



KingMakers
IAS Academy

Good Morning Test (GMT)

Prelims Compilation

April - 2025

KingMakers IAS Academy

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☎ - 94442 27273 ✉ - kingmakersiasacademy@gmail.com

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APRIL 2025

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1. The SVAMITVA scheme

1. With reference to the the SVAMITVA scheme, consider the following statements:

1. It is a Central Sector scheme of the Ministry of Panchayati Raj.
2. It aims at creation of accurate land records for rural planning and reducing property-related disputes.
3. Agricultural Lands are also covered under this scheme.
4. Drones are used for high-resolution mapping of inhabited rural areas.

How many of the statements given above is/are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

Answer: (c) Only three

Explanation:

In NEWS: 5 Years of SVAMITVA Scheme

SVAMITVA Yojana (Survey of Villages and Mapping with Improved Technology in Village Areas):

- SVAMITVA is a Central Sector scheme of the Ministry of Panchayati Raj. **Hence statement 1 is correct.**
- It provides a 'Record of Rights' to village household owners with the issuance of legal ownership cards (Property cards/Title deeds) to the property owners by mapping land parcels using drone technology.
- The scheme is a reformative step towards the establishment of clear ownership of property in rural inhabited areas, by mapping of land parcels using drone technology and providing 'Record of Rights' to village household owners with the issuance of legal ownership cards (Property cards/Title deeds) to the property owners.
- Agricultural Lands are not covered under this scheme. **Hence statement 3 is incorrect.**

Objectives:

- Creation of accurate land records for rural planning and reducing property-related disputes. **Hence statement 2 is correct.**
- To bring financial stability to the citizens in rural India by enabling them to use their property as a financial asset for taking loans and other financial benefits.
- Determination of property tax, which would accrue to the GPs directly in States where it is devolved or else, add to the State exchequer.
- Creation of survey infrastructure and GIS maps that can be leveraged by any department for their use.
- To support the preparation of a better-quality Gram Panchayat Development Plan (GPDP) by making use of GIS maps.

Key Features of the Scheme:

- **Drone Technology:**
 - Use of drones for high-resolution mapping of inhabited rural areas. **Hence statement 4 is correct.**
 - Accurate measurement of land parcels and generation of geo-referenced maps.
- **Property Cards:**

- Distribution of property cards to landowners, serving as official ownership records.

● **Coverage:**

- Targets all rural areas across India in a phased manner.

● **Integration with eGramSwaraj:**

- Digitally links property data with the Panchayati Raj system for better governance.

● **Financial Assistance:**

- Funded by the Central Government, with financial support to States for implementation.

2. Panama Canal

2. The Panama Canal, an artificial waterway which functions on a lock system, connects

- (a) the Mediterranean Sea to the Red Sea
- (b) the Baltic Sea to the North Sea
- (c) the Atlantic Ocean to the Pacific Ocean.
- (d) the Caspian Sea to the Black Sea

Answer: (c) the Atlantic Ocean to the Pacific Ocean.

Explanation:

In NEWS: U.S. defense secretary says China poses threat to Panama Canal

The Panama Canal:

The Panama Canal is an artificial waterway in Central America that connects the Atlantic Ocean (via the Caribbean Sea) to the Pacific Ocean, serving as a critical shortcut for global maritime trade. **Hence option (c) is correct.**

The construction of the Panama Canal:

- Colombia controlled Panama until 1903, when a US-backed coup helped Panama achieve independence.
- In exchange, the US received rights to build and operate the canal and permanent rights to the Panama Canal Zone through the Hay-Bunau-Varilla Treaty of 1903.
- It was completed and opened on August 15, 1914.
- It includes a system of locks to lift ships to the level of Gatun Lake (an artificial lake) and then lower them back to sea level.
- Initially controlled by the U.S. but handed over to Panama on December 31, 1999, under the Torrijos-Carter Treaties.
- It significantly reduces travel time by eliminating the need for ships to navigate around South America's southern tip via the Cape Horn.



3. Vaikom Satyagraha

3. With respect to the 'Vaikom Satyagraha', consider the following statements:

1. It is a temple entry movement that took place from 1924 to 1925 in Kerala.
2. T. K. Madhavan, K. Kelappan, K. P. Kesava Menon and E. V. Ramasamy were the notable leaders of the movement.
3. During his visit to Vaikom in Kerala, Gandhiji was titled as the "Hero of Vaikom".
4. In 1925, the movement won the entry of lower caste Hindus to the roads on all the sides of the Vaikom Temple.

How many of the statements given above is/are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

Answer: (b) Only two

Explanation:

In NEWS: A century after Vaikom Satyagraha, a temple in Kasaragod opens its door for Avarnas

Vaikom Satyagraha:

- Vaikom Satyagraha, from 30 March 1924 to 23 November 1925, was a nonviolent agitation for access to the prohibited public environs of the Vaikom Temple in the Kingdom of Travancore. **Hence statement 1 is correct.**
- The campaign was conducted and led by Congress, leaders T. K. Madhavan, K. Kelappan, K. P. Kesava Menon. Other notable leaders who participated in the campaign include George Joseph and E. V. Ramasamy also known as "Periyar". **Hence statement 2 is correct.**
- Most of the great temples in the princely state of Travancore had for years forbidden lower castes (untouchables) not just from entering, but also from walking on the surrounding roads.
- Mahatma Gandhi, who had sent goodwill telegrams to the organizers, himself visited Vaikom in March 1925.
- After the intervention of Mahatma Gandhi, a compromise was reached with Regent Sethu Lakshmi Bayi who released all those arrested and opened the north, south and west public roads leading to Vaikom Mahadeva Temple to all castes.
- E. V. Ramasamy "Periyar", then with the Congress, participated in the satyagraha and was imprisoned twice. The participation earned Periyar the title "the Hero of Vaikom". **Hence statement 3 is incorrect.**
- The Vaikom Satyagraha settled with a compromise which allowed the entry of lower caste Hindus to (the newly constructed) roads on three sides of the Vaikom Temple. The other side and the temple remained closed to the lower castes (November 1925).
- Only in 1936, after the Temple Entry Proclamation, was access to the eastern road and entry into the temple allowed to the lower castes. **Hence statement 4 is incorrect.**

4. Governor's power over state bills

4. According to the constitution of India, when a Bill has been passed by the Legislative Assembly of a State or, in the case of a State having a Legislative Council, has been passed by both Houses of the Legislature of the State, it shall be presented to the Governor and the Governor shall

1. give assent to the Bill
2. withhold assent to the Bill
3. reserve the Bill for the consideration of the President.
4. return the Bill for reconsideration irrespective of the nature of the bill.

Select the answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1, 2 and 3
- (d) 1, 3 and 4

Answer: (c) 1, 2 and 3

Explanation:

In NEWS: SC Verdict on Governors' Powers over State Bills

Article 200. Assent to Bills :

- When a Bill has been passed by the Legislative Assembly of a State or, in the case of a State having a Legislative Council, has been passed by both Houses of the Legislature of the State, it shall be presented to the Governor and the Governor shall declare either that
 - he assents to the Bill or that
 - he withholds assent therefrom or that
 - he reserves the Bill for the consideration of the President.**Hence statements 1, 2 and 3 are correct.**
- Provided that the Governor may, as soon as possible after the presentation to him of the Bill for assent, return the Bill if it is **not a Money Bill (Hence statement 4 is not correct)** together with a message requesting that the House or Houses will reconsider the Bill or any specified provisions thereof and, in particular, will consider the desirability of introducing any such amendments as he may recommend in his message and,
 - when a Bill is so returned, the House or Houses shall reconsider the Bill accordingly, and
 - if the Bill is passed again by the House or Houses with or without amendment and presented to the Governor for assent, the Governor shall not withhold assent therefrom.
- Provided further that the Governor shall not assent to, but shall reserve for the consideration of the President, any Bill which in the opinion of the Governor would, if it became law, so derogate from the powers of the High Court as to endanger the position which that Court is by this Constitution designed to fill.

5. Nuclear Energy Mission and Small Modular Reactors⁷

5. Consider the following statements:

Statement-I: Small modular reactors (SMRs) are advanced nuclear reactors that have a power capacity of up to 700 MW(e) per unit.

Statement-II: Small modular reactors (SMRs) has about one-third of the generating capacity of traditional nuclear power reactors

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-I explains Statement-II
 (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
 (c) Statement-I is correct, but Statement-II is incorrect
 (d) Statement-I is incorrect, but Statement-II is correct

Answer: (d) Statement-I is incorrect, but Statement-II is correct

Explanation:

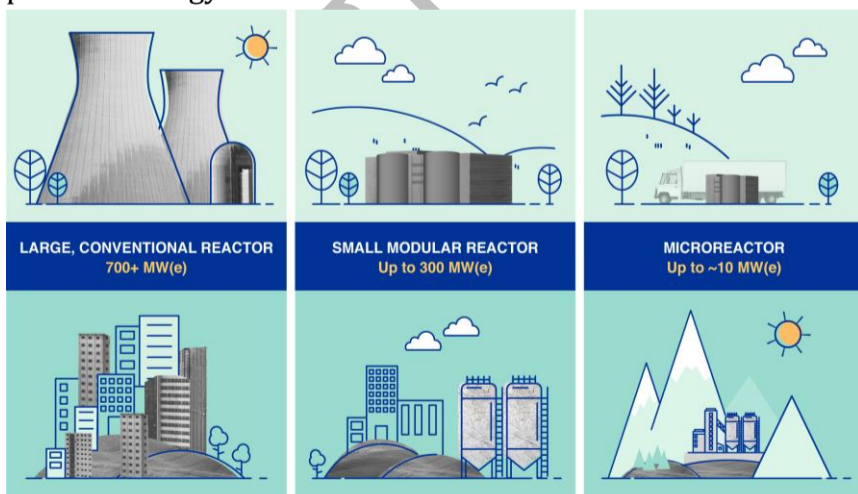
In NEWS: US to Build Small Modular Reactors in India

Nuclear Energy Mission (NEM):

- A flagship initiative announced in Union Budget 2025-26 to accelerate India's nuclear power capacity towards the target of 100 GW by 2047.
- It focuses on Small Modular Reactors (SMRs), expansion of Bharat Small Reactors (BSRs), and policy reforms to attract private and foreign investment in nuclear energy.

Small modular reactors (SMRs):

- Small modular reactors (SMRs) are advanced nuclear reactors that have a power capacity of up to **300 MW(e) per unit**, which is about **one-third** of the generating capacity of traditional nuclear power reactors. **Hence Statement-I is incorrect, but Statement-II is correct.**
- SMRs, which can produce a large amount of low-carbon electricity, are:
 - Small – physically a fraction of the size of a conventional nuclear power reactor.
 - Modular – making it possible for systems and components to be factory-assembled and transported as a unit to a location for installation.
 - Reactors – harnessing nuclear fission to generate heat to produce energy.



6. India-Middle East-Europe Corridor Project

6. Consider the following ports:

1. Jawaharlal Nehru Port Trust

2. Khair port
 3. Antwerp port
 4. Fujairah port
 5. Haifa port
 6. Hamburg port

Which of the above ports are among the 'India-Middle East-Europe Economic Corridor?'

- (a) 1, 2, 4 and 5
 (b) 3, 4, 5 and 6
 (c) 1, 3, 4 and 5
 (d) 2, 3, 4 and 6

Answer: (a) 1, 2, 4 and 5

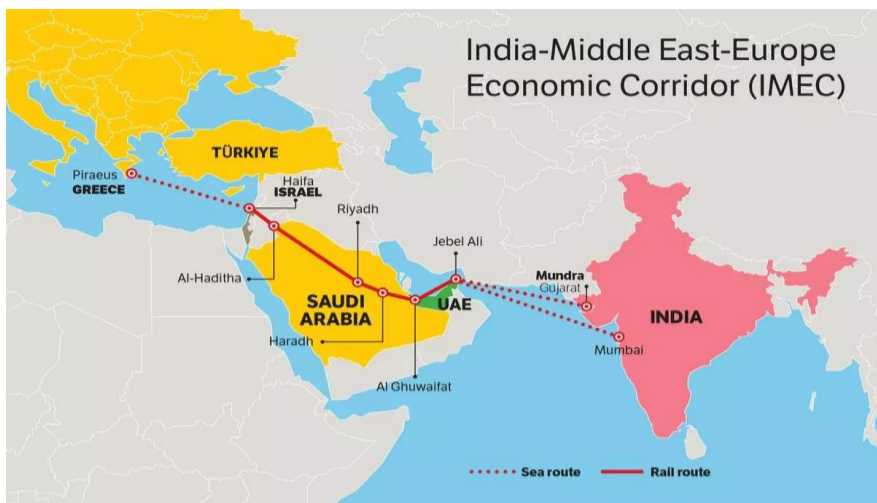
Explanation:

In NEWS: IMEC will be cornerstone of global connectivity, add to growth

About India-Middle East-Europe Economic Corridor:

- The India-Middle East-Europe Economic Corridor (IMEC) is a planned economic corridor that aims to bolster economic development by fostering connectivity and economic integration between Asia, the Persian Gulf and Europe.
- **The corridor is a proposed route from India to Europe through the United Arab Emirates, Saudi Arabia, Israel and Greece.**
- The India-Middle East-Europe Economic Corridor (IMEC) project will comprise two distinct corridors, namely:
 - The Eastern Corridor: This corridor links India with the Arabian Gulf. It features railroads, ship-to-rail networks, and road transport routes.
 - The Northern Corridor: This corridor connects the Gulf region to Europe. This incorporates similar transportation infrastructure, including rail, ship-to-rail links, and road networks.
- **Ports Which are Part of the India-Middle East-Europe Economic Corridor (IMEC)**
 - **India:** Ports in Mundra (Gujarat), Kandla (Gujarat), and Jawaharlal Nehru Port Trust (Navi Mumbai).
 - **Middle East:** Ports include Fujairah, Jebel Ali, and Abu Dhabi in the UAE, as well as Dammam and Ras Al Khair ports in Saudi Arabia.
 - **Railway Line:** The railway line will link Fujairah port in the UAE to Haifa port in Israel, passing through Saudi Arabia (Ghuwaifat and Haradh) and Jordan.
 - **Israel:** The Israeli port involved in this corridor is Haifa.
 - **Europe:** Ports in Europe that are part of this corridor comprise Piraeus in Greece, Messina in Southern Italy, and Marseille in France.

Hence 1, 2, 4 and 5 are correct.



7. Padma Awards

7. Consider the following statements in respect of the Padma Awards:

1. The Padma Awards Committee which is constituted by the Prime Minister every year is headed by the Cabinet Secretary.
2. The total number of awards to be given in a year excluding posthumous awards and to NRI/foreigners/OCIs should not be more than 120.
3. Padma Awards, which were instituted in the year 1954, were suspended only once.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Answer: (b) Only two

Explanation:

In NEWS: Padma Awards 2025 announced

Padma Awards:

- Padma Awards - one of the highest civilian Awards of the country, are conferred in three categories, namely, Padma Vibhushan, Padma Bhushan and Padma Shri.
- The Awards are given in various disciplines/ fields of activities, viz.- art, social work, public affairs, science and engineering, trade and industry, medicine, literature and education, sports, civil service, etc.
- The awards are announced on the occasion of **Republic Day every year**.
- These Awards are conferred by the President of India at ceremonial functions which are held at Rashtrapati Bhawan usually around March/ April every year.
- The Government of India instituted two civilian awards- Bharat Ratna & Padma Vibhushan in 1954. The latter had three classes namely Pahela Varg, Dusra Varg and Tisra Varg.
- These were subsequently renamed as Padma Vibhushan, Padma Bhushan and Padma Shri vide Presidential Notification issued on January 8, 1955.
- Padma Awards, which were instituted in the year 1954, are announced every year on the occasion of Republic Day except for **brief interruption(s) during the years 1978 and 1979 and 1993 to 1997. Hence statement 3 is incorrect.**

- All persons without distinction of race, occupation, position or sex are eligible for these awards. However, Government servants including those working with PSUs, except doctors and scientists, are not eligible for these Awards.
- The award is normally not conferred posthumously. However, in highly deserving cases, the Government could consider giving an award posthumously.
- The recipients are also given a small replica of the medallion, which they can wear during any ceremonial/State functions etc., if the awardees so desire.
- The names of the awardees are published in the Gazette of India on the day of the presentation ceremony.
- The total number of awards to be given in a year (excluding posthumous awards and to NRI/foreigners/OCIs) should not be more than 120. **Hence statement 2 is correct.**
- The award does not amount to a title and cannot be used as a suffix or prefix to the awardees' name.

