Constitution of India**
- The SC in 2021 held that the Governor of a State can pardon prisoners, including death row ones –

-Even before they served a minimum 14 years of prison sentence

- The **act of mercy is not the right of the prisoner**. He cannot claim it
- **The mercy is granted on the grounds based on his health, physical or mental fitness** or

-His family financial conditions whether he is the sole breadwinner or not

- **The SC, in Epuru Sudhakar case 2006 held that the clemency power of the President and Governor under Article 72 and Article 161 is subject to judicial review**. The court laid down certain grounds for judicial review:

-If the order is passed without any application of mind

-If the order passed in malafide

-If the order is passed on completely irrelevant considerations

-If the order suffers from arbitrariness

- In **Maru Ram Case 1981**, the SC held that the **power to grant pardon under Article 72** is to be exercised on the **advice of the Council of Ministers.**

5. **Poshan Bhi Padhai Bhi:** Launched by the Ministry of Women and Child Development, it is a **path breaking Early Childhood Care and Education (ECCE) program to ensure that India has the world's largest, universal, high-quality, pre-school network**

- Government will target children's development in every domain mentioned in the National Curriculum Framework (NCF):

-Physical and motor development

-Cognitive development

-Socio-emotional-ethical development

-Cultural/artistic development

-Development of communication and early language, literacy, and numeracy

- It will **target 0-3 year olds as well as 3-6 year olds** specifically and include **special support for Divyang children**
- Every school will be provided with at least **two hours of high-quality pre-school instruction on daily basis**

- Anganwadi centres will be strengthened with **high-quality infrastructure, play equipment, and well-trained Anganwadi workers/teachers.**

11TH MAY

1. **Energy Transition Advisory Committee Report:** Recently, the Energy Transition Advisory Committee (ETAC) report has been received by the **Ministry of Petroleum and Natural Gas**. **The report contains a wide range of forward-looking recommendations by a panel for the shift to low-carbon energy, in line with India's commitment to achieving net-zero emissions by 2070**. The report also includes suggestions that relate to multiple ministries and a range of stakeholders, including states

Recommendations of the panel:

- India should **ban the use of diesel-powered four-wheeler vehicles by 2027** and **switch to electric and gas-fuelled vehicles** in cities with more than a million people and polluted towns to cut emissions
- There should be **no diesel city buses** addition in urban areas in about 10 years
- EVs may be promoted as the optimal solution in preparing for phasing out internal combustion engine two/three-wheel vehicles by 2035
- The report favoured new registrations of **only electric-powered city delivery vehicles from 2024**
- The panel called for four-wheelers, including passenger cars and taxis, to partially shift to electric and partially to ethanol-based petrol with almost 50% share in each category
- Government should consider a 'targeted extension' of incentives given under the Faster Adoption and Manufacturing of Electric and Hybrid Vehicles scheme (FAME) to beyond March 31
- The report suggested higher **use of railways and gas-powered trucks** for the movement of **cargo**
- However, consultations with various stakeholders on the report have yet to be initiated, and no decision has yet been taken on the recommendations

2. **Sepoy Mutiny Anniversary:** Indian Mutiny is also called **Sepoy Mutiny or First War of Independence**. It was a widespread but unsuccessful rebellion against British rule in India in 1857-59. It **began in Meerut** by Indian troops (sepoys) in the service of the British East India Company; it **spread to Delhi, Agra, Kanpur and Lucknow**. **The rebellion began when sepoys refused to use new rifle cartridges.** These new rifle cartridges were thought to **be lubricated with grease containing a mixture of pigs' and cows' lard** and thus religiously impure for Muslims and Hindus. The soldiers were shackled and imprisoned, but their outraged comrades shot their British officers and marched on Delhi. The ensuing fighting was ferocious on both sides and ended in defeat for the Indian troops**. The immediate result was that the East India Company was abolished in favour of direct rule of India by the British Government**. In addition, the British government began a policy of consultation with Indians. British-imposed social measures that had antagonized Hindu society (e.g., a proposed bill that would remove legal obstacles to the remarriage of Hindu women) were also halted.

3. **Extension of CPEC to Afghanistan:** Pakistan and China have agreed to **extend the Beijing-backed China-Pakistan Economic Corridor (CPEC) to Afghanistan.** Pakistan Foreign Minister, his Chinese counterpart and Afghanistan's Taliban-appointed acting Foreign Minister held the 5th China-Afghanistan-Pakistan Foreign Ministers' Dialogue. **The Ministers also underlined the need to prevent any group from using their territories for terror activities against any nation.** The Ministers held in-depth talks on various issues and reached common understandings on **mutual trust, security cooperation, counterterrorism, connectivity and trade and investment**. The three countries also urged the international community to assist Afghanistan to counter the cultivation of narcotics effectively and develop alternative crops to enhance its capacity for independent and sustainable development. The three sides emphasized their

commitment to continuing the **trilateral cooperation mechanism, good-neighbourly relations and partnerships.**

CPEC: It is a framework of regional connectivity

- It is a massive bilateral project. **It aims to improve infrastructure within Pakistan for better trade with China** and to further integrate the countries of South Asia. It is **part of the larger Belt and Road Initiative (BRI).** Notably, the project was **launched on April 20, 2015,** when Chinese President Xi Jinping and Pakistani Prime Minister Nawaz Sharif signed 51 agreements and memorandums of understanding valued at $46 billion.

4. **India's first pod taxi:** India is set to get **its first pod taxi between Noida International Airport in Jewar and the Film City.** Following the approval from the Uttar Pradesh government, the construction will also be kickstarted. Moreover, the tender process is also expected to begin shortly. **The Pod Taxi initiative is expected to be finalized by the conclusion of 2024**. The project is estimated to cost approximately 810 crore rupees**. Environment-friendly and fast, pod taxis are considered one of the most advanced modes of transport**. They are automated cars. They are designed in a way that can carry only a fixed number of travellers from one place to another. They need a track to travel. **They are powered by electricity**. The track for pod taxis are usually made separately on the roads in a bid to avoid road traffic **While pod taxis have already been seen in several other nations such as Singapore, London among others, UP will be the first state in India to get the international transit system.**

5. **Surrogacy Law in India:** Recently, the Centre informed the Supreme Court that live-in partners and same-sex couples cannot be allowed to avail of services under the surrogacy law. **The Government said the inclusion of live-in and same-sex couples within the ambit of the Surrogacy Act would lead to 'misuse'.** It would be difficult to ensure a better future for the child

born through surrogacy. The affidavit comes at a time when same-sex couples are fighting for their right to marry and raise a family as equal parents. The Government's perspective is not in tune with several SC judgments that long live-in relationships 'presume' marriage. **The response from the Centre is based on a petition challenging several provisions of the Surrogacy Act, 2021 and the Assisted Reproductive Technology (Regulation) Act, 2021 as discriminatory and violative of the reproductive rights of women and an impediment to the right to privacy.** But the Government argued that both Acts made it clear that couples opting for surrogacy or assisted reproduction should be 'legally married biological man and woman'. Live-in partners are not bound by law and safety of the child born through surrogacy is at risk. The Government said that even single men or women were not allowed to avail surrogacy. The Act intends to provide a complete family to the child born out of surrogacy.

6. **25 Years of Pokhran-II Nuclear Tests:** Every year since 1998, **May 11 is observed as National Technology Day in India**. The day is a **significant milestone in the history of India's technological innovations as India successfully tested nuclear bombs on May 11, 1998**. Pune will host an exhibition of nuclear radiation and contamination protection equipment as part of the celebrations marking 25 years of Pokhran-II

Pokhran-II Nuclear Tests: **India conducted 5 nuclear tests of advanced weapons designs on 11 and 13 May 1998 at the Pokhran range in Rajasthan Desert.** The tests proved to be fundamentally consequential for India's regional as well as global relations, specifically with the United States.

12TH MAY

1. **Project Cheetah:** Recently, on the direction of the National Tiger Conservation Authority (NTCA), a team of experts visited the Kuno National Park and reviewed the status of Project Cheetah. **It is the world's first**

intercontinental large wild carnivore translocation project. Discussions to bring the Cheetah back to India were initiated in 2009 by the Wildlife Trust of India. **Under the 'Action Plan for Reintroduction of Cheetah in India', 50 cheetahs will be brought from African countries to various national parks**. As part of this project, **20 cheetahs (8 from Namibia and 12 from South Africa) were introduced in Kuno National Park (KNP).** It established a free-ranging population for the first time since their extinction in India 70 years ago

Cheetah: The term 'Cheetah' originates from Sanskrit and means 'the spotted one'. The cheetah is the fastest land animal in the world. Its historical range includes the **majority of Sub-Saharan Africa and extends eastwards to India**. The last Indian cheetah died in the Koriya district of present-day Chhattisgarh in 1947 and the species was declared extinct in 1952.

African Cheetah:

- Vulnerable in the (IUCN) Red List of Threatened Species
- Appendix 1 of the CITES List

Asiatic Cheetah:

- **Critically endangered species in the (IUCN)** Red List of Threatened Species
- Appendix 1 of the CITES List
- Schedule 1 of the Wildlife Protection Act, 1972

Kuno National Park: It is a national park in Madhya Pradesh established in 1981 as a wildlife sanctuary. **In 2018, it was given the status of a national park.** It is a part of the Khathiar-Gir dry deciduous forests**. Kuno Palpur Wildlife Sanctuary is underway to become India's second home for the Asiatic Lion.**

2. **Foundation Stone of LIGO-India:** The Prime Minister laid the foundation stone of multiple projects on the occasion of National Technology Day, including the Laser Interferometer Gravitational Wave Observatory – India (LIGO-India), Hingoli. **It will be one of the handful Laser Interferometer Gravitational Wave Observatories in the world**. It is an extremely sensitive

interferometer of 4 km arm length capable of sensing gravitational waves generated during the merger of massive astrophysical objects such as black holes, and neutron stars. **The LIGO-India will work in synchronization with two observatories operating in the United States; one in Hanford, Washington and the other in Livingston, Louisiana.**

3. **Blood Bags Delivery Trial by Drones:** Recently, the Indian Council of Medical Research (ICMR) successfully conducted a trial run of delivery of blood bags by drones under its iDrone initiative. Now, blood delivery through drones can soon be expanded to the whole country. **The initiative was in continuance with the national mission of expanding the drone ecosystem in India.** The inaugural trial flight carried 10 units of whole blood samples in visual line of sight. **In this trial, blood and blood-related products were transported which are supposed to be kept at a low temperature.** After the experiment, it was found that not only temperature was maintained, there was also no damage to the products transported. It will lead to **development of standard operating procedures (SOP) for wider applicability**, and the use of drones for the delivery of blood bags and components. **Significantly, iDrone was first used by ICMR during the Covid-19 pandemic for distributing vaccines to hard-to-reach areas.**

4. **Santiniketan Proposed for Inclusion in UNESCO Heritage List:** The recommendation was made by the **International Council on Monuments and Sites (ICOMOS),** which is the advisory body to the UNESCO World Heritage Centre. **The nomination would be formally announced at the World Heritage Committee meeting to be held at Riyadh, Saudi Arabia in September 2023**. The UNESCO website describes a tentative list as an inventory of those properties which each State Party intends to consider for nomination. Santiniketan, popularly known today as a university town, a hundred miles to the north of Kolkata, was originally an ashram built by Debendranath Tagore,

where anyone, irrespective of caste and creed, could come and spend time meditating on the one Supreme God. It later became the Nobel Laureate's home and base for activity. Debendranath, who was the father of the Poet Rabindranath, was also known as Maharshi (which means one who is both saint and sage) was a leading figure of the Indian Renaissance. **Santiniketan, if selected, would be the second cultural symbol from West Bengal to make it to the UNESCO list**. **In 2021, UNESCO had included 'Durga Puja in Kolkata' in its list of Intangible Cultural Heritage of Humanity.** ICOMOS, a France-based international culture body, comprises of professionals, experts, representatives from local authorities, companies and heritage organizations. It is **dedicated to the conservation and enhancement of global architectural and landscape heritage.**

5. **Launch of Harit Sagar:** Ministry of Ports, Shipping and Waterways has launched Harit Sagar – the Green Port guidelines

The objectives of the guidelines is to:
- Minimize waste through **reduce, reuse, repurpose and recycle** to attain **zero waste discharge** from port operations
- Promote monitoring, based on **Environmental Performance Indicators**
- It lays emphasis on use of clean energy in port operation, developing port capabilities for storage and handling greener fuels like Green Hydrogen, Green Ammonia, etc.

Awards conferred include:
- **Best absolute performance for the year 2022-23:** Deendayal Port, Kandla

13TH MAY

1. **River-Cities Alliance:** Recently, the **National Mission for Clean Ganga (NMCG) in association with the National Institute of Urban Affairs (NIUA) organised the 'River-Cities Alliance (RCA) Global Seminar:**

Partnership for Building International River-Sensitive cities' in New Delhi

- Although the Alliance began with the Ganga basin cities, it was extended to include cities beyond the basin as well
Objectives:

– To provide the member cities with a platform to **exchange information on aspects** that are vital **for sustainable management of urban rivers**

-To work towards **adopting and localising national policies** and instruments with **key river-related directions**

DHARA (Driving Holistic Action for Urban Rivers) 2023:

- The first annual meeting of the RCA – **DHARA 2023 was held in February 2023 in Pune**
- DHARA 2023 was aimed to **inspire members of the RCA** to engage in **progressive actions for urban river management in their cities**
- It featured key sessions on international best practices and examples for **urban river management**

2. **Carbon Credit Trading Scheme for Decarbonization:** This scheme will be developed by the **Ministry of Power and Ministry of Environment.** The Government plans to **develop the Indian Carbon Market (ICM).** A national framework will be established at ICM to **decarbonise the Indian economy by pricing the Green House Gas (GHG) emission through trading of the Carbon Credit Certificates**. GHG emissions intensity benchmark and targets will be developed, which will be aligned with India's emissions trajectory as per climate goals. The ICM will develop methodologies for estimation of carbon emissions reduction and removals from various registered projects**. The ICM will facilitate to achieve the NDC goal of reducing emissions intensity of GDP by 45% by 2030 against 2005 levels.**

3. **SCO Startup Form 2023:** Recently, **DPIIT organized the 3rd edition of the first-ever physical SCO Startup Forum in New Delhi.** The engagement aimed at **expanding the startup interactions amongst the SCO Member States, nurturing the spirit of innovation, generating more employment and encouraging young talent to build innovative solutions**. The forum witnessed physical participation from SCO Member States including a delegation of government officials, private industry players, incubators and startups.

15TH MAY

1. **Jal Shakti Abhiyan: Catch the Rain 2023 Campaign:** Recently, the National Water Mission (NWM), Department of Water Resources, River Development and Ganga Rejuvenation (DoWR), Ministry of Jal Shakti organised a workshop- cum-orientation programme for Central Nodal Officers (CNO) and Technical Officers (TO), who will be visiting the **150 water-stressed districts across the nation, for ensuring effective and action-oriented implementation of the "Jal Shakti Abhiyan: Catch the Rain" – 2023 (JSA: CTR)**

- **JSA:** CTR- 2023 is **4th in the series of Jal Shakti Abhiyan launched in 2019** and aims to **address water stress in 150 districts across India** and focuses on water conservation, renovation of water bodies, bore well recharge, watershed development, and afforestation.

2. **ISSF World Cup, Baku:** The ISSF World Cup is an international shooting sport competition organised by the International Shooting Sport Federation (ISSF). **The ISSF is the governing body for the Olympic shooting events** and is responsible for overseeing and promoting the shooting sport on a global scale.

3. **National MSME Council Meet:** Recently, the Ministry of Micro, Small, and Medium Enterprises (MSME) organised the inaugural meeting of the National MSME Council, in New Delhi. The council

has been **established as an administrative and functional body to oversee coordination between central ministries and departments**, promote collaboration between the central and state governments, and **monitor the progress of reforms in the MSME sector, including the Raising and Accelerating MSME Performance (RAMP) program**.

16TH MAY

1. **1st Ministerial Meeting of India-EU Trade and Technology Council:** It will lay the roadmap for cooperation and provide direction to achieve desired outcomes. **Three Working Groups will collaborate under the mechanism**:

- Working Group on Strategic Technologies, Digital Governance and Digital Connectivity
- Working Group on Green and Clean Energy Technologies
- Working Group on Trade, Investment and Resilient Value Chains

2. **Phase out Methane Emissions by 2030:** Recently, **Sultan Ahmed Al Jaber, the President-Designate of COP28 has called upon the oil and gas industry to phase out methane emissions by 2030**, as methane have emerged as a critical concern in the fight against climate change

- Role of Hydrocarbons in Energy Transition from Methane:
- **Hydrocarbons** can play a transitional role during **the shift to new energy systems**
- They can **serve as a bridge fuel** between high-carbon fossil fuels and cleaner alternatives
- Hydrocarbons contribute to **maintaining energy system stability** during the initial phases of integrating intermittent renewable energy sources
- Infrastructure for extracting, processing, and distributing hydrocarbons is already existing
- Efforts should focus **on minimizing the carbon footprint of hydrocarbons**

3. **E-Invoicing and Curbing Tax Evasion:** Recently, the Government has lowered the threshold for businesses to generate e-Invoice for Business-to-Business (B2B) transactions, from Rs 10 crore to Rs 5 crore with **the aim to curb Tax Evasion and increase compliance under the Goods and Services Tax (GST) Regime.**

- The government has also rolled out the **Automated Return Scrutiny Module (ARSM) for GST returns in a backend application for central tax officers**. This helps tax officers to scrutinize the GST returns of Centre Administered Taxpayers who are selected based on the risks identified by the system.

17TH MAY

1. **Carbon Dating:** Recently, the Allahabad High Court allowed **the Archaeological Survey of India (ASI) to conduct Carbon Dating of a 'Shivling' inside the Gyanvapi Mosque in Varanasi, Uttar Pradesh**. Carbon dating is a widely used method to establish the age of organic materials, things that were once living. Living things have carbon in them in various forms. **The dating method is based on the fact that Carbon-14 (C-14) is radioactive, and decays at a well-known rate.** Plants get their carbon through photosynthesis; animals get it mainly through food. Because plants and animals get their carbon from the atmosphere, they too acquire C-12 and C-14 in roughly the same proportion as is available in the atmosphere. When they die, their interactions with the atmosphere stop**. While C-12 is stable, the radioactive C-14 reduces to one half of itself in about 5,730 years — known as its 'half-life' which is used to deduce the age of the organism.** Carbon dating cannot be applied in all circumstances. **It cannot be used to determine the age of non-living things like rocks,** for example. Also, the age of things that are **more than 40,000-50,000 years old cannot be arrived at through carbon dating**. For determining the age of inanimate things, instead of carbon, decays of other radioactive elements that might be present in the material become the basis for the dating method.

2. **SCO Adopts India's Proposal to Support DPI:** The Shanghai Cooperation Organisation (SCO) has recently adopted India's proposal to **support the development and adoption of the country's digital public infrastructure (DPI).**

DPI refers to blocks or platforms such as digital identification, payment infrastructure and data exchange solutions that help countries deliver essential services to their people, empowering citizens and improving lives by enabling digital inclusion**. India, through India Stack, became the first country to develop all three foundational DPIs, Digital identity (Aadhar), Real-time fast payment (UPI) and Account Aggregator** built on the Data Empowerment Protection Architecture (DEPA).

3. **Protection of Women from Sexual Harassment Act, 2013:** In a recent judgment, the Supreme Court expressed concerns about the implementation of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) (PoSH) Act, 2013. **The POSH Act is a legislation enacted by the Government of India in 2013 to address the issue of sexual harassment faced by women in the workplace**. The Supreme Court in a landmark judgment in the **Vishakha and others v State of Rajasthan 1997 case gave 'Vishakha guidelines' which led to the development of PoSH Act**. Internal Complaints Committee (ICC): Employers are required to constitute an ICC at each workplace with 10 or more employees to receive and address complaints of sexual harassment

18TH MAY

1. **Gaps in AePS Exploited by Cybercriminals:** The Aadhaar-enabled Payment System (AePS) in India has recently faced exploitation by cybercriminals, leading to unauthorized access to users' bank accounts. **The AePS is a bank-led model that allows online interoperable financial transactions at Point of Sale (PoS) or micro-ATMs through the Business Correspondent (BC) of any**

bank using the Aadhaar authentication. It was **taken up by the National Payments Corporation of India (NPCI) – a joint initiative of Reserve Bank of India (RBI) and Indian Banks' Association (IBA).** Transactions can be carried out with only the bank name, Aadhaar number, and captured fingerprint during Aadhaar enrollment.

Benefits: Helps in **deepening social security**, and **enables interoperability** among different banks and financial institutions.

Drawbacks: Neither Unique Identification Authority of India (UIDAI) nor NPCI mentions clearly whether AePS is enabled by default.

2. **Model Prisons Act 2023:** The Ministry of Home Affairs (MHA) has prepared the **'Model Prisons Act 2023' that will replace a British-era law, (the Prisons Act of 1894)**, to overhaul the prison administration that will **focus on the reformation and rehabilitation of inmates.**

Need: several lacunae in the old pre-Independence act and there was conspicuous omission of the correctional focus.

Features include: (i) punishment for prisoners and jail staff for use of prohibited items such as mobile phones in jails, (ii) establishment and management of high security jails, open jail (open and semi-open), (iii) provisions for protecting society from the criminal activities of hardened criminals and habitual offenders. **Significance: In India, prisons and the 'persons detained therein' are a State subject**. The Model Prisons Act, 2023 may serve as a **guiding document for states for adoption in their jurisdiction**.

3. **6th Indian Ocean Conference:** Improving and enhancing connectivity in the Indian Ocean region emerged as a top priority during the 6th Indian Ocean Conference held in Dhaka, Bangladesh. **The Indian Foreign Minister emphasized the potential game-changing impact of establishing an effective and efficient connectivity with the Association of Southeast Asian Nations (ASEAN)**. Disregarding legal

obligations or violating long-standing agreements can undermine trust and confidence among member nations. Unsustainable debt generated by unviable projects is a concern for countries in the region. (Example-Sri Lanka). The Indian Ocean region requires shared responsibility and focused efforts to ensure its stability and prosperity

19TH MAY

1. **Artificial Sweeteners:** Artificial sweeteners have gained popularity among calorie-conscious individuals seeking low-calorie options. However, recent studies have raised concerns about their long-term effectiveness for weight loss and potential health risks. **Artificial sweeteners are sugar substitutes that are used as alternatives to natural sugars**.

These sweeteners are **chemically synthesized** and **provide a sweet taste without the high calorie content of regular sugar.** They are commonly used in various food and beverage products, including diet sodas, sugar-free desserts, and low-calorie snacks.

Benefits: Weight management, diabetes control, tooth decay prevention, and provide safe options for individuals with phenylketonuria (PKU), a genetic disorder

Negative Impacts: Controversial health effects, and digestive issues

2. **Innovations for Defence Excellence:** Innovations for Defence Excellence (iDEX), the flagship initiative of the Ministry of Defence, has **signed its 250th contract – first under Mission DefSpace – and 100th SPRINT (Navy) contract**. iDEX, launched in 2018, is an **ecosystem to foster innovation & technology development in Defence and Aerospace by engaging innovators & entrepreneurs to deliver technologically advanced solutions for modernizing the Indian Military.** It **provides funding/grants to Micro Small and Medium Enterprises (MSMEs), start-ups, individual innovators, R&D (Research and Developments) institutes** and academia to carry out research and development The iDEX-Prime aims to

support projects requiring support beyond Rs 1.5 crore up to Rs 10 crore, to help ever-growing start-ups in the defence sector.
Objectives: Indigenization, and innovation
iDEX is funded and managed by Defence Innovation Organisation (DIO)

3. **Greenwashing TechSprint:** The **Reserve Bank of India (RBI) will be among 13 international regulators taking part in the Global Financial Innovation Network's (GFIN) first-ever Greenwashing TechSprint**. The Greenwashing TechSprint is **organized by the Global Financial Innovation Network (GFIN),** a consortium of over 80 international organizations committed to supporting financial innovation for the benefit of consumers. TechSprint aims to develop a tool or solution that can effectively help regulators and the market tackle the risks of greenwashing in financial services

20TH MAY

1. **Hysterectomy:** Concerned about the **high risk faced by poor and less-educated women**, especially in rural areas, who undergo **unjustified hysterectomies**, the Ministry of Health and Family Welfare, Government of India has **initiated measures to address this issue**. A hysterectomy is a **surgical procedure** that involves the **removal of the uterus (womb)**, the organ in a woman's body where a baby develops during pregnancy.

- **Types: partial hysterectomy** (when only one uterus is removed), **total hysterectomy** (when the uterus and cervix are removed), **radical hysterectomy** (when the uterus, cervix and a wide area of ligaments and tissues around these organs are removed).

- **Indications for Hysterectomy in India:** performed for gynaecological conditions like **fibroids** (non-cancerous growths that develop in or around the womb), **endometriosis** (disease in which tissue similar to the lining of the uterus grows outside the

uterus), **abnormal bleeding, and pelvic inflammatory disease**, when other treatments fail, as well as for cancer treatment.

2. **Groundwater Extraction and Land Subsidence:** Cracks in **buildings and 'sinking' land in Joshimath, Uttarakhand**, made the headlines earlier in 2023. Digging operations conducted for mining activities demonstrated the **occurrence of "soil settlement" or sinking due to voids created from mining**. Similar observations prompted researchers to **investigate the role of groundwater extraction in land subsidence in India**. Unlike land movement from **landslides or earthquakes, subsidence from groundwater extraction was gradual and barely visible annually**. Using data from the Sentinel-1 satellite shows that the **National Capital Region (NCR) sank an average of 15 mm per year from 2011-2017**. Kolkata and parts of eastern India also experience **overexploited groundwater blocks and land subsidence.**

3. **Rasht-Astara Railway and INSTC:** Recently, **Russia and Iran** have signed a deal to build an Iranian railway line, the **Rasht-Astara railway** as part of an **International North–South Transport Corridor (INSTC)**. India sees INSTC as an alternative means of connecting with Central Asia, which is rich in hydrocarbons and has strategic importance. The INSTC is projected to reduce **transit time by 40%**, shortening it from 45-60 days to 25-30 days. Additionally, it is expected to **decrease freight costs by 30%** in comparison to the Suez Canal route. The Chabahar port is **regarded as a doorway to golden chances for India**, Iran, and Afghanistan to trade with Central Asian countries. Suez Canal's blockage in 2021, which roughly cost 12% of global trade and reportedly held up **trade valued at USD 9 billion per day**, has amplified the optimistic outlook towards the INSTC as a **cheaper and faster alternative multimodal transit corridor**. The INSTC connects India with Central Asia, Russia, and has the potential to expand up to the **Baltic, Nordic, and Arctic regions**. The creation of diverse supply chains across Eurasia might surely alter the stereotype of **East as the producer and West as the consumer.**

22ND MAY

1. **ECL Based Loan Loss Provisioning Framework:** Lenders in India have approached the **Reserve Bank of India (RBI)** seeking a **one-year extension** for the implementation of the **Expected Credit Loss (ECL)-based loan loss provisioning framework**. The **RBI had previously proposed the adoption of the ECL approach for credit impairment**, and banks were given a **one-year period for implementation** once the final guidelines are released. In the expected credit loss framework, **banks are mandated to forecast anticipated credit losses through forward-looking estimations, rather than waiting for credit losses to materialise before making corresponding provisions for those losses**. This new approach replaces the **current "incurred loss (IL)" model, which delays loan loss provisioning, potentially increasing credit risk for banks.** A key drawback in the IL model was that **usually banks made provisions with a significant delay after the borrower may have started facing financial difficulties,** thereby increasing their credit risk. This led to systemic issues. Furthermore, the delayed recognition of loan losses resulted in an **overstatement of banks' income, combined with dividend payouts, which further eroded their capital base**. To prevent a capital shock, the **RBI has proposed a transitional arrangement for the introduction of ECL norms.**

2. **25th Anniversary of Pokhran-II:** India recently celebrated the **25th anniversary of Pokhran-II on 11th May 2023** marking the successful nuclear bomb test explosions which became a significant **milestone in its journey to become a nuclear power**. In 1945, renowned physicist **Homi J. Bhaba lobbied for the establishment of the Tata Institute of Fundamental Research (TIFR) in Bombay**, dedicated to nuclear physics research. India's pursuit of nuclear weapons

was motivated by concerns over its **sovereignty and security threats from China and Pakistan**. Pokhran-I (codenamed 'Smiling Buddha') was **India's first nuclear bomb test** conducted on **May 18, 1974, at the Pokhran Test Range in Rajasthan**. Pokhran-II (codenamed 'Operation Shakti') refers to a sequence of **five nuclear bomb test explosions conducted by India** on between **11-13th May 1998 at Rajasthan's Pokhran desert**. Pokhran-II cemented **India's status as a nuclear power**. While the tests in 1998 also invited sanctions from some countries (like the US), the **condemnation was far from universal like in 1974**. India adopted a policy of **credible minimum deterrence**, stating that it would maintain a **sufficient nuclear arsenal for deterrence purposes but would not engage in an arms race**. India currently possesses approximately **160 nuclear warheads, according to the Federation of American Scientists (FAS).**

3. **International Credit Card Spending Outside India under LRS:** Recently, the Finance Ministry of India, in consultation with the **Reserve Bank of India (RBI)**, has made significant amendments to the **Foreign Exchange Management Act (FEMA), bringing international credit card spending outside India under the Liberalised Remittance Scheme (LRS)**. The amendment is expected to facilitate the **monitoring of high-value overseas** transactions but does not apply to payments for purchasing foreign goods/services from India. A **TCS levy of 5%** will be applicable on such transactions until 1st July 2023 (except for medical and education-linked sectors). After 1st July 2023, the **TCS rate will increase to 20% for credit card spends** outside India. Banks and financial institutions may experience an **increased compliance burden due to these changes.**

23RD MAY

1. **Appointment of Judges in Supreme Court:** The **Supreme Court of India** recently witnessed the administration of oath to two new judges, **Justice Prashant Kumar Mishra**, and **Justice K.V. Viswanathan**, by **Chief Justice of India DY Chandrachud**. Originally, the **Supreme Court had eight judges** (one chief justice and seven others). The current strength of the **Supreme Court is 34 judges (one chief justice and 33 others)**

- According to **Article 124(3) of the Constitution**, a person can be appointed as a judge of the Supreme Court if he or she:

– A person must be a **citizen of India**

-Must have served as a **judge of a High Court for at least five years or two such courts in succession**

-Alternatively, must have been an **advocate of a High Court for at least ten years** or two or more such courts in succession

-Must be a **distinguished jurist in the opinion of the president**

- The Judges of the Supreme Court are appointed by the **President under clause (2) of Article 124 of the Constitution**. Every appointed judge must make and subscribe to an oath which includes commitments to uphold the Constitution, **sovereignty** and **integrity of India**, and **perform duties without fear or favour**. A judge of the Supreme Court serves until they reach the **age of 65 years**. Salaries, allowances, privileges, leave, and pension of Supreme Court judges are determined by **Parliament** and are charged upon the **Consolidated Fund of India**. After retirement, a judge of the Supreme Court is **prohibited from practicing law in any court in India** or pleading before any government authority, except by **Article 128**. A judge of the Supreme Court can only be removed from office by an order of the **President** supported by a special majority in both Houses of Parliament. Judges of the higher judiciary are appointed through the **collegium** (consisting of the **Chief Justice of India** and the **four senior-most judges** of the **Supreme Court**).

2. **Custodial Torture:** Recently, two police officers were suspended on the **charges of Custodial Torture (Violence)**, assaulting the accused in Police custody. Custodial torture is the **infliction of physical or mental pain or suffering on a person who is in the custody** of the police or other authorities

    Types of Custodial Death: (i) **Death in Police Custody**, (ii) **Death in Judicial Custody**, (iii) **Death in the Custody of Army or Paramilitary Forces**. According to the Ministry of Home Affairs (MHA), a total of **146 cases of death in police custody were reported during 2017-2018**

    Challenges in Preventing Custodial Torture in India: Lack of ratification of the **UN Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (UNCAT)**, which India signed in 1997 but has not yet ratified.