Selection Process:

- 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. **Hence statement 1 is correct.**
- The recommendations of the committee are submitted to the Prime Minister and the President of India for approval.
- Final approval is given by the President of India.
- The awards are usually presented by the President at Rashtrapati Bhavan.

8. UDAN

8. With reference to the 'UDAN scheme' consider the following statements.

1. The scheme focuses only on the upgradation of Brownfield airports in India.
2. It operates on a market-driven model.
3. The scheme incentivizes airlines through Viability Gap Funding (VGF) and various concessions only provided by the Central Government.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) None

Answer: (a) Only one

Explanation:

In NEWS: Connecting India, One Flight at a Time

Components of UDAN scheme:

- Ude Desh ka Aam Naagrik (UDAN-RCS) is part of the Regional Connectivity Scheme (RCS) of upgrading under-served air routes under the **Ministry of Civil Aviation**.

● The scheme consists of **setting up Greenfield airports and as well as upgradation of Brownfield airports. Hence statement 1 is incorrect.**

● UDAN operates on a **market-driven model**, where airlines assess demand on specific routes and submit proposals during bidding rounds. **Hence statement 2 is correct.**

● The scheme incentivizes airlines to connect underserved regions by offering them support **through Viability Gap Funding (VGF) and various concessions provided by airport operators, the Central Government, and State Governments. Hence statement 3 is incorrect.**

● The first UDAN flight took off on April 27, 2017, connecting the serene hills of Shimla to the bustling metropolis of Delhi.

Objectives of UDAN:

● **Focus on underserved areas:** It primarily focuses on connecting smaller, under-served airports across India, bringing air travel to previously isolated communities.

● **Affordable fares:** The scheme aims to provide affordable airfares to encourage wider participation in air travel.

● **Economic development impact:** By improving connectivity, UDAN is expected to boost tourism, trade, and overall economic development in regional areas.

9. Pradhan Mantri Mudra Yojana (PMMY)

9. With reference to 'Pradhan Mantri Mudra Yojana (PMMY)', which of the following statements is/are correct?

1. The scheme facilitates micro credit/Loan up to Rs. 20 lakhs to income generating micro enterprises.
2. The guarantee coverage of PMMY loans are provided under the Credit Guarantee Fund for Micro Units (CGFMU).

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

Answer: (c) Both 1 and 2

Explanation:

In NEWS: A Decade of Growth with PM Mudra Yojana

Pradhan Mantri Mudra Yojana (PMMY):

● Pradhan Mantri Mudra Yojana (PMMY) is a flagship scheme of the Government of India.

● The scheme facilitates micro credit/Loan up to Rs. 20 lakhs to income generating micro enterprises.

● The Scheme provides financial assistance extended by Member Lending Institutions to the non-corporate, non-farm sector income generating activities of micro and small entities.

● The scheme has the following categories

- Shishu : covering loans upto 50,000/-
- Kishor : covering loans above 50,000/- and upto 5 lakh
- Tarun : covering loans above 5 lakh and upto 10 lakh
- Tarun Plus : covering loans above 10 lakh and upto 20 lakh.

Hence statement 1 is correct.

● The funding support from MUDRA are of two types:

○ Micro Credit Scheme (MCS) for loans up to 1 lakh finance through MFIs.

○ Refinance Scheme for Commercial Banks / Regional Rural Banks (RRBs) / Small Finance Banks / Non Banking Financial Companies (NBFCs).

● Mudra loan is extended for a variety of purposes which result in income generation and employment creation. The loans are extended mainly for:

○ Business loan for Vendors, Traders, Shopkeepers and other Service Sector activities

○ Working capital loan through MUDRA Cards

○ Equipment Finance for Micro Units

○ Transport Vehicle loans – for commercial use only

○ Loans for agri-allied non-farm income generating activities, e.g. pisciculture, bee keeping, poultry farming, etc.

○ Tractors, tillers as well as two wheelers used for commercial purposes only.

The new category: Tarun Plus

● As announced by the Finance Minister on 23rd July, 2024 in the Union Budget 2024-25, the limit of Mudra loans under the Pradhan Mantri Mudra Yojana (PMMY) has been enhanced from current Rs. 10 lakh to Rs. 20 lakh.

● The new category of Tarun Plus is for Loans above Rs. 10 lakh and upto Rs. 20 lakh

● It would be available to the entrepreneurs who have availed and successfully repaid previous loans under the Tarun category.

● The guarantee coverage of PMMY loans upto Rs. 20 lakh will be provided under the Credit Guarantee Fund for Micro Units (CGFMU). **Hence statement 2 is correct.**

10. Flue gas desulfurization (FGD)

10. Consider the following:

1. Wet scrubbing
2. Spray-dry scrubbing
3. Wet sulfuric acid process
4. Dry sorbent injection
5. Seawater Process

How many of the above methods can be used in Flue gas desulfurization (FGD)?

- (a) Only two
- (b) Only three
- (c) Only four
- (d) All five

Answer: (d) All five

Explanation:

In NEWS: A study commissioned by the Principal Scientific Adviser's Office recommended rolling back the 2015 mandate requiring Indian coal-fired plants to install Flue Gas Desulphurisation (FGD) systems.

Flue-gas desulfurization (FGD)

- Flue-gas desulfurization (FGD) is a set of technologies used to remove sulfur dioxide (SO₂) from exhaust flue gases of fossil-fuel power plants, and from the emissions of other sulfur oxide emitting processes such as waste incineration, petroleum refineries, cement and lime kilns.

- Flue gas is the emitted material produced when fossil fuels such as coal, oil, natural gas, or wood are burned for heat or power.

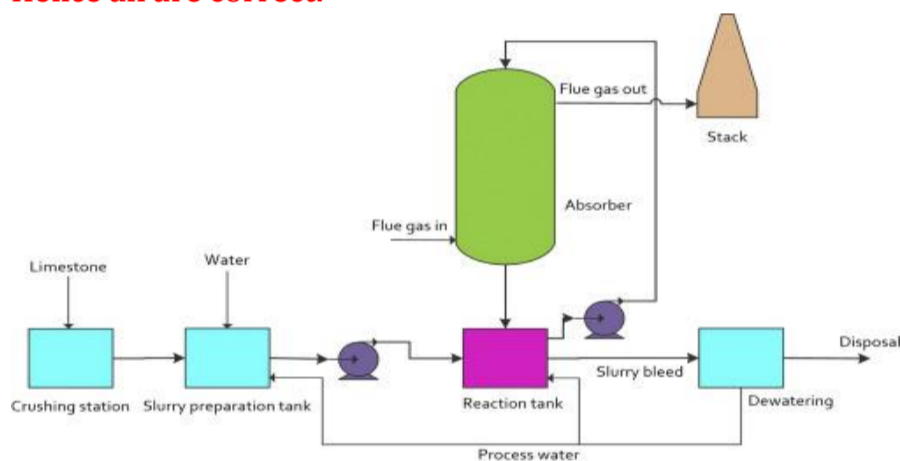
Methods

- Since stringent environmental regulations limiting SO₂ emissions have been enacted in many countries, SO₂ is being removed from flue gases by a variety of methods. Common methods used:

- **Wet scrubbing** using a slurry of alkaline sorbent, usually limestone or lime, or seawater to scrub gases;
- **Spray-dry scrubbing** using similar sorbent slurries;
- **Wet sulfuric acid process** recovering sulfur in the form of commercial quality sulfuric acid;
- **SNOX Flue gas desulfurization** removes sulfur dioxide, nitrogen oxides and particulates from flue gases;
- **Dry sorbent injection systems** that introduce powdered hydrated lime (or other sorbent material) into exhaust ducts to eliminate SO₂ and SO₃ from process emissions.

- For a typical coal-fired power station, flue-gas desulfurization (FGD) may remove 90 per cent or more of the SO₂ in the flue gases.

Hence all are correct.



11. Periodic Labour Force Survey (PLFS)

11. consider the following statements.

1. Labour Force Participation Rate is the percentage of employed persons in the population.
2. Worker Population Ratio is the percentage of persons working or seeking or available for work.
3. Unemployment Rate is the percentage of persons unemployed among the persons in the labour force.

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 only
- (c) 1 and 3
- (d) 3 only

Answer: (d) 3 only

Explanation:

In NEWS: Periodic Labour Force Survey (PLFS) – Annual Report [July, 2023 – June, 2024]

Key findings:

- **Labour Force Participation Rate (LFPR)** for persons of age 15 years and above was 60.1% during July 2023 - June 2024. The same for male and female was 78.8% and 41.7% respectively.

- **Worker Population Ratio (WPR)** for persons of age 15 years and above was 58.2% during July 2023 – June 2024. The same for male and female was 76.3% and 40.3% respectively.

- **Unemployment Rate (UR)** was 3.2% for both male and female of age 15 years and above during July 2023 – June 2024.

Periodic Labour Force Survey (PLFS):

- **The National Sample Survey Office (NSSO) launched the Periodic Labour Force Survey (PLFS) in April 2017. The objective of PLFS is primarily twofold:**

- to estimate the key employment and unemployment indicators (viz. Worker Population Ratio, Labour Force Participation Rate, Unemployment Rate) in the short time interval of three months for the urban areas only in the 'Current Weekly Status' (CWS).

- to estimate employment and unemployment indicators in both 'Usual Status' (ps+ss) and CWS in both rural and urban areas annually.

- **Labour Force Participation Rate (LFPR):** LFPR is defined as the percentage of persons in the labour force (i.e. working or seeking or available for work) in the population. **Hence statement 1 is incorrect.**

- **Worker Population Ratio (WPR):** WPR is defined as the percentage of employed persons in the population. **Hence statement 2 is incorrect.**

- **Unemployment Rate (UR):** UR is defined as the percentage of persons unemployed among the persons in the labour force. **Hence statement 3 is correct.**

12. Indus Waters Treaty (IWT) and Permanent Indus Commission (PIC)

12. Consider the following statements:

1. India shares five Himalayan rivers with Pakistan.
2. As per the Indus Water Treaty, water from the eastern rivers were allocated to India and that from the three western rivers to Pakistan.
3. The treaty also allows India to use the eastern rivers for limited irrigation purposes only.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Answer: (a) Only one

Explanation:

In NEWS: India to freeze talks with Pakistan on Indus waters

“There will be no more meetings of the Permanent Indus Commission (PIC) till the governments of India and Pakistan meet and discuss the renegotiation of the 64-year-old Indus Water Treaty,”

Permanent Indus Commission (PIC):

- The PIC is the most consequential product of the Indus Waters Treaty (IWT), signed in 1960, to manage the sharing of **six Himalayan rivers between India and Pakistan. Hence statement 1 is incorrect.**
- Commissioners of both countries are mandated to meet every year, and sometimes have met multiple times in the year, to discuss and resolve differences on the sharing of river water, constructing hydropower projects and data-sharing concerning the ecological aspects of the rivers.
- India’s notification highlights fundamental and unforeseen changes in circumstances that require a reassessment of obligations under various Articles of the Treaty.
- Among various concerns, important ones include change in population demographics; environmental issues — need to accelerate development of clean energy to meet India’s emission targets; impact of persistent cross-border terrorism, etc

Indus Waters Treaty (IWT):

- Under the treaty, water from the Beas, Ravi and Sutlej, or the ‘eastern rivers’, were allocated to India and that from the three western rivers — Chenab, Indus and Jhelum — to Pakistan. **Hence statement 2 is correct.**
- The treaty allows India to use the **western rivers** for limited irrigation purposes and power generation, among other ‘non-consumptive’ uses. **Hence statement 3 is incorrect.**

13. Cloudbursts

13. Consider the following statements:

- Statement I:** A cloudburst is a localized weather phenomenon characterized by extreme amounts of precipitation over a short period of time within a small geographical area.
- Statement II:** A cloudburst is accompanied by hail and thunderstorms which are capable of creating disastrous flood conditions.
- Statement III:** Cloudbursts are caused by a phenomenal condition known as orographic lift.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement II and Statement III are correct and both of them explain Statement I
- (b) Both Statement II and Statement III are correct but only one of them explains Statement I
- (c) Only one of the Statements II and III is correct and that explains Statement I
- (d) Neither Statement II nor Statement III is correct

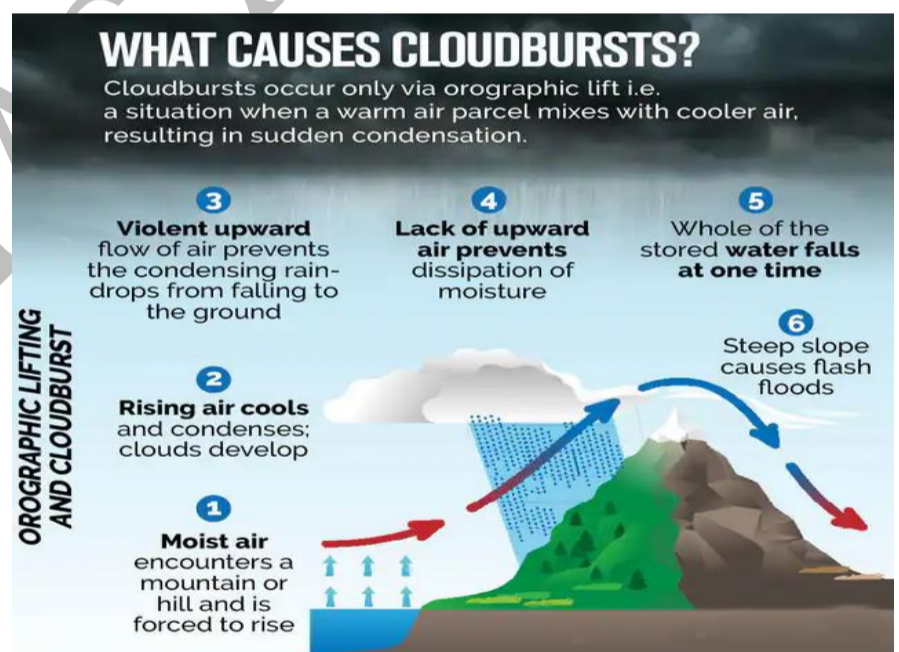
Answer: (a) Both Statement II and Statement III are correct and both of them explain Statement I

Explanation:

In NEWS: Top news of the day: Five feared dead as cloudbursts, landslides hit J&K; Pope Francis makes brief Easter appearance, calls for Gaza ceasefire, and more

Cloudburst:

- A cloudburst is a localized weather phenomenon characterized by extreme amounts of precipitation over a short period of time within a small geographical area. **Hence statement I is correct.**
- A cloudburst is sometimes accompanied by hail and thunderstorms which are capable of creating disastrous flood conditions. **Hence statement II is correct.**
- Meteorologists state that rainfall from cloudbursts is usually showered with a fall rate greater than or equal to **4.9 inches per hour.**
- Cloudbursts are caused by a phenomenal condition known as **orographic lift. Hence statement III is correct and Statement II and Statement III explains Statement I**
- Cloudbursts generally occur in mountainous regions, deserts, and interior regions of continental landmasses.
- They are highly unpredictable by nature and happen very abruptly.
- Nearly all recorded cloudburst are experienced in the Indian subcontinent where monsoon clouds drift from the Arabian Sea onto the Himalayas.



14. Olive Ridley sea turtles

14. With reference to the Olive Ridley Sea turtles, Consider the following statements:

- 1. They are omnivores.
- 2. They are endemic only to the Indian Ocean.
- 3. The female Olive Ridelys return to the same beach from where they hatched, to lay their eggs.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Answer: (b) Only two

Explanation:



In NEWS:

Olive Ridley turtle's 3,500 km sea voyage from Odisha to Konkan coast redraws migration maps

The olive ridley sea turtle:

- The olive ridley sea turtle (*Lepidochelys olivacea*), also known commonly as the Pacific ridley sea turtle, is a species of turtle in the family Cheloniidae.
- The species is the second-smallest and most abundant of all sea turtles found in the world.
- They are found in warm and tropical waters, primarily in the Pacific and Indian Oceans, but also in the warm waters of the Atlantic Ocean. **Hence statement 2 is incorrect.**
- They are omnivores. They eat jellyfish, crabs, shrimps, algae, and small fish. **Hence statement 1 is correct.**



Nesting pattern of the Olive Ridleys:

- Olive ridley turtles exhibit two different nesting behaviours: solitary nesting (the most prevalent) and synchronized mass nesting, termed arribadas.
- Females return to the same beach from where they hatched, to lay their eggs. **Hence statement 3 is correct.**
- They lay their eggs in conical nests about 1.5 ft deep, which they laboriously dig with their hind flippers.
- In the Indian Ocean, Arabian Sea near Honavar in Karnataka, the majority of Olive Ridleys nest in two or three large assemblies near Gahirmatha in Odisha.
- The coast of Odisha in India is one of the largest mass nesting sites for the Olive Ridley, along with the coasts of Mexico and Costa Rica.
- Solitary nesting also occurs in Lothian Island Wildlife Sanctuary in West Bengal & along the Coromandel Coast and Sri Lanka, but in scattered locations.