3. **Rohingya Refugees in India:** A recent report titled **'A Shadow of Refuge: Rohingya Refugees in India'** sheds light on the challenges faced by Rohingya refugees in India

- **Concerns Related to Rohingya:** (i) **India's refusal to grant exit visas to Rohingya** refugees who have completed refugee status determinations and gained approval for resettlement in third countries, (ii) **Stigmatisation and Anti-Refugee Sentiment**, (iii) Actual and threatened deportations have instilled a **sense of fear within the Rohingya community**, compelling some to return to **camps in Bangladesh**, (iv) The report details the dire living conditions of Rohingya refugees in India, residing in **slum-like settlements without safe running water, toilets, or access to basic healthcare and education**

- **Recommendations:** (i) India should formally recognize **Rohingya refugees as individuals with a right to asylum rather than as illegal migrants** and establish domestic laws on refugees, (ii) India can recognize UNHCR cards as sufficient for accessing basic education, work, and health services, (iii) Treating refugees better would enhance **India's global credibility and serve national security interests** by documenting new arrivals and discouraging them from remaining under the radar

24TH MAY

1. **G7 Summit**: **Climate Wishlist:** During the recent **49th G7 summit, member countries** had outlined key milestones in their **climate Wishlist** in response to ongoing studies and reports that continue to raise alarms about the **worsening state of climate change, urging immediate action.** The G7 emphasized the need for a **global peak in emissions by 2025**. The G7 does not set a specific deadline for **ending fossil fuel** use but commits to accelerating the **phase-out of "unabated fossil fuels"** in line with **1.5 degree Celsius trajectories**. The G7 reiterates its commitment to achieve **net-zero status by 2050** and urges other major economies to do the same.

2. **Human Pangenome Map:** Recently, a new study has been published in the Nature journal describing a **Pangenome Reference Map**, built using genomes from 47 anonymous individuals (19 men and 28 women), mainly from Africa but also from the Caribbean, Americas, East Asia, and Europe. The pangenome, unlike the previous linear reference genome, is represented as **a graph**. Each chromosome in the pangenome **can be imagined as a bamboo stem with nodes.** These nodes represent stretches of sequences that are **similar among all 47 individuals**. The internodes between the nodes vary in length and represent genetic variations among individuals from different ancestries. To create complete and continuous maps of the chromosomes in the pangenome project, researchers used a technology called **long-read DNA sequencing, creating complete and continuous chromosome maps by producing accurate, long DNA strands**

- **Significance of Pangenome Map:** A complete and accurate pangenome map of the human genome can help better understand **differences and explain the diversity among individuals.** It will also assist in

studying genetic **variations that contribute to underlying health conditions.**

- **Drawbacks**: However, the current pangenome map lacks representation from diverse populations like **Africa, the Indian subcontinent, indigenous groups in Asia** and Oceania, and West Asian regions.

3. **RBI to Withdraw Rs 2,000 Notes from Circulation:** On May 19, 2023, the **Reserve Bank of India (RBI)** announced **that it will withdraw the Rs 2000 denomination banknotes from circulation.** The RBI said that the withdrawal of the 2000 rupees notes is part of its **currency management operations.** The Rs 2000 banknotes were introduced in **2016 to meet the immediate currency requirements** after the withdrawal of Rs 500 and Rs 1000 notes during the **demonetization exercise.** As of **March 31, 2023**, the value of Rs 2000 banknotes in circulation **has decreased to Rs 3.62 lakh crore, constituting only 10.8% of the total notes in circulation**. The exchange limit for Rs 2000 banknotes is set at **Rs 20,000 at a time. Non-account holders can also exchange these banknotes at any bank branch**

Impact: The RBI governor stated that the impact of withdrawal of 2000 rupees notes will be **"very very marginal"** on the economy because it accounts for only **10.8% of currency in circulation**. Some economists said that the **withdrawal of the higher-value note is "a sensible form of demonetization"** and could **boost bank deposits at a time of high credit growth**

25th MAY

1. **3rd Forum for India–Pacific Islands Cooperation (FIPIC):** Summit was **held in Port Moresby, Papua New Guinea** on May 22, 2023. It was **co-chaired by Indian and Papua New Guinea's Prime Minister and attended by 14 Pacific Island Countries (PICs).** India supports the sovereignty and integrity of all countries and emphasised the shared priority of reforming international institutions to amplify the voice of the Global South**. India also unveiled a 12-point development programme in areas of healthcare, cyberspace, clean energy, water and small and medium enterprises in PIC.** Also, the Indian Prime Minister along with his Papua New Guinea counterpart also released the Tamil classic 'Thirukkural' in Tok Pisin (official language of Papua New Guinea) to bring the Indian thought and culture closer to the people of this south-western Pacific nation.

2. **Practice of Forum Shopping:** Recently, the Chief Justice of India (CJI) has condemned the practice of Forum Shopping after a litigant mentioned the hearing before CJI although he had mentioned the same case a day before another Judge. **Forum shopping refers to the practice of deliberately choosing a specific court for a legal case in the hope of getting a favourable outcome**. Litigants and lawyers often consider this strategy as part of their litigation plan.

> **For example, they might opt for a higher court like the Supreme Court (SC) to gain more attention for their case**. However, if someone is clearly trying to manipulate the system or avoid a particular judge, it is seen as unfair. Similarly, **"Bench Hunting" refers to petitioners managing to get their cases heard by a particular judge or bench to ensure a favourable order.**

- **Dr. Khair-Un-Nisa and Ors vs. UT of Jammu and Kashmir and Ors 2023:** The Jammu, Kashmir, and Ladakh High Court imposed costs worth one lakh rupees on the petitioners for indulging in forum shopping by filing multiple petitions before different wings of the court, despite having the same cause of action.

- **Vijay Kumar Ghai vs. State of W.B. 2022:** The SC termed forum shopping as a "disreputable practice by the courts" that "has no sanction and paramountcy in law".

3. **RBI Becomes Net Seller of USD in FY23:** Recently, the Reserve Bank of India (RBI) witnessed a significant shift in its foreign exchange transactions during the fiscal year 2022-23. **After being a net buyer of the US dollar for three consecutive years, the RBI turned into a net seller,** selling 25.52 billion USD in the spot market. **The spot exchange is where financial instruments, such as commodities, currencies, and securities, are traded for immediate delivery.**

- **Stabilisation of the Rupee:** The sale or purchase of dollars by the RBI impacts its profit and is reflected in dividend payouts to the government. Without the RBI's dollar sales, experts suggest the rupee could have weakened further, potentially reaching 84-85 levels against the dollar.

- **Depletion of Forex Reserves and Valuation Losses:** The country's foreign exchange reserves decreased from $606.475 billion to $578.449 billion during FY23. This was primarily due to valuation losses resulting from the appreciating US dollar and higher US bond yields.

- **Selling of Dollar:** The RBI sold significant amounts of dollars in FY23 to counter the rupee's depreciation resulting from the Ukraine-Russia conflict and the US Federal Reserve's interest rate hikes. The rupee depreciated by approximately 8% during FY23, with the RBI's intervention preventing further weakening. The rupee declined from around 76 levels on April 1, 2022, to nearly 82 as of March 31, 2023.

- **Impact:** The RBI's dollar sales in FY23 resulted in significant profits, leading to a **higher dividend payout to the government.** The Central Board of the RBI approved a 188% increase in surplus transfer to the government for the accounting year 2022-23.

26TH MAY

1. **PBR and Biodiversity Management in India:** National Campaign for Updation and Verification of People's Biodiversity Register (PBR) was launched in Goa, marking a significant milestone in the documentation and preservation of India's rich biological diversity**. It was organised by the Union Ministry of Environment, Forest and Climate Change**. People's Biodiversity Register serves as a comprehensive record of various aspects of biodiversity, including conservation of habitats, preservation of land races, folk varieties, and cultivars, domesticated stocks and breeds of animals, and micro-organisms. **Biodiversity Management Committees (BMC) are created as per the Biological Diversity Act 2002 for promoting conservation, sustainable use, and documentation of biological diversity.** Local bodies in the states and union territories constitute BMCs, which are entrusted with the preparation of People's Biodiversity Registers in consultation with local communities**. India's Biological Diversity Act (BDA) 2002, is in close synergy with the Nagoya Protocol** and aims to implement provisions of the Convention on Biological Diversity (CBD).

2. **Sengol to be Installed in New Parliament Building:** On May 28th 2023, the Prime Minister will inaugurate the new Parliament building, which is **part of the Central Vista redevelopment project. One of the highlights of the event will be the installation of a historic golden sceptre, called Sengol, near the Speaker's seat**. The Sengol is profound in meaning, derived from **the Tamil word "Semmai", it means "Righteousness".** It was made of gold or silver and was often decorated with precious stones. **The Cholas had a tradition of handing over the Sengol sceptre from one king to another as a mark of succession and legitimacy**. The ceremony was usually performed by a high priest or a guru who blessed the new king and conferred him with the Sengol. Before independence from the British rule in 1947, the then Viceroy – Lord Mountbatten posed a question to the to-be Prime Minister Jawaharlal Nehru: "What is the ceremony that should be followed to symbolise the transfer of power from British to Indian hands?" PM Nehru then consulted C. Rajagopalachari, commonly known as Rajaji, who went

on to become the last Governor-General of India. **The Sengol sceptre was presented to PM Nehru by Thiruvavaduthurai Adheenam (a 500-year-old Saivaite monastery) on August 14, 1947**. The Nandi, with its unyielding gaze as the beholder of "Nyaya", is hand-carved at the top.

3. **London Interbank Offered Rate (LIBOR):** The Reserve Bank of India (RBI) has advised banks and other Regulated Entities to move away from the London Interbank Offered Rate (LIBOR) and transition to Alternative Reference Rates (ARR). The transition away from LIBOR is **aimed at reducing reliance on a benchmark that is susceptible to manipulation and ensuring the financial system's stability and integrity**.

- **LIBOR is a widely used global benchmark interest rate**. It represents the average interest rate at which banks estimate they can borrow from each other in the London interbank market for specific time periods.
- **LIBOR is important because it is used as a reference rate for settling trades in various financial instruments** such as futures, options, swaps, and other Derivatives.
- To calculate LIBOR, a group of banks submits their estimated borrowing rates to Thomson Reuters, a news and financial data company, every business day. The extreme rates are removed, and the remaining rates are averaged to determine the LIBOR rate, which aims to represent the median borrowing rate.
- **The RBI is moving away from LIBOR due to concerns over its reliability and integrity**. The central flaw in the LIBOR mechanism is its h**eavy reliance on banks to provide honest and accurate reporting of their borrowing rates, without considering their commercial interests.** This creates an opportunity for manipulation and misconduct.
- In 2017, the U.S. The Federal Reserve introduced the **Secured Overnight Financing Rate (SOFR) as an alternative to LIBOR.**

4. **Advancements in Sodium-ion Batteries:** Recently, Indian scientists have made a significant breakthrough in the development of **Sodium-ion (Na-ion) batteries by creating new cathode materials that offer high performance, cost-effectiveness, and**

environmental stability. This advancement addresses the challenges of air/water-instability and structural-cum-electrochemical instability in Sodium-transition-metal-oxide (Na-TM-Oxide) based cathode materials, leading to the production of stable and efficient energy storage systems. Cathode material is the electrode where sodium ions are stored during the battery's discharge process. The newly developed cathode materials are known for being air/water-stable and high-performance. **A sodium-ion battery is a type of rechargeable battery comparable to the ubiquitous lithium-ion battery**, but it uses sodium ions (Na+) as the charge carriers rather than lithium ions (Li+). **Sodium-ion batteries are currently emerging as a potential alternative** to current lithium-ion battery technology due to their **lower cost, higher availability, and reduced impact on the environment**.

27TH MAY

1. **US Debt Ceiling Crisis –** If the House of Representatives and the President's White House are unable to come to an agreement to increase or suspend the debt ceiling, the US will default on its obligations by June 1 according to the Treasury Secretary of the US. **The debt ceiling is the maximum amount of money that the U.S. government is legally allowed to borrow to fund its expenses and obligations**. It was established in 1917 during World War I. As of now, the current debt limit is set at USD 31.4 trillion. This means that the **Government cannot exceed borrowing beyond this amount without congressional approval.**

2. **G20 Countries and Disaster Risk Reduction:** India recently hosted the first G20 Disaster Risk Reduction Working Group (DRR WG) conference, during which **India emphasised the need of disaster risk reduction (DRR).** The G20 catastrophe Risk Resilience Working Group has urged states to **create a social protection system with a reliable and preferable method of paying catastrophe risk**. In the most recent World Risk Index, four of the top ten most susceptible nations

are G20 countries. The anticipated total yearly average loss in the G20 countries alone is USD 218 billion, or 9% of their average annual infrastructure spending.

3. **Narco Analysis Test:** Protesting wrestlers at Jantar Mantar, Delhi have expressed their willingness to undergo narco analysis tests, with the condition that it is monitored by the Supreme Court and broadcasted live for the entire country to witness. **In a narco analysis test, a drug called sodium pentothal is injected into the body of the accused, which transports them to a hypnotic or sedated state in which their imagination is neutralised**. Sodium pentothal, or sodium thiopental, is a **fast-acting, short-duration anaesthetic used in larger doses to sedate patients during surgery**. It belongs to the barbiturate class of drugs that act on the central nervous system as depressants.

- **Selvi vs State of Karnataka & Anr Case 2010:** The apex court held that **narco tests violate the fundamental right against self-incrimination under Article 20(3) of the Constitution**, which states that no person accused of any offence shall be compelled to be a witness against himself.

- **D.K. Basu vs. State of West Bengal case, 1997:** The SC ruled that involuntary administration of the polygraph and narcos test will amount to cruel, inhuman, and degrading treatment in the context of Article 21 or the Right to Life and Liberty.

30TH MAY

1. **NITI Aayog's Annual Health Index 2020-21: Kerala, Tamil Nadu and Telangana** emerged as the top performers among the **'larger states' in the NITI Aayog's annual 'health index'** for the Covid year of 2020-21.

- **Larger States:** Among the 19 'larger states', Kerala, Tamil Nadu and Telangana have occupied first, second and third place respectively, in terms of overall performance. **Bihar (19th), Uttar Pradesh (18th) and Madhya Pradesh (17th) are at the bottom of the list.**

- **Smaller States:** Among the eight smaller states, **Tripura has recorded the best overall performance,** followed by Sikkim and Goa; Arunachal Pradesh (6th), Nagaland (7th) and Manipur (8th) are at the bottom.

- **Union Territories(UT):** And among the eight UTs**, Lakshadweep has been ranked as the top performe**r in terms of overall performance, while Delhi ranked at the bottom.

- **Based on Incremental Performance**: Rajasthan, Uttarakhand and Odisha emerged as the top three performers in 2020-21, as compared to their performance in 2019-20.

- **About:** In 2017, the National Institution for Transforming India (NITI Aayog) in collaboration with the Ministry of Health and Family Welfare (MoHFW) and the World Bank initiated an annual Health Index for tracking Overall Performance and Incremental Performance across all states and Union Territories (UTs).

- **Objective:** The objective of the Annual Health Index is **to track and rank progress on health outcomes and health systems performance**, develop healthy competition and encourage cross learning among states and UTs.

- **Parameters:** The health index assesses states and UTs on two parameters – **incremental performance (year-on-year progress) and overall performance.**

2. **National Population Register:** For Census 2021, the Government has made the National Population Register (NPR) mandatory, allowing citizens to self-enumerate, for individuals who wish to fill out the census form themselves instead of relying on government enumerators. **Self-enumeration refers to the completion of census survey questionnaires by the respondents themselves**. Self-enumeration will be provided to only those households that have updated NPR online. **During self-enumeration, Aadhaar or mobile number will be mandatorily collected. The upcoming Census will be the first digital one, allowing respondents to complete the questionnaire from

their homes. The set of questions for the House listing and Housing Schedule phase has been finalized, while the questions for the Population Enumeration phase are yet to be notified. **The comparison between the 2011 Census and the next one reveals new inquiries on travel time and metro rail usage for commuting**. The question on disabilities includes additional categories like **acid attack, intellectual disability, chronic neurological disease, and blood disorder.** The next Census will also gather information on **whether individuals living in rented houses own residential property elsewhere or do not own any**. Clarifications are provided on the availability of drinking water within specific distances from the premises.

3. **Child Wasting in India:** Recently, UNICEF (United Nations Children's Fund), WHO (World Health Organization), World Bank Group have released a report titled- **"Levels and trends in child malnutrition: Joint Child Malnutrition Estimates (JME)"**, stating that in 2020, 18.7 % of Indian children were affected by Wasting caused by poor nutrient intake.

- **Wasting:** Half of all children with wasting in the world live in India**. In 2022, an estimated 45 million children under five (6.8 %) were affected by wasting globally, of which 13.6 million were suffering from severe wasting**. More than three quarters of all children with severe wasting live in Asia and another 22 % live in Africa.
- **Stunting: India had a stunting rate of 31.7 % in 2022, down from 41.6 % in 2012, a decade ago**. Some 148.1 million of children under age five worldwide, were affected by stunting in 2022. Nearly all children affected lived in Asia (52 % of the global share) and Africa.
- **Overweight:** There are 37 million children under five who are overweight globally, an increase of nearly four million since 2000. India had an overweight percentage of 2.8 % in 2022, compared to 2.2 % in 2012.
- **Progress:** There is insufficient progress to reach the 2025 World Health Assembly (WHA) global nutrition targets and UN-mandated Sustainable Development Goal target 2.2.

Prelims Booster- Press Information Bureau (PIB)

1ST MAY

1. International Labour Day: Popularly known as **International Workers' Day or May Day is observed on May 01** every year to commemorate the struggles and sacrifices of the workers' and labours' movement. **It is celebrated in more than 80 countries, including India, Cuba, and China.** The tradition of Labour Day dates back to 19th century America. On May 1st, 1886, workers in Chicago organized a strike to demand an eight-hour workday. However, workers across the US came together to demand their rights and to fight for better working conditions after a bomb exploded at a labour rally in Haymarket Square in Chicago, USA. **In 1889, the International congress of socialist parties met in Paris and decided to celebrate Labour Day or Worker's Day**. **The first Labour Day was celebrated in India on May 1, 1923, in Chennai.** The first May Day celebrations were **organized by the Labour Kisan Party of Hindustan**. For example, it is known as Kamgar Din in Hindi, Karmikara Dinacharane in Kannada, and Karmika Dinotsavam in Telugu.

2. Insurance Regulatory and Development Authority of India (IRDAI): 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.

Nodal Ministry: Ministry of Finance.

Head Office: Hyderabad.

Composition: IRDAI is a **10-member body**- a Chairman, five full-time members, and four part-time members appointed by the Government of India.

3. Yuva Tourism Clubs: The Tourism Ministry will undertake a **special initiative of 100 Episodes of Mann ki Baat – 100 days of Action through the Yuva Tourism Clubs**. The vision is to nurture and develop young ambassadors of Indian tourism who would become aware of tourism possibilities in India, appreciate our rich cultural heritage and develop an interest and passion for tourism. **The establishment of Yuva Tourism Clubs was initiated in schools, colleges and Indian Hotel Management institutions in connection with the Azadi Ka Amrut Mahotsav celebrations.** The Ministry of Tourism has also proposed to **increase the number of Yuva Tourism Clubs to 50 thousand in the next 100 days, starting from May 1, 2023**.

4. ASEAN-India maritime exercise (AIME-2023): AIME-2023 is the first time India has been involved in exercises with the ASEAN though there have been exercises with ASEAN nations separately. **Aim:** Enhancing interoperability and exchange of best practices among participating navies. **With AIME-2023, India becomes the 4th ASEAN dialogue partner, after Russia, China and the US, to hold the ASEAN+1 maritime exercise.** The maiden exercise will be conducted off the coast of Singapore and will feature harbour and at-sea events off the coast of Singapore. **Two major Indian Navy warships– the INS Delhi**, an indigenously built destroyer, and **INS Satpura**, a Shivalik-class, recently built modern stealth frigate– **are part of the exercise**.

2ND MAY

1. Padma Awards: The Padma Awards namely, **Padma Vibhushan, Padma Bhushan and Padma Shri, are amongst the highest civilian awards of the**

country. These Awards were **instituted in 1954** and they are announced every year on the occasion of Republic Day. **The award seeks to recognize 'work of distinction'** and is given for distinguished and exceptional achievements/service in all fields/disciplines, such as- **Art, Literature and Education, Sports, Medicine, Social Work** etc. **Eligibility for the nomination-** All persons without distinction of race, occupation, position, or sex are eligible for these Awards. Government servants including those working with PSUs, except Doctors and Scientists, are not eligible for Padma Awards. **Awardees receive a Sanad (Certificate) and Medallion, a small size replica (miniature) of the main medal is separately handed over to the recipient but no monetary grant is attached to these Awards.** All nominations received for Padma Awards are placed before the Padma Awards Committee, which is constituted by the Prime Minister every year. **The Padma Awards Committee is headed by the Cabinet Secretary and includes Home Secretary, Secretary to the President and four to six eminent persons as members**. The Prime Minister and the President of India finally review and approve the recommendations. The result will be announced on the occasion of Republic Day to recognize the 'work of distinction' of the people for their distinguished and exceptional achievements/service in all fields/disciplines.

2. Buland Bharat Exercise: It is an integrated surveillance and firepower training exercise conducted by the Indian Army. **It was conducted in the operationalized longest High Altitude Artillery Ranges of Eastern Theatre located in Arunachal Pradesh.** The exercise involved the **synergised application of surveillance and firepower capabilities of the Artillery and the Infantry in close coordination with Special Forces, Aviation, and Central Armed Police Forces** deployed in West Kameng and Tawang districts of Arunachal Pradesh.

The exercise validated plans for bringing down integrated firepower by orchestrating synchronised firing by artillery guns and fire support components of the Infantry aimed toward the destruction of designated targets. **The month-long training culminated in the test exercise in which troops and equipment were tested in simulated war conditions in the high-altitude area and extreme weather conditions.** Synergised surveillance and firepower from Infantry and Artillery radars, weapon systems and direction of fire from the air were practised during the exercise. Uninterrupted communication on multiple media was also tested at long distances.

3. Yoga Mahotsav: The Yoga Mahotsav was a celebration to commemorate **50 days to upcoming International Day of Yoga, 2023**. The participants performed Common Yoga Protocol (CYP) in complete rhythm and harmony with a mesmerising outcome. **The Ministry of Ayush, is organising the "Yoga Mahotsav".**

International Day of Yoga: The United Nations declared **June 21 as the International Day of Yoga in 2014 after PM Modi called for the day to be adopted as a global celebration of yoga**. The date of 21 June was suggested as it is the longest day of the year in the Northern Hemisphere and shares a special significance in many parts of the world. **The first International Yoga Day celebration was organised at Rajpath in New Delhi on June 21, 2015**.The World Health Organization (WHO) mentions yoga as a means to improve health in its Global Action Plan on Physical Activity 2018–2030: More active people for a healthier world.

3RD MAY

1. NVS-01: The Indian Space Research Organisation (ISRO) is all set to launch the **navigation satellite 'NVS-01' on board its Geosynchronous Satellite Launch Vehicle (GSLV) from Sriharikota in Andhra Pradesh**. The GSLV-F12/NVS-01 mission is designed to deploy the NVS-01 navigation satellite into a

geosynchronous transfer orbit (GTO). **It is the first in the series of second-generation navigation satellites built by ISRO's UR Rao Satellite Centre in Bengaluru.** At present, India uses its Navigation with Indian Constellation (NavIC) series of satellites for civilian and defence navigation in the Indian mainland and even 1500 kms beyond India's borders. NVS series of satellites will sustain and augment the NavIC with enhanced features. This series incorporates L1 band signals additionally to widen the services. For the first time, an indigenous atomic clock will be flown in NVS-01.

2. Navigation with Indian Constellation (NavIC): It is a regional navigation satellite system established by the ISRO to meet the positioning, navigation and timing requirements of the nation. **NavIC was erstwhile known as Indian Regional Navigation Satellite System (IRNSS).** It is a **constellation of seven satellites that work with a 24X7 network of ground stations while orbiting above Earth**. Three satellites are placed in geostationary orbit and four in inclined geosynchronous orbit. Coverage: The NavIC coverage area includes India and a region up to 1,500km beyond the nation's boundary.
Services offered: It offers two services — **Standard Position Service for civilian users and Restricted Service for strategic users.** The system is used in terrestrial, aerial, marine transportation, location-based services, personal mobility, resource monitoring, surveying and geodesy, scientific research etc.

3. G20 Sherpa: India's G20 Sherpa Amitabh Kant has said that **the tourism sector is not only a driver of growth but also a driver of job creation and employmen**t. 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 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.** The term is derived from the Nepalese Sherpa people, who serve as guides for mountaineers in the Himalayas.

4. World Press Freedom Index 2023: India's ranking in the recently released 2023 World Press Freedom Index has slipped to **161 out of 180 countries**. It is an **annual report published by the global media watchdog Reporters without Borders (RSF).** To Compare the level of freedom enjoyed by journalists and media in 180 countries and territories. **The ranking is based on five categories — political, legislative, economic, socio-cultural and safety of journalists.**
Highlights of the 2023 Report: India is ranked 161 out of 180 countries. **Press freedom in India has gone from "problematic" to "very bad", with the country slipping 11 ranks since the 2022 report.** Except for Bangladesh (163), Myanmar (173) and China (179), all other neighbours have a better rank than India — Bhutan (90), Nepal (95), Sri Lanka (135), Pakistan (150), Afghanistan (152).India was positioned 169 in political indicators while it was 144 in legislative, 155 in economic, 143 in social indicators and 172 in the safety of journalists. **Norway is ranked first for the seventh consecutive year.**

4TH MAY

1. Metastasis: It is the **spread of cancer cells from the place where they first formed to another part of the body.** In metastasis, cancer cells break away from the original (primary) tumor, travel through the blood or lymph system, and form a new tumor in other organs or tissues of the body. When cancer becomes metastatic, doctors often use the verb "metastasized." **In general, metastatic cancer is**

considered an advanced form of cancer. The new, metastatic tumor is the same type of cancer as the primary tumor. For example, if breast cancer spreads to the lung, the cancer cells in the lung are breast cancer cells, not lung cancer cells. Metastases is the plural form of metastasis. **Metastases can also develop when cancer cells from the main tumor break off and grow in nearby areas, such as in the liver, lungs, or bones**. The most common sites for cancers to metastasize include the lungs, liver, bones and brain.

2. Project Dantak: Project Dantak is an overseas project of the BRO under the Ministry of Defence of India**. It was established on 24 April 1961 as a result of an agreement between Jigme Dorji Wangchuck, the third king of Bhutan and then Prime Minister of India Jawahar Lal Nehru**. It is primarily **focused on developing infrastructure and providing connectivity in remote areas of Bhutan.** It was tasked to construct the pioneering motorable roads in Bhutan. It completed the road connecting Samdrup Jongkhar to Trashigang in 1968. In the same year, Thimphu was connected to Phuentsholing by Dantak**. Some other notable projects executed by the project include the construction of Paro Airport, Yonphula Airfield, Thimphu – Trashigang Highway, Telecommunication & Hydro Power Infrastructure, Sherubtse College, Kanglung and India House Estate**. The project recruits local workers from Bhutan as well as Indian workers from adjoining districts along the India-Bhutan border.

3. Kaladan Multi-Modal Transit Transport Project: Kaladan Project would link **India and Myanmar via the Bay of Bengal.** It was jointly identified by India and Myanmar to **create a multi-modal mode of transport for the shipment of cargo from the eastern ports of India to Myanmar as well as to the North-Eastern part of India through Myanmar.** It is being **constructed by India under the Grant in Aid Scheme**. Once completed, it will link Kolkata with the Sittwe seaport in Rakhine state in Myanmar, primarily over the Bay of Bengal – covering over 500 km. **The project envisaged four important stages: Kolkata to Sittwe waterway; Sittwe to Paletwa inland (River Kaladan) waterway; Paletwa to India-Myanmar border post in Myanmar; finally, linking the road to Lawngtlai in Mizoramas part of the project's last leg.**

Benefits: The project is expected to contribute to the economic development of the North-Eastern States of India. It also provides a **strategic link to the North-East**, thereby reducing pressure on the Siliguri Corridor.

4. World Environment Day: This year, the Ministry of Environment, Forest and Climate Change, envisages to celebrate the World Environment Day 2023 with a thrust on the Mission LiFE. **World Environment Day is the United Nations day for encouraging worldwide awareness and action to protect our environment**. Every year on 5th of June to mark the first day of The United Nations Conference on the Human Environment which was held in Stockholm, Sweden from June 5–16 in 1972. **First year of observance of WED:** In 1974 the first WED was held with the theme "Only One Earth". **The theme for World Environment Day on 5 June 2023 will focus on solutions to plastic pollution** under the campaign **#BeatPlasticPollution.**

5TH MAY

1. River Cities Alliance (RCA): National Mission for Clean Ganga (NMCG) in association with the National Institute of Urban Affairs (NIUA) organized the 'River-Cities Alliance (RCA) Global Seminar: Partnership for Building International River-Sensitive Cities' recently in New Delhi. **The River Cities Alliance (RCA) has been launched with the objective to provide the member cities with a platform to discuss and exchange information on aspects that are vital for sustainable management of urban rivers, sharing best practices and**

supporting innovation. The Alliance is open to all river cities of India. Any river city can join the Alliance at any time. State Governments are implementing Action Plans for restoration of water quality of the identified polluted river stretches. The implementation is being monitored regularly at State level by Chief Secretary of the respective State/UT and at Central level by the Central Monitoring Committee under the Chairmanship of Secretary, Ministry of Jal Shakti.

2. Indian Coast Guard: Indian Coast Guard recently bought home ten rescued fishermen from Maldivian waters. **It is an armed force that protects India's maritime interests and enforces maritime law**, with jurisdiction over the territorial waters of India, including its contiguous zone and exclusive economic zone. **It was formally established in 1978 by the Coast Guard Act, 1978 as an independent Armed force of India.**

Parent ministry: It operates under the Ministry of Defence.

Administration: The organization is headed by the Director General Indian Coast Guard (DGICG).

HQ: Coast Guard Headquarters (CGHQ) is located at New Delhi.

3. Commission for Scientific and Technical Terminology (CSTT): CSTT was **established in October 1961** in pursuance of a Presidential Order with **the objective to evolve technical terminology in all Indian Languages**. It **was established under clause (4) of Article 344 of the Constitution of India**. It is functioning under **Department of Higher Education, Ministry of Education, Government of India with its headquarters at New Delhi.**

Primary Function: Evolve standard terminology, propagate its use and distribute it widely.

Other functions: Preparation and Publication of Bilingual and Trilingual Glossaries involving English/Hindi and other Indian Languages. **Preparation and Publication of National terminology**.

Identification and Publication of School Level Terminology and Departmental Glossaries. **Identification of Pan Indian Terms**. Preparation of Definitional Dictionaries and Encyclopaedias. Preparation of University level textbooks, monographs and journals. **Grant-in-Aid to Granth Academies**, Textbook Boards and University Cells for University level books in regional languages. Propagation, expansion and critical review of terms coined and defined through training/orientation programmes, workshops, seminars etc. Free distribution of Publications. Providing necessary terminology to the National Translation Mission.

6TH MAY

1. Pradhan Mantri National Apprenticeship Mela (PMNAM): Ministry of Skill Development and Entrepreneurship (MSDE) organised the Pradhan Mantri National Apprenticeship Mela (PMNAM) in over 200 districts across the country. **Its objective is to connect the youth with more opportunities of on-ground training within corporates and further a chance to get employment**. Individuals having a 5th-12th grade pass certificate, a skill training certificate, an ITI Diploma, or a graduate degree can apply for an interview across these trades/opportunities. The candidates will be given a choice of 500+ trades, including welders, electricians, housekeepers, beauticians, mechanics, and others. **Candidates will also receive Apprenticeship certificates recognised by the National Council for Vocational Education and Training (NCVET)** at the end of their training period, which will give them industry recognition.

2. Indian Air Force Heritage Centre: This is the **first heritage centre of the IAF**. The **heritage centre highlights the IAF's role in various wars, including in 1965 and 1971 and the Kargil War, and the Balakot air strike through murals and memorabilia**. It houses five vintage aircraft and will provide visitors with cockpit exposure and an

experience with flight simulators. I**t also houses the first IAF-made patent aircraft Air Force 'Kanpur-1 Vintage Prototype Aircraft', a single-engine indigenous flying machine** designed and built by the late Air Vice Marshal Harjinder Singh in 1958 at Base Repair Depot Kanpur. The centre also showcases augmented reality, holograms, virtual reality, and electro-mechanical enclosures, interactive kiosks highlighting various facets of the IAF. The centre also has a special segment which has been dedicated to women officers in the IAF for their contribution to the service of the nation. **Location: Chandigarh**.

3. Tungnath Temple: The central government recently issued a notification declaring the ancient temple of Tungnath as a monument of national importance**.**

Location: It is located in **Rudraprayag District, Uttarakhand**. It is **the highest Shiva temple in the world** nestled at an altitude of 3680 meters. It is **one of the Panch Kedars** and is believed to have belonged to an ancient era almost 1000 years old. It was **built in the North Indian style of architecture** and has a dozen shrines of other Gods surrounding the temple.

Panch Kedars: Panch Kedar is a group of five sacred shrines of Lord Shiva located in the Garhwal Himalayas, Uttarakhand. **The five temples are the Kedarnath Temple at an altitude the Tungnath Temple, the Rudranath Temple, the Madhyamaheshwar Temple or Madmaheshwar and the Kalpeshwar Temple.**

4. National Center for Good Governance (NCGG): It was **set up in 2014 by the Government of India as an apex–level autonomous institution under the Ministry of Personnel, Public Grievances and Pensions**. It has been set up to assist in bringing about governance reforms through studies. **The Centre traces its origin to the National Institute of Administrative Research (NIAR), which was set up**

in 1995 by the LBSNAA, topmost training institute for civil services**. NIAR was subsequently rechristened and subsumed into NCGG. NCGG deals with a gamut of governance issues from local, state to national levels, across all sectors. It curates training courses for civil servants from India and other developing countries. **NCGG is governed by a Governing Body, under the Chairmanship of the Cabinet Secretary.**

8TH MAY

1. Viswa Bharati University: The Calcutta High Court granted interim relief to Nobel laureate Amartya Sen by prohibiting Visva Bharati University from acting on its decision asking him to relinquish a portion of his land at his property at Shantiniketan. It is one of India's major Central Government funded autonomous University located in Santiniketan, West Bengal. **It is well-known as a distinguished centre for Visual Arts practice and research in India.** The University was **established in 1921 by Nobel Prize Laureate Rabindranath Tagore**. It was named after Nobel Laureate Rabindranath Tagore until the Visva-Bharati Society was registered as an organisation in May 1922.**The institution was given the status of a Central University in 1951 through a central Act**. **Its first vice-chancellor was Rathindranath Tagore,** the son of Rabindranath Tagore, and the second vice-chancellor was the grandfather of another Nobel Laureate economist Amartya Sen. The President of India appoints the Vice-chancellor of the University. **Visva Bharati University is renowned for its cultural festivals called Poush Mela and the Basanta Utsab,** which attract a number of artisans from all across the country.

2. Harit Sagar Guidelines: The Ministry of Ports, Shipping & Waterways launched 'Harit Sagar', the Green Port Guidelines.

Objective: To **minimize waste through Reduce, Reuse, Repurpose and Recycle to attain zero waste discharge**

from port operations and promote monitoring based on Environmental Performance Indicators. These guidelines have been formulated with the **aim of promoting environmentally friendly practices across all Indian Ports.**

3. iDrone initiative: The Indian Council of Medical Research (ICMR) has successfully conducted a trial run of delivery of blood bags by drones under its iDrone initiative**. The project 'i-DRONE'(ICMR's Drone Response and Outreach for North East) assessed the feasibility of using drone to deliver vaccines and medical supply**. This was carried out in difficult geographical terrains including **land, island, foothills and across the hills**. The medical supplies delivered under i-Drone project included COVID-19 vaccines, vaccines used routine immunisation programs, antenatal care medicines, multi-vitamins, syringes and gloves**. The drone delivery system focused on end-to-end ecosystem for drone-based logistic transportation** within the states and was first successful example of delivering vaccines through drone from land to Island in South Asia.

4. National Technology Day: The Technology Development Board (TDB) a statutory body of the Department of Science & Technology (DST) celebrates May 11 every year as National Technology Day to commemorate achievements of innovations and technological excellence in the country. **The day has a historical perspective: On May 11, 1998, India successfully carried out nuclear tests at Pokhran.** The **first indigenous aircraft "Hansa-3" was test flown at Bangalore on this day;** and India also performed successful test firing of the Trishul missile on the same day. **Since 1999, the day is being celebrated as National Technology Day.**

9TH MAY

1. Cyclone Mocha: It is a tropical cyclone formed over the southern Bay of Bengal. **The cyclone's name 'Mocha' is suggested by Yemen** and was named after the Red Sea port city, which is known to have introduced coffee to the world.

2. YUVA PRATIBHA – Culinary Talent Hunt: MyGov, in collaboration with Institute of Hotel Management, **Pusa launch – YUVA PRATIBHA – Culinary Talent Hunt.** The purpose of this competition is to **bring out the lost recipes and promote the culinary talents of young and aspiring chefs and home cooks**. The fusion of millets in this competition provides a unique opportunity for participants to showcase their creativity and innovation in cooking with healthy and sustainable ingredients. The dish should be home-cooked, wherein 50 percent of the ingredients should be of millet.

3. Automated Return Scrutiny Module for GST returns: The Central Board of Indirect Taxes and Customs (CBIC) has rolled out the **Automated Return Scrutiny Module for GST returns**. This module will enable the officers to carry out scrutiny of GST returns of Centre Administered Taxpayers selected on the basis of data analytics and risks identified by the system. The module shows the discrepancies with the return to the tax officer and provides the tax officer with a way to interact with the taxpayer through the GSTN Common Portal for communication of discrepancies. **The implementation of this Automated Return Scrutiny Module has commenced with the scrutiny of GST returns for financial year 2019-20**.

4. 6th Indian Ocean Conference (IOC): Bangladesh hosted the **6th Indian Ocean Conference (IOC) in Dhaka.** It discussed aspects strengthening cooperation between the countries of the Indian Ocean region. The 6th edition of the Conference organised by India Foundation in association with

the Ministry of Foreign Affairs, Bangladesh and S. Rajaratnam School of International Studies.

Theme: "Peace, Prosperity and Partnership for a Resilient Future" The Conference endeavours to bring critical states and principal maritime partners of the region together on a common platform to deliberate upon the prospects of regional cooperation for Security And Growth for All in the Region (SAGAR). **The first edition of the Conference was held in Singapore in 2016.**

5. Chheligada Irrigation Project: It is a **multipurpose medium project being undertaken across river Badjhore**, a tributary of river Vansadhara near the village Chheligada in the Gajapati District of Odisha. **The Project envisages the construction of a 250m long & 30m high dam across the river Badjhore with a central spillway. The salient features of the Project are:** 90m long centrally located Ogee-type gated Spillway; 1.13 km long tunnel to connect Chheligada reservoir with Ghodahada river; Canal system directly from the dam to irrigate in the Gajapati district; laying of the pipeline for drinking water supply to Berhampur (Distt. Ganjam).

10TH MAY

1. Exercise Samudra Shakti: It is the **4th edition of India-Indonesia Bilateral exercise**. It is **aimed at enhancing interoperability, jointness and mutual cooperation between both the navies.** The Harbour phase will comprise Cross deck visits, professional Interactions, Subject Matter Expert Exchanges, and sports fixtures. During the Sea Phase, weapon firing, Helicopter Operations, Anti-submarine warfare & air defence exercises and boarding operations are planned. **The Indonesian Navy will be represented by KRI Sultan Iskandar Muda, CN 235 Maritime Patrol Aircraft and AS565 Panther Helicopter.**

2. One Station One Product' (OSOP) scheme: Ministry of Railways launched this scheme in March, 2022. **The objective is to promote 'Vocal for Local' vision of the government, providing a market for local or indigenous products and create additional income opportunities for the marginalized sections of society.** Under the scheme, OSOP outlets at railway stations are allotted for showcasing, selling and giving high visibility to indigenous or local products. These OSOP stalls are designed through National Design Institute for uniformity.

3. India-EU Trade and Technology Council: The first Ministerial meeting of the India-EU Trade and Technology Council was be held in Brussels. **The meeting will be co-chaired on the Indian side by the Ministers for External Affairs, Commerce and Industry, and Communications, Electronics, and Information Technology**. Trade and Technology Council was launched by Prime Minister Narendra Modi and President of European Commission Ursula von der Leyen. Both sides established three Working Groups under the Council. **These are Working Group on Strategic Technologies, Digital Governance, and Digital Connectivity, Working Group on Green and Clean Energy Technologies, and Working Group on Trade, Investment and Resilient Value Chains**. Meetings of the three Working Groups have also taken place leading to the Ministerial meeting in Brussels.

4. INS Hansa: INS Hansa in Goa has become the very first Joint-User International Aerodrome in the South-Asia Pacific region to be augmented with the Required Navigation Performance (RNP) approach. The RNP approach will reduce dependency for navigation on ground-based equipment such as Very-High Frequency Omni Directional Radio (VOR) and Instrument Landing System (ILS).This RNP approach will provide near Category-I ILS accuracies, thereby aiding

unhindered flying operations even when the aforementioned equipment is unserviceable or under maintenance. It is an Indian naval air station located near Diabolism in Goa. **It is India's biggest naval airbase and is home to the Indian Navy's premier air squadrons**. The base has a civil enclave that operates as Dabolim Airport. This naval air station has grown to become a full-fledged airfield that handles domestic and international flights around the clock. **INS Hansa was commissioned in 1961 at Sulur near Coimbatore, Tamil Nadu**. Post the liberation of Goa, the Navy took over Dabolim airfield in April 1962, and the INS Hansa was moved to Dabolim in June 1964.

11TH MAY

1. Sikkim Statehood Day: Sikkim commemorates its statehood day annually on May 16 to acknowledge its integration with India and its emergence as the 22nd state in the country in 1975. **The state of Sikkim was formed by the 36th Amendment of the Constitution of India in 1975**. In the 17th century, the **Namgyal dynasty formed the Kingdom of Sikkim.** The kingdom was made a protectorate of the British Empire in 1890 but the dynasty continued to function under the Chogyal (Buddhist priest-kings). After around two decades a people's agitation against the monarchy in 1973 was led by former Sikkim Council member Kazi Lhendup Dorji. After riots broke out in front of the Chogyal's palace in 1973, the Chogyal formally requested security from India and this led to the kingdom signing a contract with India. In 1974 a new constitution was adopted in the state, which restricted Chogyal to a titular post. **In 1974, The Indian government changed Sikkim's status to "associated state" and gave it one seat each in the Rajya Sabha and Lok Sabha**. In 1975, The Sikkim Prime Minister requested that Sikkim become a state of India in a petition to the Indian Parliament thus Sikkim became a state in India, and the **monarchy was abolished on May 16.**

2. "Meri LiFE" app: The Government recently launched the "Meri LiFE" (My Life) mobile application to empower young people and encourage their participation in tackling climate change. **The app is inspired by the concept of Mission LiFE (Lifestyle for Environment), which was envisioned by the Prime Minister at COP 26**.
Aim: To **promote mindful utilisation instead of wasteful consumption**. The application will foster a nationwide movement for LiFE, demonstrating the power of citizens in saving the environment. **Meri LiFE is a marketplace where young people can explore their interests, find Climate Change and Environmental Sustainability focused opportunities** that match their interests, and sign up to act on issues that matter the most to them.

3. Mission LiFE (Lifestyle for Environment): It was **launched by the Prime Minister in 2022 at Kevadia, Gujarat**. The mission focuses on bringing about behaviour changes in individuals through simple and easy-to-do actions. **The Ministry of Environment, Forest and Climate Change is the nodal Ministry for national-level coordination and implementation of Mission Life.** The global movement will showcase sustainable goals and climate actions taken by countries and individuals around the world. To monitor the progress of Life, the Ministry has developed two dedicated portals**. The Mission LiFE Portal (missionlife-moefcc.nic.in)**: Allows open access to download over 100 creatives, videos, and knowledge materials created by the Ministry for LiFE. **The Meri LiFE Portal (merilife.org):** Enables ministries and institutions to upload event reports and track the progress of the mass mobilization drive.

4. National Gallery of Modern Art (NGMA): It is **located in Delhi**. The building in which the gallery is situated was the former residence of the Maharaja of Jaipur and hence is known as Jaipur House. It is located at the edge of the Rajpath and faces India

Gate. It was **established on March 29, 1954, by the Indian Government**.

Aim: To acquire and preserve modern art from 1850 onwards and to present it to a global audience which will create an understanding and sensitivity towards a time that helped shape contemporary art in India.

12TH MAY

1. Baralacha La Pass: It is **a high mountain pass located along the Leh-Manali highway that connects Leh district in Ladakh and Lahaul district in Himachal Pradesh**. It is situated in the Zanskar range. It lies close to River Bhaga, which originates from the Surya Taal Lake & is a tributary of the River Chenab.

Elevation: It is located at the height of 16,040 feet above the sea level and is **one of the highest motorable passes in India.** It also finds mention in Rudyard Kipling's celebrated novel 'Kim', wherein the source of the Suraj Tal is used by the novel's character Lama to enter into India from Tibet.

2. Border Roads Organisation (BRO): It is a road construction executive force in India that provides support to Indian Armed Forces. It was **formed on 7 May 1960 to secure India's borders and develop infrastructure in remote areas of the north and north-east states of the country. The organisation motto is Shramena Sarvam Sadhyam** (everything is achievable through hard work). **BRO develops and maintains road networks in India's border areas and friendly neighboring countries.** This includes infrastructure operations in 19 states and three union territories (including Andaman and Nicobar Islands) and neighboring countries such as Afghanistan, Bhutan, Myanmar, Tajikistan and Sri Lanka**. Officers and personnel from the General Reserve Engineer Force (GREF) form the parent cadre of the BRO**. It is also staffed by Officers and Troops drawn from the Indian Army's Corps of Engineers on extra regimental employment (on deputation).

3. Global Report on Internal Replacement 2023: It is **released by the Norwegian Refugee Council's Internal Displacement Monitoring Centre (IDMC).Internal displacement refers to people forced to move inside their own borders** and the Internal Displacement Monitoring Centre's report didn't take into account those who left for different countries.

Highlights of the 2023 Report: The number of internally displaced people (IDPs) around the world reached 71.1 million as of the end of 2022, an increase of 20 per cent from the previous year. **Of the total disaster displacement, 98 per cent were triggered by weather-related events like floods and storms. India recorded the fourth largest disaster displacement, with 2.5 million displacements.**

Pakistan had the highest number of disaster displacements in the world in 2022, at 8.16 million.

4. C-PACE (Centre for Processing Accelerated Corporate Exit): Ministry of Corporate Affairs (MCA) recently established C-PACE, or Centre for Processing Accelerated Corporate Exit, to bring efficiency into the strike off process of companies. **C-PACE has been set up to centralise the process of striking off companies from the MCA Register.** It is **located at the Indian Institute of Corporate Affairs in Gurgaon**. C-PACE will be in operation through the Registrar of Companies (RoC) for the purposes of exercising functional jurisdiction of processing and disposal of applications. **It will work under the supervision of the Director General of Corporate Affairs (DGCoA).** C-PACE will reduce the burden on the registry and provide stakeholders with hassle-free filing, timely and process-bound striking off of their company's names from the register. **It is part of MCA's efforts towards ease of doing business and ease of exit for companies.**

1. Amangarh Tiger Reserve: It is **located in Amangarh in Bijnor district in the state of Uttar Pradesh**. It is situated in the Terai region and covers an area of around 578 sq km. **It shares its boundaries with Jim Corbett National Park of Uttarakhand.** It was originally part of the Jim Corbett National Park, and after the state of Uttarakhand was carved out of Uttar Pradesh, Jim Corbett went to Uttarakhand and Amangarh remained in Uttar Pradesh**. It was declared a tiger reserve in 2012.** The vegetation of the tiger reserve is a combination of grasslands, wetlands and dense forest.

2. Public Interest Litigation: It has not been defined in any Indian statute. However, Courts have interpreted and defined PIL. The Hon'ble Supreme Court of India has, in the case of Janata Dal v. H.S.Chaudhary, [(AIR 1993 SC 892) held that lexically, the **expression 'PIL' means a legal action started in a court of law for the enforcement of public/general interest where the public or a particular class of the public some interest (including pecuniary interest) that affects their legal rights or liabilities**. Any individual or organisation can file a PIL either in his/her/their own standing i.e. to protect or enforce a right owed to him/her/them by the government or on behalf of a section of society who is disadvantaged or oppressed and is not able to enforce their own rights. **The concept of "Locus Standi" has been relaxed in the case of PILs so as to enable the Hon'ble Court to look into grievances that are filed on behalf of those who are poor, illiterate, deprived or disabled** and are unable to approach the courts themselves. **Suo moto cognizance may also be taken by the Court**. PILs are extensions of Writ Jurisdiction. Therefore, PILs may be filed either before the Hon'ble Supreme Court of India under **Article 32 of the Indian Constitution or any High Court under Article 226 of the Indian Constitution.**

3. GBU-57: It is **known as the "Massive Ordnance Penetrator (MOP)".** It is a GPS-guided, earth-penetrating strike weapon for use against hard and deeply buried targets. **MOP is one of the most powerful non-nuclear bombs in the world**. It is **manufactured by Boeing and used by the United States Air Force**. It is used to destroy deeply entrenched enemy bunkers such as those concealing a supply of weapons of mass destruction (WMD). The bomb is 20.5 feet long with a diameter of 31.5 inches. Weight: 14,000 kg MOP is carried by the B-2 Spirit bomber, which can carry two of the bombs at a time. The bomb is equipped with a delayed-action fuse, allowing the warhead to survive the impact, not detonating until the bomb has stopped traveling underground.

4. INS Tarini: INSV Tarini is returning home after **successfully completing the 17000-nautical miles trans-ocean inter-continental voyage in seven months**. The two women officers undertook the voyage from Goa to Rio de Janerio via Cape Town and back, spanning over 188 days of sailing on the vessel. **The current sailing expedition of INSV Tarini is part of the run-up towards the Navy's next big project to send a woman to circumnavigate the globe solo.** It is the **second sailboat of Indian Navy after INSV Mhedi**. It is known for circumnavigating the globe with an all-women officer crew in the historic expedition titled **'Navika Sagar Parikrama' in 2017.**

1. SCO Startup Forum: The engagement aimed at **expanding the startup interactions amongst the SCO Member States, nurturing the spirit of innovation, generating more employment and encouraging young talent to build innovative solutions**. In addition, the delegates also attended a workshop conducted by Startup India on the 'Role

of Bilateral and Multilateral Engagements in developing startup ecosystem'. Previously, Startup India had organized various initiatives for SCO Member states including: SCO Startup Forum 2020: **The SCO Startup Forum laid the foundation for multilateral cooperation and engagement for startups among the SCO Member States**.

SCO Startup Forum 2021: The two-day Forum was held virtually through a customized platform representing the Indian culture in augmented reality. **SCO Startup Hub, a single point of contact for the SCO startup ecosystem, was launched in this forum.**

Focused Mentorship Program: A 3-month long virtual mentorship series 'Starting-Up' was organized for the nominated startups, to build capacity among the SCO Startup founders.

2. Geological Survey of India (GSI): It was **set up in 1851 primarily to find coal deposits for the Railways**. Over the years, it has grown into a repository of geo-science information required in various fields in the country.

Objective: Providing objective, impartial and up-to-date geological expertise and geoscientific information of all kinds, with a focus on policy-making decisions and commercial and socio-economic needs.

Under the National Mineral Policy (NMP) 2008, **GSI remains the principal agency for geological mapping and regional mineral resources assessment of the country**. It also emphasises systematic documentation of all geological processes, both surface and subsurface, of India and its offshore areas. The organisation carries out this work through geological, geophysical, & geochemical surveys using the latest and most cost-effective techniques and methodologies. **It is headquartered in Kolkata and has six regional offices located at Lucknow, Jaipur, Nagpur, Hyderabad, Shillong and Kolkata**. Every state has a state unit. **Presently, GSI is an attached office to the Ministry of Mines.**

3. Aadhar enabled Payment System: AePS is a bank-led model which allows **online financial transactions at Point-of-Sale (PoS) and Micro ATMs through the business correspondent of any bank using Aadhaar authentication**. The model removes the need for OTPs, bank account details, and other financial details**. It allows fund transfers using only the bank name, Aadhaar number, and fingerprint captured during Aadhaar enrolment**, according to the National Payments Corporation of India (NCPI).For AePs, these are the only inputs required for certain types of transactions, including cash deposit, cash withdrawal, balance inquiry, mini statement, Aadhaar to Aadhaar fund transfer, authentication, and BHIM Aadhaar pay. Neither UIDAI nor NPCI mentions clearly whether AePS is enabled by default. **Cashless India, a website managed and run by MeitY, says the service does not require any activation, with the only requirement being that the user's bank account should be linked with their Aadhaar number**. Users who wish to receive any benefit or subsidy under schemes notified under section 7 of the Aadhaar Act, have to mandatorily submit their Aadhaar number to the banking service provider, according to UIDAI. **Aadhaar is also the preferred method of KYC for banking institutions, thus enabling AePS by default for most bank account holders.**

16TH MAY

1. Patriot System: The Patriot, which stands for **Phased Array Tracking Radar for Intercept on Target, is a theater-wide surface-to-air missile defense system built by Raytheon Technologies Corp (RTX.N)** and considered one of the most advanced air defense systems in the U.S. arsenal. The **system was first used in combat during the 1991 Gulf War**, with batteries protecting Saudi Arabia, Kuwait and Israel, and later used during the U.S. invasion of Iraq in 2003.**It is a mobile system that usually includes powerful radar, a control station, a power generator, launch stations and**

other support vehicles. The system has different capabilities depending on the type of interceptor used. The PAC-2 interceptor uses a blast-fragmentation warhead, while the newer PAC-3 missile uses more advanced hit-to-kill technology.

2. Central Bureau of Investigation (CBI): It is the **premier investigative agency of India**. The agency was **established in 1963 by the Indian government as a result of the recommendation of the Santhanam Committee**. CBI is not a statutory body. It **derives its power to investigate from the Delhi Special Police Establishment Act 1946**.

Control: It **operates under the jurisdiction of the Ministry of Personnel, Public Grievances and Pensions**. However, for investigation of offences under the Prevention of Corruption Act, the CBI vests superintendence to the Central Vigilance Commission. Initially, it was set up to investigate corruption in government departments and public sector undertakings. However, over the years, its **jurisdiction has expanded to cover a wide range of cases, including economic offences, cyber-crimes, organized crimes, and special crimes**.

3. Appointment of the CBI Director: The CBI director is appointed according to **provisions under the Delhi Special Police Establishment Act (1946) and amendments therein brought by the Lokpal and Lokayuktas Act, 2013**. The appointment is made by the Centre on recommendation by a **three-member Appointment Committee**. The appointment committee comprises the Prime Minister as the chairperson, the leader of the opposition (LoP) in the Lok Sabha and the Chief Justice of India, or a Supreme Court judge nominated by him. If there is no recognised LoP, then the leader of the single largest party is included in the committee**. The Central Vigilance Commission Act 2003 fixed the tenure of the CBI director at 2 years**.

Supreme Court Directions: The apex court, in a 2019 order, mandated **that no officer with less than six months' tenure remaining can be considered for the post of CBI chief.** The court also ruled that the director is to remain in office for 'not less than 2 years' and can be transferred only with the consent of the appointing committee.

4. Unique Identification Authority of India (UIDAI): It is a **statutory authority established under the provisions of the Aadhaar Act 2016 by the Govt. of India under the Ministry of Electronics & Information Technology**.

Vision: To empower residents of India with a unique identity and a digital platform to authenticate anytime, anywhere. **It is created to issue Unique Identification Numbers (UID), which is also known as 'Aadhaar number' to all the residents of India.** Under the Aadhaar Act 2016, UIDAI is responsible for Aadhaar enrolment and authentication, including operation and management of all stages of the Aadhaar life cycle and the system for issuing Aadhaar numbers to individuals.

Composition: UIDAI consists of a **Chairperson, two part-time Members and the Chief Executive Officer (CEO), who is also the Member-Secretary of the Authority.**

17TH MAY

1. International Organisation of Migration: Established in 1951, IOM is the leading intergovernmental organization in the field of migration and works closely with governmental, intergovernmental and non-governmental partners.

History: It was born in 1951 out of the chaos and displacement of Western Europe following the Second World War. **Status: IOM was granted Permanent Observer status to the UN General Assembly in 1992,** and a cooperation agreement between IOM and the UN was signed in 1996.

Members: With 175 member states, a further 8 states holding observer status and offices in over 100 countries**, IOM is dedicated to promoting humane and orderly migration for the benefit of all**. It does so by providing services and advice to governments and migrants. **India is a member of IOM**. IOM works in the four broad areas of migration management: **Migration and development, Facilitating migration, Regulating migration, Forced migration.**

2. National Ayush Mission: It aims to enhance the **availability, accessibility, and quality of Ayush healthcare services across the country** through Ayush Health Wellness centers (AHWCs) as part of Ayushman Bharat scheme.

Mandatory Components: AYUSH Services, AYUSH Educational Institutions, Quality Control of ASU &H Drugs, Medicinal Plants. Resource Allocation Framework: For AYUSH Services, Educational Institutions and Quality Control of ASU&H Drugs:- For special Category states- **Grant-in-aid component will be 90% from Govt. of India and remaining 10% is proposed to be the State contribution**. For other States/UTs the sharing pattern will be 75%:25%. For Medicinal Plants: This component will be financed 100% by Central Government in North Eastern State and hilly State. In other states, it will be shared in the ratio of 90:10 between Centre and States. **It was launched in 2014 under Department of AYUSH, Ministry of Health and Family Welfare.**

3. Kiru Hydro-Electric Power Project: It is being **developed over the Chenab River near the villages of Patharnakki and Kiru in Kishtwar district, Jammu and Kashmir (J&K).**It is located between Kirthai II hydroelectric project to its upstream and Kwar hydroelectric project to its downstream. It is a 624MW run-of-river project.

Beneficiary States: J&K, Himachal Pradesh, Punjab, Haryana, Uttar Pradesh, Uttaranchal, Rajasthan, Union territories of Chandigarh & Delhi.

4. National Productivity Council: It is an autonomous organization under the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry. **It was set up in 1958.**

Objectives: To **promote innovation-led productivity** in a sustained manner in all spheres of national economy through a holistic and inclusive approach by addressing the **triple bottom line – Economic, Environmental and Social**. To propagate productivity consciousness and culture amongst Govt., Business and Society. **To act as a total solution provider for Industry, Services, and Agriculture sectors** for augmenting productivity through Training, Consultancy and Research wherever needed through alliances and partnerships**. It is a constituent of the Tokyo-based Asian Productivity Organisation (APO),** an Inter-Governmental Body of which the Government of India is a founding member.

18TH MAY

1. Wings India 2024: The Ministry of Civil Aviation in collaboration with Federation of Indian Chambers of Commerce & Industry (FICCI) organized a curtain raiser ahead of Wings India 2024. **Ministry of Civil Aviation (MoCA), Airport Authority of India (AAI) and Federation of Indian Chambers of Commerce and Industry (FICCI) are organizing the upcoming edition of 'Wings India 2024'.**The Asia's largest commercial, general, and business aviation event to be held in January 2024 at Begumpet Airport, Hyderabad, India. Federation of Indian Chambers of Commerce and Industry (FICCI): **It was established in 1927 as non-government, not-for-profit organization. It is the largest and oldest apex business organisation in India.** It serves its members from the Indian private and public corporate sectors and multinational companies. **It is the voice of India's business and industry**.

2. Vaghsheer: INS Vagsheer (S26) is the **sixth submarine of the first batch of six Kalvari-class submarines for the Indian Navy**. It is named after the sand fish, a deadly deep-sea predator of the Indian Ocean. It is **designed by French naval defence and**

energy group Naval Group and manufactured by **Mazagon Dock Limited**. It is designed to operate in all theatres of operation, showcasing interoperability with other components of a Naval Task Force.

3. Kalvari-class submarines: The Kalvari class is a class of diesel-electric attack submarines based on the Scorpène-class submarine being built for the Indian Navy. **The submarines are designed by French naval defence and energy company DCNS and are being manufactured by Mazagon Dock Limited in Mumbai.** It has been constructed with technology transfer from French firm Naval Group under a programme called Project 75.**The state-of-the-art technology used in Scorpene-class has superior stealth features such as advanced acoustic silencing techniques, low radiated noise levels and ability to launch crippling attacks with precision-guided weapons on board**. They can attack through launching the torpedoes and anti-ship missiles while underwater or on the surface.

4. European Bank for Reconstruction and Development (EBRD): It is an international financial institution with the mandate to promote transition towards a sustainable, open market economy and to foster innovation**. The EBRD was created in April 1991 to help Eastern European and ex-Soviet countries transitioning into democracies by developing free-market economies after the fall of communism**.
Headquarters: London. It provides project financing mainly for private enterprises, usually together with other commercial lending partners, in countries that are committed to, and apply, democratic principles. It also works with public partners to support privatisation, restructuring and improvement of municipal services. It prioritizes support for countries in Central and West Asia, and North Africa**. It focuses on advancing developmental goals in finance and policy reform.**
The organization also **promotes environmentally sustainable development and gender equality and promises to be fully transparent.**

Membership: It is publicly owned by shareholders in 69 countries. **India became the EBRD's 69th shareholder when it joined the Bank in July 2018.**

19TH MAY

1. Machilipatnam Port: It is a proposed deep sea port on the coast of Bay of Bengal. **It is located at Machilipatnam, the District Headquarters of Krishna district in Andhra Pradesh.** The port is developed by the State Government under the landlord model**. The project is being implemented by Machilipatnam Port Development Corporation Limited (MPDCL),** a special purpose vehicle floated by the State government. The port is expected to have a capacity of 35 million tonnes in phase one, with four berths, including three general berths and one for coal.

2. IRIS-T Surface-Launched-Missile (SLM) system: It is the medium-range version of the IRIS-T SL air defense missile system designed and produced by the German company Diehl Defense. **The system provides comprehensive 360° protection against aircraft, helicopters, cruise missiles, and guided weapons**. It enables simultaneous engagement of multiple targets from very short to medium-range within extremely brief reaction times. **It is suited for both mobile and stationary deployment.** Each system comprises three vehicles: a missile launcher, a radar, and a fire-control radar, with integrated logistics and support. The missiles, which use infrared imaging to identify targets, are said to have a range of 40 kilometres and a maximum altitude of 20 kilometres.

3. Centre of Excellence On Sustainable Land Management: The establishment of the CoE-SLM was announced by the Prime Minister of India during the 14th Conference of the Parties (COP-14) of the United Nations Convention to Combat Desertification (UNCCD) in September, 2019.
Aims: To set **Land Degradation Neutrality (LDN) targets, Develop drought risk and early warning systems, Mainstream gender considerations,**

Promote good governance of land tenure and rights, assess the impacts of land degradation on greenhouse gas emissions and biodiversity loss. To facilitate the restoration of degraded land through technical support, capacity building, and knowledge sharing at the national and sub-national levels. **To promote South-South Cooperation** and address land degradation issues through sustainable land management practices.

Objectives: The CoE-SLM has set forth specific objectives to guide its actions: Assessing land degradation, Capacity building on sustainable land management frameworks aligned with SDGs, Strengthening the assessment, monitoring, and reporting of land-based indicators outlined by the UNCCD.