Conservation Efforts in India:

- Protected under Schedule I of the Wildlife Protection Act, 1972.
- Listed in Appendix I of CITES (Convention on International Trade in Endangered Species). Operation Olivia – Indian Coast

Guard patrols the Odisha coast to prevent poaching and protect nesting sites.

- Turtle Excluder Devices (TEDs) – Mandated in fishing trawlers to allow turtles to escape.
- Gahirmatha Marine Sanctuary – A protected area for nesting.
- Sensitization programs for fishermen to prevent bycatch.
- Beach cleanup drives to reduce pollution.

15. Rare Earth Elements (REEs) - "Vitamins of the modern economy"

15. Consider the following statements:

Statement I: China dominates the global rare earth supply chain and tightening grip over exports.

Statement II: China holds the world's largest reserves of rare earth elements.

Statement III: China accounts for nearly 70% of global REE mining and more than 90% of refining capacity.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement II and Statement III are correct and both of them explain Statement I
- (b) Both Statement II and Statement III are correct but only one of them explains Statement I
- (c) Only one of the Statements II and III is correct and that explains Statement I
- (d) Neither Statement II nor Statement III is correct

Answer: (b) Both Statement II and Statement III are correct but only one of them explains Statement I

Explanation:

In NEWS: Rare earths emerge as a geopolitical lynchpin in the rising China-U.S. rivalry

- With China dominating the global rare earth supply chain and tightening grip over exports amid escalating trade tensions, the U.S. is now actively seeking alternative sources to reduce its strategic dependence. **Hence statement I is correct.**

Rare Earth Elements (REEs):

- Often described as the "vitamins of the modern economy," it is a group of 17 chemically similar metallic elements.
- The **17 elements** include lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium, scandium, and yttrium.

Answer: (d) 1, 2 and 3

Explanation:

In NEWS: Over 7,500 lakes in western Greenland underwent a fundamental ecological transformation owing to extreme climatic conditions. Atmospheric rivers transformed them from being carbon sinks to sources, a new study has revealed.

Atmospheric rivers (ARs):

- Atmospheric rivers (ARs) are defined as relatively long, narrow regions in the atmosphere like rivers in the sky that transport most of the water vapour outside of the tropics, according to National Oceanic and Atmospheric Administration (NOAA).

- They are a significant feature of the Earth's climate system and are often responsible for producing heavy rainfall or snow, particularly in coastal and mountainous regions.

- These moisture-laden systems can lead to extreme weather events, including flooding, especially when they make landfall.

Hence statement 3 is correct.

Key Features of Atmospheric Rivers:

Moisture Transport:

- Atmospheric rivers are like rivers in the sky, carrying vast amounts of water vapor from tropical and subtropical regions to other areas. These systems can move enormous quantities of moisture, sometimes more than the Mississippi River carries in liquid form. **Hence statement 1 is correct.**

Narrow but Long:

- These "rivers" are narrow compared to their length, often stretching for thousands of kilometers, but only tens to hundreds of kilometers wide. Despite their narrow width, the amount of moisture they contain can be substantial. **Hence statement 2 is correct.**

Heavy Precipitation:

- When atmospheric rivers make landfall, they can release their moisture in the form of heavy rainfall or snow, particularly in mountainous regions where the air is forced to rise, cooling and condensing the moisture. This is what causes the extreme precipitation associated with atmospheric rivers.

Potential for Extreme Weather:

- In some cases, atmospheric rivers can lead to severe flooding, especially when the rain falls on already saturated ground, or in areas with poor drainage. They can also cause landslides and other types of weather-related damage.

18. Jyotiba Phule

18. He was a social reformer who strongly opposed Brahmanical domination, untouchability, and child marriage. He advocated widow remarriage and universal education. Through his Satyashodhak Samaj, he sought to create a society based on equality and truth. - Identify the reformer described above:

- (a) Raja Ram Mohan Roy
- (b) Jyotiba Phule
- (c) B.R. Ambedkar
- (d) Ishwar Chandra Vidyasagar

Answer: (b) Jyotiba Phule

Explanation:

In News: The birth anniversary of Jyotiba Phule was observed on 11th April

Jyotiba Phule:

- Jyotirao Govindrao Phule (1827-1890) was a **social reformer, thinker, and activist** from Maharashtra.

- He worked against **caste discrimination, untouchability, and social inequality.**

- Along with his wife **Savitribai Phule**, he pioneered **women's education in India** (opened the first girls' school in Pune in 1848).

- He founded the **Satyashodhak Samaj (Society of Truth Seekers)** in 1873 to promote **social equality, education, and upliftment of lower castes.**

- Phule strongly criticized the **Brahmanical social order** and the practice of **untouchability.**

- He promoted the idea of **universal education** and emphasized that education was the key to liberation.

- His major literary works include "**Gulamgiri**" (**Slavery**) (1873) and "**Sarvajanik Satya Dharma**".

- He opposed **child marriage** and supported **widow remarriage.**

- Phule is also regarded as a pioneer of the **anti-caste movement** and is often called the "**Father of Indian Social Revolution**".

- In 1888, he was given the title of "**Mahatma**" by a fellow reformer.

Hence option (b) is correct.

19. ASEAN-India Trade in Goods Agreement (AITIGA)

19. With reference to the 'ASEAN-India Trade in Goods Agreement (AITIGA)', consider the following statements.

1. It is a trade deal between the member states of ASEAN and India for both goods and services.
2. Under the Agreement, ASEAN Member States and India have agreed to open their respective markets by progressively reducing and eliminating duties on goods.

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

Answer: (b) 2 only

Explanation:

In NEWS: Commerce and Industry Minister Shri Piyush Goyal co-chairs 21st ASEAN-India Economic Ministers meeting in Lao PDR

ASEAN-India Trade in Goods Agreement (AITIGA):

- The ASEAN-India Trade in Goods Agreement was signed and entered into force on 1 January 2010.

- The Agreement covers **trade in physical goods and products; it does not apply to trade in services.** **Hence statement 1 is incorrect.**

● Under the Agreement, ASEAN Member States and India have agreed to open their respective markets by progressively reducing and eliminating duties on 76.4 coverage of goods.
Hence statement 2 is correct.

ASEAN-India Trade in Services Agreement:

● The ASEAN-India Trade in Services Agreement was signed in November 2014. It contains provisions on transparency, domestic regulations, recognition, market access, national treatment and dispute settlement.

ASEAN-India Investment Agreement:

● The ASEAN-India Investment Agreement was also signed in November 2014. The Investment Agreement stipulates protection of investment to ensure fair and equitable treatment for investors, non-discriminatory treatment in expropriation or nationalisation as well as fair compensation.

ASEAN-India Free Trade Agreement:

● Economic co-operation activities under the AIFTA are now being undertaken on agriculture, fisheries and forestry; services; mining and energy; science and technology; transport and infrastructure; manufacturing; human resource development; and other sectors such as handicrafts, small and medium enterprises (SMEs), competition policy, Mekong Basin Development, intellectual property rights and government procurement.

20. Biological Weapons Convention

20. Consider the following statements with respect to the Biological Weapons Convention:

- I. The convention was signed in 1972
- II. India is a signatory to the convention
- III. As of May 2025, 189 states have become party to the treaty.

Which of the statements given above are correct?

- (a) I and II only
- (b) II and III only
- (c) I and III only
- (d) I, II and III

Answer: (d) I, II and III

Explanation:

In NEWS: 50 Years of Biological Weapons Convention

Biological weapons:

- Biological weapons are agents (organisms or toxins) used to cause disease in humans, animals or plants, often in a way that is contagious, lethal or disruptive.
- They typically have two parts:
 - **Weaponized agent** — bacteria, viruses, fungi, prions, rickettsiae, or toxins (natural or synthetic) that cause disease.
 - **Delivery mechanism** — the way the agent/toxin is spread. This could be via bombs, missiles, aerosols (sprays), contaminated food or water, sprays on surfaces or clothes, injection devices, etc.

- Examples of agents used or explored in historical programs: anthrax, smallpox, ricin, botulinum toxin, plague, foot-and-mouth disease, rice blast, etc.

Biological Weapons Convention:

- The convention was signed on 10 April 1972 and entered into force on 26 March 1975. **Hence statement I is correct.**
- **India signed the BWC in 1973** and ratified it in 1974. **Hence statement II is correct.**
- As of May 2025, 189 states have become party to the treaty. **Hence statement III is correct.**
- The Biological Weapons Convention (BWC) effectively prohibits the development, production, acquisition, transfer, stockpiling and use of biological and toxin weapons.
- It was the first multilateral disarmament treaty banning an entire category of weapons of mass destruction (WMD).

21. Genome India

21. Consider the following:

1. To build a detailed catalogue of India's unique genetic makeup
2. To use genetic data for improved disease prevention
3. To develop targeted therapies for Indian individuals
4. To develop an Indian Reference Genome

How many of the above are the objectives of the Genome India project?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All the four

Answer: (d) All the four

In NEWS: Why Genome India Project matters

Explanation:

Genome India:

- **GenomeIndia** is a **national initiative funded by the Department of Biotechnology (DBT)** to create a comprehensive **Whole Genome Sequencing (WGS) database** representing India's diverse population.
- The initiative reflects India's focus on **scientific innovation, health research, and sustainable development by democratizing genetic resources.**
- The **Indian Biological Data Center (IBDC)**, established in **March 2020**, is the **national repository** for GenomeIndia data.
- **Biotech-PRIDE Guidelines (2021)** and **FeED Protocols** govern ethical and responsible sharing of biological data.
- Independent access requests can also be made under **Biotech-PRIDE and FeED protocols.**
- Key Goals and Objectives**
 - **Map Genetic Diversity:** To build a detailed catalogue of the genetic variations present across India's diverse population, better capturing its unique genetic makeup.
 - **Develop an Indian Reference Genome:** To create a comprehensive genetic reference that reflects the distinct genetic landscape of the Indian population, according to Genome India.



● **Advance Personalized Medicine:** To leverage genetic information to tailor treatments, improve disease detection, and develop targeted therapies for Indian individuals.

● **Understand Health and Disease:** To understand how genetic variations contribute to different health conditions, diseases, and drug responses within various population groups.

● **Inform Public Health Strategies:** To use genetic data for improved disease prevention and better patient treatment strategies, as mentioned by Genome India.

Hence option (d) is correct.

22. Artificial Ripening Agents

22. Which of the following are permitted under the Food Safety and Standards Act, 2006 to be used as fruit ripening agents?

1. Ethylene Gas
2. Calcium Carbide
3. Ethephon
4. Ethylene Glycol

Select the correct answer using the code given below:

- (a) 1 only
(b) 2 only
(c) 3 and 4
(d) 2 and 4

Answer: (a) 1 only

In NEWS: Ripening Agents Used for Fruits

Explanation:

Artificial fruit ripening:

Artificial fruit ripening is a process used to accelerate the ripening of fruits to meet market demands. While natural ripening occurs via the emission of ethylene, artificial methods often involve the application of chemical agents.

FSSAI Guidelines

- Only ethylene gas is allowed, used through certified ripening chambers.
- Misuse or illegal use of any ripening agent is punishable under the Food Safety and Standards Act, 2006.

Permitted Ripening Agent

- Ethylene Gas. **Hence 1 is correct.**
 - Naturally occurring plant hormone that regulates fruit ripening.
 - Permitted by FSSAI under controlled conditions.
 - Mimics natural ripening process.

Commonly Used but Hazardous/Non-permitted Agents

- Calcium Carbide (CaC_2) – "Masala"
 - Prohibited under FSSAI regulations. Contains arsenic and phosphorus impurities.
 - Health risks: Mouth ulcers, Gastric irritation, Neurological symptoms and Potential carcinogenic effects
- Ethephon
 - Permitted only as a source of ethylene gas (indirect use).
 - Some vendors immerse fruits directly in ethephon solution — this is illegal.
- Ethylene Glycol

- Toxic chemical used in antifreeze
- Sometimes misused as a ripening agent or preservative
- Highly poisonous: affects kidneys, nervous system, and may cause death

Hence 2, 3 and 4 are incorrect.

Other Harmful or Banned Substances

- Ethrel (a brand of ethephon): legal only in specific, indirect applications.
- Synthetic dyes or coatings for aesthetic appeal: often non-food-grade and toxic.
- Wax coatings (when non-food-grade) to make fruits shiny: may cause digestive issues.

23. India's Extended Continental Shelf Claim

23. Consider the following statements:

Statement I: India has submitted a modified Extended Continental Shelf claim to the United Nations Commission on the Limits of the Continental Shelf.

Statement II: Under Article 76 of the UNCLOS, a coastal state can claim rights over the water column beyond 200 nautical miles if it proves the natural extension of its continental margin.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement I and Statement II are correct and Statement II explains Statement I
(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I
(c) Statement I is correct but Statement II is not correct
(d) Statement I is not correct but Statement II is correct

Answer: (a) Both Statement I and Statement II are correct and Statement II explains Statement I

Explanation:

In News: India has submitted a modified claim to the United Nations Commission on the Limits of the Continental Shelf (CLCS). **Hence Statement I is correct.**

Extended Continental Shelf:

- Under UNCLOS, coastal states can claim seabed rights beyond 200 nautical miles.
- If they can scientifically show that their continental margin naturally extends beyond 200 nm, they may claim the outer limits of their continental shelf (beyond 200 nm), subject to criteria in Article 76 of UNCLOS.
- These outer limits must be submitted to the Commission on the Limits of the Continental Shelf (CLCS). **Hence both Statement I and Statement II are correct and Statement II explains Statement I.**
- These rights apply only to the seabed and subsoil, not the water column above.

United Nations Convention on the Law of the Sea(UNCLOS):

- UNCLOS is the primary international treaty governing the law of the sea.
- It was adopted in 1982 and entered into force in 1994.

- It defines the rights and responsibilities of nations in their use of the world's oceans.
- It covers navigation, overflight, marine resources, environment, and dispute resolution.
- UNCLOS divides maritime zones into:
 - Territorial Sea (up to 12 nautical miles)
 - Contiguous Zone (12–24 nautical miles)
 - Exclusive Economic Zone (EEZ) (up to 200 nautical miles)
 - Continental Shelf (up to or beyond 200 nautical miles)
- States have sovereignty over their territorial sea and sovereign rights over the EEZ and continental shelf.
- India ratified UNCLOS in 1995 and follows its provisions for maritime zones and ECS claims.
- The United States has not ratified UNCLOS but accepts many of its provisions as customary international law.

24. State of Social Protection Report

24. The State of Social Protection Report 2025 was released by

- (a) The Asian Development Bank
- (b) The European Bank for Reconstruction and Development
- (c) The World Bank
- (d) The International Monetary Fund

Answer: (c) The World Bank

Explanation:

In News: The World Bank's released the State of Social Protection Report 2025

The State of Social Protection Report 2025:

- The State of Social Protection Report 2025 was released by the World Bank in April 2025. **Hence option (c) is correct.**
- Titled "The 2-Billion-Person Challenge," it is a comprehensive global review of social protection systems in low- and middle-income countries.
- In low- and middle-income countries, 2 billion people remain either uncovered or inadequately covered by social protection systems.
- Over the past decade, social protection and labor programs expanded to reach 4.7 billion people in these countries.
- Global coverage rose from 41% in 2010 to 51% in 2022 in LMICs, but coverage remains especially low among the poorest.
- In low-income countries, three in four people receive no social protection.
- Benefit adequacy is weak: in low-income countries, social assistance transfers amount to only about 11% of the income of poor households.
- Women, on average, receive 81 cents for every dollar that men receive in social protection benefits in sample countries.
- At current growth rates, it will take 18 years to achieve full coverage for those living in extreme poverty, and 20 years to cover the poorest 20% of households in LMICs.
- Only about 0.25% of GDP is spent on labour market programs on average in these countries.
- Policy recommendations include: expand coverage with improved delivery systems (databases, digital payments), strengthen benefit adequacy, build shock-responsive systems, and optimize financing (e.g. via targeting, subsidy reform).

25. Agasthiyamalai Biosphere Reserve

25. Consider the following statements with respect to the Agasthiyamalai Biosphere Reserve:

1. Neyyar, Idu Peppara and Shendurney Wildlife Sanctuaries; and Kalakad Mundanthurai Tiger Reserve are part of Agasthiyamalai Biosphere Reserve
2. In 2016, UNESCO added it to the World Network of Biosphere Reserves under its Man and the Biosphere (MAB) Programme.
3. The Kani tribe, the predominant inhabitant of the biosphere reserve, led the development of the herbal drug "Jeevani", made from the plant Arogyapacha.