4. Pashmina Certification Centre: Union Minister inaugurated the Pashmina Certification Centre (PCC) at the Wildlife Institute of India in Dehradun, Uttarakhand**. The Export Promotion Council for Handicrafts (EPCH) collaborated with WII to establish a Pashmina Certification Center (PCC) for its associated members involved in Pashmina Trade**.

Purpose of setting: To streamline the Pashmina Trade, To provide a one-stop testing facility to certify genuine Pashmina Product free from any prohibited fibres to the associated manufacturers, exporters, and traders, All the tested products will be labelled with a traceable unique id tag with individual e-certificates, enabling a seamless trade of such products in national and international markets.

20ᵀᴴ MAY

1. XpoSat Mission: It **is built by ISRO along with Raman Research Institute**. XPoSat (X-ray Polarimeter Satellite) is India's first dedicated polarimetry mission to study various dynamics of bright astronomical X-ray sources in extreme conditions**. The spacecraft will carry two scientific payloads in a Low Earth Orbit**.

The primary payloads: (a) POLIX (Polarimeter Instrument in X-rays): Measure the polarimetry parameters (degree and angle of polarization) in medium X-ray energy range of 8-30 keV photons of astronomical origin.

(b) XSPECT (X-ray Spectroscopy and Timing): Gives spectroscopic information in the energy range of 0.8-15 keV.

2. National e-Vidhan Application: National e-Vidhan Application (NeVA) is one of the **44 Mission Mode Projects (MMPs) under the "Digital India Programme" of Government of India**.

Aim: To make **the functioning of all the State Legislatures paperless by transforming them into 'Digital House'.** It is a **device neutral and member centric application created to equip them to handle diverse House Business smartly** by putting entire information regarding member contact details, rules of procedure, notices, bills, starred/unstarred questions and answers, committee reports etc. in their hand held devices/ tablets. **Till now, 21 State legislatures have signed Memorandum of Understanding for implementation of the NeVA and the project has been sanctioned for 17 Legislatures.**

Among them, **9 Legislatures have already become fully digital** and are Live on NeVA platform.

Nodal Ministry: Ministry of Parliamentary Affairs.

3. FIPIC Summit: The third forum for India-Pacific islands co-operation (FIPIC Summit), which was held at Port Moresby was jointly hosted with Papua New Guinea. Prime minister of India co- chaired the summit with PM of Papua **New Guinea. FIPIC is a multinational grouping for cooperation between India and 14 Pacific Islands nations.** It include 14 islands named- Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Samoa, Solomon Islands, Palau, Papua New Guinea, Tonga, Tuvalu and Vanuatu. **All Head of state/head of government of the above countries met in Suva, Fiji in November 2014 for the first time where the annual summit was conceptualised.** A major part of India's engagement with these countries is through **development assistance under South-South**

Cooperation, mainly in capacity building (training, scholarships, grant-in-aid and loan assistance) and community development projects. In 2015, FIPIC Trade Office at Federation of Indian Chambers of Commerce & Industry (FICCI) to promote Trade & Investment opportunities between India & Pacific Island Countries.

4. Environment and Climate Sustainability Working Group (ECSWG): The meeting is a critical step in fostering the efforts of the G20 countries towards a sustainable and resilient future. **Ocean 20 Dialogue aimed at promoting a sustainable and climate-resilient Blue Economy**. The Ocean 20 platform, launched during the Indonesia Presidency Dialogue is aimed to advance ideation and action for ocean solutions. It aims **to facilitate sustainability in the maritime domain**, ocean governance, building capacities to facilitate sustainable ocean practices and **equitable distribution of benefits from traditional and new blue economy sectors.**

22ND MAY

1. 76th World Health Assembly: Union Minister of Health and Family Welfare delivered the keynote address at a side event session on "Heal in India & Heal by India" at the 76th World Health Assembly, in Geneva. **'Heal by India' initiative is designed with an intent to increase health workforce mobility from India to different parts of the world to serve the world as per the Indian Philosophy of 'Vasudhaiva Kutumbakam'** (The World is One Family). 'Heal in India' initiative seeks to **provide "integrated and holistic treatment"** to the world in India and **enhance patient mobility for access to world class, affordable and quality healthcare services".**

2. INS Mormugao: It is an indigenous guided missile destroyer of the Indian Navy. **It was named after the historic port city of Goa on the West coast.** The ship is propelled by four powerful Gas Turbines, in a Combined Gas and Gas (COGAG) configuration. **The**

ship has enhanced stealth features resulting in a reduced Radar Cross Section (RCS). The ship is fitted with a modern Surveillance Radar which provides target data to the gunnery weapon systems of the ship. It is packed with sophisticated weapons and sensors such as **Surface to Surface Missile and Surface to Air Missiles**. Its Anti-Submarine Warfare capabilities are provided by the indigenously-developed Rocket Launchers, Torpedo Launchers and the ASW helicopters. **It is equipped to fight under nuclear, biological and chemical (NBC) warfare conditions.**

3. Insurance Information Bureau of India (IIB): IIB has been established by the insurance regulator, Insurance Regulatory and Development Authority of India (IRDAI) in the year 2009, as a data repository and analytics body. **It was registered as an independent non-profit earning society on 21st November, 2012 under the Andhra Pradesh Societies Registration Act 2001.**IIB was mandated to be market neutral and provide independent and non-judgmental analysis to all stakeholders. **It acts as the Sole Repository and Analytics Body for the entire Insurance Sector in India.** All the registered Insurance Companies in India are mandated to submit data under Life, Motor, Health, Fire and Other Miscellaneous lines of Insurance business to IIB. **It handles huge data and provides analytical insights and services to the stake holders through web services and applications**.

4. e-Malkhana: e-Malkhana is a scientific way of storing property and evidence recovered from crime scene. **The facility was first commissioned in July 2021 at Narsipatnam Police Station (presently in Anakapalli district).**
Need: According to police officers, earlier recovered properties and evidence used to be stored in storerooms and it was difficult to find them. The property seized and evidences collected from the crime scene can be stored in standard size cardboard boxes, which will be numbered with other details. A dynamic QR code will be generated and pasted on the

box. A dedicated website is also hosted and all details pertaining to the case and property will be uploaded. All one has to do is to scan the code to get the details.

23RD MAY

1. UDAN 5.1 Scheme: After 4 successful rounds of the Regional Connectivity Scheme (RCS) – Ude Desh Ka Aam Nagrik (UDAN), **the Ministry of Civil Aviation has launched UDAN 5.1 to further enhance the connectivity to remote areas of the country and achieve last mile connectivity through helicopters**. An increase in the scope of operations for operators wherein the scheme will now allow routes where one of the origin or destination locations is in a priority area. Earlier both points had to be in priority areas. **Airfare caps have been reduced by as much as 25% to make flying in helicopters more affordable for passengers. Viability Gap Funding (VGF) caps for the operators have been increased substantially for both single and twin-engine helicopters** to enhance financial viability for operating the awarded routes. Previous rounds of the scheme have already operationalised 46 helicopter routes, benefiting hilly and North-East states. The current round aims to cover an even larger number of routes, expanding the reach of air connectivity.

2. UDAN Scheme: UDAN- Ude Desh Ka Aam Nagrik is **an innovative scheme to develop the regional aviation market.** The scheme was initiated in **October 2016 with the objective of fulfilling the aspirations of the common citizen, with an enhanced aviation infrastructure and air connectivity in tier II and tier III cities**. The scheme UDAN envisages providing connectivity to un-served and under-served airports of the country through revival of existing air-strips and airports. Nodal Ministry- Ministry of Civil Aviation.

3. Har Shikhar Tiranga (HST) Mission: It is a **unique expedition to hoist the national flag on the highest point of every state of India for the first time**. It is a campaign under the aegis of the **Azadi Ka Amrit Mahotsav to take the tricolour to all the states of the count**ry and hoist it on the summits to commemorate India's G20 presidentship. **It is the brainchild of Colonel Jamwal who is a veteran of more than 52 successful expedition**s and is the **only Indian to have summited Mount Everest three times and climbed the Seven Summits**, touching the highest points of the seven continents. The summit will begin from summiting **Mt. Reo Purgyil in Himachal Pradesh and end at Mt Jongsong in Sikkim.** The lowest in terms of elevation will be Someshwar Fort in Bihar which is around 800 highest climbable mountain in India: **The highest peak under Indian control is Kanchenjunga (8,586 m) in Sikkim** but is closed for climbs. The next is Nanda Devi (7,816 m) but it's a world heritage site and national biosphere reserve. Thus the highest climbable mountain in India is Mt Kamet (7,756 m) in Uttarakhand.

4. NASAMS (National Advanced Surface-to-Air Missile System): It is a medium-range ground-based air defense system. It is designed to engage air targets at low and medium altitudes in all weather conditions. **It was designed and developed jointly by Raytheon (United States) and Kongsberg Defence & Aerospace (Norway)**.It is best suited to defend important stationary assets, such as key military assets, infrastructure, or cities. **It is the world's first networked short- and medium-range air defines system that could integrate with other equipment and air defines system**s. It features an X-Band, 360-degree phased array air defines radar with a 75-kilometer range to identify targets. The NASAMS is armed with three launchers, each carrying up to six missiles. The system can engage 72 targets simultaneously in active and passive modes.

24TH MAY

1. Mining Start Up Summit: The summit is being **organized by the Ministry of Mines in collaboration with Indian Institute of Technology, Bombay**. The Summit will be mainly focusing on innovation and

techniques that will support and improve the **performance, safety and help in building autonomy in the field of mining and metallurgy**. The summit will also be focusing on interaction with leading industries in the mineral exploration sector, financial institutions and banks. **More than 120 start-ups and 20 major industries will be participating in the Summit.**

2. Mumbai Trans Harbour Link: It is **India's longest sea bridge**. The **22-kilometer long 6-lane sea bridge from Sewri to Nhava in Mumbai** will ensure Seamless, direct connectivity between South Mumbai and Raigad. The bridge will also reduce distance between Mumbai, Navi Mumbai, Raigad, Mumbai-Pune Expressway and Mumbai-Goa Highway, and save **one hour travel time including fuel and transportation cost.**

3. NITI Aoyog Governing Council: The Eighth meeting of the NITI Aayog Governing was held at the **new Convention Centre in Pragati Maidan in New Delhi.** The Governing Council, which embodies NITI Aayog's objectives of cooperative federalism, presents a platform to discuss inter-sectoral and federal issues to accelerate the implementation of the national development agenda.

Timeline: The First Meeting was held in February 2015, the Second Meeting in July 2015, the Third Meeting in 2017 and the Fourth meeting in June 2018.

Composition: The Governing Council of NITI Aayog comprises the – Prime Minister of India, Chief Ministers of all the States and UTs with Legislatures and Lt. Governor of Andaman and Nicobar Islands, four Union Ministers as ex-officio members and three Union Ministers as Special Invitees.

4. SAMARTH Campaign: It was **started on 1st February 2023 and will continue till 15 August 2023 under the Azadi Ka Amrit Mahotsav.** The key thrust of the campaign is to **promote Digital Transactions in rural areas, particularly among women**. Deendayal Antyodaya Yojna- National Rural Livelihoods Mission

(DAY-NRLM) will help to achieve the goals of this campaign

Ministry: Ministry of Rural Development and Panchayati Raj

5. Sudarshan Shakti Exercise: The Sapta Shakti Command of the Indian Army conducted exercise 'Sudarshan Shakti 2023' along the western borders in **Rajasthan and Punjab.**

Aim: It aimed at starting the transformation of the forces into a modern, lean, and agile fighting combination capable of leveraging new-age technologies. The exercise was designed to validate operational plans in a network-centric environment with elements of combat power, combat support and logistic support. These elements were exercised in a synergised application under all domains of enemy threat including Grey Zone Warfare as part of high tempo operations.

25TH MAY

1. Schizophrenia: Schizophrenia is a chronic, severe mental disorder that affects the way a person thinks, acts, expresses emotions, perceives reality, and relates to others. It mostly affects young adults in the productive age group. **One in every 100 people experiences schizophrenia and men are twice as likely to develop this condition as compared to women**. Schizophrenia symptoms generally fall into three main categories**: psychotic, negative, and cognitive**. **Psychotic symptoms include Hallucinations, Delusions, thought disorder, Movement disorder. Negative symptoms include loss of motivation, loss of interest or enjoyment in daily activities, withdrawal from social life,** difficulty showing emotions, and difficulty functioning normally. **Cognitive symptoms include problems in attention, concentration, and memory**. Schizophrenia sometimes runs in families. However just because one family member has schizophrenia, it does not mean that other members of the family also will have it. Person's environment and life experiences may play a role in the development of

schizophrenia. People affected may be more likely to have differences in the size of certain brain areas and in connections between brain areas. There is no specific cure for schizophrenia.

2. New Parliament Building: The new Parliament, constructed on the lines of the Central Vista buildings, is a triangular structure. It is built over an area of 64,500 square metres. **It houses the Lok Sabha, the Rajya Sabha, the Central Lounge and offices of constitutional authorities**. **The Lok Sabha, with theme of the national bird 'peacock', will have a capacity of 888 seats. The Rajya Sabha hall on the theme of our national flower 'lotus', will have a capacity to seat 384 people.** Now two members will be able to sit side by side on each bench in the Lok Sabha and the Rajya Sabha Chambers. Each seat will be equipped with digital systems and touch screens**. It will have a Constitution Hall for the purpose of showcasing India's democratic heritage**. It will have large committee rooms, with the latest audio-visual systems. There will be 92 rooms for the use of the Council of Ministers**. It is also 'divyang-friendly'. With a focus on energy efficiency,** the new complex is a "platinum-rated green building" and showcases India's "commitment towards sustainable development. It will feature rainwater harvesting and water recycling systems.

3. Supercomputer 'AIRAWAT': **India's AI Supercomputer 'AIRAWAT' has been ranked at No. 75 in the world at the International Supercomputing Conference (ISC 2023) in Germany.** The supercomputer has been named in the 61st edition of the Top 500 Global Supercomputing List released recently. **The AI supercomputer AIRAWAT' is installed at C-DAC, Pune.** The system is installed under National Program on AI by the Government of India. **AIRAWAT's manufacturer is Netweb Technologies**. Airawat PSAI, stands **as India's largest and fastest AI supercomputing system,** with a remarkable speed of 13,170 teraflops.

4. Centre for Development of Advanced Computing (C-DAC): It is **a prominent R&D organization under the Ministry of Electronics and Information Technology.** It focuses on research and development in various domains, including information technology, electronics, and supercomputing. **It was established in the year 1988**. It was set up to build Supercomputers in context of denial of import of Supercomputers by USA. **C-DAC build India's first indigenously built supercomputer Param 8000 in 1991.**

26TH MAY

1. Divya Kala Shakti Program: This time, the **sixth Divya Kala Shakti program was organized in the divine city of Varanasi,** where approximately 100 artists from six states, namely West Bengal, Odisha, Jharkhand, Bihar, Uttar Pradesh, and Uttarakhand, performed in the program. It is **organized by the Department of Empowerment of Persons with Disabilities (Divyangjan), Ministry of Social Justice and Empowerment** through CRC-Lucknow, an organization under the department. Five regional "Divya Kala Shakti" programs have already been held in various places, including the Western Region, North Eastern and Southern Region in Mumbai, Arunachal, Chennai, New Delhi, and Gauhati.

2. REWARD Programe: REWARD (Rejuvenating Watersheds for Agricultural Resilience through Innovative Development) Program is a **World Bank assisted Watershed development program which is being implemented from 2021 to 2026.**The Development Objectives of REWARD program is to "Strengthen capacities of National and State institutions to adopt improved watershed management for increasing farmers resilience and support value chains in selected watersheds of participating States". **The program is being implemented to introduce modern watershed practices in the Department of Land Resources in the Ministry of Rural Development and in the States of**

Karnataka and Odisha. At the central level, the scope of the REWARD program covers management, monitoring, communication and knowledge sharing functions by DoLR.

3. Solar Decathlon India: A total of 12 teams won the Solar Decathlon India (SDI) Design Challenge for Net-Zero Future Proof Building in the different categories at the 3rd edition of the challenge conducted at Infosys' campus in Mysuru. **The Solar Decathlon India is conducted every year by the Indian Institute for Human Settlements (IIHS) and the Alliance for an Energy-Efficient Economy (AEEE).** It is **under the aegis of the Indo-US Science and Technology Forum (IUSSTF),** an autonomous bilateral organisation jointly funded by both the Governments. The Council of Architecture (CoA) has signed a Memorandum of Understanding as a knowledge partner with AEEE, who co-organises SDI, to expand outreach and the impact of Solar Decathlon India aimed at building the next generation of leaders to combat climate change in India.

4. Sagar Parikrama Yatra: Union Minister for Fisheries, Animal Husbandry and Dairying launched VI Phase of Sagar Parikarma Yatra in Anadaman**. The aim is to resolve the issues of the fishers, other stakeholders and facilitate their economic upliftment through various fisheries schemes and programs being implemented by the Government of India such as Pradhan Mantri Matsya Sampada Yojana (PMMSY) and Kisan Credit Card (KCC).** Sagar Parikrama is a program reflecting the far-reaching policy strategy of the government leading to the direct interaction with fishers and fish farmers to understand the issues of coastal areas and problems related to fishermen. **Phases I, II & III, IV have brought massive changes in the development strategy for fishermen.**

27TH MAY

1. National review conference of Department of Social Justice, Empowerment: Two-day national review conference organised by the Department of Social Justice and Empowerment conducted in New Delhi recently. The Ministry of Social Justice and Empowerment said, the focus of this conference is to discuss the issue pertaining to the welfare schemes being implemented by the department for the marginalized section of the society **including Scheduled Castes, Other Backward Classes, Senior Citizens and others.** The National Review Conference will have deliberation on an overview of the schemes, highlighting best practice and innovations from States and Union Territories to establish better synergy between the States and Centre.

2. G20 Anti-Corruption Working Group Meeting: The three day Anti-Corruption Working Group meeting under the G20 India Presidency concluded at the **Tehri, Uttarakhand**. Its primary goal is to prepare "comprehensive recommendations for consideration by leaders on how the G20 could continue to make practical and valuable contributions to international efforts to combat corruption". **The ACWG has led the G20 anti-corruption efforts coordinating the collective and national actions taken by its members**. The ACWG actively works with the **World Bank Group, the OECD, the UNODC, the IMF, the FATF, as well as with the Business 20 (B20) and the Civil Society 20 (C20).**

3. Sengol Sceptre: The Sengol sceptre, measuring an impressive five feet in length, is a remarkable creation made from silver and gold**. It carries a rich history as it was originally handed over to Pandit Jawaharlal Nehru by Lord Mountbatten on August 14, 1947, symbolizing the momentous transfer of power during India's Independence**. Subsequently, the sceptre was put on display at The Allahabad Museum, allowing visitors to appreciate its historical significance. **The golden scepter has its origins in the Chola Empire,** where it was used as a symbol of power transfer from one king to another. It had a carving of the Nandi atop it, which is said to be a symbol of justice.

4. Vinayak Damodar Savarkar: Born on this day in 1883 near Nasik in Maharashtra, he was popularly called Veer Savarkar .Veer Savarkar was a freedom fighter. **He called 1857 revolt as the first war of independence**. He founded the following Organizations**: Abhinav Bharat Society and Free India Society.** He was also a member of India House. He was not the founder of Hindu Mahasabha, but he did served as its president. He opposed the Quit India struggle in 1942, calling it a "Quit India but keep your army" movement. **Savarkar endorsed the ideal of India as a Hindu Rashtra and is credited with developing the Hindu nationalist political ideology Hindutva.**

Publications: He wrote the book"Joseph Mazzini-Biography and Politics".

He published "The Indian War of Independence" about the Indian rebellion of 1857. The airport at Port Blair, Andaman and Nicobar's capital has been named Veer Savarkar International Airport.

29ᵀᴴ MAY

1. Cambodia: King of Cambodia, Norodom Sihamoni, will arrive in New Delhi. The visit marks the culmination of the celebrations of the 70th anniversary of diplomatic relations between India and Cambodia. This visit by the King of Cambodia is taking place after almost six decades, with the last being that of the current King's father in 1963. Cambodia, country on the Indochinese mainland of Southeast Asia. Its capital is Phnom Penh. It is bordered to the west and northwest by Thailand, to the northeast by Laos, to the east and southeast by Vietnam and to the southwest by the Gulf of Thailand.

The two dominant hydrological features of Cambodia are the Mekong River and the Tonle Sap (Great Lake). The Elephant Mountains and Cardamom Mountain of the southwest and western regions; the Dangrek Mountains of the North adjoining of the Korat Plateau of Thailand and Rattanakiri Plateau and Chhlong highlands on the east merging with the Central Highlands of Viet Nam. Conservation and restoration of the ancient temples of Angkor Wat, Ta Prohm and Preah Vihar are being carried out under India's funding.

2. Rice Fortification: India's pilot studies on rice fortification showed that nutritional anaemia could be reduced, with a significant drop in the prevalence of anaemia among schoolchildren, according to a United Nations report. **Fortification is the process of adding Fortified Rice Kernels (FRK), containing FSSAI prescribed micronutrients (Iron, Folic Acid, Vitamin B12) to normal Rice in the ratio of 1:100** (Mixing 1 Kg of FRK with 100 Kg custom milled rice). Fortified rice is nearly identical to traditional rice in aroma, taste, and texture. **This process is done in the rice mills at the time of milling of rice.** Fortification of rice is found to be a **cost-effective and complementary strategy to increase vitamin and mineral content in diets** with low turnaround time (TAT) and a step towards nutritional security.

3. One District One Product (ODOP) Initiative: It was **launched by the Ministry of Food Processing Industries in 2018.**This initiative is carried out with the 'Districts as Exports Hub' initiative by the Directorate General of Foreign Trade (DGFT), Department of Commerce.

Process: Under the ODOP initiative, **all products have been selected by States/UTs by taking into consideration the existing ecosystem on the ground, products identified under Districts as Export Hubs (DEH), and GI-tagged products**. The finalized list is communicated to the Department for Promotion of Industry and Internal Trade (DPIIT) by the relevant Department of States/UTs. All activities including exhibitions, capacity building, etc. are undertaken at the State/UT and district level, in consultation and coordination with the States/UTs.

4. NATO Plus: A US Congressional Committee recently recommended strengthening **Nato Plus by including India in the five-member grouping**. It is a grouping of

the North Atlantic Treaty Organization (NATO) and five countries, including Australia, New Zealand, Japan, Israel, and South Korea. **The group works toward boosting global defence cooperation.**

Advantages for India: India would **gain access to seamless intelligence sharing between these countries**. India would get access to the latest military technology without much of a time lag.

It would further strengthen India's defence partnership with the United States.

30TH MAY

1. Sakhalin-1 Project: The Sakhalin-1 oil and gas development project is located in the Okhotsk Sea, off the north-eastern coast of Sakhalin Island in the Russian Far East. **It comprises three offshore fields namely Chayvo, Odoptu, and Arkutun-Dagi.** It is operated by Exxon Neftegas (ENL), a subsidiary of Exxon Mobil which holds a 30% participating interest. **The other partners of the project are the Japanese consortium Sakhalin Oil and Gas Development Company** (SODECO, 30%), India's state-owned ONGC Videsh (20%), and Russian oil company Rosneft (20%). The Sakhalin 1 project is estimated to hold approximately 2.3 billion barrels of oil and 17.1 trillion cubic feet (Tcf) in recoverable reserves. **South Korea has recently come up with a special proposal to provide its advanced KSS-III Batch-II submarine to India.**

2. KSS-III Batch-II Submarine: The **KSS-III, the largest submarine to ever be built by South Korea, is being developed in two phases, Batch-I and Batch-II.** It is a series of diesel-electric attack submarines. **The Batch-II series will be equipped with lithium-ion batteries**, which will reportedly make it capable of cruising at higher speeds with a greater period of underwater endurance, life expectancy, and durability. **Additionally, the submarines will be equipped with Air Independent Propulsion (AIP) technology** that will allow them to operate without access to atmospheric oxygen. It will also be capable of carrying a crew of 50

members. It can fire missiles such as Hyunmoo-4-4 submarine-launched ballistic missiles (SLBM). The navigation aids on board the submarine include an **inertial navigation system (INS) and global positioning system (GPS).**

3. Goa Statehood Day: As India gained independence on 15th August, 1947, it requested the Portuguese to cede their territories. However, Portuguese refused. **In 1961, Indian Government launched Operation Vijay and annexed Daman and Diu islands and Goa with the Indian mainland**. Goa Liberation Day is observed on 19th December every year in India. It can be noted that the **Portuguese were the first Europeans to come to India (1498) and were also the last to leave this land (1961).** On 30th May, 1987, the territory was split and Goa was formed. Daman and Diu remained Union Territory.

About: Goa is located on the south-western coast of India within the region known as the Konkan, and geographically separated from the Deccan highlands by the Western Ghats.

Capital: Panji.

Official Language: Konkani. B

orders: It is surrounded by Maharashtra to the north and Karnataka to the east and south, with the Arabian Sea forming its western coast.

Geography: The highest point of Goa is Sonsogor**. Goa's seven major rivers are the Zuari, Mandovi, Terekhol, Chapora, Galgibag, Kumbarjua canal, Talpona and the Sal.** Most of Goa's soil cover is made up of laterites.

Wildlife Sanctuaries and National Parks: Dr. Salim Ali Bird Sanctuary, Mhadei Wildlife Sanctuary, Netravali Wildlife Sanctuary, Cotigao Wildlife Sanctuary, Bhagwan Mahaveer Sanctuary, Mollem National Park.

31ST MAY

1. Universal Postal Union: The UPU was established by the Treaty of Bern of 1874. **It is a specialized agency of the UN that coordinates postal policies among**

member nations, in addition to the worldwide postal system. It is the second oldest international organization worldwide.

Headquarters: Bern, Switzerland. **The UPU contains four bodies consisting of: The Congress, The Council of Administration (CA), The Postal Operations Council (POC) and The International Bureau (IB).** Any member country of the UN may become a member of the UPU. Any non-member country of the United Nations may become a UPU member provided that its request is approved by at least two-thirds of the member countries of the UPU. **With its 192 member countries, the organization fulfils an advisory, mediating, and liaison role, and provides technical assistance where needed**. The union sets the rules for international mail exchanges and makes recommendations to stimulate growth in mail, parcel, and financial services volumes and improve the quality of service for customers. **India joined the UPU in 1876.**

2. CITIIS 2.0: The CITIIS program was **launched on July 9, 2018**. The Indian government has recently approved the second phase of an ambitious project aimed at promoting integrated waste management and climate-oriented reform actions**. Known as CITIIS (City Investments to Innovate, Integrate and Sustain), this project aims to transform urban areas in India into sustainable and resilient cities**. CITIIS 2.0 has set its sights on 18 cities across India for implementation. This phase of the project builds upon the success and experiences gained during the first phase, which covered 12 cities including Chennai, Amaravati, and Bhubaneshwar**. It is launched with equal contributions from partnering organizations such as the French Development Agency (AFD) and Kreditanstalt für Wiederaufbau (KfW).** Additionally, the European Union has provided a technical assistance grant of Rs 106 crore to support the project's objectives.

3. Multiple Sclerosis Day: World Multiple Sclerosis (MS) Day is officially marked on 30th May. It brings the global MS community together and to raise awareness and campaigns with everyone affected by MS. **The theme for World MS Day 2020-2023 is 'connections'.** The MS Connections campaign is all about building community connection, self-connection and connections to quality care. **The campaign tagline is 'I Connect, We Connect' and the campaign hashtag is MS Connections. Ministry of Social Justice and Empowerment is the nodal body** to look after all the development agenda of Persons with Disabilities of the country**. The theme colour of MS Day is Orange**. On 30th May, 2023, the organizations lighten their buildings in orange colour.

4. Multiple Sclerosis: MS is a **chronic autoimmune disease that affects the central nervous system (CNS)**. In MS, the immune system attacks and damages the myelin sheath, a protective covering that surrounds the nerve fibers in the brain and spinal cord, causing a range of symptoms .

Symptoms: Muscle weakness and Numbness, Bladder Problems: A person may have difficulty emptying their bladder or need to urinate frequently or suddenly. Bowel problems, Fatigue, Dizziness, and damaged nerve fibers in the spinal cord. Since symptoms are common, people don't often recognise the disease early and often takes many years for someone to be diagnosed, as it is impossible to determine a specific cause or trigger.

Causes: The exact cause of the disease is unknown, but it could be a combination of: Genetic factors, Smoking and Stress, Vitamin D and B12 deficiency.

PLACES IN NEWS

1. Qatar (Capital Doha)

- UN holds crucial Afghanistan talks in Qatar, without the Taliban.
- **Political Boundaries**
- o Qatar is located on the west coast of the **Persian Gulf.**
- o It shares a border with **Saudi Arabia and UAE.**
- o Island country of Bahrain lies northwest of Qatar.
- **Geographical features:**
- o Most of Qatar's area is flat, low-lying desert. Sanddunes and salt flats, or sabkhahs, are the chief topographical features.
- o **Highest Point:** Abū al-Bawl
- o There are **no permanent bodies of freshwater**

2. Maldives (Capital : Male)

- Indian Defence Minister laid the foundation stone for the **Maldives National Defence Forces (MNDF) Coast Guard 'Ekatha Harbour'.**
- **Political Boundaries**
- o Maldives is an **island nation** situated in north central Indian Ocean.
- o 8 Degree channel separates Maldives from Minicoy Island (India).
- **Geographical Features**
- o The island is of volcanic origin and consists of a chain of about 1,200 small coral islands and sandbanks, grouped in clusters, or atolls.
- o **Highest peak :** Mount Villingili on Addu Atoll
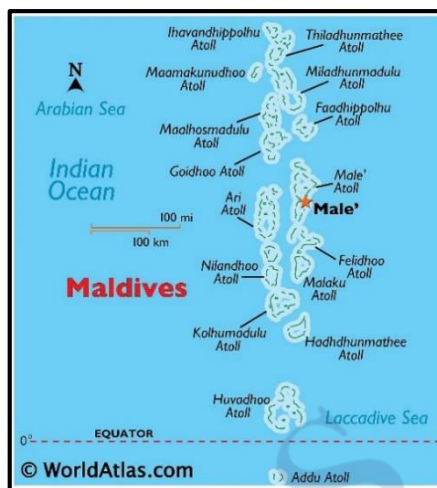
3. Rwanda (Capital- Kigali)

- Floods, landslips in Rwanda killed several people.
- **Political Boundaries**
- o Rwanda is a **landlocked country** lying south of the Equator in east-central Africa. **It is often referred as 'land of a thousand hills'.**
- o Shares border with Uganda, Tanzania, Burundi and Democratic Republic of the Congo.
- **Geographical features**
- o Its dominant feature is a chain of mountains that runs on a north-south axis and forms part of the Congo-Nile divide.
- o **Major Rivers:** Akagera, Akanyaru, Base, Rubyiro.
- o **Major Lakes:** Kivu, Ruhondo, and Mugesera
- o **Highest peak**: Mount Karisimbi

4. Sri Lanka (Capital: Colombo (Executive and Judicial) and Sri Jayawardenepura Kotte (Legislative)

- China's state owned firm China Merchants Group is building a large logistics complex at Sri Lanka's Colombo Port.

- **Colombo port is the largest and busiest port in Sri Lanka.**
- **Political Boundaries**
- Island country lying in Indian Ocean and separated from peninsular India by **Palk Strait**.
- Maritime border with India in northwest and Maldives in southwest.
- **Geographical features**
- **Major Rivers:** Mahaweli River.
- **Highest peaks:** Pidurutalagala, followed by kirigalpotta and Adams Peak Sri Pada.
- **Important Ports:** Colombo, Trincomalee, Hambantota.

5. Ethiopia (Capital: Addis Ababa)

- Ethiopia will issue up to five banking licenses to foreign investors in next five years.
- **Political Boundaries**
- Landlocked country in Horn of Africa.
- **Largest and most populated country in Horn of Africa.**
- Bounded by **Eritrea** (north), **Djibouti** (northeast), **Somalia** (east), **Kenya** (south), **South Sudan and Sudan** (west).
- **Geographical features**
- **Major River:** Blue Nile and Tekeze river.
- **Largest inland lake:** Lake Tana.
- **Highest point:** Mount Ras Dejen (or Dashen)
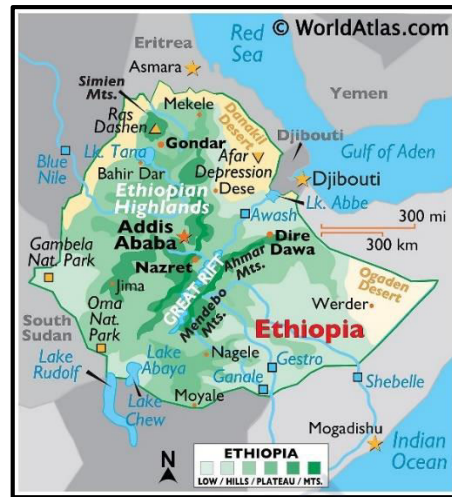
6. Democratic Republic of Congo (Capital : Kinshasa)

- More than 170 people have died due to heavy rains and flooding.
- **Political Boundaries**
- It is the **second largest country of Africa after Algeria**.
- Bordered by Central African Republic, South Sudan, Uganda, Rwanda, Burundi, Tanzania, Zambia, Angola.
- **Geographical Features**
- Most of the country is composed of central Congo basin, a vast rolling plain.
- North-south Western Rift Valley, the western arm of the East African Rift System, forms the country's eastern border.
- **Highest Mountain:** Mt.Stanley of Ruwenzori Range.
- **Important Rivers:** Congo (crosses the equator twice), Mpozo river.
- **Important Lakes:** Lakes Albert, Edward, Kivu, Tanganyika, and Mweru

7. Cambodia (Capital: Phnom Penh)

- INS Delhi and INS Satpura made a port-call at Sihanoukville in Cambodia.
- **Political Boundaries**
- o Country on Indochinese mainland of Southeast Asia.
- o Bordered by **Thailand** (west and northwest), **Laos** (northeast), **Vietnam** (east and southeast), and **Gulf of Thailand** (southwest).
- **Geographical features**
- o **Major River:** Mekong.
- o **Major Lake**: Tonle Sap.
- o **Major Mountain Ranges**: Dangrek, Kravanh, Damrei.
- o **Highest Peak:** Phnom Aural.
- o **Famous World Heritage Site**: Angkor Wat, largest religious monument in world.

8. Myanmar (Capital: Naypyidaw)

- Cyclone Mocha, classified as a Super Cyclone, made landfall along Myanmar coast.
- Super cyclone refers to tropical storm, where wind speeds ≥ 222 kmph.
- **Political Boundaries**
- o Bordered by **Bangladesh, India, China, Laos, Thailand, and Andaman Sea and Bay of Bengal** (south and southwest).
- **Geographical Features**
- o **Highest Peak:** Mount Hkakabo
- o **Major Rivers:** Irrawaddy, Salween, Sittang
- o **Major Mountains**: Rakhine, Bago
- o **Major Lakes**: Indawgyi, Inle

9. Papua New Guinea (Capital: Port Moresby)

- PM attended Forum for **India Pacific Islands Cooperation (FIPIC) summit** in Papua New Guinea.
- **Political Boundaries:**
- o It is an **island country in south-western Pacific Ocean**, encompassing eastern half of New Guinea (world's second largest island); Bismarck Archipelago; Bougainville and Buka (part of Solomon Islands chain) and other small islands.
- o It stretches from just south of Equator to Torres Strait.
- **Geographical Features:**
- o It is located in a region defined as Melanesia.
- o It is **situated along a fault line,** making earthquakes and the resultant tsunamis relatively common occurrences.
- o **Main rivers**: Sepik, Ramu, Fly, and Purari
- o **Highest peak:** Mount Wilhelm

10. Somalia (Capital: Mogadishu)

- Around 200,000 people have been displaced due to **flash flooding in Shabelle River.**
- Somalia to **introduce direct universal suffrage in 2024**

- **Political Boundaries**
- o **Location**: Easternmost country on mainland Africa situated on peninsula known as Horn of Africa.
- o **Borders**: Bordered by Ethiopia, Djibouti, Gulf of Aden, Kenya, and Indian Ocean.
- o Also Shares maritime borders with Yemen.
- o **Equator passes through Somalia.**
- **Geographical features**
- o **Terrain**: Mostly flat savanna and semidesert, to undulating plateau rising to hills in north.
- o **Major Rivers:** Shebelle and Jubba.
- o **Highest Point:** Mount Shimbiris, also known as Mount Surud Cad

11. Lebanon (Capital: Beirut)

- Lebanon is likely to be placed on a **"grey list" of countries** under special scrutiny over unsatisfactory practices to **prevent money laundering and terrorism financing**.
- **Political Boundaries**
- o Located on eastern shore of Mediterranean Sea.
- o Bounded by Syria (north and east), Israel (south), and Mediterranean Sea (west).
- o Shares maritime borders with Cyprus
- **Geographical features**
- o **Terrain**: Narrow coastal plain; El Beqaa (Bekaa Valley) separates Lebanon and Anti-Lebanon Mountains.
- o **Major river**: Nahr el Litani.
- o **Highest point**: Qurnat as Sawda
- o **Lowest point**: Mediterranean Sea.

12. Turkey (Capital: Ankara)

- President of Turkey was re-elected to the post of President.
- **Political Boundaries**
- o It lies partly in Asia and partly in Europe.
- o Bounded by Black Sea (north), Georgia and Armenia (northeast), Azerbaijan and Iran (east), Iraq and Syria (southeast), Mediterranean Sea and Aegean Sea (southwest and west), and by Greece and Bulgaria (northwest).
- o Shares maritime borders with Cyprus, Egypt, Romania, Russia, and Ukraine.
- o **Largest city and seaport is Istanbul.**
- **Geographical features**
- o **Major River**: Euphrates, Tigris and Kizilirmak.
- o **Highest Point**: Mount Ararat.
- o **Important Straits**: Bosphorus strait, Dardanallaise strait.
- o **Turkey is a part of Anatolia Plateaus**

o **Major River**: Ibar River
o **Highest point:** Gjeravica

13. Kosovo (Capital: Pristina)

- NATO peacekeepers were injured after they were attacked in northern Kosovo.
- Kosovo is **a landlocked country in Balkans region of Europe**. It is bordered by Albania, North Macedonia, Montenegro and Serbia.
- K**osovo unilaterally declared independence from Serbia in 2008,** after years of strained relations between its Serb and mainly Albanian inhabitants.
- **Geographical features:**
o Largely mountainous, characterized by sharp peaks and narrow valleys.
o **Climate**: continental, with cold, relatively dry winters and warm, humid summers.

EDUFACTS

5th May

1. 16 out of 30 national sports federations don't have an **Internal Complaints Committee (ICC)** as per **POSH Act, 2013.**
2. **Khelo India 2020** saw a >160% increase in women's participation compared to 2018.
3. While cities constitute about 3% of the land in the country, they generate **70% of the GDP**.
4. India's share of global exports of goods is just about 2%.

6th May

1. India has planned to hold **230 meetings in 60 cities** in its G20 Presidency Year.
2. IIT Madras launches survey, website to address students' mental health concerns.
3. The first phase of **Kaladan Multi-Modal Project** has been operationalized with the launch of cargo ships from **Kolkata to Sittwe Port, Myanmar**.

9th May

1. India should ban the use of diesel-powered four-wheeler vehicles by 2027 and **switch to electric and gas-fuelled vehicles** in cities with more than a million people and polluted towns in order to cut emissions, an oil ministry panel is recommending.
2. Diesel accounts for about **two-fifth of refined fuel consumption in India** with 80% of that being used in the transport sector

10th May

1. Almost half of all pre-term births in 2020 happened in 5 countries – **India, Pakistan, Nigeria, China and Ethiopia.**
2. India's youth unemployment rate (15-29 years) is at **12.4%** according to PLFS (periodic labour force survey) 2021-22.
3. India became the **3rd largest automobile market** after China and USA in 2022, with sales of 4.25 million vehicles.

11th May

1. UN study says **India among 10 countries** that make up **60 % of global maternal deaths**, still births, new born deaths.
2. The **35th edition of India-Thailand Coordinated Patrol** (Indo-Thai CORPAT) between the Indian Navy and the Royal Thai Navy was conducted recently.
3. Cisco, the US-based tech conglomerate, has said it will set up a manufacturing plant in India to drive more than $1 billion in combined domestic production and exports in the coming years.

12th May

1. USA invited India's Prime Minister for a state visit after 14 years.
2. Ministry of Jal Shakti has announced that half of the nation's villages have attained **ODF Plus status under the Swachh Bharat Mission Grameen (SBM-G) Phase-II**.
3. Around 39% of Indian families in a survey claimed to have experienced financial fraud in the last 3 years.

14th May

1. Italy likely to withdraw from China's controversial Belt and Road Initiative.
2. Government Health Expenditure's share in country's total GDP increases from 1.13% (2014-15) to 1.35% (2019-20).
3. The Railways plans to provide **Agniveers** with a combined reservation of **15% in non-gazetted positions** for direct recruitment in various departments.

15th May

1. Drugs worth Rs 15,000 crore seized by NCB, Navy off Kerala Coast is the largest ever haul in India, and was part of **Operation Samudragupt of NCB**.
2. India can cut its energy imports bill by $2 billion if the nation harnesses 10% of the coal bed methane reserves of 2,600 billion cubic metres.
3. The US sold weapons in 2022 to **57%** of the **world's authoritarian regimes.**

16th May

1. India's Defence Ministry approves **4th positive indigenisation list of 928 items** to boost local manufacturing.
2. **Bhopal** has become the **first city** in India to **adopt voluntary local reviews (VLR)** to demonstrate its commitment and capacity to achieving the SDGs.

3. The **4th edition** of the India-Indonesia Bilateral exercise, **Samudra Shakti-23** is being held in **Indonesia**.

17th May

1. Training a large AI model such as **GPT-3** can directly consume up to **700,000 liters of clean freshwater**, which is enough to produce 370 BMW cars or 320 Tesla electric vehicles.
2. India's arms imports fell 11% between 2013-17 and 2018-22, but the country is still **the world's top importer of military hardware** in 2022.
3. With a recorded wind speed of 277 kmph, **Mocha became the strongest cyclone** for all seasons in both **Arabian Sea and Bay of Bengal**, since 1982, in the North Indian Ocean, tying with Cyclone Fani in terms of speed and intensity.

18th May

1. According to NCRB, occupancy rate of jails is **118.5%** of the prison capacity.
2. A total of **146 cases** of death in **police custody** were reported during 2017-2018.
3. 4,500 industrial facilities in the permafrost regions have most likely produced between 13,000 and 20,000 contaminated sites.

19th May

1. India is the **third-largest fish producer** and the **second-largest aquaculture producer** globally.
2. Indian fisheries has witnessed a paradigm shift from **marine dominated fisheries to inland fisheries,** with the latter emerging as a major contributor of fish production from 36% in the mid-1980 to 70% in the recent past.
3. India recorded thousand numbers of internal displacement and 631,000 internally displaced people due to conflict and violence and 2.5 million due to disaster in 2022.

20th May

1. According to NFHS-5, 3% of **women aged 15-49** have had a **hysterectomy**.
2. Currently, 85% of rural and 50% of urban population is dependent on groundwater for sustenance, making **India the largest groundwater user globally**.
3. EU is India's **2nd-largest trading partner** (after the US) and **India's 2nd-largest export market**. India is the EU's 10th largest trading partner.

22nd May

1. India became the **6th country** in the world to **possess nuclear weapons capability** after the US, Soviet Union, Britain, France and China.
2. Indians spent 12.51 billion USD on overseas travel between April-February of fiscal 2022-23, a rise of 104% compared to the same period of the last year.
3. India's Pharmaceutical Industry is currently valued at USD 50 Bn being a **major exporter of Pharmaceuticals**, with over **200+ countries** served by **Indian pharma exports**.

23rd May

1. In the last five years, the highest number of **custodial deaths (80)** has been reported in **Gujarat**, followed by **Maharashtra (76).**
2. Children suffering from **SAM (severe acute malnutrition)** are nine times more likely to die in case of diseases due to their weakened immune system.
3. According to **NFHS-5**, in children below the age of five years, **35.5% were stunted**, 19.3% showed wasting, and 32.1% were underweight.

24th May

1. If all countries only fulfil their existing commitments, emissions in **2030** would be about **11% higher than 2010 levels.**
2. Although any two humans share more than 99% of their DNA, there is still about a 0.4% (~12.8 million nucleotides) difference between any two individuals.
3. **Meta**, the parent company of Facebook and Instagram, has been hit with a record-breaking fine of 1.3 billion USD by the **European Union (EU) for violating its privacy law.**

25th May

1. The Son River is the **2nd-largest southern (right bank) tributary of the Ganges** after the Yamuna River. It originates near **Amarkantak Hill** in the Gaurela-Pendra-Marwahi district of Chhattisgarh and finally merges with the **Ganges River near Patna in Bihar**.
2. India consumes 23.5-24 million tonnes (mt) of cooking oil annually, out of which 13.5-14 mt is imported and the balance 9.5-10 mt produced from domestically cultivated seed. **Sunflower is the fourth largest consumed oil (**2-2.5 mt), behind mustard (3-3.5 mt), soyabean (4.5-5 mt) and palm (8-8.5 mt).
3. WMO revealed that between 1970 and 2021, **India** experienced **573 climate-related**

disasters, resulting in the 2nd-highest number of deaths in Asia, after Bangladesh.

26th May

1. With only 2.4% of the earth's land area, **India** accounts **for 7-8% of the world's recorded species**. **4** of the **world's 36 biodiversity hotspots** are located in **India:** The Himalayas, Western Ghats, Indo-Burma area, and Sundaland.
2. **Tribal communities** in India constitute for approximately **8.9% of the total population**. Out of the total Schedule Tribe population, approximately 2.6 million (2.5%) belong to "Particularly Vulnerable Tribal Groups" (PVTGs) known as the "Primitive Tribes".
3. India's solar power capacity has reached 64,380.68 MW as of February 2023 and the country's wind power capacity has also crossed the 42,015.38 MW mark according to data from the Ministry of New and Renewable Energy (MNRE).

27th May

1. **50% of forest fire occurrences** in India were reported from nine national parks and wildlife sanctuaries.
2. Around 23 lakh cases, which are over a decade old, are pending in various subordinate courts of the country: **NJDG**
3. **23.3% women** surveyed got married before attaining the legal age of 18 : **NFHS 5**

30th May

1. **Insurance penetration** in India increased from 3.76% in 2019-20 to 4.20%in 2020-21, registering a growth of 11.70% : **IRDA**I.
2. India had a stunting rate of 31.7 % in 2022, down from 41.6 % in 2012, a decade ago.
3. India's most powerful supercomputers — **Pratyush and Mihir** — with a combined capacity of 6.8 petaflops are housed at the **Indian Institute of Tropical Meteorology (IITM).**

Practice MCQs on Current Affairs- May 2023

1. BlueSky was in news recently, it is related to:
(a) A military upgrade to come out of NATO's security doctrine.
(b) A fund for Pandemic Prevention, Preparedness and Response.
(c) A microblogging platform built on the Authenticated Transport Protocol.
(d) A cyber security initiative of OECD

Ans:- Option C
European Sky Shield Initiative (ESSI) is the **latest military upgrade to come out of NATO's security doctrine.**
Financial Intermediary Fund: A fund for **Pandemic Prevention, Preparedness and Response (PPR).** It has received financial commitments from various countries including India. **iCET was conceived as an initiative which will be spearheaded by the National Security Councils** of the two countries to expand partnership in critical and emerging technologies. **Bluesky is a microblogging platform and social website built on the AT Protocol (Authenticated Transport Protocol).**

2. Consider the following statements regarding G20
1. It was founded after the Global financial crisis of 2008.
2. Alliance for Global Food Security is an initiative of G20 to fight the hunger crisis.

Which of the following statement is/are correct:
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D
G20 **was founded in 1999 after the Asian Financial Crisis** as a forum for Finance Ministers and Central Bank Governors to discuss global economic and financial issues. **G7 fights hunger crisis with "Alliance for Global Food Security**. Research & Innovation Initiative Gathering (RIIG): Aims to enhance, intensify and strengthen research & innovation collaboration among G20 member countries.**

3. With reference to the Indian agricultural trade, which of the following statement(s) is/are correct?
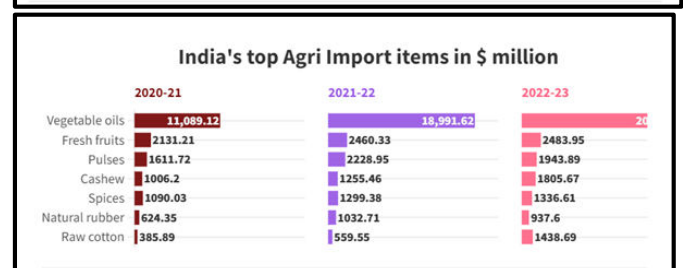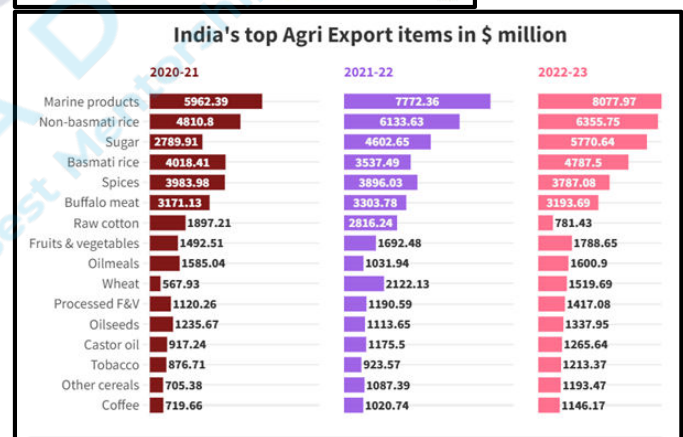1. Indian agricultural exports have risen continuously for the past five years.

2. Non-basmati rice is the top exported agricultural item of the country
3. Vegetable oils are the largest item that are imported by India.

Select the correct answer using code given below:
(a) 2 only
(b) 3 only
(c) 1 and 3 only
(d) 2 and 3 only

Ans:- Option B
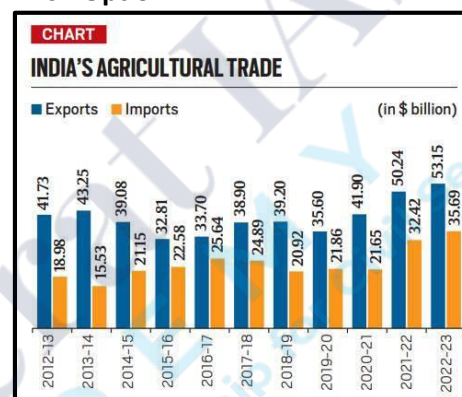
4. Consider the following statements with reference to the public health emergency of international concern (PHEIC)":
1. Nations should promptly respond to a PHEIC but it is not legally binding.

2. Declaration of PHEIC may lead to increased funding for the research and development of treatments.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option B

A public health emergency of international concern (PHEIC) is a **formal declaration by the World Health Organisation as defined in the International Health Regulations, 2005**, "an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response". **This definition implies a situation that is:**

• serious, sudden, unusual or unexpected;
• carries implications for public health beyond the affected State's national border; and
• may require immediate international action.

The 2005 International Health Regulations (IHR) are a legally binding instrument that governs the international management of PHEICs. **196 countries across the globe, including all the Member States of the WHO have a legal duty to respond promptly to a PHEIC.** The declaration of a PHEIC may also lead **to increased funding and resources for the research and development of treatments and vaccines.**

5. **Which of the following technologies are used for detecting improvised explosive devices (IEDs)?**
1. X-ray machines
2. Chemical sensors
3. Ground-penetrating radar

Select the correct answer using the code given below:
(a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

Ans:- Option D

Chemical sensors are widely used for **detecting IEDs**, as they can detect the presence of explosive materials or chemicals used in the construction of the device. **X-ray machines and ground-penetrating radar can also be used to detect IEDs**, but they are less common due to their **high cost and limited availability**.

6. **With reference to the Municipalities, consider the following statements:**

1. Constitution authorises legislature of a State for making provision for reservation in favour of Scheduled castes and Scheduled tribes.
2. Duration of municipality varies across the country as constitution has authorised state legislatures to decide upon the duration and term of the municipalities.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D

• **Statement 1 is incorrect - Article 243 T (6)** of the constitution authorizes Legislature of a State for making any provision for **reservation of seats in any Municipality or offices of Chairpersons in the Municipalities in favour of backward class of citizens**. While Article **243 T (1-6)** clearly provides provisions for **reservations for SCs and STs.**
• **Statement 2 is incorrect - Art 243 U -** Every Municipality, unless sooner dissolved under any law for the time being in force, shall continue for five years from the date appointed.

7. **With reference to the Indian history, consider the following:**
1. The Sharana movement which started Veerashaivism was based on the teachings of Alvars.
2. Siddhanta Shikhamani is a Sanskrit text that elaborates on the history of Veerashavism.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option B

Statement 1 is not correct: The Sharana-movement, which started in the 11th century, is **regarded as the start of Veerashaivism.** It started in a time when Kalamukha Shaivism, which was supported by the ruling classes, was dominant, and in control of the monasteries. **The Sharana-movement was inspired by the Nayanars, and emphasised personal religious experience over text-based dogmatism.**

Nayanars: The Nayanars were a **group of 63 Tamil Hindu saints** living during the 6th to 8th centuries CE who were **devoted to the Hindu god Shiva.**

Alvars: The Alvars were the **poet-saints of South India** who espoused **bhakti (devotion) to the Hindu preserver deity Vishnu.**

Statement 2 is correct: A central text in this tradition is **Siddhanta Shikhamani, which was written in Sanskrit, and gives an elaboration of "the primitive traits of Veerashaivism in the Vedas and the Upanishads".** While Veerashaivas regard the Siddhanta Shikhamani to predate Basava, it may actually have been composed in the 13th or 14th century, post-dating Basava.

8. Consider the following pairs:

S.NO.	Sites related to Buddhism	Significant for
1.	Sankasya	Compilation of Abhidhamma Pitaka
2.	Kundalavana	Compilation of Sutta-Pitaka and Vinaya-Pitaka
3.	Kapilavastu	Division of Buddhists into Hinayana and Mahayana

How many pairs given above is/are correctly matched?
(a) Only one pair
(b) Only two pairs
(c) Only three pairs
(d) None of the pairs

Ans:- Option D
1. Sankasya: Its current location is the Farrukhabad district of Uttar Pradesh. It has some **faiths of Buddhism that Buddha after his death descended from heaven here. After the Gautama Buddha's Mahaparinirvana (passing away) king Ashoka developed this place and installed one of his famous Pillars of Ashoka in the city,** from which the elephant capital survives. He also built a stupa and a temple commemorating the visit of the Buddha.
2. Kundalavana, Kashmir: 4rth Buddhist council (98 AD) was held under the chairmanship of Vasumitra. The patron to the council was Kanishka of the Kushana dynasty. **Significant for: Compilation of Mahavibha-sha-shastra (Sanskrit comment on Tripitaka) and division of Buddhists into Hinayana and Mahayanas.**
3. Kapilavastu: Kapilavastu was an ancient city in the north of the Indian subcontinent which was the capital of the gaṇasangha of the Shakyas, around the 6th and

5th centuries BC. King Suddhodana and Maya are believed to have lived at Kapilavastu, **as did their son Prince Siddartha Gautama (Gautama Buddha) until he left the palace at the age of 29.**
Note:
- **Abhidharma Pitaka was compiled in the third Buddhist council**. The third Buddhist council held at Patliputra.
- **Vinaya pitaka and Sutta pitaka by Ananda and Upali** respectively took place in the **First buddhist council at Rajgriha.**

9. Consider the following statements with reference to the Central Drugs Standard Control Organisation (CDSCO):
1. CDSCO lays down the standards for drugs and controls the quality of imported drugs in the country.
2. CDSCO is responsible for the implementation of the national law for the recall of substandard drugs in the country.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option A
- Central Drugs Standard Control Organisation (CDSCO) is the **National Regulatory Authority** of India. It functions under the **Directorate General of Health Services, Ministry of Health & Family Welfare.**
- Under the Drugs and Cosmetics Act 1940, **CDSCO is responsible for the approval of Drugs, Conduct of Clinical Trials, laying down the standards for Drugs, and control of the quality of imported drugs in the country.**
- CDSCO along with state regulators, is jointly **responsible for the grant of licenses of certain specialized categories of critical Drug**s such as blood and blood products, Intravenous fluids, Vaccines etc.
- India has been mulling the creation of a mandatory recall law for substandard drugs that have failed to meet quality parameters since 1976, and **yet no law exists** that mandates such medicine be removed from the market till date.

10. Consider the following statements regarding Fiscal Stability and Development Council (FSDC):
1. Governor of the RBI is the ex officio chairman of the FSDC.

2. The Council meets once every six months.
3. The Council is responsible for coordinating India's international interface with the Financial Action Task Force (FATF).

Which of the statements given above are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 3 only
(d) 1, 2 and 3

Ans:- Option C
With a view to establishing a body to **institutionalise and strengthen the mechanism for maintaining financial stability,** financial sector development and inter-regulatory coordination, **the Government in consultation with the financial sector regulators has decided to set up the Financial Stability and Development Council (FSDC).**
Statement 1 is incorrect:
Composition: The Council shall have the following composition:
- The Union Finance Minister shall be the Chairperson.
  Its members shall be:
- Governor, Reserve Bank of India (RBI),
- Finance Secretary and/or Secretary, Department of Economic Affairs (DEA),
- Secretary, Department of Financial Services (DFS),
- Chief Economic Advisor, Ministry of Finance,
- Chairman, Securities and Exchange Board of India (SEBI)
- Chairman, Insurance Regulatory and Development Authority (IRDA)
- Chairman Pension Fund Regulatory and Development Authority (PFRDA)
- **Chairman, Forward Markets Commission (FMC) (Added by December, 2013 notification)**
- Joint Secretary (Capital Markets), DEA, will the Secretary of the Council (August 2013 notification changed it to Additional Secretary, Ministry of Finance, Department of Economic Affairs, will be the Secretary of the Council),
- The Chairperson may invite any person whose presence is deemed necessary for any of its meeting (s).

Statement 2 is incorrect: The Council would meet as and when deemed necessary by the Chairperson.
Statement 3 is correct:
Responsibility of the Council: The Council shall deal with issues relating to:
- Financial stability

- Financial sector development
- Inter-regulatory coordination
- Financial literacy
- Financial inclusion
- Macro prudential supervision of the economy including the functioning of large financial conglomerates.
- **Coordinating India's international interface with financial sector bodies like the Financial Action Task Force (FATE), Financial Stability Board (FSB) and any such body may be decided by the finance minister from time to time.**
- Any other matter relating to the financial sector stability and development referred to by a member Chairperson and considered prudent by the Council Chairperson.

11. With reference to Lithium, consider the following statements:
1. Argentina has the largest reserves of lithium in the world.
2. Currently, India imports all of its lithium requirements for domestic consumption.
3. Lithium-ion batteries have a longer lifespan and high self-discharge rate.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) 1 and 3 only
(d) 2 and 3 only

Ans:- Option B
Properties of Lithium:
- Lithium is a soft, **silvery-white metal**. It has a **low density**, making it the **lightest metal** and the least dense solid element.
- It has a **high reactivity**, easily reacting with water and oxygen in the air. It is a **highly reactive metal**, and it can cause chemical burns and fire if not handled properly.
- **Lithium is commonly used in batteries due to its high electrochemical potential**.
- It has a **low melting point and boiling point.**
- Lithium is a **good conductor of heat and electricity.**
- It is relatively rare in the Earth's crust, but it can be found in certain types of rocks and mineral deposits.
- Lithium is used in the **production of glass, ceramics, lubricants, and pharmaceuticals**.
- Lithium has a range of potential medical uses, including as a treatment for bipolar disorder and depression.
- The **world's largest lithium reserves of 21 million tonnes** are currently in the country of **Bolivia**. After this, there are also large reserves in Argentina, Chile and America. Despite this, China, which has reserves of

5.1 million tonnes of lithium, continues to have a monopoly in the global market.

- **India currently imports all its lithium needs** and is almost entirely dependent on inflows of these imported cells for domestic consumption.
- Lithium-ion batteries are **widely used in portable electronic devices** such as smartphones, laptops, and cameras, as well as electric vehicles and grid storage systems. They are popular **because they have a high energy density, which means they can store a lot of energy in a relatively small size and weight.**

Compared to other types of rechargeable batteries, **lithium-ion batteries have a longer lifespan, can handle more charge/discharge cycles, and have a lower self-discharge rate.** They also do not suffer from the **"memory effect"** that some other types of batteries do, which means they do not need to be fully discharged before recharging.

12. With reference to the Citizenship Amendment Act, 2019, which of the following statements is/are correct?

1. It seeks to make illegal migrants who are Hindus, Sikhs, Buddhists, Jains, Parsis and Christians from Afghanistan, Bangladesh and Pakistan, eligible for citizenship.
2. It will not apply to the tribal areas of Assam, Meghalaya, and Tripura.

Select the correct answer using the code given below:
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option C
The Citizenship Act, 1955 regulates who may acquire Indian citizenship and on what grounds. A person may become an Indian citizen if they are born in India or have Indian parentage or have resided in the country for a period of time, etc. However, **illegal migrants are prohibited from acquiring Indian citizenship**. An illegal migrant is a foreigner who: (i) enters the country without valid travel documents, like a passport and visa, or (ii) enters with valid documents, but stays beyond the permitted time period.

Citizenship Amendment Act 2019:
- The **2019 Act** seeks to make **illegal migrants who are Hindus, Sikhs, Buddhists, Jains, Parsis and Christians from Afghanistan, Bangladesh and Pakistan, eligible for citizenship**.
- It **exempts certain areas in the North-East from this provision**.

- **It also makes amendments to provisions related to OCI cardholders**. A foreigner may register as an OCI under the 1955 Act if they are of Indian origin (e.g., former citizen of India or their descendants) or the spouse of a person of Indian origin. This will entitle them to benefits such as the right to travel to India, and to work and study in the country.
- It **exempts the tribal areas of Assam, Meghalaya, and Tripura** from its applicability.
- It also **exempts the areas regulated through the Inner Line Permit, which include Arunachal Pradesh, Mizoram and Nagaland.**

13. With reference to the 'Pradhan Mantri Suraksha Bima Yojana', consider the following statements:

1. Life Insurance Corporation is the nodal agency for the administration of the scheme.
2. Any individual aged between 18 years to 55 years are eligible to apply for the scheme.
3. It is an accidental insurance scheme mainly targeted at people from the unorganized sector.

Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 2 only
(c) 1 and 3 only
(d) 3 only

Ans:- Option D
Statement 1 is not correct: PMSBY is an **insurance scheme** that comes under Department of Financial Services, **Ministry of Finance**, offering life insurance cover for **death due to any reason**. It is a one-year cover, renewable from year to year. The **scheme is being offered by Public Sector General Insurance Companies or any other General Insurance Company** who are willing to offer the product on similar terms with necessary approvals and tie up with banks for this purpose.

Statement 2 is not correct: All individual (single or joint) account holders of participating banks / Post office, in the **age group of 18 to 70 years are entitled to join**. In case of multiple accounts held by an individual in one or different banks/ Post offices, the person is eligible to join the scheme through one bank / Post office account only.

Statement 3 is correct: The Pradhan Mantri Suraksha Bima Yojana (PMSBY) provide **accidental insurance worth Rs. 2 lakh at Rs. 12 per annum**. The schemes are **particularly for people in the unorganized sector**. However, it is also open to all SB account holders irrespective of their economic status.