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

Answer: (d) 1, 2 and 3

Explanation:

In News: The Supreme Court has directed the Central Empowered Committee (CEC) to carry out a detailed survey of the Agasthiyamalai landscape to identify any non-forestry activities and encroachments.

Agasthiyamalai Biosphere Reserve:

- Agasthiyamalai Biosphere Reserve is located at the southern end of the Western Ghats, spanning the states of Kerala and Tamil Nadu.
- Agasthiyamalai was formally declared a biosphere reserve in 2001.
- In 2016, UNESCO added it to the World Network of Biosphere Reserves under its Man and the Biosphere (MAB) Programme. **Hence statement 2 is correct.**
- The reserve supports very high biodiversity: over 2,254 species of higher plants (about 400 endemic), many species of mammals, reptiles, amphibians and birds, with significant endemism.
- It includes several protected areas: Neyyar, Peppara and Shendurney Wildlife Sanctuaries in Kerala, and the Kalakad-Mundanthurai Tiger Reserve in Tamil Nadu. **Hence statement 1 is correct.**
- The predominant tribe of the Agasthiyamalai Biosphere Reserve is the Kani tribe (also known as Kanikkar or Kanis). Their knowledge led to the development of the herbal drug "Jeevani", made from the plant Arogyapacha (*Trichopus zeylanicus*), which brought attention to tribal benefit-sharing rights. They are recognized as a Scheduled Tribe in both Kerala and Tamil Nadu. **Hence statement 3 is correct.**
- The reserve is a genetic reservoir for many cultivated plants like cardamom, jamun, nutmeg, pepper and plantain.
- Agasthiyamalai holds cultural, religious and medicinal importance: associated with Sage Agastya; rich in medicinal plants; pilgrimage to its peak is common.

26. Exercise INDRA 2025

26. Exercise INDRA 2025, a biennial bilateral naval exercise held at Chennai was conducted between

- (a) India and Russia
- (b) India and the United States
- (c) India and France
- (d) India and Bangladesh

Answer: (a) India and Russia

Explanation:

In News: The 14th edition of the bilateral naval exercise INDRA-2025 between India and Russia was conducted in Chennai.

Exercise INDRA 2025:

● Exercise INDRA 2025 was the 14th edition of the biennial bilateral naval exercise between India and Russia, held from March 28 to April 2, 2025, off Chennai and in the Bay of Bengal.

Hence option (a) is correct.

● The exercise involved a harbor phase for expert exchanges and a sea phase with advanced drills, including tactical maneuvers and live firings, to enhance naval interoperability and cooperation between the two nations.

Objectives

- To enhance interoperability between the navies.
- To strengthen the maritime cooperation and strategic partnership between India and Russia.
- To address common maritime threats and promote global maritime security.
- To foster defense diplomacy and build mutual trust.

Assets Involved

- Russian Navy: Ships Pechanga, Rezkiy, and Aldar Tsydenzhapov.
- Indian Navy: Ships Rana, Kuthar, and P-8I maritime patrol aircraft.

27. BIMSTEC

27. Consider the following countries:

1. Malaysia
2. Singapore
3. Bangladesh
4. Thailand
5. Nepal
6. Bhutan

Which of the above countries are among the members of 'BIMSTEC'?

- (a) 1, 2, 4 and 5
- (b) 3, 4, 5 and 6
- (c) 1, 3, 4 and 5
- (d) 2, 3, 4 and 6

Answer: (b) 3, 4, 5 and 6

Explanation:

In News: Bangladesh assumes Chairmanship of BIMSTEC for next two years

BIMSTEC - Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation:

History & Evolution

- 1997: Formed as BIST-EC (Bangladesh, India, Sri Lanka, Thailand – Economic Cooperation).
- Later renamed BIMST-EC with Myanmar joining in 1997.
- Renamed BIMSTEC in 2004 after full membership of all 7 current nations (**Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand**). **Hence 3, 4, 5 and 6 are correct.**

Objectives

- Foster regional and economic cooperation.
- Bridge South Asia and Southeast Asia.
- Promote sustainable development, connectivity, trade, and security.
- Enhance people-to-people and institutional linkages.

Key Focus Areas

- **Connectivity:** Includes the BIMSTEC Master Plan for Transport Connectivity (adopted in 2022).
- **Trade Integration:** Negotiating the BIMSTEC Free Trade Area (FTA) Agreement.
- **Energy Cooperation:** Development of a BIMSTEC Grid Interconnection.
- **Security:** Cooperation on counter-terrorism, cybersecurity, maritime security.
- **Climate Change & Disaster Management.**
- **Tourism & Cultural Exchange:** Boosting tourism, cross-border movement, and cultural exchanges among the countries. Strengthening people-to-people connections through arts, sports, and cultural programs.

28. Gandhisagar Wildlife Sanctuary

28. Gandhi Sagar Wildlife Sanctuary is located in which one of the following states?

- (a) Rajasthan
- (b) Madhya Pradesh
- (c) Uttar Pradesh
- (d) Chhattisgarh

Answer: (b) Madhya Pradesh

Explanation:

In News: Female cheetah to be relocated from Kuno to Gandhi Sagar

Gandhi Sagar Wildlife Sanctuary:

- Gandhi Sagar Wildlife Sanctuary is located in Mandasaur and Neemuch districts of Madhya Pradesh. **Hence option (b) is correct.**
- It was declared a Wildlife Sanctuary in 1974.
- The sanctuary spreads over about 368 sq km.
- It lies along the Chambal River and around the Gandhi Sagar Dam.
- The terrain consists of dry deciduous forests, hills, valleys, and river ravines.



- Major vegetation includes teak, kardhai, salai, tendu, khair, palash, etc.
- Common fauna include chinkara, nilgai, sambar, wild boar, leopards, and several bird species.
- It is an important site for migratory water birds in winter.
- The Gandhi Sagar reservoir enriches the region's aquatic biodiversity.
- The sanctuary is part of the proposed Chambal–Gandhi Sagar Tiger Reserve.
- It is promoted as a site for eco-tourism and birdwatching in Madhya Pradesh.

29. Harvest Festivals

29. Consider the following pairs:

New Year	- Region
1. Vishu	- Kerala
2. Nutan Varsh	- Maharashtra
3. Gudi Padwa	- Gujarat

How many of the above pairs are correctly matched?

- Only one
- Only two
- All three
- None

Answer: (a) Only one

Explanation:

Festival name	Region / Communities / Religions
Vaisakhi	Punjab, Chandigarh, Haryana, Himachal Pradesh, Jammu, and parts of Delhi
Mesha Sankranti (Hindu Solar New Year)	Uttarakhand (Garhwal and Kumaon), Nepal (Sikkim, Darjeeling)
Puthandu	Tamil Nadu
Vishu (traditional)	Kerala 1 is correct
1st Chingam (Kollam era calendar)	Kerala
Bisu Parba	Tulu Nadu
Buisu	Tripura
Bwisagu	Bodoland, Assam
Bohag Bihu	Assam
Pana Sankranti	Odisha
Pahela Baishakh	West Bengal and the wider Bengal region
Jur Sital	Mithila
Sangken	Arunachal Pradesh (Khamti, Singpho, Khamyang, Tangsa), Assam (Tai Phake, Tai Aiton, Turung)
Bizhu	Chakma

Pateti	Parsis
Nowruz	Iranis/other Zoroastrians
Chaitra Navaratri (Hindu Lunar New Year)	Bihar (Bhojpur, Magadh), Uttar Pradesh (Awadh, Braj, Bagelkhand, Bhojpur-Purvanchal, Bundelkhand, Kannauj, Rohilkhand), Madhya Pradesh (Bagelkhand, Bundelkhand, Malwa, Mahakoshal, Gird), Chhattisgarh, Jharkhand, and parts of Delhi
Ugadi	Andhra Pradesh, Telangana, Karnataka, parts of Goa
Gudi Padwa	Maharashtra, Goa (Konkan) 2 is incorrect
Navreh	Kashmir
Ashadhi Bij	Kutch
Nutan Varsh	Gujarat 3 is incorrect
Cheti Chand	Sindh, Sindhi Hindus
Sajibu Cheiraoba ^[4]	Manipur
Losoong/Namsong	Sikkim (Bhutia, Lepcha)
Losar	Ladakh, Arunachal Pradesh (Monpa)
Mha Puja	Sikkim (Newar)
Gyalpo Lhosar	Sikkim (Sherpa)
Tamu Lhosar	Sikkim (Gurung)
Sonam Lhosar	Sikkim (Tamang)

30. Competition Commission of India

30. Which of the following statements is/are correct regarding the 'Competition Commission of India'?

- It is a statutory body within the Ministry of Commerce and industry.
- It has the power to investigate potential violations of the Competition Act, 2002.
- It has the authority to block or modify mergers that are harmful to competition.

Select the correct answer using the code given below:

- 1 only
- 1 and 2 only
- 3 only
- 2 and 3 only

Answer: (d) 2 and 3 only

Explanation:

In NEWS: Competition Commission of India again penalises Federation of Publishers' and Booksellers' Association in India ('FPBAI') and its office-bearers for anti-competitive practices

The Competition Commission of India:

- The Competition Commission of India (CCI) is the chief national competition regulator in India.



● It is a statutory body within the **Ministry of Corporate Affairs** and is responsible for enforcing the Competition Act, 2002 to promote competition and prevent activities that have an appreciable adverse effect on competition in India. **Hence statement 1 is incorrect.**

● The commission comprises a chairperson and not less than two and not more than six other members appointed by the Central Government.

Functions of Competition Commission of India:

1. Preventing Anti-Competitive Agreements:

● The CCI prohibits agreements between businesses that restrict competition, such as cartels and price-fixing arrangements. It investigates and penalizes entities involved in such practices.

2. Regulating Abuse of Dominant Position:

● The CCI prevents companies with significant market power from exploiting consumers or engaging in anti-competitive practices.

3. Overseeing Mergers and Acquisitions:

● The CCI reviews mergers and acquisitions to ensure they don't create monopolies or significantly reduce competition in the market.

● It has the authority to block or modify mergers that are deemed harmful to competition. **Hence statement 3 is correct.** CCI also approves combination under the act so that two merging entities do not overtake the market.

4. Promoting Competition Awareness:

● The CCI conducts educational programs and campaigns to raise awareness about competition law and its benefits among businesses, consumers, and policymakers.

● It also advises the government on competition-related matters when requested.

5. Investigating and Penalizing Violations:

● The CCI has the power to investigate potential violations of competition law.

● It can impose penalties on entities found guilty of anti-competitive practices. **Hence statement 2 is correct.**

6. Collaborating with Other Regulatory Bodies:

● The CCI works with other regulatory authorities in India to ensure that competition law is effectively implemented and enforced.

● It also collaborates with international competition agencies to promote best practices and address cross-border competition issues.

Notable Cases:

● Google (2022) – Fined ₹1,337.76 crore for abuse of dominant position in Android ecosystem

● DLF Case (2011) – Penalized for abuse of dominance in real estate

● Jet-Etihad Merger (2013) – Reviewed under the combination regulations

31. World Earth Day 2025

31. Which of the following Indian initiatives resonate with the objectives of World Earth Day?

1. National Solar Mission
2. International Solar Alliance
3. LiFE (Lifestyle for Environment) Movement

4. Net zero target

Select the correct answer using the code below:

- (a) 1 and 3 only
- (b) 2 and 4 only
- (c) 1, 2 and 3 only
- (d) 1, 2, 3 and 4

Answer: (d) 1, 2, 3 and 4

Explanation:

In News: World Earth Day observed on 22 Apr, 2025

World Earth Day 2025:

Date & Origin

● Celebrated annually on **22nd April** since **1970**, started in the USA by Senator **Gaylord Nelson** to promote environmental awareness.

● Recognized globally; the **United Nations** observes it as **International Mother Earth Day**.

Theme (2025)

● **"Our Power, Our Planet"** – emphasizes the urgent need to shift towards renewable energy and sustainable consumption patterns.

● Focus: phasing out fossil fuels, increasing climate resilience, and global cooperation on carbon neutrality.

Global Significance

● Mobilizes **over 1 billion people in 190+ countries**.

● Acts as a platform to influence **climate policies, corporate responsibility, and citizen participation**.

Relevance to India

● India, being a signatory to **Paris Agreement (2015)**, aligns its commitments with global climate actions.

● Initiatives like **National Solar Mission, LiFE (Lifestyle for Environment) Movement**, and **International Solar Alliance** resonate with Earth Day's objectives.

● Earth Day 2025 can highlight India's efforts toward **net zero by 2070** and **energy transition targets (500 GW renewable energy by 2030)**. **Hence all are correct.**

32. India's First Full-Stack Quantum Computer 'Indus'

32. Which one of the following is the context in which the term "QpiAI-Indus" is mentioned?

- (a) Cloud Services
- (b) Quantum Computing
- (c) Visible Light Communication Technologies
- (d) Wireless Communication Technologies

Answer: (b) Quantum Computing

Explanation:

In News: Startup selected under NQM launches one of India's most powerful quantum computers

QpiAI-Indus:

● India's first full-stack quantum computer is named QpiAI-Indus, developed by the Bengaluru-based startup QpiAI. **Hence option (b) is correct.**

● It was launched on **World Quantum Day - 14th April 2025**, under the framework of **India's National Quantum Mission (NQM)**.

● The system is built on **25 superconducting qubits**, making it the most powerful quantum computer in India so far.

● "Full-stack" indicates that it integrates the **hardware (processor, cryogenics), control electronics, software, hybrid quantum-classical computing tools, and AI-assisted workflows**

● Current **coherence times**: $T1 \approx 30$ microseconds, $T2 \approx 25$ microseconds; **single-qubit fidelity** $\approx 99.7\%$, **two-qubit fidelity** $\approx 96\%$.

● The roadmap includes scaling to **64 and 128 qubits**, and building **logical qubits** ("Yukti") with error correction by 2026.

● Application areas include **life sciences, drug discovery, materials science, logistics, and sustainability**.

● The launch aligns with India's target of **technological self-reliance** and global competitiveness in **emerging technologies**.

● The initiative supports India's **National Quantum Mission**, which aims to build **50-1000 qubit systems** and a domestic quantum ecosystem by 2031.

● Challenges include **low qubit counts, limited coherence times, high infrastructure costs, and competition from global players** like IBM and Google.

● It is a milestone towards India's vision of being a leader in **quantum computing, quantum communication, and quantum materials research**.

33. BharatNet

33. Consider the following statements:

1. BharatNet is an ambitious project aimed at providing affordable high-speed internet access to every Gram Panchayat in the country.

2. The initiative functions under the Ministry of Electronics and Information Technology.

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

Answer: (a) 1 only

Explanation:

In NEWS: Gujarat becomes first state to operationalise amended BharatNet program under state-led model

BharatNet

● BharatNet is an ambitious project aimed at providing **affordable high-speed internet access to every Gram Panchayat in the country**. **Hence statement 1 is correct.**

● This initiative, under the **Ministry of Communications**, seeks to empower rural India, fostering inclusive growth and bridging

the gap between urban and rural communities. **Hence statement 2 is incorrect.**

● The program provides for internet access by Optical Fibre (OF) connectivity to 2.64 lakh GPs in ring topology and also to provide OF connectivity to the remaining non-GP villages (approx. 3.8 lakhs) on demand basis.

● BharatNet is not merely an infrastructure project; it is the backbone of India's journey towards a truly digital nation.

● BharatNet operates as the world's largest rural broadband connectivity program. The project is being executed by a Special Purpose Vehicle (SPV) namely Bharat Broadband Network Limited (BBNL).

Digital Bharat Nidhi: Funding BharatNet

● Digital Bharat Nidhi (DBN) is a fund that aims to improve the quality and accessibility of telecommunications services in India.

● It was established by the government of India as a replacement for the Universal Service Obligation Fund (USOF).

34. Arbitration in India

34. Consider the following statements:

1. Arbitration is a form of Alternative Dispute Resolution (ADR) where disputes are settled by the regional level courts which are binding.

2. Arbitration in India is primarily governed by the Arbitration and Conciliation Act, 1996 based on the UNCITRAL Model Law, 1985.

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

Answer: (b) 2 only

Explanation:

In News: India's growing economy has sparked discussions on using arbitration to handle increasing commercial disputes.

Arbitration in India:

● Arbitration is a form of **Alternative Dispute Resolution (ADR)** where **disputes are resolved outside courts by an arbitrator**, whose award is binding. **Hence statement 1 is incorrect.**

● The **Arbitration and Conciliation Act, 1996** governs arbitration in India, based on the **UNCITRAL Model Law, 1985**. **Hence statement 2 is correct.**

● The Act covers **domestic arbitration, international commercial arbitration, and enforcement of foreign awards**.

● **2015 Amendment:** Introduced timelines, reduced court intervention, promoted institutional arbitration.

● **2019 Amendment:** Provided for the creation of the **Arbitration Council of India (ACI)** for accreditation and grading.

● **2021 Amendment:** Allowed automatic stay of awards if the underlying arbitration agreement was prima facie induced by fraud or corruption.

● **Types of Arbitration in India:**

- **Ad hoc Arbitration** – parties manage procedures themselves.
- **Institutional Arbitration** – managed by recognized bodies.
- **Domestic Arbitration** – all parties Indian.
- **International Commercial Arbitration** – at least one party foreign.

● **Key Indian Arbitration Institutions: MCIA (Mumbai Centre for International Arbitration), DIAC (Delhi International Arbitration Centre), and New India International Arbitration Centre (NIAAC).**

● India is a signatory to the **New York Convention (1958)** and **Geneva Convention (1927)** on enforcement of foreign arbitral awards.

35. Ethanol Production

35. Consider the following statements.

1. India is the third-largest producer and consumer of ethanol in the world.
2. India targets to achieve 20% ethanol blending in petrol by 2025

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

Answer: (c) Both 1 and 2

Explanation:

In NEWS: India has become World's third largest Producer and Consumer of Ethanol

- India has recently become the third-largest producer and consumer of ethanol in the world. **Hence statement 1 is correct.**
- This change is thanks to important policy changes made by the Indian government to encourage the use of biofuels and improve energy sustainability.

Government Initiatives

- The government has launched several programs to increase ethanol production, including financial support for sugarcane farmers and manufacturers.
- These policies aim to make more ethanol available for blending with fuels, reduce reliance on fossil fuels, and support farmers in rural areas.
- **National Biofuel Policy:** Launched in 2018, the policy aims to promote the production and use of biofuels, including ethanol, as part of India's commitment to clean energy.
- **Ethanol Blending Targets:** The government set a target to achieve 20% ethanol blending in petrol by 2025, which is a significant increase from previous years. **Hence statement 2 is correct.**

Industry Conference

● In September 2024, the India Sugar & Bio-Energy Conference was held, organized by the Indian Sugar & Bio-Energy Manufacturers Association (ISMA).

● This event gathered policymakers, industry leaders, and other stakeholders to talk about the future of the sugar and bio-energy sectors.

● This year's conference theme, "Harmonising Sweet Sustainability: Navigating India's Path to a Green Economy," focuses on developing sustainable practices in the sugar and bio-energy industries.

36. Chagos Island

36. The Chagos Island is located in the

- (a) Pacific Ocean
- (b) Atlantic Ocean
- (c) Arctic Ocean
- (d) Indian Ocean

Answer: (d) Indian Ocean

Explanation:

In News: Trump approves UK's Chagos Islands deal with Mauritius

Chagos Island:

- The **Chagos Archipelago** is a group of 60+ small islands in the **Indian Ocean**, located about **500 km south of Maldives**. **Hence option (d) is correct.**
- The largest island is **Diego Garcia**, which hosts a major **US military base**.
- Historically, the islands were part of **Mauritius**, a British colony until 1968.
- In **1965**, before Mauritius' independence, the UK separated Chagos from Mauritius to form the **British Indian Ocean Territory (BIOT)**.
- The **local Chagossian population** was forcibly evicted (1967–1973) to make way for military installations.
- **Mauritius claims sovereignty** over the Chagos Islands, calling the separation illegal under decolonization rules.
- **International Legal Developments:**
 - **2019:** The **International Court of Justice (ICJ)** issued an advisory opinion – UK's continued administration of Chagos is illegal, and the islands should be returned to Mauritius
 - **2019:** The **UN General Assembly (UNGA)** passed a resolution (116–6 vote) demanding the UK withdraw from the islands within 6 months.
 - **2021:** The **International Tribunal for the Law of the Sea (ITLOS)** reaffirmed that Mauritius has sovereignty.
- **UK's Position:** Maintains control, citing defense agreements with the US.
- **US Role:** Operates a strategic military base in Diego Garcia, critical for security in the **Indian Ocean, Middle East, and Indo-Pacific**.
- **India's Stand:** Supports Mauritius' claim over Chagos in line with its consistent **anti-colonial and decolonization policy**.
- **Strategic Importance:**
 - Location in the central Indian Ocean → key for monitoring shipping routes and power projection.
 - Diego Garcia used in **Cold War, Gulf War, Afghanistan, and Iraq operations**.



37. National Technical Textiles Mission

37. Consider the following

1. High Tensile Strength
2. High Thermal conductivity
3. Fire Resistance
4. Shock Absorption

How many of the above is/are the properties of technical textiles?

- (a) Only one
(b) Only two
(c) Only three
(d) All four

Answer: (c) Only three

Explanation:

In NEWS:

Annual export of technical textiles will cross \$10 billion by 2030, said Giriraj Singh, Union Minister for Textiles on Friday, inaugurating a conference and exhibition on technical textiles in New Delhi, held by the Ministry of Textiles, the Federation of Indian Chambers of Commerce and Industry, and the Indian Technical Textiles Association.

About:

- Technical textiles are textile products manufactured primarily for their technical performance and functional properties rather than for aesthetic or decorative purposes.
- They are designed to meet specific industrial, commercial, or consumer needs and are used in a wide range of applications, including agriculture, construction, healthcare, and transportation.

National Technical Textiles Mission:

- The Government has launched the National Technical Textiles Mission and PLI Scheme for MMF, Apparel and Technical Textiles and has sanctioned 156 research projects under the Mission.
- The Union Minister of State for Textiles has taken initiatives to promote investments, including Foreign Direct Investment in technical textiles.

Key Features of Technical Textiles:

- **Performance-Oriented:** The main focus is on functionality, such as durability, strength, elasticity, insulation, and resistance to heat, chemicals, or abrasion.
- Technical textiles are the thermal inductor, not a conductor.
Hence statement 2 is incorrect.
- **Specialized Applications:** These textiles are tailored for specific purposes, such as protection, filtration, reinforcement, or safety.
- **Innovative Materials:** They often use advanced fibers like aramid, carbon, and glass fibers, along with traditional materials, to achieve superior technical performance.

Categories of Technical Textiles:

Technical textiles are classified based on their end-use application:

1. **Agrotech:** Textiles used in agriculture, horticulture, and forestry. Examples include shade nets, crop covers, and weed control fabrics.
2. **Buildtech:** Used in construction, infrastructure, and architectural applications. Examples are geogrids, roofing membranes, and concrete reinforcement textiles.
3. **Medtech:** Textiles used in healthcare and hygiene. Examples include surgical gowns, bandages, and artificial implants.
4. **Geotech:** Used in geotechnical and civil engineering applications. Examples are geotextiles for soil reinforcement, erosion control, and drainage systems.
5. **Protech:** Protective textiles used for personal safety. Examples include bulletproof vests, fire-resistant fabrics, and chemical protective suits.
6. **Sportech:** Textiles used in sports and leisure activities. Examples are parachutes, tents, and sportswear.
7. **Homotech:** Textiles used in household applications. Examples include upholstery fabrics, carpet backings, and blinds.
8. **Packtech:** Packaging textiles such as sacks, bags, and wrapping materials.
9. **Mobiltech:** Textiles used in transportation, including automobiles, aircraft, and ships. Examples include seatbelts, airbags, and upholstery fabrics.

38. ChaSTE

38. 'ChaSTE', sometimes seen in the news, is related to:

- (a) India's first space-based solar observatory
(b) A payload on Aditya-L1 to study solar wind
(c) A thermal probe deployed on the Moon by Chandrayaan-3
(d) A cryogenic engine developed by ISRO

Answer: (c) A thermal probe deployed on the Moon by Chandrayaan-3

Explanation:

In News: Chandrayaan's ChaSTE scores a first after taking moon's temperature

ChaSTE:

- **ChaSTE (Chandra's Surface Thermophysical Experiment)** was developed by ISRO to study the thermal properties of the lunar south pole region.



● It was onboard Chandrayaan-3's Vikram lander, which successfully landed on 23 August 2023. Hence option (c) is correct.

● ChaSTE was operational until 2 September 2023, when the lander entered sleep mode.

Design & Function:

● Probe with 10 temperature sensors placed 1 cm apart near the tip.

● A rotating mechanism allowed it to penetrate 10 cm below the lunar surface.

● Created a vertical temperature profile of the regolith.

Key Achievements:

● First instrument to successfully measure in-situ subsurface temperature near the Moon's south pole.

● Provided data on thermal conductivity and vertical temperature gradients.

● Suggested presence of more water ice in the subsurface than earlier believed.

Scientific & Strategic Significance:

● Helps in understanding heat transfer and regolith properties in permanently shadowed regions.

● Critical for resource utilization (water extraction, oxygen, hydrogen).

● Supports planning of future lunar habitats and missions, including Artemis & India's future lunar explorations.

● Establishes India's capability in planetary surface thermophysical experiments.

39. Air Quality Index (AQI)

39. In the cities of our country, which among the following atmospheric gases are normally considered in calculating the value of Air Quality Index?

1. Carbon dioxide
2. Carbon monoxide
3. Nitrogen dioxide
4. Sulphur dioxide
5. Methane

Select the correct answer using the code given below.

- (a) 1, 2 and 3 only
- (b) 2, 3 and 4 only
- (c) 1, 4 and 5 only
- (d) 1, 2, 3, 4 and 5

Answer: (b) 2, 3 and 4 only

Explanation:

In NEWS: Air quality in Delhi remains 'very poor', govt. initiates action

Air Quality Index (AQI):

● The Air Quality Index (AQI) is a tool for communicating about outdoor air quality and health.

● Five major pollutants: EPA establishes an AQI for five major air pollutants regulated by the Clean Air Act. Each of these pollutants

has a national air quality standard set by EPA to protect public health:

- ground-level ozone
- particle pollution (also known as particulate matter, including PM2.5 and PM10)
- carbon monoxide
- sulfur dioxide
- nitrogen dioxide. Hence 2, 3 and 4 are correct.

● The AQI is divided into six categories. Each category corresponds to a different level of health concern. Each category also has a specific color. The color makes it easy for people to quickly determine whether air quality is reaching unhealthy levels in their communities.

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

40. Silicon-Perovskite Tandem Solar Cells

40. Consider the following statements:

1. Silicon-perovskite tandem solar cells can achieve higher power conversion efficiencies (PCEs) than single-junction solar cells.
2. A perovskite layer absorbs lower-energy infrared light, while a silicon layer captures high-energy photons (visible light), broadening the solar spectrum coverage.

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

Answer: (a) 1 only

Explanation:

In NEWS: NCPRE's pioneering work in high-efficiency, low-cost Silicon-Perovskite Tandem Solar Cells is a game-changer for India's solar energy future

● IIT-Bombay-incubated startup - Advanced Renewable Tandem-Photovoltaics India (ART-PV India) has developed a 4-Terminal Silicon/CdTe-Perovskite tandem solar cell with a conversion efficiency of 29.8%.

● This is a national milestone and one of the highest performance levels ever achieved in India.

Silicon-perovskite tandem solar cells:

● Silicon-perovskite tandem solar cells combine a perovskite top cell with a silicon bottom cell to achieve higher power conversion efficiencies (PCEs) than single-junction solar cells. **Hence statement 1 is correct.**

● A perovskite layer (bandgap ~1.5–1.8 eV) absorbs high-energy photons (visible light), while a silicon layer (bandgap ~1.12 eV) captures lower-energy infrared light, broadening the solar spectrum coverage. **Hence statement 2 is incorrect.**

● These cells surpass the Shockley-Queisser limit for single-junction silicon cells (~29.4%).

● Design: Typically monolithic two-terminal cells, with the perovskite layer deposited on a silicon heterojunction (SHJ) or passivated emitter and rear contact (PERC/TOPCon) bottom cell. Interconnection layers like transparent conductive oxides (TCOs) or self-assembled monolayers (SAMs) ensure efficient charge transfer.

Advantages

● **High Efficiency:** Combining materials leverages their complementary bandgaps for better light harvesting.

● **Cost Potential:** Perovskites are processed at low temperatures using solution-based methods (e.g., spin coating), potentially reducing manufacturing costs compared to silicon-only cells.

● **Flexibility:** Perovskites enable thinner, lighter, and potentially flexible panels.

Challenges

● **Stability:** Perovskite layers are sensitive to moisture, oxygen, and heat, leading to faster degradation than silicon. Encapsulation and material tweaks (e.g., aluminum oxide nanoparticles) are improving lifespans.

● **Scalability:** Lab efficiencies (on ~1 cm² cells) drop in larger modules due to defects and non-uniform deposition. Commercial-sized cells reached 30.1% PCE, but full modules are at ~25.8%.

● **Lead Content:** Perovskites often contain lead, raising environmental concerns. Research focuses on lead-free alternatives and recycling protocols.

● **Manufacturing:** Scaling solution-based perovskite deposition on textured silicon surfaces is complex. Innovations like bilayer passivation (e.g., lithium fluoride and diammonium diiodide) and nanotextured surfaces improve yield and performance.

41. India - Sri Lanka Relations

41. With reference to 'India - Sri Lanka Relations', consider the following statements:

1. The joint military exercises Mitra Shakti, SLINEX, and SIMBEX exemplify structured defence cooperation between India and Sri Lanka.
2. India and Sri Lanka have institutionalized economic engagement through a bilateral Free Trade Agreement, facilitating preferential trade and market access.
3. India ranks among the principal foreign investors in Sri Lanka, with substantial stakes across banking, information technology, petroleum, and infrastructure sectors.

How many of the above statements are correct?

- (a) Only one

(b) Only two

(c) All three

(d) None

Answer: (b) Only two

Explanation:

In News: Visit of Prime Minister to Sri Lanka

India-Sri Lanka Relations:

Historical & Cultural Ties

● India and Sri Lanka share **2,500+ years of cultural, linguistic, religious and historical links** (Buddhism, Ramayana, Tamil cultural ties).

● **Buddhism** is a strong bond – Emperor Ashoka's children (Mahinda and Sanghamitta) carried Buddhism to Sri Lanka.

● **Indian diaspora in Sri Lanka:** Tamil population (plantation Tamils and Sri Lankan Tamils) remain politically significant.

Political & Diplomatic

● Diplomatic ties established in **1948** (year of Sri Lankan independence).

● India played a role in **Sri Lanka's peace process** during the ethnic conflict (1980s–2009).

● **Indo-Sri Lanka Accord (1987)** → led to 13th Amendment of Sri Lankan Constitution, promising devolution of power to provinces.

● India advocates for **Tamil minority rights and reconciliation** while respecting Sri Lanka's sovereignty.

Economic & Trade

● India is **Sri Lanka's largest trading partner**; bilateral trade ≈ **\$5 billion (2022–23)**.

India-Sri Lanka Free Trade Agreement (ISLFTA) came into force in **2000** (India's first FTA). **Hence statement 2 is correct.**

● India is among the **largest investors** in Sri Lanka (banking, IT, petroleum, infrastructure). **Hence statement 3 is correct.**

● India supplied **credit lines worth \$4 billion in 2022** to help Sri Lanka during its economic crisis.

Development Cooperation

● India is a major development partner: over **\$5 billion in grants and LoCs** in housing, education, healthcare, transport, and railways.

● **Indian Housing Project:** construction of **50,000+ houses** for internally displaced Tamils.

Initiatives in renewable energy, digital connectivity, and capacity building (e.g., scholarships, training programs).

Security & Strategic

● India's location makes Sri Lanka central to **Indian Ocean security and SAGAR (Security and Growth for All in the Region)**.

● **Defence cooperation:** joint exercises like **Mitra Shakti** (Army), **SLINEX** (Navy), and training programs. **Hence statement 1 is incorrect.**

● India has supplied defence equipment and extended maritime security assistance.

Connectivity & Infrastructure

- Proposed projects: **land bridge, undersea power grid link, and Trincomalee oil tank farm development.**
 - **Ferry services** between Nagapattinam and Kankesanthurai were revived in 2023.
- Air connectivity and tourism are major people-to-people links.

Challenges

- **China's presence** in Sri Lanka (Hambantota Port, Colombo Port City, Belt & Road Initiative) creates strategic concerns for India.
- **Tamil minority issue** remains a sensitive political matter.
- Fisheries disputes between Tamil Nadu fishermen and Sri Lankan Navy cause recurring tensions.
- Domestic politics in Sri Lanka sometimes exploit **the India factor** for electoral gains.