14. Which of the following Fundamental right(s) is/are available only to the citizens and not to the foreigners?

1. Equality before law and equal protection of laws (Article 14)
2. Equality of opportunity in matters of public employment (Article 16)
3. Protection of language, script and culture of minorities (Article 29)
4. Protection in respect of conviction for offences (Article 20)

Select the correct answer from the code given below:
(a) 1, 2 and 3 only
(b) 2 and 3 only
(c) 2, 3 and 4 only
(d) 2 and 4 only

Ans:- Option B
Some of the Fundamental Rights are available only to the citizens while others are available to all persons whether citizens, foreigners or legal persons like corporations or companies.
Following rights are available to citizens only and not to the foreigners:
1. Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth **(Article 15).**
2. Equality of opportunity in matters of public employment **(Article 16).**
3. Protection of six rights regarding freedom of: (i) speech and expression, (ii) assembly, (iii) association, (iv) movement, (v) residence, and (vi) profession **(Article 19).**
4. Protection of language, script and culture of minorities **(Article 29).**
5. Right of minorities to establish and administer educational institutions **(Article 30)**
Other FRs are available to both citizens and foreigners (except enemy aliens).

15. Consider the following statements with reference to Thalassemia:
1. Thalassemia is a rare disorder in which the blood lacks sufficient blood-clotting proteins.
2. It is a genetic disorder that results from a mutation in one or more genes that make haemoglobin.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option B
- Thalassemia is a group of **inherited blood disorders** characterised by **abnormal haemoglobin production**. The patient **cannot make enough haemoglobin** which leads to Anaemia, thus the patients require blood transfusions every two to three weeks to survive. Thalassemia results from a **mutation in one or more of the genes** that make haemoglobin and is passed down from one or both parents through their genes.
- India has the **largest number of children with Thalassemia major** in the world (about 1 to 1.5 lakhs). The only cure available is **bone marrow transplantation** (BMT), which is difficult and **not affordable**. The mainstay of treatment is **repeated blood transfusions**, followed by regular iron chelation therapy to remove the excessive iron overload, consequent to the multiple blood transfusions.

16. With reference to the Fair and Remunerative Price on the sugarcane, consider the following statements:
1. It is decided on the recommendations of the Commission for Agricultural Costs and Prices.
2. It is paid by the government directly to the sugarcane farmer.
3. Amount of FRP is higher than the state advised price (SAP) in all the states.

Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 1 only
(c) 2 and 3 only
(d) 3 only

Ans:- Option B
Fair and remunerative price (FRP) **is the minimum price at which rate sugarcane is to be purchased by sugar mills from farmers**. **It is fixed by the Union government (Cabinet Committee on Economic Affairs (CCEA)** on the basis of recommendations made by **Commission for Agricultural Costs and Prices (CACP).** It is **determined under Sugarcane (Control) Order, 1966.** It is **decided on various factors** (cost of production, demand-supply situation, domestic & international prices, inter-crop price parity etc.) This will be uniformly applicable all over the country. **Some states such as Punjab, Haryana, UK, UP and TN announce a State Advised Price, which is generally higher than the FRP.**

17. With reference to Sixty-Ninth constitution Amendment Act, 1991, consider the following statements:
1. It provided that Legislative Assembly of Delhi can legislate on matters in State & Concurrent List including land and public order.
2. As per this Act, the Chief minister shall be appointed by the Lieutenant Governor.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D
Constitution 69thAmendment (1991) added Article 239AA & Article 239AB which gave **constitutional status and the National Capital Territory of Delhi (GNCT) Act, 1991** was enacted based on recommendations of Balakrishnan Committee Report.
Statement 1 is incorrect - Article 239AA - Provides that **Legislative Assembly of Delhi can legislate on matters in State & Concurrent List except** – State List: Entry 1– Public Order; Entry 2 – Police; Entry 18 – Land.
Statement 2 is incorrect - Article 239 AA subclause (5) says that, The Chief Minister shall be appointed by the President and other Ministers shall be appointed by the President on the advice of the Chief Minister and the Ministers shall hold office during the pleasure of the President.

18. Arrange the following protected areas of India from North to South:
1. Mudumalai
2. Kalakkad-Mundanthurai
3. Dandeli-Anshi
4. Periyar

Select the correct answer using the code given below:
(a) 2-4-1-3
(b) 3-1-2-4
(c) 4-3-1-2
(d) 3-1-4-2

Ans:- Option D

- **Dandeli-Anshi Tiger Reserve (kali tiger reserve), Karnataka** comprises of two important protected areas of the region viz., Dandeli Wildlife Sanctuary and Anshi National Park, which are contiguous to each other in the Western Ghats. **It is home to rare black panthers.**
- **Mudumalai National Park or Wildlife Sanctuary is now declared as a Tiger Reserve, situated in Tamil Nadu.** The Mudumalai Sanctuary is an important wildlife habitat **due to its strategic position as a Wildlife corridor between several other protected areas making an essential part of the Nilgiri Biosphere Reserve.** Mudumalai tiger reserve is among the 14 Indian tiger reserves that were awarded the Conservation Assured | Tiger Standards (CA|TS) status.
- **Periyar National Park, also known as Periyar Wildlife Sanctuary, is a protected area located in the Indian state of Kerala.** It is situated in the Western ghats mountain range**. The park is also home to the Periyar Lake, which is a major tourist attraction**. The lake is a **man-made reservoir that was created in 1895**. Mullaperiyar Dam is located in this reserve.
- **The Kalakad Mundanthurai Tiger Reserve (KMTR) is in Tamil Nadu**. This region has got vegetation types which gradually changes from dry thorn forest to dry deciduous, moist deciduous and a patch of West coast wet evergreen forests on the higher reaches of the reserve. **KMTR was declared as the "First Tiger Reserve of Tamil Nadu" and the 17th Tiger Reserve of the country**

19. With reference to the 'Revolt of 1857', consider the following statements:
1. In Delhi, the command of the revolt was under a court of soldiers headed by Khan Bahadur.
2. Disallowance of 'Bhatta' by the authorities to the sepoys became an immediate cause for the revolt.
3. Lack of Hindu-Muslim unity during the revolt was one of the reasons for its failure.

Which of the statements given above is/are incorrect?
(a) 1 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 3 only

Ans:- Option B
Statement 1 is not correct: Storm Centres and Leaders of the Revolt: At Delhi, the nominal and symbolic leadership belonged to the Mughal emperor, Bahadur Shah, **but the real command lay with a court of soldiers headed by General Bakht Khan who had led the revolt of Bareilly troops and brought them to Delhi. At Bareilly, Khan Bahadur,** a descendant of the former ruler of Rohilkhand, was placed in command. Not enthusiastic about the pension being granted by the British, he organised an army of 40,000 soldiers and offered stiff resistance to the British.
Statement 2 is correct: The Indian sepoy was equally unhappy with his emoluments compared to his British counterpart. **A more immediate cause of the sepoys' dissatisfaction was the order that they would not be given the foreign service allowance (bhatta) when serving in Sindh or in Punjab. The annexation of Awadh, home of many of the sepoys, further inflamed their feelings.**
Statement 3 is not correct: **During the entire revolt, there was complete cooperation between Hindus and Muslims at all levels—people, soldiers, leaders**. **All rebels acknowledged Bahadur Shah Zafar, a Muslim, as the emperor, and the first impulse of the Hindu sepoys at Meerut was to march to Delhi, the Mughal imperial capital.**

Example: Immediate banning of cow slaughter was ordered once the revolt was successful in a particular area. Both Hindus and Muslims were well represented in leadership, for instance Nana Saheb had Azimullah, a Muslim and an expert in political propaganda, as an aide, while Laxmibai had the solid support of Afghan soldiers.

20. Consider the following, with reference to the Association of Southeast Asian Nations (ASEAN):
1. Indonesia, Malaysia, Singapore and Myanmar are the founding members of the ASEAN.
2. India, Japan and South Korea are members to the 'ASEAN Plus Three' consultative group initiated in 1997.
3. 'Cebu Declaration' is associated with the acceleration of the establishment of ASEAN community.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) 3 only
(d) 1, 2 and 3

Ans:- Option C
The Association of Southeast Asian Nations is a **regional organization which was established to promote political and social stability** amid rising tensions among the Asia-Pacific's post-colonial states. **ASEAN Secretariat – Indonesia, Jakarta.**
Statement 1 is not correct: Founding Fathers of ASEAN are: Indonesia, Malaysia, Philippines, Singapore and Thailand.
Ten Member Nations: Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Vietnam, Laos, Myanmar, Cambodia.
Statement 2 is not correct: ASEAN Plus Three (APT) consist of ten ASEAN Member States and the People's Republic of China, Japan and the Republic of Korea.
The APT Cooperation process began in December 1997 and since then has evolve as the main vehicle to promote East Asian Cooperation towards the long-term goal of building an East Asian Community, with ASEAN as the driving force.
Statement 3 is correct: 2007 – Cebu Declaration, Philippines. To accelerate the establishment of ASEAN Community by 2015.
In 2015, ASEAN Community was launched. ASEAN Community is comprised of three pillars: ASEAN Political-Security Community; ASEAN Economic Community and ASEAN Socio-Cultural Community.

21. Which among the following is/are outside the legislative and executive domains of the Delhi government?
1. Land
2. Police
3. Public Order
4. Administrative Services

Select the correct answer using the codes given below:
(a) 1 and 2 only
(b) 1, 2 and 3 only
(c) 3 and 4 only
(d) 4 only

Ans:- Option B
- The 69th Constitutional Amendment Act 1991 added **Article 239AA to the Constitution of India,** which provided a special status to the Union Territory of Delhi, **redesignated it the National Capital Territory of Delhi** and designated the administrator of Delhi as the lieutenant governor (LG).
- The Act provided for a **Legislative Assembly for Delhi** consisting of not more than 70 members.
- **Article 239AA** delineates the legislative and executive powers of the Delhi government while clarifying that three subjects, namely **land, police, and public order**, shall remain under the exclusive domain of the Centre in the capital.
- The LG, who is appointed by the President of India, was given the power to act at his own discretion in matters relating to **public order, police, and land**. However, in all other matters, he is required to act on the aid and advice of the Council of Ministers.
- Expect **subjects of police, public order and land**; the Legislative assembly can make laws on all the matters of the State List and the Concurrent List.
- According to the constitutional scheme of governance in Delhi, as settled by the Delhi High Court in 2016, '**services**' was outside the executive and legislative domain of the Delhi Government. However, the latest Supreme Court verdict (May 2023) has ruled that the **Delhi government has legislative and executive powers over administrative services** in the national capital.

22. Which of the following disqualification(s) of Members of Parliament comes under the 10th Schedule of the Indian Constitution?
1. If a member voluntarily gives up membership of his/her political party.
2. If a member abstains from voting, contrary to directions issued by his/her political party without obtaining prior permission.
3. If an independent member joins any political party after getting elected to the House.

Select the correct answer using the codes given below:

(a) 1 and 3 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

Ans:- Option D

Anti-Defection Law:

* The **52nd Amendment Act of 1985** provided for the **disqualification of the members of Parliament and the state legislatures** on the **ground of defection** from one political party to another.
* It **added a new Schedule (the Tenth Schedule)** to the Constitution. This act is often **referred to as the 'anti defection law'.**
* Later, the **91st Amendment Act of 2003** made one change in the provisions of the Tenth Schedule. It **omitted an exception provision i.e., disqualification on the ground of defection not to apply in case of a split.**

Provision of the Act:

* **Members of Political Parties:** A member of a House belonging to any political party becomes disqualified for being a member of the House, (a) if he **voluntarily gives up his membership** of such political party; or (b) if he **votes or abstains from voting** in such House **contrary to any direction issued by his political party** without obtaining prior permission of such party and such act has not been condoned by the party within 15 days.

* **Independent Members:** An independent member of a House (elected without being set up as a candidate by any political party) becomes disqualified to remain a member of the House **if he joins any political party after such an election.**

* **Nominated Members:** A nominated member of a House becomes disqualified for being a member of the House **if he joins any political party after the expiry of six months from the date on which he takes his seat in the House.** This means that he may join any political party within six months of taking his seat in the House without inviting this disqualification.

23. Consider the following statements in reference to the application of Article 356:

1. The state executive and legislatures continue to function and exercise the powers assigned to them under the Constitution.
2. The emergency can be continued indefinitely in the state with the approval of Parliament every six months.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D

* **Statement 1 is incorrect** because during its operation, the state executive is dismissed and the state legislature is either suspended or dissolved. **The President administers the state through the governor and the Parliament makes laws for the state.** In brief, the executive and legislative powers of the state are assumed by the Centre.

* **Statement 2 is incorrect** as there is a **maximum period prescribed for its operation, that is, three years**. Thereafter, it must come to an end and the normal constitutional machinery must be restored in the state.

24. Consider the following statements with reference to the Monkey Pox:

1. Monkey pox is an airborne viral infection.
2. It is a zoonotic disease with no cases of human-to-human transmission.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D

* Mpox (monkeypox) is a **viral zoonotic disease** caused by the **mpox virus, a member of the Orthopoxvirus genus.**
* Mpox is characterized by **rash or skin lesions** that are usually concentrated on the face, palms of the hands, and soles of the feet.
* It is mainly **spread to people from animals**, primarily rodents and monkeys, and **human-to-human transmission can occur** through contact with bodily fluids, respiratory droplets, or contaminated objects.
* There is currently **no specific treatment** for mpox, it may be treated with some antiviral drugs used to treat smallpox. Also, monkeypox is self-limiting, which means it can get better without treatment.

25. Consider the following pairs:

S.No.	Dance forms in India	State related to
1.	Saraikella Chhau	Jharkhand
2.	Butta Bommalu	Karnataka

3.	Singhi Chham	Sikkim
4.	Bhootha Aradhane	Andhra Pradesh

Which of the given pairs above are correctly matched?
(a) 1, 2 and 3 only
(b) 1 and 4 only
(c) 1 and 3 only
(d) 1, 2 and 4 only

Ans:- Option C
Context: Benoy K. Behl's documentary, Dance of Liberation of the Lamas, has captured the spiritual experience of Cham. **Cham Dance:** Originated from **the Yogachara School of Buddhism,** that was founded in Kashmir in the 4th century **by Asanga and Vasubandhu,** which further developed into the **Vajrayana form of Buddhism. From Ladakh to Mongolia, the Cham is the deepest form of meditation of the Lamas.**

1. **Chhau dance:** There are three main styles of Chhau dance – **Saraikella Chhau in Jharkhand,** Mayurbhanj Chhau in Odisha and Purulia Chhau in West Bengal. **Of these, Mayurbhanj Chhau artists don't wear masks.** In **2010, UNESCO inscribed Chhau in the Representative List of Exam Intangible Cultural Heritage of Humanity.**
2. **Butta Bommalu:** It is a popular dance form in **Andhra Pradesh**. The dancers entertain through delicate movements and non-verbal music.
3. **Singhi Cham:** The **Singhi Chham is a popular mask dance of Sikkim.** The dancers' costume symbolises the snow lion and pays **tribute to Khang-Chen Dzong Pa (Kanchenjunga peak).**
4. **Bhootha Aradhane: Bhootha Aradhane or devil worship** is a popular dance form of Karnataka. Bhootha kola/aradhane was shown in the movie Kantara).

26. With reference to Special provisions with respect to Delhi; consider the following statements:
1. The constitution has limited the strength of Council of Ministers at fifteen per cent of the total number of members in the Legislative Assembly
2. Constitution has authorised the President to regulate the matters relating to the functioning of the Legislative Assembly of Delhi.

Which of the statements given above is/are incorrect?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option C
Statement 1 is incorrect: Article 239AA sub clause 4 states that, there shall be a **Council of Ministers consisting of not more than ten per cent of the total number of members** in the Legislative Assembly.

Statement 2 is also incorrect - Art 239 AA sub clause 2 states that **the total number of seats in the Legislative Assembly, the number of seats reserved for Scheduled Castes, the division of the National Capital Territory into territorial constituencies** (including the basis for such division) and all other matters relating to the functioning of the Legislative Assembly shall be **regulated by law made by Parliament**.

27. Which of the following treaty designed to facilitate financing and leasing of aviation equipment?
(a) Bonn Convention
(b) Geneva Convention
(c) Wassenaar Arrangement
(d) Cape Town Convention

Ans:- Option D
The Convention on International Interests in Mobile Equipment was concluded in **Cape Town** on **16th November 2001**, as was the Protocol on Matters Specific to Aircraft Equipment.

28. Consider the following pairs:

S.NO	Communities	States/UTs
1.	Zeme	Andaman and Nicobar Islands
2.	Singpho	Tripura
3.	Siddi	Gujarat
4.	Chenchus	Telangana

How many given above is/are incorrectly matched?
(a) Only one pair
(b) Only two pairs
(c) Only three pairs
(d) All four pairs

Ans:- Option B
1. **Zeme:** The Zeme people, also known as the **Zeme Nagas.** Their villages are mostly spread across **Nagaland and Manipur and Assam.**
2. **Singpho:** Singpho Tribe is numerically a minor **tribe in North-East India.** They are found **in Tirap district and some parts of the Lohit district of Arunachal Pradesh**.

3. **Siddi:** The **Siddis are descendants of the Bantu populations** of East and Central Africa and are also sometimes referred to as **Habshis or Abyssinians.** The population resides primarily in **five states (Goa, Gujarat, Karnataka, Maharashtra, and Telangana), but the majority (90%) reside in Gujarat or Karnataka.**

4. **Chenchus:** Chenchus are a Dravidian tribe, a designated Scheduled Tribe in the **Indian states of Andhra Pradesh, Telangana, Karnataka and Odisha.** They are an aboriginal tribe whose traditional way of life been based on hunting and gathering.

29. Consider the following statements with reference to the Maternity Benefit (Amendment) Act, 2017.
1. The duration of paid maternity leave of 26 weeks can be availed for two or more surviving children.
2. Every establishment employing 20 or more employees is mandated to provide a creche facility.
3. Mothers adopting a child below the age of three months are entitled to 12 weeks of maternity leave from the date of adoption.

Which of the statements given above is/are correct?
(a) 1 only
(b) 1 and 2 only
(c) 3 only
(d) 2 and 3 only

Ans:- Option C
- **Statement 1 is incorrect:** Maternity Benefit (Amendment) Act, 2017 increases the **duration of paid maternity leave available for women employees from 12 weeks to 26 weeks**. However, for having two or more surviving children, the duration of paid maternity leave is 12 weeks (i.e., six weeks before and six weeks after the expected date of delivery).
- **Statement 2 is incorrect:** The Maternity Benefit Amendment Act makes it **mandatory for every establishment employing 50 or more employees to provide for a creche facility**. Women employees shall be permitted to visit the crèche four times during the day (including rest intervals) and where **creche facilities are not available to women employees there should be two one-half-hour rest periods.**
- **Statement 3 is correct: Mothers adopting a child below the age of three months are entitled to 12 weeks of maternity leave from the date of adoption**. The Maternity Benefit Amendment Act is applicable to all establishments which include factories, mines, plantations, Government establishments, shops and establishments under the relevant applicable legislation, or any other establishment as may be notified by the Central Government.

30. With reference to London interbank offered rate (LIBOR); consider the following statements:
1. It is a benchmark interest rate at which major Global banks lend to one another for long-term loans.
2. It is based on five currencies including the U.S. dollar, the euro, the British pound, the Japanese yen, and the Chinese Yuan.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D
Statement 1 is incorrect: The London Interbank Offered Rate (LIBOR) is **a benchmark interest rate at which major global banks lend to one another in the international interbank market for short-term loans.**

Statement 2 is incorrect: It is based on five currencies including the **U.S. dollar, the euro, the British pound, the Japanese yen, and the Swiss franc.**

31. Consider the following statements with reference to Central Bureau of Investigation (CBI):
1. The establishment of CBI was recommended by Swaran Singh committee (1962-64).
2. It was made statutory body by Parliament in 2013.
3. The Director of CBI is appointed by Central Government on the recommendation of three-member committee consisting of Prime Minister, Leader of Opposition and Home Minister.

Which of the statements given above is/are correct?
(a) 2 only
(b) 1 only
(c) 1 and 3 only
(d) None of the above

Ans:- Option D
About CBI:
- It was setup in **1963** by **resolution of the Ministry of Home Affairs.**
- The establishment of the CBI was recommended by **Santhanam Committee on Prevention of Corruption (1962-64).**
- It is a **non-constitutional and non-statutory**
- It derives its powers from the **Delhi Police Establishment Act, 1946.**
- It is the **main investigating agency** of the Central Government.

- It acts as **the "National Central Bureau" of Interpol** in India.

Director of CBI:
- The director of CBI has been provided security of **two-year tenure** in office by CVC Act, 2003.
- **Lokpal and Lokayuktas Act 2013** amended the Delhi Special Police Establishment Act 1946 and made following changes: The Central Government shall appoint the Director of CBI on the recommendations of a **three-member committee** consisting of **Prime Minister, Leader of Opposition and the Chief Justice of India or Judge of Supreme Court** nominated by him.

32. With reference to millets, consider the following statements:
1. Millets, a group of small-grained cereal crops, are both gluten-free and non- allergenic.
2. India is the fifth largest producer of millets in the world.
3. India celebrated 2018 as "The National Year of Millets" to promote the production and consumption of millets in the country.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option C
- Millets are a versatile and healthy grain alternative, as they are both **gluten-free and non-allergenic.**
- **India celebrated 2018 as "The National Year of Millets"** to promote the production and consumption of millets in the country.
- United Nations General Assembly **(UNGA) declared the year 2023 as International Year of Millets.**
- India produces around **80 per cent of Asia's and 20 per cent of global** production of millets.
- **India** is the **largest producer and fifth-largest exporter** of millets in the world.

33. With reference to the causes behind Revolt of 1857, consider the following statements:
1. Introduction of Greased cartridges
2. Discrimination among the sepoys
3. Policy of Doctrine of Lapse
4. Rolling out of Factory Acts
5. Religious interference

Select the correct answer using the codes given below:
(a) 1, 2 and 3 only
(b) 2, 3, 4 and 5 only
(c) 1, 2, 3 and 4 only

(d) 1, 2 and 5 only

Ans:- Option D
Mains reasons behind the Revolt of 1857 were:
1. **Economic reasons:**
- Peasantry was exploited.
- **Revenue policy –** Zamindari, Ryotwari and Mahalwari system
- **De-industrialization** in the handicraft sector
- Heavy taxation on the crops
- Tariff policy on export by the Indian.

2. Defence reasons:
- Discrimination at soldier rank (salary and rank).
- Introduction of **Greased cartridges for Enfield Rifles** which were against the religious sentiments.
- **Judicial discrimination in defence** where Indian were treated severely by the English Judges.
- **Ocean policy:** Indian soldiers were forced to cross the sea (loss of caste).

3. British Policies
- **Doctrine of Lapse**
- Modernization (Railway, Post)

4. Cultural reasons:
- Policy of interference among traditional customs (e.g., Ban on human sacrifice)
- **Cultural legislations** -- sati, widow remarriage
- Westernization of education **(Macaulay's minute)**

5. Political reasons:
- Downgrading princely states (subordination)
- **Expansionist tendency** (Doctrine of Lapse, Subsidiary alliance)
- Denial of pension and rights to the ruling people.
- **Denial of political positions** to Indians in the legislations.
- Factory Acts were passed in 1881 and 1891 and years later. They had no connections with the Revolt of 1857.

34. Consider the following statements related to the Wholesale Price Index (WPI) and Consumer Price Index (CPI):
1. Both WPI and CPI are published by the Office of Economic Advisor.
2. The increase in food prices would have a higher impact on WPI than CPI.
3. The RBI has been mandated to target CPI and not WPI.

Which of the statements given above is/are incorrect?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option A

- The **WPI is published by the Office of Economic Advisor, Ministry of Commerce, and Industry** while **CPI is published by the National Statistical Office**.
- Once there is an **increase in food prices**, **CPI would be more impacted** as the weightage of food is higher in the CPI than in the WPI.

35. Consider the following statements with reference to Mitochondrial diseases:
1. Mitochondrial diseases are only passed on through the mother.
2. Faulty mitochondria can cause conditions such as heart problems, liver failure, brain disorders and muscular dystrophy.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option C

- Mitochondrial diseases are a **group of genetic disorders** that primarily affect the mitochondria, which are the **energy-producing structures within our cells.**
- The genetic disorder of mitochondrial DNA is **primarily inherited**. This is because the sperm provides almost no cytoplasm (and hence no mitochondria) to the fertilized egg. The egg has thousands of mitochondria, and it is these that are passed to the developing embryo.
- Faulty mitochondria can cause **inherited conditions** such as fatal heart problems, liver failure, brain disorders, blindness and muscular dystrophy. There is no cure for mitochondrial DNA disease at present.

36. Consider the following statements:
1. 5G offers significantly faster data transfer speeds compared to 4G.
2. 5G utilizes advanced technologies like millimetre wave frequencies and beamforming, while 4G primarily relies on lower frequency bands.
3. 5G is expected to enable transformative technologies such as autonomous vehicles, remote surgery, and smart cities, whereas 4G mainly supports mobile data and voice communication.
4. 5G networks can support a larger number of devices simultaneously, enabling more connections in crowded areas.
5. 5G networks are designed to be more efficient in terms of energy consumption and spectrum utilization.

Which of the above are difference between 4G and 5G technologies?
(a) 1, 3 and 5 only
(b) 1, 2, 3 and 5 only
(c) 1, 4 and 5 only
(d) 1, 2, 3, 4 and 5

Ans:- Option D
Statement 1 is CORRECT: 5G technology is designed to provide **faster data transfer speeds** compared to 4G networks.
Statement 2 is CORRECT: 5G networks utilize a wider range of **frequency bands, including millimetre wave frequencies**, which have higher frequency ranges compared to the lower frequency bands predominantly used by 4G networks.
Statement 3 is CORRECT: While 4G primarily focuses on providing mobile data and voice communication services, 5G is designed to support a wide range of emerging technologies.
Statement 4 is CORRECT: 5G networks are designed to handle a significantly larger number of connected devices simultaneously compared to 4G.
Statement 5 is CORRECT: 5G networks **aim to optimize energy consumption** by implementing techniques such as **network slicing**, which allows for more efficient resource allocation based on specific service requirements.

37. With reference to communication technologies, what is/are the difference/differences between LTE (Long-Term Evolution) and VoLTE (Voice over Long-Term Evolution)?
1. LTE is commonly marketed as 3G and VoLTE is commonly marketed as advanced 3G.
2. LTE is data-only technology and VoLTE is voice-only technology

Select the correct answer using the code given below.
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D

- LTE or Long Term Evolution is a **series of 4G network standards that were agreed in 2008. Hence Statement 1 is Not Correct.**
- VoLTE is both data and voice technology. **Hence Statement 2 is also Not Correct.**

38. Which of the following diseases can be transmitted from one person to another through tattooing?
1. Chikungunya

2. Hepatitis B
3. HIV - AIDS

Select the correct answer using the codes given below.
(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option B
Infections that can theoretically be transmitted by the **use of unsterilised tattoo equipment or contaminated ink include surface infections of the skin, hepatitis B, hepatitis C, tuberculosis, and HIV**. However, no person is reported to have contracted HIV via a commercially-applied tattooing process**. Hence statements 2 and 3 are only correct**.

39. Consider the following statements:
1. The weightage of food in Consumer Price Index (CPI) is higher than that in Wholesale Price Index (WPI).
2. The WPI does not capture changes in the prices of services, which CPI does.
3. The Reserve Bank of India has now adopted WPI as its key measure of inflation and to decide on changing the key policy rates.

Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 2 only
(c) 3 only
(d) 1, 2 and 3

Ans:- Option A
The weightage of items in WPI is as follows- Primary article - 22.62 % Fuel and Power - 13.51 % Manufactured goods - 64.23 %
While weightage of items in CPI is as follows- Food and Beverages – 45.86 Housing – 10.07 Fuel and Light – 6.84 Clothing and Footwear – 6.53 Pan, tobacco and intoxicants – 2.38 Miscellaneous – 28.32
Hence statement 1 is correct.

40. With reference to the history of India, "Ulgulan" or the Great Tumult is the description of which of the following events?
(a) The Revolt of 1857
(b) The Mappila Rebellion of 1921
(c) The Indigo Revolt of 1859-60
(d) Birsa Munda's Revolt of 1899-1900

Ans:- Option D

The correct answer is Birsa Munda's Revolt of 1899 - 1900.
Birsa Munda (1874-1900) was the son of a sharecropper who had received some education from the missionaries.
Birsa became a critic of the traditional tribal customs, religious beliefs and practices. He called upon the Mundas community to fight against superstition, give up animal sacrifice, and retain the tribal tradition of worship in the sacred grove.
The Munda Sardar had been struggling against the destruction of their system of common landholdings by the intrusion of jagirdar, thikadar (revenue farmers) and merchant moneylenders.

41. Consider the following statements regarding Arab League:
1. It is a regional organization of West Asian Countries only.
2. Beirut declaration calling for establishment of free trade zone is related to league.
3. India has a observer status with the league.

Which of the following statements is/are correct:
(a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

Ans:- Option C
ARAB LEAGUE
Arab League or the League of Arab States is **a regional organization of African and Western Asian countries**. **Six countries have observer states**—Eritrea, Brazil and Venezuela, India, Armenia and Chad.
BERIUT DECLARATION: A joint statement **issued by 20 member of Arab league** and called **establishment of an Arab free trade zone** and urged the international community to support nations hosting Syrian refugees.

42. With reference to the Aadhaar enabled Payment System (AePS), which of the following statements is/are correct?
1. It is introduced by Indian Banks' Association in collaboration with the Unique Identification Authority of India (UIDAI).
2. It enables customers to carry out financial transactions through Aadhaar-based authentication at Point of Sale (PoS) devices only.

Select the correct answer using the codes given below:
(a) 1 only
(b) 2 only
(c) Both 1 and 2

(d) Neither 1 nor 2

Ans:- Option D

What is AePS?

- AePS, or Aadhaar enabled Payment System, is a payment system that enables customers to **carry out financial transactions through Aadhaar-based authentication at Point of Sale (PoS) devices and micro ATMs.**
- The **National Payments Corporation of India (NPCI) introduced the AePS** system **to promote financial inclusion and make banking services accessible to all**, particularly those living in remote and rural areas.

43. Which of the following best describes the term, 'Windfall Tax'?

(a) It is a tax imposed to disincentivise short-term currency speculation.

(b) It is a tax imposed on any perks and privileges given to an employee.

(c) It is a tax on goods and services which are harmful to the society.

(d) It is a tax levied on unexpectedly large profits.

Ans:- Option D

1. **The Tobin tax** is a tax levied on spot currency conversions, with the intention of disin**centivizing short-term currency** speculation, named after **economist James Tobin**.

2. **Perquisite Tax** is **imposed on any perks or privileges provided to an employee by the employer**, like a car, house, fuel, etc., considering how the perks are used.

3. A **Sin tax** is an **excise tax on specific goods and services** due to their ability, or perception, to be harmful or costly to society.

4. A **Windfall tax** is **levied on an unforeseen or unexpectedly large profit**, especially one regarded to be excessive or unfairly obtained

44. Consider the following statements regarding Disqualification of member of state assemblies:

1. Presiding officer is the final authority and the decisions are final.

2. The rules regarding the procedure of disqualification are made by presiding officer.

3. The defection has immediate and automatic effect on disqualification.

Which of the following statement is/are correct:

(a) 1 only

(b) 1 and 3 only

(c) 2 only

(d) 2 and 3 only

Ans:- Option C

DECIDING AUTHORITY

Any question regarding disqualification arising out of defection is to be decided by the presiding officer of the House. Originally, the act provided that the decision of the presiding officer is final and cannot be questioned in any court. **However, in Kihoto Hollohan case2 (1993), the Supreme Court declared this provision as unconstitutional on the ground that it seeks to take away the jurisdiction of the Supreme Court and the high courts**. It held that **the presiding officer**, while deciding a question under the Tenth Schedule**, function as a tribunal.** Hence, his decision like that of any other tribunal, is subject to judicial review on the grounds of mala fides, perversity, etc.

RULE MAKING POWER

The presiding officer of a House is empowered to make rules to give effect to the provisions of the Tenth Schedule. All such rules must be placed before the **House for 30 days**. The House may approve or modify or disapprove them. Further, he may direct that any willful contravention by any member of such rules may be dealt with in the same manner as a breach of privilege of the House. According to the rules made so, **the presiding officer can take up a defection case only when he receives a complaint from a member of the House**. Before taking the final decision, he must give the member (against whom the complaint has been made) a chance to submit his explanation. He may also refer the matter to the committee of privileges for inquiry. **Hence, defection has no immediate and automatic effect.**

45. Consider the following statements:

1. Treasury bills are zero coupon securities and pay no interest

2. Treasury bills can only be issued by central government but not state governments

3. Dated G-Secs are issued at both flexible and fixed interest rates

Which of the statements given above is/are correct?

(a) 1 only

(b) 1 and 2 only

(c) 2 and 3 only

(d) 1, 2 and 3

Ans:- Option D

- Treasury bills are **zero coupon securities and pay no interest.**
- In India, the Central Government issues both, treasury bills and bonds or dated securities while the State Governments issue only bonds or dated securities, which are called the State Development Loans (SDLs).

- Dated G-secs **are long term securities** issued either at **fixed or floating interest rates**.

46. With reference to Union and State public service commissions, consider the following statements:
1. The chairman and members of both the commission hold office for a fix term of six years or until they attain the age of 65 years.
2. Joint state public service commissions (JPSC) are created directly by the constitution in a manner similar to that of creation of UPSC and SPSC.

Which of the statements given above is/are incorrect?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option C
Statement 1 is incorrect: As though the constitution provides for a term of six years for the chairman and members of the UPSC and SPSC, **Article 316 subclause (2) clearly defines age limit of 65 years for the members of UPSC and 62 years for the members of SPSC and JPSC.**
Statement 2 is also incorrect: The Constitution under art **315 subclause (2), makes a provision for the establishment of a Joint State Public Service Commission (JSPSC) for two or more states.** While the UPSC and the SPSC are created directly by the Constitution, **a JSPSC can be created by an act of Parliament on the request of the state legislatures concerned. Thus, a JSPSC is a statutory and not a constitutional body.**

47. Consider the following statements:
1. Tryambakeshwar temple is one the Jyotirlingas in India, situated in the Sahyadri mountain ranges.
2. The temple represents Vesara style of temple architecture.
3. The current structure of the temple was built by Peshwa Balaji Bajirao in the 17th century.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) 3 only
(d) 1 and 3 only

Ans:- Option C
Statement 1 is not correct: Trimbakeshwar town is an ancient Hindu Pilgrim centre and **is close to the Brahamagiri Mountain from which River Godavari flows.** Trimbakeshwar is **abode of one of the twelve Jyotirlingas** and it is also **one of four places**

where **Sinhastha Fair (Kumbh Mela) i**s held which draws people from all over India.
Statement 2 is not correct: This temple is built of **black stone in the Nagara style of architecture.** Housing a spacious courtyard, the **temple also has an elevated platform known as the Shikhara which has a stone plate carved in the form of a lotus.**
Statement 3 is correct: The present Trimbakeshwar temple was constructed by **third Peshwa Balaji Bajirao (1740-1760) on the site of an old temple.**

48. Consider the following statements:
1. Governor appoints district judges in consultation with the High Court of the state.
2. A person appointed as district judge should have been an advocate for ten years.
3. Appointment of persons to state judicial services other than district judges are made by the Governor in consultation with the Chief Minister.

Which of the statements given above is/are correct?
(a) 1 only
(b) 3 only
(c) 1 and 2 only
(d) 1, 2 and 3

Ans:- Option A
Statement 1 is correct: The appointment, posting and promotion of district judges in a states are made by the **Governor of the state in consultation with the High Court.**
Statement 2 is incorrect: A person to be appointed as district judge should have the **following qualifications: (a) He should not already be in the service of the Central or the state government. (b) He should have been an advocate or a pleader for seven years. (c) He should be recommended by the High Court for appointment.**
Statement 3 is incorrect: Appointment of other Judges Appointment of persons (other than district judges) to the **judicial service of a state are made by the Governor of the state after consultation with the State Public Service Commission and the High Court.**

49. Consider the following statements regarding Washington Consensus:
1. It advocated measures like fiscal policy discipline, tax reforms, privatization of state enterprises among other reforms.
2. India pursued the policy which resulted in higher growth rates.
3. Agriculture also saw a boost which led to increase in daily per capita availability of food grains.

Which of the following statements is/are correct:
(a) 1 only

(b) 1 and 3 only

(c) 1 and 2 only

(d) 1, 2 and 3

Ans:- Option C

A list of policies that had gained support among Latin American policymakers in response to the macroeconomic turbulence and debt crisis of the early to mid-1980s. These policies also had **the backing of experts at Washington & international institutions— especially the International Monetary Fund and the World Bank**, as well as the US Treasury—to help the recovery from the debt crisis.

1. **Fiscal Policy discipline**, with avoidance of large fiscal deficits relative to GDP;

2. Tax reform broadening the tax base and adopting moderate marginal tax rates;

3. Privatization of state enterprises

Pursuit of this policy resulted in annual economic growth (for India) breaking out of the 3 to 5 percent band of the pre-1991 era. But redistribution of the extra wealth has been skewed. Those already better off have improved their living standards further whereas the large **majority who lagged behind before have stagnated or grown poorer. The emphasis of the WTO and the IMF on export-led growth encouraged cultivators to switch from food crops to fertilizer-intensive cash crops** like cotton, coffee, sugarcane, groundnuts, pepper and vanilla. **As a consequence, the daily per capita availability of foodgrains declined from 510 grams in 1991 to 422 grams in 2005.**

50. Consider the following statements with reference to Armed Forces Special Powers Act (AFSPA):

1. Under the Act, an area can be declared as a 'disturbed area' solely by the Governor of the state.

2. Security forces have absolute immunity from prosecution for actions taken under the provisions of the Act.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Ans:- Option D

Statement 1 is not correct: The **Governor of a State and the Central Government are empowered to declare any part or full of any state as a disturbed area** if according to their opinion that it has become necessary to disrupt the terrorist activity or any such activity that might impinge on the sovereignty of India. **Statement 2 is not correct:** The law also **provides security forces with immunity from prosecution** for

actions taken under its provisions, unless prior approval is obtained from the Central government.

51. With reference to the concept of Secured Overnight Financing Rate (SOFR), consider the following statements

1. It is a benchmark interest rate for Euro-denominated derivatives and loans.

2. Its rate is determined by the daily transaction taking place in the securities repurchase market.

3. It is adopted to replace London Interbank Offer Rate (LIOBR).

Which of the statements given above are correct?

(a) 1 and 3 only

(b) 2 and 3 only

(c) 1 and 2 only

(d) 1, 2 and 3

Ans:- Option B

The Secured Overnight Financing Rate, or SOFR, is an **influential interest rate that banks use to price U.S. dollar-denominated derivatives and loans**. The daily Secured Overnight Financing Rate (SOFR) is based on transactions in the Treasury repurchase market, where investors offer banks overnight loans backed by their bond assets.

It is **replacing the London Interbank Offered Rate (LIBOR)**. It is seen as preferable to LIBOR since it **is based on data from observable transactions rather than on estimated borrowing rates.**

52. With reference to Central Drugs Standard Control Organisation (CDSCO), consider the following statements:

1. It is regulatory body attached to Ministry of Health and Family Welfare.

2. It regulates the prices of pharmaceutical drugs in the Indian market.

3. It derive its powers from Drugs and Cosmetics Act, 1940.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) 1 and 3 only

(d) 2 and 3 only

Ans:- Option C
About Central Drugs Standard Control Organisation (CDSCO)

- It functions as **India's national regulatory body** overseeing cosmetics, pharmaceuticals, and medical devices.

- The CDSCO is organized with the **Drug Controller General of India (DCGI)** overseeing pharmaceuticals and medical devices.
- It is assigned duties under **Drugs and Cosmetics Act, 1940.**
- The DCGI is **situated within the Ministry of Health and Family Welfare** and receives guidance from the Drug Technical Advisory Board (DTAB) and the Drug Consultative Committee (DCC).
- **The CDSCO operates through zonal offices** that conduct inspections prior to licensing, post-licensing inspections, post-market surveillance, and, if necessary, initiates drug recalls.

Note: The National Pharmaceutical Pricing Authority (NPPA) is **a government regulatory agency that controls the prices of pharmaceutical drugs in India.**

53. Consider the following statements:
1. Under the nutrient based subsidy the non- urea fertilizers are sold at statutorily notified uniform MRPs.
2. Nutrient based subsidies are fixed on the recommendations of the Commission for Agricultural Costs and Prices (CACP).

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D
- **Statement 1 is incorrect** - The nutrient based subsidy scheme, the **MRPs of non-urea fertilisers are decontrolled or fixed by the companies**. The Centre, however, pays a flat per-tonne subsidy on these nutrients to ensure they are priced at "reasonable levels".
- **Statement 2 is also incorrect** - **Nutrient based subsidies are approved by the cabinet under the chairmanship of PM**, and it approves the **proposal of the Department of fertilizers which works under the union Ministry of chemicals & fertilizers.** Whereas Commission for Agricultural Costs and Prices (CACP) recommendations are related to the MSP of various crops.

54. With reference to the Enforcement Directorate, consider the following statements:
1. It functions under the Union Ministry of Home Affairs.
2. The tenure of the director of Enforcement Directorate cannot be extended beyond 2 years.

Which of the statements given above is/are correct?
(a) 1 only

(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D
The Enforcement Directorate functions under **the Department of Revenue of the Ministry of Finance.**
The **tenure of Enforcement Directorate director is two years**, but directors' tenure can be extended from two to five years by giving three annual extensions.

55. In which one of the following States/ U.Ts is Kishtwar National Park located?
(a) Jammu and Kashmir
(b) Himachal Pradesh
(c) Meghalaya
(d) Uttarakhand

Ans:- Option A
- Kishtwar National Park is located in the **Kishtwar district of union territory of Jammu and Kashmir**.
- The area was **declared as a Kishtwar High Altitude National Park in 1980.**
- It was majorly founded to **protect the Snow Leopards** that are now slowly vanishing from the nature.
- The area lies in the central crystalline belt of the great Himalayas and the tract is situated on the high altitudes i.e., sub-alpine and alpine zone.
- The National Park encompasses the catchment area of **Kiber, Nanth and Kiyar Nallas**, all of which drain south-west into Marwah River (locally called Mariv Sudir) which later joins Chenab.

56. With reference to the Indian Constitution; Consider the following statements:
1. It makes the advice of the central council of ministers binding for the President of India.
2. It mandates that the total number of Ministers, in the Council of Ministers shall not exceed fifteen per cent of the total number of members of the Parliament.
3. It defines collective responsibility of the council of minister to the President of India.

Which of the statements given above is/are incorrect?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option B
- As per the Article 74 of the constitution - There shall be a Council of Ministers with the Prime Minister at the head to aid and advise **the President who shall, in the exercise of his functions, act in accordance with such advice**.

However, the President may require the Council of Ministers to reconsider such advice and the President shall act in accordance with the advice tendered after such reconsideration.

- **As per the Article 75 (1A) -** The total number of Ministers, including the Prime Minister, in the Council of Ministers **shall not exceed fifteen per cent. of the total number of members of the House of the People i.e. Lok Sabha.**
- **Article 75 (3) states** that The Council of Ministers shall be collectively responsible to the House of the People.

57. With reference to the history of Indian freedom struggle, consider the following statements:
1. The Mountbatten plan mentioned independence for the Princely states with the option to join either India or Pakistan.
2. The Cabinet mission plan envisaged federal structure for India with strong centre having residual powers.
3. The Cabinet mission recommended formation of Constituent Assembly based on direct elections.

Which of the statements given above is/are incorrect?
(a) 1 and 2 only
(b) 1, 2 and 3
(c) 2 and 3 only
(d) 1 and 3 only

Ans:- Option B
Statement 1 is not correct: Mountbatten Plan, June 3, 1947-
The important points of the plan:
1. Punjab and Bengal Legislative Assemblies would meet in two groups, Hindus and Muslims, to vote for partition. If a simple majority of either group voted for partition, then these provinces would be partitioned. In case of partition, two dominions and two constituent assemblies would be created.
2. Independence for princely states ruled out, they would join either India or Pakistan;
3. Independence for Bengal ruled and accession of Hyderabad to Pakistan ruled out

Statement 2 is not correct: The Cabinet Mission reached Delhi on March 24, 1946. The mission recommended for constituent assembly to sit together to formulate the union constitution. A common centre would control defence, communication, and external affairs. **A federal structure was envisaged for India and the provinces were to have full autonomy and residual powers.**
Statement 3 is not correct: The Cabinet mission also recommended for three-tier executive and legislature at provincial, section, and union levels. **The constituent assembly was to be elected by provincial assemblies**

by proportional representation (voting in three groups—General, Muslims, Sikhs).

58. With respect to "World Meteorological Organization (WMO)", consider the following statements:
1. It is a nongovernmental organization work as a forum for exchanging weather data and research.
2. A report, Status of world Climate is published by WMO.

Which of the statements, given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option B
Statement 1 is incorrect: The WMO originated from the **International Meteorological Organization, a nongovernmental organization founded in 1873 as a forum for exchanging weather data and research**. Proposals to reform the status and structure of the IMO culminated in the World Meteorological Convention of 1947, which formally established the World Meteorological Organization**. The Convention entered into force on 23 March 1950**, and the following year the **WMO began operations as an intergovernmental organization within the UN system.**
Statement 2 is correct: Status of World Climate and Greenhouse Gas Bulletin are published by WMO.
Status of World Climate: An annual report on the status of the World Climate. This report will provide detailed information on temperatures at the local, national and global levels along with extreme weather events.

59. Consider the following statements:
1. India is a founding member of shanghai five, which is a precursor to Shanghai cooperation Organisation (SCO).
2. Except China, all the neighbouring countries of India are the member of the South Asian Association for Regional Cooperation (SAARC).

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D
- **SCO came into existence in 2001 in Shanghai (China)** by the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Russian Federation, the Republic of Tajikistan and the

Republic of Uzbekistan. Prior to that, all of the above countries, except for Uzbekistan, were members of the Shanghai Five which was a political association. **India and Pakistan Were granted status of member states in the year 2017.**

- The **South Asian Association for Regional Cooperation (SAARC) was established with the signing of the SAARC Charter in Dhaka on 8 December 1985.** SAARC comprises of eight Member States: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

60. With respect to RBI's framework on green deposits, consider the following statements:
1. Green Deposit is an interest-free deposit and the proceeds are allocated towards green finance.
2. The framework is applicable to Small Finance Banks and Regional Rural Banks.
3. Proceeds raised through green deposits can be allocated towards hydropower plants larger than 25 MW.

Which among the statements given above is/are incorrect?
(a) 1 and 2 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

Ans:- Option D
The Framework defines "green deposit" as an **interest-bearing deposit**, received by the RE for a fixed period and the proceeds of which are earmarked for being allocated towards green finance

The provisions of these instructions shall be applicable to the following entities, collectively referred to as regulated entities (REs):
- Scheduled Commercial Banks including Small Finance Banks (**excluding Regional Rural Banks**, Local Area Banks and Payments Banks) and
- All Deposit taking Non-Banking Financial Companies (NBFCs) registered with the Reserve Bank of India under The Reserve Bank of India Act, 1934, including Housing Finance Companies (HFCs) registered under Section 29A of The National Housing Bank Act, 1987.

Proceeds raised through green deposits **cannot be allocated** for the following:
- Projects involving new or existing extraction, production and distribution of fossil fuels, including improvements and upgrades; or where the core energy source is fossil-fuel based.
- Nuclear power generation.
- Direct waste incineration.

- Alcohol, weapons, tobacco, gaming, or palm oil industries.
- Renewable energy projects that generate energy from biomass using feedstock originating from protected areas.
- Landfill projects.
- **Hydropower plants larger than 25 MW**

61. Consider the following statements:
1. 'Accelerated Clean Hydrogen Initiative', has been launched by the United Nations to accelerate adoption of Hydrogen as an alternative fuel.
2. Brown Hydrogen is produced from methane by a process known as 'steam reforming'.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D
According to the International Energy Agency (IEA**), hydrogen has the potential to be a key component of our transition to a clean energy future.** Generating electricity from hydrogen does not produce pollution because the by-product is only heat and water
Statement 1 is not correct: To identify ways to accelerate its adoption, the **World Economic Forum developed the 'Accelerated Clean Hydrogen Initiative' as part of its Climate Action Platform.** The Accelerating Clean Hydrogen initiative has over **200 members from 60 organisations**, including public and private stakeholders dedicated to accelerating the development of the clean hydrogen economy. **Partners include: IRENA, IEA, Hydrogen Council, Mission Possible Partnership, First Movers Coalition.**
Statement 2 is not correct:
Types of Hydrogen:
- **Green Hydrogen:** The only variety that is created in a **climate-neutral manner**. It could be vital in the worldwide effort to **achieve net-zero emissions by 2050**.
- **Grey hydrogen:** It is the **most prevalent type and is produced from natural gas, or methane, by a process known as "steam reforming".** This technology emits far fewer emissions than black or brown hydrogen, which employs black (bituminous) or brown (lignite) coal in the hydrogen-production process. **It produces carbon dioxide as a by-product**.
- **Blue hydrogen:** It is **produced from hydrocarbons** where the emissions generated from the process can be captured and stored. They are **stored underground by industrial carbon capture storage (CSS).**
- **Brown Hydrogen:** It is **produced by gasification**, where carbonous materials are heated into a gas. This extraction process involves turning coal into gas and

produces large quantities of carbon emissions that are released into the atmosphere

62. Consider the following statements with reference to the Carbon dating:
1. Carbon dating technique utilises the properties of a highly radioactive isotope of Carbon.
2. Radiocarbon dating can determine the age of organic materials up to about 50,000 years old.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option B
- Carbon-14 dating is a **way of determining the age of certain archaeological artefacts of a biological origin** (bone, cloth, wood and plant fibres) up to about **50,000 years old**, beyond which the amount of carbon-14 remaining in a sample becomes too low to accurately measure.
- The method utilises the **properties of radiocarbon** (carbon 14) which is an isotope of carbon that is unstable and weakly radioactive.
- **The method is designed to measure residual radioactivity**. The ratio of carbon-12 to carbon-14 in an organic matter at the moment of death is the same as in every other living thing, but after death carbon-14 decays and is not replaced. Thus, by **measuring the ratio of carbon-12 to carbon-14 in the sample and comparing it to the ratio in a living organism, it is possible to determine the age of a formerly living thing.**

63. With the reference to the Constitution of India, consider the following statements:
1. The Constitution has authorised the President of India to notify a number of judges to be appointed to the Supreme Court.
2. The Chief Justice of India is empowered by the Constitution to administer the oath of a judge appointed to the Supreme Court.
3. The Constitution has not fixed the tenure of a judge of the Supreme Court.

Which of the statements given above is/are incorrect?
(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1 and 2 only

Ans:- Option D
Statement 1 is not correct:
According to **Article 124**, there shall be **a Supreme Court of India constituting of a Chief Justice of India and, until Parliament by law prescribes a larger number, of not more than seven other Judges**.
At present, the **Supreme Court consists of thirty-four judges** (one chief justice and thirty-three other judges). In 2019, the centre notified an increase in the number of Supreme Court judges from thirty-one to thirty-four, including the Chief Justice of India. **This followed the enactment of the Supreme Court (Number of Judges) Amendment Act, 2019.**
Originally, the strength of the Supreme Court was fixed at eight (one chief justice and seven other judges). The Parliament has increased this number of other judges progressively to ten in 1956, to thirteen in 1960, to seventeen in 1977, to twenty-five in 1986, to thirty in 2008 and to thirty-three in 2019.
Statement 2 is not correct: Article 124: Every person appointed to be a Judge of the Supreme Court shall, before he enters upon his office, make and subscribe before the President, or some person appointed in that behalf by him, an oath or affirmation according to the form set out for the purpose in the Third Schedule.
Statement 3 is correct: The Constitution has not fixed the tenure of a judge of the Supreme Court. He **holds office until he attains the age of 65 years.**

64. Consider the following statements about Angel Tax:
1. Angel Tax is the tax that listed startups are required to pay on the capital they raise through the issue of shares
2. Funds raised from a foreign investor falls out of the ambit of angel tax.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D
- Angel Tax is the tax that **unlisted startups** are required to pay on the capital they raise through the issue of shares.
- **Section 56(2) VII B of the Income Tax Act,** colloquially known as the **'angel tax' was first introduced in 2012** to deter the generation and use of unaccounted money through the subscription of shares of a closely held company at a value that is higher than the fair market value of the firm's shares.
- The provision states that when **an unlisted company, such as a start-up, receives equity investment from a resident for issue of shares that exceeds the face value of such shares, it will be counted as income for the start-up** and be subject to income tax under the head 'Income from other Sources' for the relevant financial year.

- The Finance Bill, 2023, unveiled by the Finance Minister, has proposed to **amend Section 56(2) VII B of the Income Tax Act.**
- **With the latest amendment, the government has proposed to also include foreign investors in the ambit, meaning that when a start-up raises funding from a foreign investor, that too will now be counted as income and be taxable.**

65. With reference to right to assembly as enshrined under Article-19 of the Constitution; consider the following statements:
1. The State can impose reasonable restrictions on the exercise of right of assembly on the ground of security of the state and decency or morality.
2. The right to assembly does not include the right to strike.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option B
- **Statement 1 is incorrect -** The State can impose reasonable restrictions on the exercise of right of assembly on two grounds, namely, **sovereignty and integrity of India** and **public order** including the maintenance of traffic in the area concerned.
- **Statement 2 is correct -** Every citizen has the **right to assemble peaceably and without arms**. It includes the right to hold public meetings, demonstrations and take out processions. This provision does not protect violent, disorderly, riotous assemblies, or one that causes breach of public peace or one that involves arms. **This right does not include the right to strike.**

66. With reference to the cultural history of India, consider the following statements:
1. 'Jallikattu' is an animal sport, played as part of Mattu Pongal celebrations.
2. The Koraga communities of Tulu Nadu region are traditionally associated with 'Jallikattu'.
3. Silappatikaram, the epic of Sangam period, has made reference to the celebration of 'Jallikattu'.

Which of the statement given above is/are incorrect?
(a) 2 and 3 only
(b) 2 only
(c) 1 and 2 only
(d) 3 only

Ans:- Option B

The Supreme Court upheld the laws allowing **'Jallikattu', 'Kambala' and other Bull-Cart Racing in Tamil Nadu, Karnataka and Maharashtra.** The court held that the **2017 Amendment Act and rules on Jallikattu are in concurrence with Entry 17 (prevention of cruelty to animals) of the Concurrent List** and Article 51A(g) (compassion to loving creatures) of the Constitution.

Statement 1 is correct: Jallikattu, also known as 'Eruthazhuvuthal', is a **bull-taming sport played in Tamil Nadu** as part of the Pongal celebrations on **Mattu Pongal day,** which occurs annually in January.

Statement 2 is incorrect: Jallikattu has been known to be practiced during the Tamil classical period (400–100 BCE). It was practiced among the **Ayar Tribes** people who lived in the **'Mullai' (Forest land) geographical region of the ancient** Tamil Nadu. Later, it became a platform for display of bravery.

Statement 3 is correct: A **seal from the Indus Valley civilization** depicting the practice is preserved in the National Museum, New Delhi. A cave painting in **white kaolin discovered near Madurai** depicting a lone man trying to control a bull is estimated to be **about 2500 years old.** There are also references to people observing and participating in **Jalikattu in Silappatikaram**, the great epic of Tamil classical period and another ancient **work Kalithogai**

67. Consider the following statements, with reference to the 'Open Network Digital Commerce' (ONDC):
1. 'Open Network Digital Commerce', is an e-commerce protocol developed by the Ministry of Information and Technology.
2. The ONDC aims to boost the platform-centric model of commerce by giving greater access to small merchants.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D
The Open Network for Digital Commerce (ONDC) is a **government-backed project which is aimed at enabling small merchants** and **mom-and-pop stores in parts of the country to access processes and technologies that are typically deployed by large e-commerce platforms.**

Statement 1 is not correct: ONDC is a private non-profit Section 8 company established by the **Department for Promotion of Industry and Internal Trade (DPIIT) (under Ministry of Commerce and Industry)** of the Government of India to develop open e-commerce.

Statement 2 is not correct: It is an initiative aiming at promoting open networks for all aspects of the exchange of goods and services over digital or electronic networks.

ONDC is to be based on open-sourced methodology (open network model) using open specifications and open network protocols independent of any specific platform.

It goes beyond the current platform-centric digital commerce model where the buyer and seller have to use the same platform or application to be digitally visible and do a business transaction.

68. Consider the following statements:
1. A gene is the entire set of genetic instructions found in a cell.
2. Genome sequencing involves identifying the order of base pairs in deoxyribonucleic acid to decode the genetic fingerprint of a human.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option B
Genome is the **entire set of genetic instructions** found in a cell. Human genome is the **entire set of deoxyribonucleic acid** (DNA) residing in the nucleus of every cell of the human body. It carries the **complete genetic information** responsible for the development and functioning of an organism.

A chromosome consists of a **long strand of DNA** containing **many genes**. A gene is considered the basic unit of inheritance. It is a region of DNA that comprises of a **particular set of instructions for a particular function** in the body or protein-coding.

Genome sequencing is the process of **determining the complete DNA sequence** of an organism's genome. It involves **identifying the order of base pairs** [adenine (A), cytosine (C), guanine (G), and thymine (T)] that make up the DNA molecule in each of the chromosomes, to decode the genetic fingerprint of a human. Sequencing individual genomes helps us understand human diversity at the genetic level and how prone we are to certain diseases.

69. Consider the following statements:
1. The constitution authorises state legislatures to provide for a law for the adjudication of any interstate water dispute.
2. The Inter-State Water Disputes Act (1956) provides for the original jurisdiction of the Supreme Court in matters referred to the water dispute tribunal.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D
Statement 1 is incorrect - Article 262 sub clause (1) states that **the Parliament may by law provide for the adjudication of any dispute or complaint with respect to** the use, distribution or control of the waters of, or in, any **inter-State river or river valley.**

Statement 2 is incorrect - The subclause (2) states that the Parliament may by law provide that neither the Supreme Court nor any other court shall exercise jurisdiction in respect of any such dispute or complaint as is referred to the tribunal, accordingly **Parliament has enacted the Inter-State Water Disputes Act (1956)** in which clause (11) provides for the Bar of jurisdiction of Supreme Court and other courts in respect of any **water dispute which may be referred to a Tribunal under this Act.**

70. Consider the following statements about CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora)?
1. The aim is to ensure that international trade does not threaten survival of wild animals only.
2. It is legally binding on the parties and hence replaces the national laws.
3. Appendix 1 consist of species that are threatened with extinction.

Which of the following statement is/are correct:
(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 3 only

Ans:- Option D
CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments**. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species.**

CITES was drafted as a result of a resolution adopted in 1963 at a meeting of members of IUCN (The World Conservation Union).

CITES is an **international agreement to which States and regional economic integration organizations adhere voluntarily.**

States that have agreed to be bound by the Convention ('joined' CITES) are known as Parties.

Although CITES is legally binding on the Parties – in other words they have to implement the Convention – it does not take the place of national laws. Rather it provides a framework to be respected by each Party,

which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level. CITES works by subjecting international trade in specimens of selected species to certain controls. **All import, export, re-export and introduction from the sea of species covered by the Convention has to be authorized through a licensing system.**

- **Appendix I includes species threatened with extinction**. Trade in specimens of these species is permitted only in exceptional circumstances.
- **Appendix II** includes **species not necessarily threatened with extinction**, but in which **trade must be controlled** in order to avoid utilization incompatible with their survival.
- **Appendix III:** This Appendix **contains species that are protected in at least one country**, which has asked other CITES Parties for assistance in controlling the trade. Changes to Appendix III follow a distinct procedure from changes to Appendices I and II, as each Party's is entitled to make unilateral amendments to it.

71. Consider the following statements regarding 'Forum shopping':

1. Forum shopping refers to the practice of litigants or lawyers deliberately selecting a particular judge or court where they believe the judgment will be more favorable to their case.
2. The Supreme Court termed forum shopping as a "disreputable practice by the courts" that "has no sanction and paramountcy in law".

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option C
- Forum shopping refers to the **practice of litigants or lawyers** deliberately selecting **a particular judge or court where they believe the judgment will be more favorable** to their case. **Hence, statement 1 is correct.**
- It **circumvents the normal course of justice and can lead to an imbalance in the workload of courts**. The Supreme Court termed forum shopping as a "disreputable practice by the courts" that "has no sanction and paramountcy in law" in Vijay Kumar Ghai vs. State of W.B. **Hence, statement 2 is correct.**

72. Consider the following statements.

1. Melanesia, Micronesia, and Polynesia are the major groups of Pacific Islands.
2. Papua New Guinea is located north of Australia.
3. Papua New Guinea is among the least populous Pacific Island nation.

Which of the above statements is/are correct?
(a) 1,2
(b) 1,3
(c) 2,3
(d) 1,2,3

Ans:- Option C
The Pacific Islands are a group of islands in the Pacific Ocean. They are further **categorized into three major island groups: Melanesia, Micronesia, and Polynesia.** Papua New Guinea's location just north of Australia makes it strategically significant. It was the site of fierce battles during World War II, and with a population of nearly 10 million people, it's **one of the most populous Pacific Island nation.**

73. Consider the following statements:

1. The Son River is the 2nd-largest southern (right bank) tributary of the Ganges after the Yamuna River.
2. It flows through four states: Chhattisgarh, Madhya Pradesh, Uttar Pradesh, and Bihar.
3. It originates near Amarkantak Hill in the Gaurela-Pendra-Marwahi district of Chhattisgarh and finally merges with the Ganges River near Patna in Bihar.

Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option D
- Ranking as the **second-largest tributary** on the southern (right bank) of the Ganges, the Son River follows the Yamuna River in size. **Hence, statement 1 is correct.**
- The Son River meanders through four states, including **Chhattisgarh, Madhya Pradesh, Uttar Pradesh, and Bihar**. **Hence, statement 2 is correct.**
- Beginning its journey **near Amarkantak Hill in the Gaurela-Pendra-Marwahi district** of Chhattisgarh, the Son River eventually converges with the Ganges River near Patna in Bihar. **Hence, statement 3 is correct.**

74. Consider the following pairs:
1. Loktak Lake: Meghalaya

2. Umiam Lake: Manipur
3. Kolleru Lake: Andhra Pradesh
4. Pulicat Lake: Andhra Pradesh

Which of the above pairs is/are correct?
(a) 1,2,3
(b) 1,3,4
(c) 3,4
(d) 2,3,4

Ans:- Option C
- Loktak Lake is a freshwater lake in Manipur. It is the **largest freshwater lake in South Asia.**
- Umiam Lake is a **reservoir in the hills north of Shillong in the state of Meghalaya.**
- Kolleru Lake is **one of the largest freshwater lakes in India** located in state of Andhra Pradesh and forms the largest shallow freshwater lake in Asia
- Pulicat Lake is the **second largest brackish water lagoon in India**, (after Chilika Lake). Major part of the lagoon comes under Tirupati district of Andhra Pradesh.

75. Consider the following statements regarding Open Network for Digital Commerce (ONDC).
1. ONDC is an interoperable network that seeks to democratise digital commerce in India.
2. ONDC eliminates the need for buyers and sellers to use the same application, and promotes the discoverability of local digital stores across industries.
3. The ONDC entity, a not-for-profit company incorporated under the Companies Act 2013, manages and operates the ONDC Network.
4. ONDC has been endorsed by the Department for Promotion of Industry and Internal Trade (DPIIT) under the Union Ministry of Commerce and Industry.

Which of the above statements is/are correct?
(a) 1,2,3
(b) 2,3,4
(c) 1,3,4
(d) 1,2,3,4

Ans:- Option D
ONDC is an interoperable network based on the BeckN protocol that anyone can piggyback on. It seeks to break down silos in digital commerce by enabling platforms of varying configurations (big or small) to connect and operate seamlessly on it.
It comprises different entities called 'Network Participants', including Buyer Applications, Seller

Applications, and Gateways that perform the search and discovery function. Imagine a scenario where all the large e-commerce platforms, from food delivery to clothing and fashion to conveyance, are accessible in one place, along with your neighbourhood start-ups, shops, and kirana stores.