42. UNESCO Global Geoparks

42. Consider the following statements with respect to UNESCO designated Global Geoparks:

- The April 2025 designation marked the first inclusion for India in the list of UNESCO global geoparks.
- The designation provides legal protection in addition to enhanced recognition, conservation efforts, and international cooperation.

Which of the statements given above is/are incorrect?

- I only
- II only
- Both I and II
- Neither I nor II

Answer: (c) Both I and II

Explanation:

In News: UNESCO designated 16 new Global Geoparks as Global Geoparks Network

- In April 2025, UNESCO added 16 new sites to its Global Geoparks Network, increasing the total to 229 sites across 50 countries.
- These newly designated Geoparks are located in China, the Democratic People's Republic of Korea (North Korea), Ecuador, Indonesia, Italy, Norway, the Republic of Korea (South Korea), Saudi Arabia, Spain, the United Kingdom, and Vietnam.
- This designation marked the first inclusion for both North Korea and Saudi Arabia in the network.

UNESCO Global Geoparks:

- UNESCO Global Geoparks are single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education, and sustainable development.
- The concept integrates geoscience with local culture, history, and biodiversity, making geoparks valuable not only for their geological importance but also for their role in preserving intangible cultural heritage.
- These geoparks must meet strict criteria set by UNESCO and undergo revalidation every four years to maintain their status.

- UNESCO designated the first global geoparks in 2004, and they became part of its official program in 2015, under the International Geoscience and Geoparks Programme (IGGP).
- The designation **does not provide legal protection**, but it enhances recognition, conservation efforts, and international cooperation. **Hence statement II is incorrect.**

Status of India:

- As of around April/May 2025, **India does not yet have any site designated as a UNESCO Global Geopark.** **Hence statement I is incorrect.**
- However, India already has about 100 geo-heritage sites designated by the Geological Survey of India (GSI), of which 32 are recognised as National Geological Monuments.
- However, geo-heritage sites in India do not yet have national legislation for comprehensive protection. There is a proposed Geo Heritage Sites and Geo-relics Bill, 2022 under consideration.

43. WAVES

43. Consider the following statements:

- The World Audio Visual Entertainment (WAVES) Summit is a key forum for promoting discussions, collaboration, and innovation in the media and entertainment industry.
- WAVES 2025 is organised by the Ministry of Information and Broadcasting of India to celebrate and amplify India's creative and media economy.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer: (c) Both 1 and 2

Explanation:

In NEWS: PM Modi chairs WAVES advisory board meeting to position India as global entertainment hub

World Audio Visual Entertainment (WAVES) Summit:

- World Audio Visual & Entertainment Summit (WAVES) is a key forum for promoting discussions, collaboration, and innovation in the M&E industry. **Hence statement 1 is correct.**
- WAVES is a global summit that brings together the world of entertainment, creativity, and culture, the Prime Minister's Office said on Friday in an official statement.
- The global summit that brings together the world of entertainment, creativity and culture.
- The members of the Advisory Board are eminent individuals from different walks of life, who not only reiterated their support but also shared valuable inputs on how to further enhance our efforts to make India a global entertainment hub.
- WAVES 2025 is being **organised by the Ministry of Information and Broadcasting** to celebrate and amplify India's creative and media economy. **Hence statement 2 is correct.**
- As part of the Waves Summit, being held from February 5 to 9, 2025, the Ministry is also launching the Create in India Challenge,



Season 1, which will feature several 'challenges' aimed at fostering innovation and creativity.

- The Summit has brought together industry leaders, stakeholders, and innovators.
- The Summit was earlier supposed to be held alongside the International Film Festival of India (IFFI) in Goa in November.

44. Basava

44. Which one of the following statements correctly represents the teachings of Basava, a 12th-century Bhakti Saint?

- (a) Social hierarchy was divinely ordained and necessary for harmony.
- (b) Social equality, compassion, and devotion to one God, in the form of Ishtalinga.
- (c) Idol worship and elaborate rituals as the path to salvation.
- (d) Logical arguments were essential means for the highest bliss.

Answer: (b) Social equality, compassion, and devotion to one God, in the form of Ishtalinga.

Explanation:

In News: Processions, cultural programmes mark Basava Jayanti in several districts

Basava:

- Basava was a 12th-century Indian philosopher, statesman, and social reformer who is considered the founding saint of the Lingayat (or Veerashaiva) movement in Karnataka.
- He was born in 1105 CE in Basavana Bagewadi (present-day Karnataka), during the reign of the Kalachuri dynasty.
- Basava strongly opposed the rigid caste system, ritualism, and Brahminical dominance in religious practices.
- He preached social equality, compassion, and devotion to one God, Shiva, in the form of Ishtalinga worn on the body. **Hence option (b) is correct.**
- He promoted the idea of Kayaka (dignity of labor) and Dasoha (sharing wealth with the needy), making work and service a form of worship.
- Basava composed thousands of short, poetic verses called **Vachanas**, written in Kannada, expressing his spiritual and social ideals.
- His teachings emphasized personal devotion, inner purity, and direct connection with God, bypassing priestly mediation.
- He founded the **Anubhava Mantapa**, an assembly that brought together thinkers, saints, and common people to discuss spiritual and social issues.
- Though initially supported by the Kalachuri king, his reforms led to conflicts with orthodox groups, and he eventually left Kalyana (now Basavakalyan).
- Basava is regarded as a pioneer of the Bhakti movement in South India and a symbol of social justice and spiritual democracy.

45. Fair and Remunerative Price of sugarcane

45. With reference to the Fair and Remunerative Price (FRP), which of the following statements is/are correct?

1. It is the minimum price that the Government pays to sugarcane farmers for their produce.
2. The Central Government, based on the recommendations of the Commission for Agricultural Costs and Prices (CACP), announces the FRP every year before the sugarcane harvesting season.
3. Non-payment or delayed payment of FRP to farmers is regulated under the Sugarcane (Control) Order, 1966.

Select the correct answer using the code given below.

- (a) 2 and 3
- (b) 2 only
- (c) 1 and 3
- (d) 3 only

Answer: (a) 2 and 3

Explanation:

In News: Cabinet approves Fair and Remunerative Price of sugarcane payable by Sugar Mills to sugarcane farmers for sugar season 2025-26

Fair and Remunerative Price (FRP):

- The Fair and Remunerative Price (FRP) is the minimum price set by the Government of India that **sugar mills must pay to sugarcane farmers for their produce. Hence statement 1 is incorrect.**
- FRP aims to ensure that sugarcane farmers receive a fair, timely, and remunerative return for their crop, protecting them from exploitation by sugar mills.
- The Central Government, based on the recommendations of the Commission for Agricultural Costs and Prices (CACP), announces the FRP every year before the sugarcane harvesting season. **Hence statement 2 is correct.**
- The price is determined after considering factors like production costs, international sugar prices, sugar recovery rate, and the overall market conditions.
- FRP serves as a benchmark; some states may declare a State Advised Price (SAP), which can be higher than the FRP to provide additional support to farmers.
- The FRP system helps stabilize the sugar industry and safeguard the interests of both farmers and sugar mills.
- Non-payment or delayed payment of FRP by sugar mills to farmers is regulated under the Sugarcane (Control) Order, 1966, which mandates mills to pay farmers within 14 days of cane crushing. **Hence statement 2 is correct.**

46. Consumer Price Index for Agricultural Labourers (CPI-AL) and Rural Labourers (CPI-RL)

46. Consider the following statements:

1. The base year of both Consumer Price Index for Agricultural Labourers (CPI-AL) and Rural Labourers (CPI-RL) is 1986-87.

2. The CPI-RL covers the households of rural labourers which includes agricultural labourers households also.
3. The CPI-AL is compiled and released by the Central Statistical Organisation whereas the CPI-RL compiled and released by the Labour Bureau.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 3 only
- (c) 1 and 2
- (d) 2 and 3

Answer: (c) 1 and 2

Explanation:

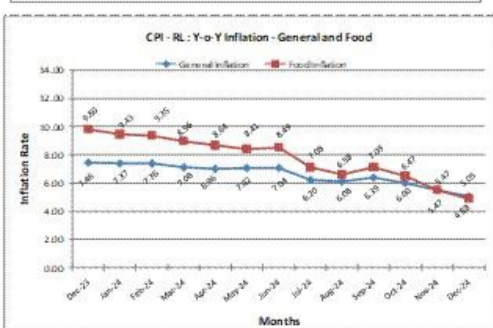
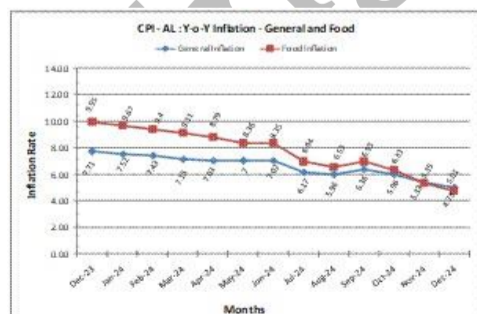
In NEWS: ALL-INDIA CONSUMER PRICE INDEX NUMBERS FOR AGRICULTURAL AND RURAL LABOURERS – DECEMBER, 2024

At the national level, there are four Consumer Price Index (CPI) numbers. These are:

- CPI for Industrial Workers (IW),
- CPI for Agricultural Labourers (AL), CPI for Rural Labourers (RL) and
- CPI for Urban Non-Manual Employees (UNME).
- The base years of the current series of CPI(IW), CPI(AL) and CPI(RL), and CPI(UNME) are 1982, 1986-87 and 1984-85, respectively. **Hence statement 1 is correct.**
- While the first three are compiled and released by the Labour Bureau in the Ministry of Labour, the fourth one is released by the Central Statistical Organisation in the Ministry of Statistics and Programme Implementation. **Hence statement 3 is incorrect.**

CONSUMER PRICE INDEX NUMBERS FOR AGRICULTURAL AND RURAL LABOURERS:

- The All-India Consumer Price Index for Agricultural Labourers (CPI-AL) and Rural Labourers (CPI-RL) (Base: 1986-87=100) remained unchanged for the month of December 2024 at 1320 and 1331 points respectively.
- The year-on-year inflation rates based on CPI-AL and CPI-RL for the month of December, 2024 were recorded at 5.01% and 5.05%, respectively, compared to 7.71% and 7.46% in December, 2023.
- The corresponding figures for November, 2024 were 5.35% for CPI-AL and 5.47% for CPI-RL.



Consumer Price Index for Agricultural Labourers (CPI-AL) and Rural Labourers (CPI-RL):

- The compilation of CPI Numbers for Agricultural Labourers started from September, 1964. The existing series of CPI Numbers for Agricultural and Rural Labourers (base 1986-87=100) replaced the same from November, 1995.
- While the retail prices utilized in the compilation of CPI-AL and CPI-RL are same, the weights are different due to the difference in coverage of the two series.
- The coverage of CPI-AL is confined to households of the agricultural labourers whereas the CPI-RL covers the households of rural labourers which includes agricultural labourers households also. **Hence statement 2 is correct.**

47. PM e-Drive

47. With reference to 'PM E-DRIVE Scheme' consider the following statements.

1. The PM E-DRIVE scheme aims to promote EVs to reduce the environmental impact of transportation and improve air quality.
2. The scheme provides incentives for the purchase of EVs as well as facilitates the establishment of essential charging infrastructure for EVs.

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

Answer: (c) Both 1 and 2

Explanation:

In NEWS: Ministry of Heavy Industries Launches PM E-DRIVE Scheme at Bharat Mandapam, New Delhi

- The Union Cabinet chaired by the Prime Minister Shri Narendra Modi, has approved the proposal of the Ministry of Heavy Industries (MHI) for implementation of a scheme titled 'PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme' for promotion of electric mobility in the country.
- The scheme promotes mass mobility by supporting means of public transportation.
- The primary objective of the PM E-DRIVE scheme is to expedite the adoption of EVs by providing upfront incentives for their purchase, as well as by facilitating the establishment of essential charging infrastructure for EVs. **Hence statement 2 is correct.**
- The PM E-DRIVE scheme aims to promote EVs to reduce the environmental impact of transportation and improve air quality. **Hence statement 1 is correct.**
- The scheme promotes an efficient, competitive and resilient EV manufacturing industry thereby promoting Aatmanirbhar Bharat.
- This will be achieved by incorporating a phased manufacturing programme (PMP) which encourages domestic manufacturing and strengthening of EV supply chain.
- This initiative of Govt. of India is poised to address concerns regarding environmental pollution and fuel security as well as to



make significant progress in promoting sustainable transportation solutions.

- This scheme along with its PMP, shall spur investment in the EV sector and associated supply chain.
- The scheme shall create significant employment opportunities along the value chain.
- There will also be employment generation through manufacturing and establishment of charging infrastructure.

48. Palna Scheme under Mission Shakti

48. With reference to the Palna Scheme, consider the following statements:

- I. It provides creche services only to working mothers in organized sectors.
- II. It is a Centrally Sponsored Scheme under Mission Shakti.

Which of the statements given above is/are correct?

- (a) I only
- (b) II only
- (c) Both I and II
- (d) Neither I nor II

Answer: (b) II only

Explanation:

Palna Scheme:

- The **Palna Scheme**, under the sub-scheme 'Samarthya' of **Mission Shakti**, aims to provide **quality crèche facilities** to children (6 months–6 years), enabling **working mothers** to participate in gainful employment without compromising child care. **Hence statement 1 is incorrect.**
- It promotes **women empowerment**, aligns with **Sustainable Development Goal 8**, and formalizes child care work.

Key Features:

- **Launched:** Reorganized from the National Crèche Scheme in 2022.
- **Funding Pattern:** It is a Centrally Sponsored Scheme under Mission Shakti.
 - **General States & UTs with legislature:** 60:40 (Centre:State)
 - **NE & Special Category States:** 90:10
 - **UTs without legislature:** 100% Central funding

Hence statement 2 is correct.

- **Beneficiaries:** Children of **all mothers**, irrespective of employment status.

Services Provided:

- Daycare with **sleeping arrangements**
- **Early stimulation** (below 3 years), **Pre-school education** (3–6 years)
- **Locally sourced nutrition**, health checkups, growth monitoring, **immunization**
- Complies with **Maternity Benefit Act** – mandates crèches in establishments with 50+ employees

Types of Crèches:

1. **Standalone Crèches**

2. **Anganwadi-cum-Crèches (AWCCs)** – integrated with Anganwadi Centres

- Staffing:
 - **Standalone:** 1 Crèche Worker + 1 Helper
 - **AWCC:** Additional Crèche Worker + Helper with existing Anganwadi staff

Infrastructure and Reach (as of March 2025):

- **Target for 2024-25:** 17,000 new AWCCs
- **Approved AWCCs:** 11,395 across 34 States/UTs
- **Operational AWCCs:** 1,761 (28,783 beneficiaries)
- **Standalone Crèches operational:** 1,284 (23,368 beneficiaries)

49. EPFO

49. With reference to the Employees' Provident Fund Organisation (EPFO), consider the following statements.

1. It is a constitutional body that promotes employees to save funds for retirement.
2. It is governed by the Ministry of Labour and Employment.
3. It offers schemes that cover only the Indian workers and excludes international workers.

Which of the statements given above are correct?

- (a) 1 only
- (b) 1 and 3 only
- (c) 2 only
- (d) 2 and 3

Answer: (c) 2 only

Explanation:

In NEWS: With a total 9.3 lakh new members, EPFO shows 9% growth in subscriber base

About The Employees' Provident Fund Organisation (EPFO):

- Employees' Provident Fund Organisation is a non-constitutional body that promotes employees to save funds for retirement. **Hence statement 1 is incorrect.**
- EPFO was launched in 1951 and is governed by the Ministry of Labour and Employment. **Hence statement 2 is correct.**
- It offers schemes that cover Indian and international workers. **Hence statement 3 is incorrect.**

Schemes Offered Under EPFO:

- Employees' Provident Funds Scheme 1952 (EPF)
- Employees' Pension Scheme 1995 (EPS)
- Employees' Deposit Linked Insurance Scheme 1976 (EDLI)

Objectives of EPFO:

- To ensure that each employee only has one EPF account.
- Compliance must be made as simple as possible.
- Ensure that organizations follow all of the EPFO's rules and regulations regularly.
- To assure the dependability of internet services and to increase their facilities.
- All member accounts should be easily accessible online.
- Claim settlement times will be lowered from 20 to 3 days.



- Encouragement and promotion of voluntary compliance.

UAN and EPFO Portal:

- All EPF subscribers have online access to their PF accounts and can execute operations such as withdrawal and checking their EPF balance.
- EPFO assigns each member a 12-digit number known as the UAN. Even if an employee changes employers, his or her UAN remains the same.
- The Universal Account Number (UAN) simplifies access to the EPFO member portal. When a member's job changes, his or her member ID changes, and the new ID is linked to the UAN. Employees must, however, activate their UAN to use the services online.

50. One Nation One Election

50. With reference to the 129th Constitutional Amendment Bill, Consider the following statements.

1. It Inserts Article 82A which would allow for simultaneous elections to the House of People and the Council of states.
2. The Bill states that the Legislative Assembly's full term shall come to an end with the end of the full term of the Lok Sabha irrespective of deferment.
3. Part XV of the Constitution of India deals with the Elections to both the House of the People and to the Legislative Assemblies of States.

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

Answer: (b) 2 and 3 only

Explanation:

In NEWS: 'One nation, one election' bills to be introduced in Lok Sabha on December 16

- The 'One Nation, One Election' Bill, officially known as the Constitution (One Hundred and Twenty-Ninth Amendment) Bill, 2024, will likely be tabled in the ongoing winter session of the Parliament by Arjun Ram Meghwal, Minister of State for Law & Justice and Minister of State of Parliamentary Affairs.

129th Constitutional Amendment Bill - (One Nation, One Election):

- The Bill proposes,
 - to **insert Article 82A** (simultaneous elections to the **House of the People** and **all Legislative Assemblies**) and
 - to **amend Articles 83** (duration of Houses of Parliament), 172(duration of State Legislatures) and
 - **Article 327** (Power of Parliament to make provisions with respect to elections to legislatures).
 - **Article 326** (Elections to the House of the People and to the Legislative Assemblies of States to be on the basis of adult suffrage) **Hence statement 3 is correct.**

- The Bill after passing in both Houses of the Parliament shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint.

- Another Bill that is likely to be tabled is **The Union Territories Law (Amendment) Bill, 2024**, to further amend the **Government of Union Territories Act, 1963; the Government of National Capital Territory of Delhi Act, 1991 and the Jammu and Kashmir Reorganisation Act, 2019**. Through this Bill, the amendments proposed in the main Bill will be aligned for the Union Territories.

The Bill proposes the following amendments:

1. Simultaneous elections:

- Insertion of Article 82A which would allow for '**simultaneous elections to the House of the People and all Legislative Assemblies**'. **Hence statement 1 is incorrect.**

- **Article 82A(3)** of the Bill is particularly important. It says before the expiry of the full term of the Lok Sabha, the Election Commission shall conduct general elections to the Lok Sabha and all Legislative Assemblies 'simultaneously'.

- Provisions of **Part XV (Elections)** of the Constitution shall apply to those elections mutatis mutandis with such modifications as may, become necessary and which the Election Commission may, by order specify.

2. When elections of the Legislative Assembly need to be deferred:

- Section 82A(5) of the Bill states that when the Election Commission is of the 'opinion' that the elections to any Legislative Assembly cannot be conducted along with the general elections to the Lok Sabha, it 'may' make a recommendation to the President, to declare by order, that the election to that Legislative Assembly may be conducted at a later date.

3. Legislative Assembly's full term shall come to an end with Lok Sabha irrespective of deferment:

- The Bill states that even if the term of the Legislative Assembly is deferred, then notwithstanding anything stated in Article 172 of the Constitution, the full term shall come to an end on the same date as the end of the full term of the Lok Sabha constituted in the general elections. **Hence statement 2 is correct.**

4. Mid-term elections:

- In Article 83, clauses 3 to 7 are proposed to be inserted which talks about 'mid-term election'. It says when the Lok Sabha is dissolved before the full term of 5 years as stated, the period between the date of dissolution and the expiry of the full term shall be an unexpired term.
- Pursuant to the dissolution, a mid-term election shall take place and a new Lok Sabha shall be constituted only for the unexpired term. However, the new Lok Sabha constituted shall not be a continuation of the immediately preceding Lok Sabha.
- Similar mid-term elections through the insertion of clauses in Article 172 are proposed for Legislative Assemblies.

Union Territories Bill

- Similar amendments have been proposed to the Government of Union Territories Act, 1962 and the respective legislations to the National Capital Territory and Jammu & Kashmir to accommodate amendments for simultaneous and mid-term elections.

- The imposition of Model Code of Conduct in various parts of the country which are poll-bound put on hold the entire development programs, cause disruption of public life, impacting functioning of services and also curtail the involvement of

manpower from their core activities for deployment of prolonged election duties.

51. Parole and Furlough

51. Consider the following statements:

1. The release on parole decreases the duration of imprisonment whereas a release on a furlough does not reduce the duration of imprisonment.
2. Parole can be granted a number of times whereas there is limitation in the case of furlough.

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

Answer: (b) 2 only

Explanation:

In NEWS: Convicts of the Hashimpura massacre have moved the Delhi High Court against a Delhi prison rule about furloughs.

Furlough:

Furlough means granting leave of absence for a specified period of time to a convict from prison. It is a conditional release and is granted as good conduct remission.

Parole:

parole is a conditional release of a prisoner, generally under the supervision of a parole officer, who has served part of the term for which he was sentenced to prison.

Parole and Furlough:

- Both furlough and parole stem from jail manuals and prison rule and are in the domain of the executive.
- Both are conditional releases, subject to good behavior in prison and to not committing specific offences.
- In furlough, the sentence continues to run despite the convict being released from prison for a specified period of time.
 - For example, if a person has been sentenced to 10 years' imprisonment and is released on furlough for 30 days, in effect he will be in jail for 9 years 11 months and yet will be deemed to have completed the sentence.
- When the convict is released on parole, the sentence is suspended and the quantum of sentence remains intact. **Hence statement 1 is incorrect.**
- Paroles are granted in short-term imprisonment, to provide relief to prisoners in certain specified exigencies such as illness, sowing and harvesting of crops, and to pursue an appeal against conviction in the SC.
- Furlough is usually granted in case of long-term imprisonment and after spending a certain period of time incarcerated.
- It is aimed to prevent solitude of prisoners, allow them to establish family and social ties, a way of motivation for maintaining good conduct, and to remain disciplined in prison.
- Parole is granted by the **Divisional Commissioner** while furlough is granted by the **Deputy Inspector General of Prisons**.

- For parole, a specific reason is required, whereas furlough is meant for breaking the monotony of imprisonment.
- During parole, prisoners are monitored and may require police escort. In case of furlough, the prisoner must return voluntarily without an escort.
- Parole can be granted a number of times whereas there is limitation in the case of furlough. **Hence statement 2 is correct.**
- Since furlough is not granted for any particular reason, it can be denied in the interest of the society.

52. Dhan-Dhaanya Krishi Yojan

52. Consider the following statements: 'Prime Minister Dhan-Dhaanya Krishi Yojana' aims to

1. adopt crop diversification and sustainable agriculture practices
2. provide financial assistance, technical support, and market linkages to farmers involved in animal husbandry, poultry farming, and aquaculture.
3. augment post-harvest storage at the panchayat and block level
4. improve irrigation facilities and facilitate availability of long-term and short-term credit.

Which of the above statements is/are correct?

- (a) 1, 3 and 4
- (b) 2 and 3 only
- (c) 2 only
- (d) 1, 2 and 4

Answer: (a) 1, 3 and 4

Explanation:

In NEWS: The Union Finance Minister stated that motivated by the success of the Aspirational Districts Programme, the Government will undertake a 'Prime Minister Dhan-Dhaanya Krishi Yojana' in partnership with states.

Prime Minister Dhan-Dhaanya Krishi Yojana-Developing Agri Districts Programme:

- The programme aims to enhance agricultural productivity; adopt crop diversification and sustainable agriculture practices; augment post-harvest storage at the panchayat and block level; improve irrigation facilities and facilitate availability of long-term and short-term credit. **Hence statements 1, 3 and 4 are correct.**
- This programme is likely to help 1.7 crore farmers.
- Through the convergence of existing schemes and specialized measures, the programme will cover 100 districts with low productivity, moderate crop intensity and below-average credit parameters.

Note: Its objective does not include providing financial assistance, technical support, and market linkages to farmers involved in animal husbandry, poultry farming, and aquaculture. Hence statement 2 is incorrect.



Prime Minister Dhan-Dhaanya Krishi Yojana

Developing Agri Districts Programme

Scheme to cover 100 districts with low productivity, moderate crop intensity and below-average credit parameters

- To enhance agricultural productivity
- To adopt crop diversification and sustainable agriculture practices
- To augment post-harvest storage at Panchayat and Block levels
- Improve irrigation facilities
- Improve credit availability



53. The Pradhan Mantri Anusuchit Jaati Abhyuday Yojana (PM-AJAY)

53. With reference to the Pradhan Mantri Anusuchit Jaati Abhyuday Yojana (PM-AJAY), consider the following statements.

1. It is an initiative aimed at uplifting Scheduled Caste (SC) communities across India.
2. It is a comprehensive scheme amalgamating three Centrally Sponsored Schemes, including Pradhan Mantri Adarsh Gram Yojana (PMAGY), Special Central Assistance to Scheduled Castes Sub Plan (SCA to SCSP), and Babu Jagjivan Ram Chhatrawas Yojana (BJRCY).

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

Answer: (c) Both 1 and 2

Explanation:

In NEWS: Pradhan Mantri Anusuchit Jaati Abhyuday Yojana (PM-AJAY) - Bridging Socio-Economic Gaps through Targeted Interventions

The Pradhan Mantri Anusuchit Jaati Abhyuday Yojana (PM-AJAY):

- The Pradhan Mantri Anusuchit Jaati Abhyuday Yojana (PM-AJAY) is an initiative aimed at uplifting Scheduled Caste (SC) communities across India. **Hence statement 1 is correct.**
- It is a comprehensive scheme amalgamating three Centrally Sponsored Schemes, including Pradhan Mantri Adarsh Gram Yojana (PMAGY), Special Central Assistance to Scheduled Castes Sub Plan (SCA to SCSP), and Babu Jagjivan Ram Chhatrawas Yojana (BJRCY). **Hence statement 2 is correct.**

- Launched to combat poverty and enhance socio-economic conditions, the scheme focuses on generating employment and improving education.
- Recently, the central advisory committee convened to review its progress and strategise future actions.

Objectives of PM-AJAY

- The primary objective is to reduce poverty among SC communities.
- This is achieved through skill development and income-generating initiatives.
- The scheme also aims to increase literacy rates and encourage SC enrolment in educational institutions, particularly in aspirational districts.

Core Components - PM-AJAY comprises three main components:

Adarsh Gram Development:

- This initiative transforms SC-majority villages into model villages by ensuring integrated development. It focuses on essential infrastructure and socio-economic indicators across ten domains, including education, health, and financial inclusion.

Grants-in-Aid:

- This component supports district and state-level projects aimed at socio-economic development. It includes comprehensive livelihood projects that create sustainable income opportunities for SC communities.

Hostel Construction:

- The scheme promotes the establishment of hostels to facilitate quality education for SC students. It aims to reduce dropout rates and improve access to higher education

54. PROJECT VISTAAR

54. Which one of the following is the correct description of "Project VISTAAR"?

- (a) It is an international alliance and a network of individuals and farming organizations interested in supporting and strengthening the development of organic animal husbandry.
- (b) It is a platform with a mission of encouraging the farmers to form Farmer Product Organisations or Agribusiness Consortia, thus facilitating the access to global open markets to sell their products.
- (c) It is a digital platform fully integrated with service providers and built on blockchain that lets buyers, sellers and third parties trade fertilizers quickly and securely.
- (d) It is an initiative to support the development of robust Digital Public Infrastructure (DPI) for agricultural extension.

Answer: (d) It is an initiative to support the development of robust Digital Public Infrastructure for agricultural extension.

Explanation:

In NEWS: Launch of Project VISTAAR

Project VISTAAR:

- Project VISTAAR stands for *Virtually Integrated System to Access Agricultural Resources*.



- It is a **digital initiative of the Ministry of Agriculture and Farmers' Welfare** launched in collaboration with **Indian Institute of Technology Madras**.
- The project aims to **modernize agricultural extension services** by providing farmers with timely, localized, and high-quality advisory support.
- It seeks to empower **frontline extension workers**, such as Kisan Mitras and Pashu Sakhis, through digital tools and real-time data access.
- The platform integrates data on more than **12,000 agri-startups** to offer farmers access to innovative technologies, products, and services.
- It delivers **localized and contextual information** in regional languages on crop production, marketing, value addition, climate-smart agriculture, and supply chains.
- Project VISTAAR provides a **single-window access** to government schemes and agricultural resources, improving awareness and uptake among farmers.
- It is designed as a **federated, open, and interoperable digital network**, enabling integration of various state and private extension systems.
- The project promotes **public-private partnerships** and enhances collaboration between government agencies, startups, and research institutions.
- Its primary goal is to **bridge the information and advisory gap**, particularly for small and marginal farmers, and to promote **climate-resilient and sustainable agriculture**. **Hence option (d) is correct.**

55. Very Short-Range Air Defence (VSHORAD) system

55. Which of the following statements are correct with respect to the Very Short-Range Air Defence System (VSHORADS):

1. It is a man-portable air-defense system (MANPADS) developed by DRDO.
2. The missile system has the capability to meet the needs of the Army, Navy and the Air Forces.
3. It can neutralise low altitude aerial threats at short ranges.

Select the answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (d) 1, 2 and 3

Explanation:

In NEWS: DRDO carries out three consecutive tests of Very Short-Range Air Defence system

Very Short Range Air Defence System:

- The Very Short Range Air Defence System, or VSHORADS, is a fourth generation, man-portable air-defense system (MANPADS) developed by Research Centre Imarat (RCI), a research lab under Defence Research and Development Organisation (DRDO), located in Hyderabad. **Hence statement 1 is correct.**

- It is designed for anti-aircraft warfare and neutralising low altitude aerial threats at short ranges. **Hence statement 3 is correct.**
- The missile system has the capability to meet the needs of all the three branches of the armed forces — the Army, Navy and the Air Forces. **Hence statement 2 is correct.**
- It uses an Infrared seeker-based guidance system.
- It is a critical requirement for the Army as it offers close air defence protection for mobile formations, especially in the growing threat of drones and loitering munitions.

Applications of VSHORAD Systems in Warfare:

- Protects frontline troops from aerial threats.
- Effective against enemy helicopters, UAVs, and fighter jets flying at low altitudes.
- Enhances mobility and flexibility in battlefield scenarios.
- Used in modern conflicts, including Ukraine-Russia war for drone and aircraft defence.

56. Chandrayaan-4

56. Which among the following is the aim of the Chandrayaan-4 mission?

- (a) to collect samples from the moon's surface and bring them back to the Earth.
- (b) to reach the moon's south polar region.
- (c) to map the moon's surface in infrared, visible, and X-ray light
- (d) to discovered the presence of water on the moon

Answer: (a) to collect samples from the moon's surface and bring them back to the Earth.

Explanation:

In NEWS: India to launch Chandrayaan-4 in 2027, aims to bring back moon rock

Chandrayaan-4:

- The Chandrayaan-4 mission aims to collect samples from the moon's surface and bring them back to the Earth. **Hence option (a) is correct.**
- Chandrayaan-4 will involve at least two separate launches of the heavylift LVM-3 rocket that will carry five different components of the mission which will be assembled in orbit.

Chandrayaan-1:

Launched in 2008, this was the first lunar space probe from ISRO Mapped the moon's surface in infrared, visible, and X-ray light Discovered water on the moon Launched the Moon Impact Probe (MIP) to test systems for future landings

Chandrayaan-2:

Launched in 2019, this was ISRO's first lunar lander Consists of an orbiter, lander named Vikram, and rover named Pragyan The lander and rover crashed during their landing attempt The orbiter is still functional and is expected to aid in communications with Chandrayaan-3

Chandrayaan-3:

Launched in July 2023, this was ISRO's first lunar lander to reach the moon's south polar region
Consists of a lander named Vikram and rover named Pragyan
Made India the first nation to successfully land a spacecraft in the lunar south pole region

57. World Wetlands Day

57. Consider the following statements:

1. World Wetlands Day is observed on 2nd February every year worldwide to commemorate the signing of the Ramsar Convention on Wetlands of International Importance in 1971.
2. India has been a party to the Ramsar Convention on Wetlands since 1982.
3. Under Ramsar Convention, it is mandatory on the part of the Government of India to protect and conserve all the wetlands in the territory of India.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

Answer: (a) 1 and 2 only

Explanation:

In NEWS: World Wetlands Day 2025, themed 'Protecting Wetlands for our Common Future', celebrated at Parvati Arga Ramsar Site, in Gonda, Uttar Pradesh

About World Wetlands Day (WWD):

- World Wetlands Day is observed on **2nd February** every year worldwide to commemorate the signing of the Ramsar Convention on Wetlands of International Importance in 1971. **Hence statement 1 is correct.**
- **India** is a party to the Convention since 1982. India has recently increased its tally of Ramsar sites (Wetlands of International Importance) to 89 by designating four more wetlands as Ramsar sites. **Hence statement 2 is correct.**
- While India is a signatory to the Ramsar Convention and has designated several wetlands as Ramsar Sites, it is **not mandatory** under the convention for India to protect and conserve all wetlands within its territory. **Hence statement 3 is incorrect.**
- **Udhwa Lake** in Jharkhand, **Theerthangal and Sakkarakottai** in Tamil Nadu and **Khecheopalri** in Sikkim. With the addition of these wetlands to List of Wetlands of International Importance, the total area covered under Ramsar sites is now 1.358 million ha.
- **Tamil Nadu** continues to have maximum number of Ramsar Sites (20 sites) followed by Uttar Pradesh (10 sites).