How does this help, and why is it significant?
By moving the exchange of goods and services from a platform-centric approach to a network-centric approach, **ONDC eliminates the need for buyers and sellers to use the same application**, and promotes the discoverability of local digital stores across industries.

What is ONDC's inclusive governance approach?
The ONDC entity, a **not-for-profit company incorporated under Section 8 of the Companies Act 2013**, manages and operates the ONDC Network.
It is **responsible for building and maintaining the underlying infrastructure** (common registries and protocols) as well as defining the rules of engagement and code of conduct for the Network Participants through the ONDC Network Policy and the ONDC Network Participant Agreement.

To what extent will the government be involved in ONDC?
ONDC has been endorsed by the Department for Promotion of Industry and Internal **Trade (DPIIT) under the Union Ministry of Commerce and Industry**. DPIIT is not involved in ONDC's funding, but is at the forefront of its evangelisation through light-touch governmental oversight.
To **ensure a market + community driven approach to decision-making**, the board includes representatives from banks, the government, and independent industry and civil society members.

76. Regarding the Axolotls, consider the following statements:
1. It is a species of salamander with remarkable regenerative abilities.
2. They are aquatic and spend their whole lives underwater.
3. The International Union for the Conservation of Nature and Natural Resources (IUCN) has listed the axolotl as a critically endangered species.

Which of the statements given above is/are correct?
(a) 1 and 2
(b) 1 and 3
(c) 2 and 3
(d) 1,2, and 3

Ans:- Option B

- The Axolotl, a species of salamander (lizard-like amphibians) possesses **an extraordinary ability to regenerate lost body parts,** inspiring researchers to delve into the secrets of this unique regenerative power. **Hence, statement 1 is correct.**
- Axolotls are amphibians that spend their whole lives underwater. **They exist in the wild in only one place—Lake Xochimilco near Mexico City**, a network of artificial channels, small lakes, and temporary wetlands that help supply water to nearby Mexico City's 18 million residents. **Hence, statement 2 is not correct**.
- The International Union for the Conservation of Nature and Natural Resources (IUCN) **has classified the axolotl as a critically endangered species since 2006. Hence, statement 3 is correct.**

77. Which of the following statements is/are correct?

1. The Convention on Biological Diversity (CBD) was signed at the Earth Summit (1992) at Rio de Janeiro in Brazil.
2. The Secretariat of the Convention on Biological Diversity (CBD) is based in Montreal, Canada.
3. Nagoya Protocol is a legal instrument that focuses on access to genetic resources and the fair and equitable sharing of benefits.

Select the correct answer using the code given below:
(a) 1 and 2
(b) 2 and 3
(c) 1 only
(d) 1,2 and 3

Ans:- Option D

- The Convention on Biological Diversity (CBD) was **negotiated and signed by nations at the Earth Summit at Rio de Janeiro in Brazil on June 5, 1992**. The convention came into force on December 29, 1993**. India became a party to the convention on February 18, 1994**. **Hence, statement 1 is correct.**
- The Secretariat of the Convention on Biological Diversity (CBD) is based in **Montreal, Canada**. **Hence, statement 2 is correct.**
- The Nagoya Protocol sought to ensure commercial and research utilisation of genetic resources led to sharing its benefits with the government and the community that conserved such resources. **Hence, statement 3 is correct.**

78. Which of the following is/are the objectives of Pradhan Mantri Swasthya Suraksha Yojana (PMSSY)?

1. Correcting the imbalances in the availability of affordable healthcare facilities in the different parts of the country.
2. Providing universal access to public health services and universal immunisation.
3. Augmenting facilities for quality medical education in the country.

Select the correct answer code:
(a) 1 only
(b) 1 and 3
(c) 2 and 3
(d) 1 2 and 3

Ans:- Option B
PMSSY was announced in 2003 with objectives of **correcting regional imbalances** in the availability of affordable/ reliable tertiary healthcare services and also to augment facilities for quality medical education in the country.

79. Consider the following statements regarding Group of Five (G5) countries.

1. The Group of Five (G5) encompasses five nations which have joined together for an active role in the rapidly evolving international order.
2. The G5 nations work to promote dialogue and understanding between developing and developed countries.
3. India is not part of G5 countries.

Which of the above statements is/are correct?
(a) 1 and 3
(b) 2 and 3
(c) 2 only
(d) 1 and 2

Ans:- Option D
The Group of Five (G5**) encompasses five nations which have joined together for an active role in the rapidly evolving international order.** Individually and as a group, **the G5 nations work to promote dialogue and understanding between developing and developed countries**. The G5 seek to find common solutions to global challenges.
The grouping includes **Brazil, China, India, Mexico, and South Africa.**

80. Which of the following are considered as Ex-situ crop residue management (CRM)?

1. Use of paddy straw as feedstock for 2G ethanol plants
2. Use of paddy straw for biomass power projects
3. Incorporation of paddy straw in the soil using heavy machinery
4. Use of paddy straw for co-firing in thermal power plants

Select the correct answer code:
(a) 2,3,4
(b) 1,2,3
(c) 1,2, and 4
(d) 1,2,3 and 4

Ans:- Option C

The Commission for Air Quality Management in National Capital Region and Adjoining Areas (CAQM) had developed a **framework and action plan for the effective prevention and control of stubble burning**. The framework/action plan includes **in-situ management**, i.e., incorporation of paddy straw and stubble in the soil using heavily subsidised machinery (supported by crop residue management (CRM) Scheme of the Ministry of Agriculture and Farmers Welfare). **Ex-situ CRM efforts include the use of paddy straw for biomass power projects and co-firing in thermal power plants, and as feedstock for 2G ethanol plant**s, feed stock in CBG plants, fuel in industrial boilers, waste-to-energy (WTE) plants, and in packaging materials, etc.

81. Renke commission, sometimes seen in news is related to
(a) Sub Categorization of OBC
(b) Agriculture Marketing
(c) Defence Modernization
(d) Denotified tribes(DNTs)

Ans:- Option D

Who are de-notified, nomadic and semi-nomadic tribes?
These are communities who are the **most vulnerable and deprived**. **Denotified tribes (DNTs) are communities that were 'notified' as being 'born criminal' during the British regime** under a series of laws starting with the Criminal Tribes Act of 1871. Nomadic and semi-nomadic communities are defined as those who move from one place to another rather than living at one place all the time.
A National Commission for De-notified, Nomadic and Semi-Nomadic Tribes (NCDNT) was constituted in 2006 by the then government. It was **headed by Balkrishna Sidram Renke** and submitted its report in

June 2008, in which it said, "It is an irony that these tribes somehow escaped the attention of our Constitution makers and thus got deprived of the Constitutional support unlike Scheduled Castes and Scheduled Tribes."

82. Consider the following statements regarding Multidimensional Poverty Index (MPI).
1. Multidimensional Poverty Index (MPI) is released by World Bank.
2. The global MPI constructs on indicators spanning health, education and standard of living.
3. The MPI ranges from 0 to 1, and higher values imply higher poverty.

Which of the above statements is/are correct?
(a) 1 and 2
(b) 2 only
(c) 2 and 3
(d) 1 and 3

Ans:- Option C
Multidimensional Poverty Index (MPI):
The report produced by the **United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI).**
The global MPI constructs a **deprivation profile of each household and person through 10 indicators spanning health, education and standard of livin**g. All indicators are equally weighted within each dimension. The global MPI identifies people as multidimensionally poor if their deprivation score is 1/3 or higher.
The MPI is calculated by multiplying the incidence of poverty and the average intensity of poverty. **The MPI ranges from 0 to 1, and higher values imply higher poverty.**

83. Consider the following statements regarding Millets.
1. Millets are climate-smart crops that are drought-resistant, growing in areas with low rain and infertile soil.
2. They are hardier than other cereals.
3. They are less extractive for the soil and can revive soil health.

Which of the above statements is/are correct?
(a) 1 and 2
(b) 1 and 3
(c) 2 and 3
(d) 1,2 and 3

Ans:- Option D

Millets — which fell out of fashion a few decades ago — have received renewed attention as crops that are good for nutrition, health, and the planet. **Millets are climate-smart crops that are drought-resistant, growing in areas with low rain and infertile soil.** They are hardier than other cereals, more **resilient to changes in climate, and require less water to cultivate** (as much as 70% less than rice), and less energy to process (around 40% less than wheat). Since they need fewer inputs, they are less extractive for the soil and can revive soil health. Additionally, **their genetic diversity ensures that agrobiodiversity is preserved.**

84. The Red Sea is a strip of water and an inlet of the Indian Ocean occupying the area separating the continent of Africa from Asia. The countries bordering the Red Sea are

1. Egypt
2. Djibouti
3. Ethiopia
4. Yemen
5. Saudi Arabia

Select the correct answer code:

(a) 1,2,3,4
(b) 1,2,3,5
(c) 2,3,4,5
(d) 1,2,4,5

Ans:- Option D

The six countries that border the Red Sea are the following: Saudi Arabia, Yemen, Egypt, Sudan, Eritrea, and Djibouti.

85. Which of the following is the ethnic community of Assam?

(a) Gond
(b) Bhil
(c) Ahom
(d) Adi

Ans:- Option C

The **Ahom** or **Tai-Ahom** is an **ethnic group from the states of Assam and Arunachal Pradesh.** The members of this group are **admixed descendants of the Tai people** who reached the Brahmaputra valley of Assam in 1228 and the local indigenous people who joined them over the course of history. **Sukaphaa**, the leader of the Tai group and his 9000 followers **established the Ahom kingdom** (1228–1826 CE), which controlled much of the Brahmaputra Valley in modern Assam until 1826.

1. Consider the following statements:
1. The Electoral Bonds shall be valid for 25 calendar days from the date of issue.
2. The Electoral Bonds can be encashed by any political party within a specified time-frame.
3. The amount of donation received by the political parties must be disclosed to the Election Commission.

Which of the statements given above is/are incorrect?
(a) 1 and 2 only
(b) 3 only
(c) 1 only
(d) 2 and 3 only

Ans:- Option A
Only the political parties registered under **Section 29A of the Representation of the People Act, 1951**, and which **secured not less than 1% of the votes polled** in the last general election to the House of the People or the Legislative Assembly of the State, **shall be eligible to receive the Electoral Bonds**. The Electoral Bonds shall be encashed by an eligible political party, only through a bank account with the authorized bank. **The Electoral Bonds would have a life of only 15 days**, during which it can **be used for making donation only to the political parties,** which have secured not less than 1% of the votes polled in the last general election to the House of the People or to the Legislative Assembly.

2. Consider the following statements about the Indian citizenship:
1. The Citizenship Act, 1955, regulates the modes of acquiring and terminating the Indian citizenship.
2. The Government of India can deprive a person of the Indian citizenship, if the Registration or the Naturalization Certificate was obtained by fraud.
3. Acquiring the nationality of other country or countries does not impact the Indian citizenship of such person.

Which of the statements given above are correct?
(a) 2 and 3 only
(b) 1 and 2 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option B
The Constitution of India does not allow dual citizenship. According **to** Article 9, no person shall be a citizen of India, if he has voluntarily acquired the citizenship of any foreign state**.** The Parliament, in its exercise of power under Article 11, enacted the **Citizenship Act, 1955, which regulates the modes of acquiring and terminating the Indian citizenship.**

3. With reference to the Inter-State Council, consider the following statements:
1. The Constitution of India provides for the establishment of an Inter-State Council by an Act of the Parliament.
2. The Council can inquire, investigate or make recommendations on the disputes which may have arisen between the states.
3. An Inter-State Council was set up after independence, based upon the recommendations of Justice R. S. Sarkaria.

Which of the statements given above are correct?
(a) 1 and 2 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

Ans:- Option C
An Inter-State Council, under **Article 263, can be set up if at any time it appears to the President that the public interests would be served by the establishment of a Council charged with the duty of**
(a) inquiring into and advising upon the disputes which may have arisen between the states;
(b) investigating and discussing the subjects in which the state(s) and the Union have common interest; or
(c) make recommendations for better co-ordination of policy and action among the states. It shall be lawful for the President by order to establish such a Council, and to define the nature of the duties to be performed by it and its organization and procedure

4. The Egmont Group, recently in the news, can be associated with which of the following?
(a) Sharing maritime intelligence
(b) Sharing financial intelligence
(c) Preserving marine environment
(d) Developing Artificial Intelligence for Mars

Ans:- Option B
The Egmont Group recognizes that **financial intelligence sharing is of paramount importance** and has become the **corner-stone of international efforts**

to counter money laundering, terrorist financing and associated predicate offences. The Financial Intelligence Units (FIUs) are required by the international standards to exchange information and engage in international co-operation.

5. Consider the following pairs:

1. The Tribes Advisory Council	Sixth Schedule
2. The District Council	Fifth Schedule
3. The Regional Council	Sixth Schedule

Which of the pairs given above is/are correctly matched?
(a) 2 only
(b) 1 and 2 only
(c) 3 only
(d) 1 and 3 only

Ans:- Option C
- **The Tribes Advisory Council**: Fifth Schedule
- **The District Council**: Sixth Schedule
- **The Regional Council**: Sixth Schedule

6. With respect to the 'Buy Now Pay Later (BNPL) Cards', consider the following statements:
1. The Buy Now Pay Later Cards (BNPL) Cards are issued only by the banks.
2. The issuance of these cards is regulated by the Reserve Bank of India.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option D
The Buy Now Pay Later (BNPL) Cards are **usually issued by the NBFCs (The Non-Banking Financial Companies) and the Fintech Companies.** Presently, the Fintech Companies and the NBFCs claim that the loans offered through the BNPL Cards do not strictly fall under the definition of 'Credit', as they are normally provided at 0% interest rate. Hence, no regulations are applicable to them. In this regard, the **RBI's Working Group on Digital Lending has recommended that the RBI should bring such BNPL Cards under the ambit of regulation**.

7. Which of the following commodities is/are presently covered under the Essential Commodities Act, 1955?
1. Drugs

2. Fertilizers
3. Sugar
4. Petroleum products

Select the correct answer using the code given below:
(a) 1 only
(b) 1 and 2 only
(c) 1, 2 and 3 only
(d) 1, 2, 3 and 4

Ans:- Option D
The Essential Commodities Act, 1955**, empowers the Government to regulate the prices of the goods declared as 'essential' under the Act.** Presently, it covers commodities, such as **food (including sugar), fertilisers, drugs, petroleum products, jute etc.** Further, commodities can be added or removed from the Act by the Centre in consultation with the State Governments.

8. With respect to the drug pricing regime in India, consider the following statements:
1. The National Pharmaceutical Pricing Authority (NPPA) functions under the Ministry of Health and Family Welfare.
2. The NPPA can fix the ceiling prices on the non-scheduled drugs under certain exceptional circumstances.
3. The NPPA has included more than 50% of the drugs sold in India under the National List of Essential Medicines (NLEM).

Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

Ans:- Option B
The National Pharmaceutical Pricing Authority (NPPA) has been set up through an **Executive Resolution of the Government and presently functions under the Ministry of Chemicals and Fertilisers**. Increase or decrease the prices of the drugs listed under the NLEM. In pursuance of these powers, the **NPPA has recently increased the prices of the 21 essential medicines by almost 50%**. Presently, around **18% of the drugs sold in India are under the NLEM.**

9. With respect to the UPI 123PAY, consider the following statements:
1. The UPI 123PAY works on both feature phones and smart phones, without the need for internet.

2. There is no limit on the transactions done through the UPI 123PAY.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option A
The UPI 123PAY works on both feature phones and smart phones (without internet).
Developed by: The National Payments Corporation of India (NPCI).
Limit on Transactions:
- **Per Transaction Limit:** Rs. 5,000.
- **Per Day Limit:** Rs. 1 lakh.

10. Which of the following statements related to the New Pension Scheme (NPS) is incorrect?
(a) Any Indian citizen (Whether resident and non-resident) in the age group 18- 70 years can join the NPS.
(b) Unlike the old Pension Scheme, the NPS provides for the contribution by both the employee and the Government.
(c) Unlike the old Pension Scheme, the NPS does not provide for defined benefit upon retirement.
(d) Pre-mature exit from the NPS is not allowed at all for the individuals.

Ans:- Option D
Regulated by the Pension Fund Regulatory and Development Authority (PFRDA).
Who can Join?
Any citizen of India (Whether resident and non-resident) and the Overseas Citizen of India (OCI) in the age group of 18-70 years. Earlier, the maximum age for entry was 65. In August, 2021, the PFRDA has increased the maximum age limit to 70.
Different Sectors:
a. Government Sector:
- **Central Government**: Introduced with effect from **January 1, 2004** (except for the armed forces).
- **State Government:** Almost all the State Governments (except a few, such as West Bengal) have also adopted the NPS through their own notifications.

b. **Private Sector (Non-Government Sector):**
- **Corporates.** All Citizens of India: Any individual not being covered by any of the above sectors has been allowed to join the NPS 2009 onwards.

Contribution: The Government employees make a monthly contribution at the rate of 10% of their salary and Dearness Allowance, and a matching contribution is paid by the Government. **For the Central Government employees, the employer's contribution rate has been enhanced to 14% from 1st April, 2019**. The State Governments have also been given an option to increase their contribution to 14%, through their own gazette notification. **Pre-mature exit from the NPS is allowed after 10 years.**

11. With reference to the Convention on Biological Diversity (CBD), consider the following statements:
1. The CBD covers biodiversity at all levels, i.e., ecosystems, species and genetic resources.
2. The Secretariat of the Convention on Biological Diversity (SCBD) is based in Montreal, Canada.
3. The Convention entered into force at the Rio "Earth Summit" (1992).

Which of the statements given above are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option A
The conservation of biodiversity is a common concern of the humankind. **The Convention on Biological Diversity (CBD) covers biodiversity at all levels: ecosystems, species and genetic resources**. It also covers biotechnology, including through the Cartagena Protocol on Biosafety. In fact, it covers all possible domains that are directly or indirectly related to biodiversity and its role in development, ranging from **science, politics and education to agriculture, business, culture and much more. The Convention was opened for signature on 5th June, 1992, at the United Nations Conference on Environment and Development (The Rio "Earth Summit").** It remained open for signature until 4th June, 1993, by which time it had received 168 signatures. **The Convention entered into force on 29th December, 1993,** which was 90 days after the 30th ratification. **The first session of the Conference of the Parties was scheduled for 28th November – 9th December, 1994, in the Bahamas.**

12. With reference to the Eco Sensitive Zone, consider the following statements:
1. As per the National Wildlife Action Plan, the land within 10 km of the boundaries of the National Parks

and the Wildlife Sanctuaries is to be notified as eco-fragile zones or Eco-Sensitive Zones (ESZs).

2. Felling of trees, establishment of hotels and resorts, and commercial use of natural water resources come under the category in ESZ of prohibited activities.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option A
Activities like felling of trees, establishment of hotels and resorts, drastic change of agriculture system, commercial use of natural water, erection of electrical cables, drastic change of agriculture system, ongoing agriculture and horticulture practices by the local communities, rain water harvesting, organic farming, etc., come under the regulated category

13. With reference to the Biosphere Reserves, consider the following statements:
1. These are the sites established by the countries and recognized under UNESCO's Man and the Biosphere (MAB) Programme.
2. Nanda Devi was the first notified Biosphere Reserve in India.
3. Area-wise, the Rann of Kachchh is the largest Biosphere Reserve in India.

Which of the statements given above are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option C
The Nilgiri Biosphere Reserve was the first Biosphere Reserve in India, notified in 1986. It covers an area of 5,520 sq km and spreads in the states of **Kerala, Tamil Nadu and Karnataka**. It includes part of Wayanad, Nagarhole, Bandipur and Madumalai, Nilambur, the Silent Valley and the Siruvani Hills. **Nanda Devi was the second to be notified in 1988**.
The Rann of Kachchh Biosphere Reserve was notified in 2008. It covers the largest area (of 12,454 sq km) among all other Biosphere Reserves in India. It covers part of **Kachchh, Rajkot, Surendra Nagar and Patan civil districts of Gujarat state.**

14. With reference to the Nagoya Protocol, consider the following statements:

1. It is a supplementary agreement to the Convention on Biological Diversity.
2. It provides a transparent legal framework for the effective implementation of the fair and equitable sharing of benefits arising out of the utilization of the genetic resources.
3. The Protocol covers the 'traditional knowledge' (TK) associated with the genetic resources.

Which of the statements given above are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option D
The **Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the Convention on Biological Diversity (CBD) is a supplementary agreement to the CBD**. It provides a transparent legal framework for the effective implementation of one of the three objectives of the CBD: The fair and equitable sharing of benefits arising out of the utilization of the genetic resources.

15. With reference to the National Tiger Conservation Authority (NTCA), consider the following statements:
1. It is a statutory body constituted under the enabling provisions of the Environment (Protection) Act, 1986.
2. The NTCA approves the Tiger Conservation Plan prepared by the state government.
3. It lays down normative standards for tourism activities and guidelines for Project Tiger.

Which of the statements given above are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option B
The National Tiger Conservation Authority (NTCA) is a **statutory body under the Ministry of Environment, Forest and Climate Change,** constituted under the enabling provisions of the Wildlife (Protection) Act, 1972, as amended in 2006, for **strengthening tiger conservation,** as per the powers and functions assigned to it under the said Act.

16. With respect to the Zero Coupon Zero Principal Bonds, to be issued on the Social Stock Exchanges, consider the following statements:

1. These Bonds do not carry any interest and the principal amount need not be repaid.
2. These Bonds can be issued by both the 'Not-for-Profit' entities, as well as the 'For-Profit' companies.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option A
The Zero Coupon Zero Principal Bonds are issued by the **'Not-for-Profit Organizations (NPOs)', such as societies, trusts and Section-8 companies**. **These Bonds do not carry any interest.** The money borrowed by the NPOs need not be repaid.

17. With reference to the "Reverse Currency War", sometimes seen in the news, consider the following statements:
1. Under the "Reverse Currency War", the countries devalue their domestic currency to reduce the cost of the imports.
2. The "Reverse Currency War" comes into being due to the adoption of the Quantitative Easing Policy of the US Fed Bank.
3. The Reverse Currency War may lead to decrease in the dollar value, vis-à-vis the domestic currencies.

Which of the statements given above is/are correct?
(a) 1 only
(b) 1 and 2 only
(c) 3 only
(d) 2 and 3 only

Ans:- Option C
About the Reverse Currency War: In the case of the Reverse Currency War, the countries compete with each other to strengthen their domestic currencies. **Such policy is adopted to counter rapid depreciation in the domestic currency,** due to the US Fed Bank policies. For example, adoption of Fed Tapering in the US could lead to the depreciation of the domestic currencies. **The depreciation of the domestic currency would have adverse impact in terms of the imports being costly, higher inflation, higher dollar outflows** etc. Hence, to counter such adverse impacts, the countries would strengthen their domestic currencies by injecting more dollars.

18. Consider following statements wrt to Foreign Direct Investment(s) in India?

1. A foreign entity buying shares and bonds issued by an Indian company is FDI.
2. Investment in the American Depository Receipts (ADRs) issued by an Indian company is not covered as FDI.
3. Investment in India by an Indian company, which is majorly owned by a foreign entity is FDI

Select the incorrect answer using the code given below:
(a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

Ans:- Option C
Investment of 10% or more in a listed company in India is treated as Foreign Direct Investment (FDI). However, investment of **less than 10 % in a listed company in India is treated as Foreign Portfolio Investment (FPI).**
- Investment in an unlisted Indian company (irrespective of threshold) is always treated as FDI.
- Investment in the American Depository Receipts (ADRs) issued by an Indian Company is treated as FDI.
- Investment in India by an Indian company, which is majorly owned by a foreign entity, is treated as Indirect Foreign Investment.

19. With reference to the RBI's Central Bank Digital Currency (CBDC), consider the following statements:
1. The Reserve Bank of India (RBI) Act, 1934, has been amended to facilitate the introduction of the CBDC.
2. The CBDC would not be considered as a fungible legal tender in India.
3. The introduction of the CBDC is likely to decrease the RBI's Seigniorage.
4. The CBDC is freely convertible against the commercial bank money and cash.

Which of the statements given above is/are correct?
(a) 1 only
(b) 1, 2 and 3 only
(c) 1, 3 and 4 only
(d) 1 and 4 only

Ans:- Option D
The introduction of the CBDC is likely to **increase the RBI's Seigniorage.**
The features of the CBDC include:

- The CBDC is a **sovereign currency** issued by the Central Banks in alignment with their monetary policy.
- It appears as a liability on the Central Bank's balance sheet.

20. Which of the following is/are the function(s) of the National Land Monetisation Corporation (NLMC)?

1. To undertake the monetisation of surplus land and building assets of the PSUs.
2. To act as an advisory body and support the PSUs in identifying their surplus non-core assets.
3. To act as a repository of best practices in land monetisation.

Select the correct answer using the code given below:
(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option D
Details about the National Land Monetisation Corporation (NLMC) –
Establishment: Set up as a **wholly-owned Government of India company,** with an initial authorized share capital of Rs. 5,000 crores and a paid-up share capital of Rs. 150 crores.
Mandate:

- The surplus land and building assets of the PSUs (The Public Sector Undertakings) would be transferred to the NLMC. The NLMC would then undertake the monetisation of surplus land and building assets. As a part of such an exercise, the NLMC would either sell or lease the surplus land and buildings to the private sector.
- The NLMC will also **act as an advisory body and support other government entities** and the CPSEs (The Central Public Sector Enterprises) in identifying their surplus non-core assets and monetising them in an efficient and professional manner.
- To **act as a repository of best practices in land monetisation**.

21. Which of the following is the correct chronological order of the following events?

1. Reign of Asoka
2. Invasion of Alexander
3. Arabs conquer Sind
4. Pilgrimage of Xuan Zang

Select the correct answer using the code given below:

(a) 1-3-2-4
(b) 1-2-3-4
(c) 2-1-3-4
(d) 2-1-4-3

Ans:- Option D

- 327-325 **BCE Invasion of Alexander of Macedon**
- 321 BCE Accession of **Chandragupta Maurya**
- 272/268-231 BCE Reign of Asoka
- 185 BCE **End of the Mauryan empire**
- 200-100 BCE Indo-Greek rule in the northwest; Cholas, Cheras and Pandyas in south India; Satavahanas in the Deccan
- 100 BCE-200 CE Shaka (peoples from Central Asia) rulers in the northwest; Roman trade; gold coinage
- 78 CE **Accession of Kanishka**
- 100-200 CE Earliest inscriptional evidence of land grants by **Satavahana and Shaka rulers**
- 320 CE Beginning of Gupta rule
- 335-375 CE Samudragupta
- 375-415 CE Chandragupta II; Vakatakas in the Deccan
- 500-600 CE **Rise of the Chalukyas in Karnataka and of the Pallavas in Tamil Nadu**
- 606-647 CE Harshavardhana king of Kanauj; Chinese pilgrim Xuan Zang comes in search of Buddhist texts
- 712 Arabs conquer Sind

22. The term 'Adimai' mentioned in the Sangam Texts refers to which of the following?
(a) Village headman
(b) Landowners
(c) Slaves
(d) Ploughmen

Ans:- Option C
Early Tamil literature (the Sangam texts) mentions different categories of people living in the villages – **large landowners or vellalar, ploughmen or uzhavar and slaves or adimai.** It is likely that these differences were based on differential access to land, labour and some of the new technologies. The large landholders, as well as the village headman (whose position was often hereditary), emerged as powerful figures, and often exercised control over other cultivators.

23. Which of the following sub committees for coordinating military under Mauryan Empire were mentioned by Megasthenes?
1. Navy
2. Slaves

3. Elephants

Select the correct answer using the code given below:
(a) 1 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

Ans:- Option B
Megasthenes mentions a committee with **six subcommittees for coordinating military activity**. Of these, **one looked after the navy, the second managed transport and provisions; the third was responsible for foot-soldiers, the fourth for horses, the fifth for chariots and the sixth for elephants.**

24. Which of the following ancient literature text was composed the earliest?
(a) Ashtadhyayi
(b) Manu Smriti
(c) Sushrut Samhitas
(d) Natyashastra

Ans:- Option A
- 500 BCE **Ashtadhyayi of Panini**, a work on Sanskrit grammar
- 500-200 BCE **Major Dharmasutras** (in Sanskrit)
- 500-100 BCE Early Buddhist texts including the **Tripitaka** (in Pali)
- 500 BCE-400 CE **Ramayana and Mahabharata** (in Sanskrit)
- 200 BCE-200 CE **Manusmriti** (in Sanskrit); composition and compilation of Tamil Sangam literature
- 100 CE Charaka and Sushruta Samhitas, works on medicine (in Sanskrit)
- 200 CE onwards **Compilation of the Puranas** (in Sanskrit)
- 300 CE Natyashastra of Bharata, a work on dramaturgy (in Sanskrit)
- 300-600 CE Other **Dharmashastras** (in Sanskrit)
- 400-500 CE Sanskrit plays including the works of **Kalidasa**; works on astronomy and mathematics by **Aryabhata** and Varahamihira (in Sanskrit); compilation of **Jaina works (in Prakrit)**

25. The Buddhist text 'Majjhima Nikaya' belongs to which of the following sect?
(a) Mahayana
(b) Sarvastivadins
(c) Theravada
(d) Vajrayana

Ans:- Option C
The **Majjhima Nikaya is a Buddhist scripture, the second of the five nikayas, or collections, in the Sutta Pitaka**, which is one of the "three baskets" that compose the Pali Tipitaka of Theravada Buddhism.

26. With reference to the states of the Deccan and South India, consider the following statements:
1. Chandragupta II married his daughter into the Vakataka royal family.
2. The Chalukyas set up their kingdom in western Deccan.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans:- Option C

27. Consider the following statements:
1. Gautam Buddha recommended a ten-fold path for the elimination of human misery.
2. The people of Magadha responded readily to Buddhism, because they were looked down upon by the orthodox Brahmanas.
3. The use of Prakrit contributed to the spread of Buddhism.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 and 3 only
(c) 2 only
(d) 1, 2 and 3

Ans:- Option C
Gautama Buddha recommended an **eight-fold path (Ashtangika Marga) for the elimination of human misery**. This path is attributed to him in a text of about the third century BC. It comprised **right observation, right determination, right speech, right action, right livelihood, right effort, right awareness and right concern.**

28. With reference to Jainism, consider the following statements:
1. Mahavira was the last or the twenty-fourth Tirthankara.
2. Vardhamana Mahavira was the spiritual successor of Rishabhadeva.

3. Mahavira's family was connected with the royal family of Magadh.

Which of the statements given above are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option C
Some Jainas believe that Rishabhadeve was the first Tirthankara or teacher of Jainism. He is associated with Ayodhya. The earliest important teachings of Jainism are attributed to **Parshvanatha, the twenty-third Tirthankar**a, who hailed from Banaras, abandoned royal life and became an ascetic. **Vardhamana Mahavira was his spiritual successor, who was the real founder of Jainism.**

29. Consider the following statements:
1. The Lokayata Philosophy underlined the importance of intimate contact with this world and showed a lack of belief in the other world.
2. Charvaka denies the operation of divine and supernatural agencies, and makes man the centre of all activities.
3. The schools of idealistic philosophy developed in the period of an expanding economy, between 500 BC and AD 300.

Which of the statements given above are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option A
Charvaka, however, was the main expounder of the materialistic philosophy, which came to be **known as the Lokayata, which means the ideas derived from the common people**. It underlined the importance of intimate contact with the world (Loka) and showed a lack of belief in the other world.

30. Consider the following statements:
1. The Mimamsa School of Philosophy used reasoning to provide justification for various Vedic rituals.
2. Belief in rebirth becomes an important element in the Vedanta system.
3. In Vedanta philosophy, Ramanuja considered knowledge to be the chief means of salvation.

Which of the statements given above are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans:- Option A
Mimamsa literally means the **art of reasoning and interpretation**. However, reasoning was used to provide justifications for various Vedic rituals