58. ELS Cotton

Q. Consider the following statements with respect to the cultivation of Extra Long Staple Cotton (ELS) varieties in India:

1. The yield of Extra Long Staple Cotton is relatively higher than the medium staple variety cotton.
2. Minimum Support Price (MSP) is not provided for Extra Long Staple Cotton varieties.
3. India produces 95% of its ELS cotton demand.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Answer: (d) None

Explanation:

In NEWS: A five-year mission to promote extra-long staple (ELS) cotton varieties announced in the Union Budget.

Extra-long Staple cotton:

- Extra-Long Staple (ELS) Cotton is a premium variety of cotton known for its exceptionally long and fine fibers, making it ideal for producing high-quality textiles.
- ELS varieties boast fibre lengths of 30 mm and above.
- It produces silky, smooth, and luxurious fabrics.
- It improves dye retention and color vibrancy.
- Most ELS cotton comes from the species *Gossypium barbadense*, commonly known as Egyptian or Pima cotton.
- Having originated in South America, ELS cotton today is mainly grown in China, Egypt, Australia, and Peru.
- In India, some ELS cotton is grown along rain fed parts of Atpadi taluka in Maharashtra's Sangli district, and around Coimbatore in Tamil Nadu.
- India imports a significant amount of ELS cotton due to limited domestic production.

Reason for farmers not adopting ELS Cotton:

- High Import Dependence – Imports mainly from Egypt, USA, and Australia.
- Low Domestic Production – India produces only 5% of its ELS cotton demand. **Hence statement 3 is incorrect.**
- For the 2024-25 season, the Minimum Support Price (MSP) of medium staple cotton was Rs 7,121 (per quintal) while that of extra long staple cotton was Rs 7,521. **Hence statement 2 is incorrect.**
- Nonetheless, cotton farmers in India have thus far been reluctant to adopt ELS cotton.
- This is mainly due to lower than average per acre yields.
- While the medium staple variety yields between 10 and 12 quintals per acre, ELS cotton has a yield of only 7-8 quintals. **Hence statement 1 is incorrect.**
- Additionally, farmers growing ELS cotton are often unable to market their premium produce at premium prices.
- The market linkages necessary are also not available easily.

Mission to promote extra-long staple (ELS) cotton:

- Productivity Enhancement: Implementing advanced agricultural practices and technologies to increase cotton yield per hectare.
- Sustainability: Encouraging eco-friendly farming methods to ensure long-term soil health and environmental conservation.
- Promotion of ELS Cotton: Focusing on the cultivation of ELS cotton, known for its superior fiber quality, to meet domestic demand and reduce import dependence.
- Farmer Support: Providing farmers with access to the latest scientific research and technological advancements to improve crop outcomes.
- Economic Growth: Aligning with the government's integrated 5F vision—Farm to Fibre, Fibre to Factory, Factory to Fashion, Fashion to Foreign—to boost the textile sector and increase farmers' incomes.
- Import Reduction: Decreasing reliance on imported ELS cotton by bolstering domestic production.

59. Himalayan gold

59. The term 'Himalayan gold', sometimes found in news, refers to

- (a) Crude oil
- (b) Coal
- (c) Rare earth elements
- (d) Caterpillar fungus

Answer: (d) Caterpillar fungus

Explanation:

In NEWS: In the remote Qinghai-Tibetan Plateau, a rare fungus grows inside dead caterpillars. In traditional Chinese medicine, this parasitic fungus is prized for its purported medicinal effects.

Caterpillar fungus or "Himalayan gold":

- Ophiocordyceps sinensis – colloquially, caterpillar fungus or "Himalayan gold" – it can fetch astronomical prices on the herbal medicine market: up to US \$ 63,000 per pound. **Hence option (d) is correct.**
- It is mainly found in the meadows above 3,500 metres (11,500 ft) on the Tibetan Plateau in Tibet and the Himalayan regions of Bhutan, India, and Nepal.
- It parasitizes larvae of ghost moths and produces a fruiting body which is valued in traditional Chinese medicine as an aphrodisiac.
- Caterpillar fungus contains the compound cordycepin, an adenosine derivative.
- However, naturally harvested fruiting bodies often contain high amounts of arsenic and other heavy metals, making them potentially toxic. As a result, their sale has been strictly regulated by China's State Administration for Market Regulation since 2016.
- O. sinensis is classified as a medicinal mushroom, and its use has a long history in traditional Chinese medicine as well as traditional Tibetan medicine.
- The hand-collected, intact fungus-caterpillar body is valued by herbalists as medicine, and because of its cost, its use is also a status symbol.

- The fruiting bodies of the fungus are not yet cultivated commercially, but the mycelium form can be cultivated in vitro.
- Overharvesting and overexploitation have led to the classification of O. sinensis as an endangered species in China.
- Additional research needs to be carried out in order to understand its morphology and growth habits for conservation and optimum utilization.

60. TrailGuard and Nightjar

60. The term 'TrailGuard and Nightjar' is talked about in the context of

- (a) Indigenous Satellite Navigation System
- (b) Enhancing wildlife conservation
- (c) Railway safety at night
- (d) Cyber security threats

Answer: (b) Enhancing wildlife conservation

Explanation:

In NEWS: Odisha's Similipal Tiger Reserve has 100-150 AI-enabled cameras that send real-time alerts of poachers and animal movement inside the forest

- TrailGuard AI is an end-to-end, camera-based alert system designed for enhancing wildlife conservation and promoting human-wildlife coexistence in remote areas. **Hence option (b) is correct.**
- Real-time Alert Transmissions - TrailGuard AI transmits human and wildlife activities in remote areas in under 30 seconds, enabling real-time interventions.
- The system combines durable outdoor hardware, on-the-edge AI algorithms, and real-time transmission capabilities, and can be deployed along trails or access points in areas of interest.
- TrailGuard AI autonomously detects target objects, and transmits real-time alerts that can trigger rapid-response to entry by poachers or illegal loggers, wildlife entering agricultural or pastoral lands, or status of endangered or exotic invasive species

Innovative Features Unique to TrailGuard AI:

- Small form factor - Enhances concealment and prevents vandalism and theft
- Connectivity Anywhere - Allows transmission of alerts over cell, long-range radio, or satellite network
- Embedded AI - Runs inferences on the edge in milliseconds
- Long Battery Life - Up to 48 months per charge in normal use
- Cost Effective - Low cost and minimal maintenance effort, maximizing monitoring efficiency
- Out of the Box - Minimal setup required, just connect battery to deploy and operate
- One Hardware, Multiple Use Cases - TrailGuard AI can run a selection of different AI detection models for:
 - Human-wildlife conflict
 - Park intrusion monitoring
 - Wildlife monitoring
 - illegal logging
 - Mine security
 - Border security



61. M23 Rebels

61. The regions Bukavu, Goma and South-Kivu recently seen in the news are located in

- (a) Israel
- (b) Ukraine
- (c) Nigeria
- (d) the Democratic Republic of the Congo

Answer: (d) the Democratic Republic of the Congo

Explanation:

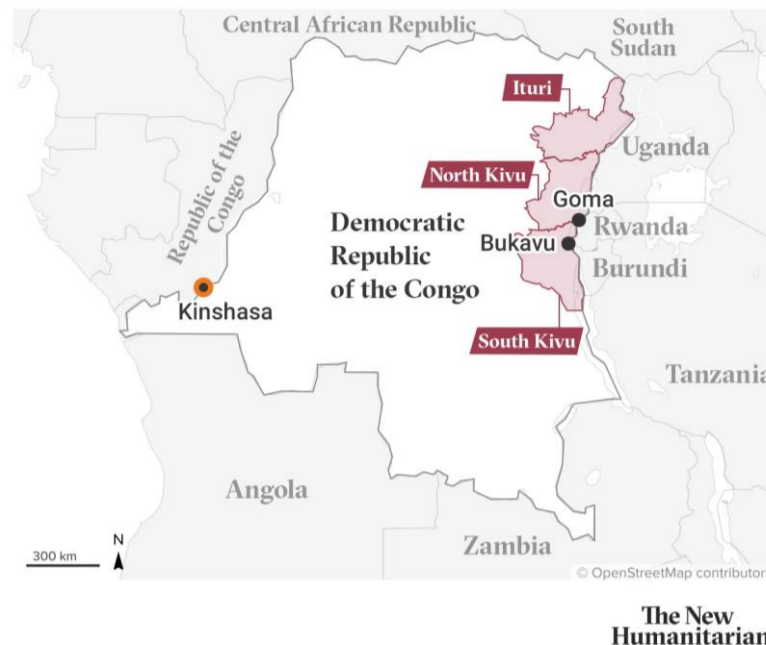
In NEWS: Rwandan-backed M23 rebels captured Goma

The M23 rebels:

- The M23 rebels, also known as the March 23 Movement, are a militia group operating in the eastern regions of the Democratic Republic of Congo (DRC). **Hence option (d) is correct.**
- Comprising primarily Tutsi fighters, the group emerged in 2012, citing grievances over the implementation of a peace agreement signed on March 23, 2009, between the Congolese government and the former National Congress for the Defense of the People (CNDP).
- The group has accused the government of Congo of not living up to the peace deal and fully integrating Congolese Tutsis into the army and administration.
- It also vows to defend Tutsi interests, particularly against ethnic Hutu militias such as the Democratic Forces for the Liberation of Rwanda (FDLR).
- The FDLR was founded by Hutus who fled Rwanda after participating in the 1994 genocide of close to one million Tutsis and moderate Hutus.
- M23 rebels in the Democratic Republic of Congo are seeking to advance south towards Bukavu, the capital of South Kivu

province, in an attempt to expand their area of control in the country's east after capturing the city of Goma.

- The conflict has led to over 2,000 deaths, with hospitals and morgues in Goma overwhelmed by the number of casualties. There are also concerns about the spread of diseases due to delayed burials and inadequate medical facilities.



62. TROPEX - 25

62. Which one of the following statements best reflects the idea behind the "TROPEX - 25" often talked about in media?

- (a) A hypersonic missile is launched into space to counter the asteroid approaching the Earth and explode it in space
- (b) An operational level exercise in the Indian Ocean Region by all operational Indian Naval units.
- (c) A spacecraft lands on another planet after making several orbital motions.
- (d) A missile is put into a stable orbit around the Earth and deorbits over a target on the Earth.

Answer: (b) An operational level exercise in the Indian Ocean Region by all operational Indian Naval units.

Explanation:

In NEWS: Navy's biennial TROPEX exercise underway in Indian Ocean Region

THEATRE LEVEL OPERATIONAL READINESS EXERCISE (TROPEX-25):

- The 2025 edition of Indian Navy's capstone Theatre Level Operational Exercise (TROPEX), is currently underway in the Indian Ocean Region.
- This operational level exercise is conducted biennially with participation by all operational Indian Naval units along with substantial participation of Indian Army, Indian Air Force and Coast Guard assets. **Hence option (b) is correct.**
- TROPEX 25 is aimed at validating Indian Navy's core warfighting skills, and ensuring a synchronised, integrated response to preserve and protect national maritime security interests in a contested maritime environment against conventional, asymmetric as well as hybrid threats.
- TROPEX 25 is being conducted over a duration of three months from Jan - Mar 25.

- The exercise is being conducted in various phases - both in Harbour and at Sea, integrating various facets of combat operations, cyber and electronic warfare operations, live weapon firings during Joint Work Up Phase and Amphibious Exercise (AMPHEX).
- During the exercise, the combined fleets comprising approximately 65 Indian Naval Ships, 09 Submarines and over 80 Aircrafts of different types, are put through complex maritime operational scenarios to validate and refine the Navy's Concept of Operations including forward deployed sustenance and interoperability with other Services.
- TROPEX 25 is witnessing participation of platforms like indigenous aircraft carrier Vikrant, state-of-the-art Visakhapatnam and Kolkata Class destroyers, Kalvari Class submarines and aircraft fleet comprising MiG 29K, P8I, HALE Sea Guardian and MH-60R helicopters.
- Towards enhancing synergy and jointness amongst the Services, IA, IAF and Indian Coast Guard have also been integrated into the exercise, with participation of Sukhoi-30, Jaguar, C-130, Flight Refueller, AWACS aircraft, an Infantry Brigade with over 600 troops, and more than 10 ICG ships and aircraft.
- Having grown in scope and complexity over the years, TROPEX 25 is a step forward in coordinated planning, precise targeting, combat effectiveness and credible joint operations in a dynamic environment, towards safeguarding India's national maritime interests, Anytime, Anywhere, Anyhow.

63. The Corruption Perceptions Index 2024

63. Consider the following statements.

1. The Corruption Perceptions Index (CPI) is produced annually by the United Nations Convention against Corruption (UNCAC).
2. The CPI scores countries on a scale from 0 to 100, with 0 indicating the highest level of corruption and 100 representing the highest level of governance.
3. As per the Corruption Perceptions Index 2024, Denmark is the least corrupt country.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Answer: (b) Only two

Explanation:

In NEWS: Bangladesh slips 2 notches in Global Corruption Index
The Corruption Perceptions Index 2024:

- The Corruption Perceptions Index (CPI) is produced annually by the international secretariat of Transparency International (TI), the Berlin-based global coalition against corruption. **Hence statement 1 is incorrect.**
- The index was first globally introduced in 1995, while Bangladesh was first included in it in 2001, according to TIB.
- Bangladesh has slipped two positions in Transparency International's (TI) Corruption Perceptions Index (CPI) for 2024, ranking 151st out of 180 countries.

- The country recorded its lowest score in 13 years, scoring 23 out of 100, a one-point drop from the previous year. In 2023, Bangladesh ranked 149th, reports United News of Bangladesh (UNB).
- The CPI scores countries on a scale from 0 to 100, with 0 indicating the highest level of corruption and 100 representing the highest level of governance. **Hence statement 2 is correct.**
- According to the latest index, Bangladesh has the second-lowest score in South Asia, ahead of only war-torn Afghanistan, which scored 17. With 72 points, Bhutan scored the highest in South Asia, followed by India and the Maldives with 38 points, Nepal with 34, Sri Lanka with 32, and Pakistan with 27 points.
- Denmark retained its position as the least corrupt country with a score of 90, followed by Finland (88) and Singapore (84). **Hence statement 3 is correct.**
- South Sudan ranked as the most corrupt country in 2024, with a score of 8, followed by Somalia (9) and Venezuela (10).

64. Pineapple Express

64. Consider the following statements.

1. The Pineapple Express is a cold wind that moves from the Pacific Ocean to the Atlantic Ocean.
2. The Pineapple Express transports vast amounts of water vapour from the tropics.

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

Answer: (b) 2 only

Explanation:

In NEWS: Pineapple Express has drenched Northern California in the last few days

Pineapple Express:

- The Pineapple Express is a narrow region of atmospheric moisture that builds up in the tropical Pacific.-National Oceanic and Atmospheric Administration (NOAA).
- The Pineapple Express is a type of atmospheric river— a narrow, fast-moving “river in the sky” that transports significant moisture over long distances. **Hence statement 1 is incorrect.**
- The warm air and high humidity it carries from the Pacific lead to heavy rainfall when the system reaches land.
- Pineapple Express gets its name from the warm, moist air drawn into the system, originating near Hawaii, a region known for its pineapple production.
- The NOAA explains that atmospheric rivers are long, narrow bands in the atmosphere that transport vast amounts of water vapour from the tropics. **Hence statement 2 is correct.**
- Their size and strength can differ significantly, but on average, they carry a volume comparable to the flow of the Mississippi River at its mouth. Exceptionally strong atmospheric rivers can transport up to 15 times that amount.
- When atmospheric rivers make landfall, they typically release this moisture as rain or snow, often covering a vast region as they move inland.

● According to NOAA, these rivers are part of the Earth's ocean water cycle, and are tied closely to both water supply and flood risks. While atmospheric rivers can bring heavy rainfall that may lead to flooding, they also play a beneficial role in increasing snowpack.

65. Dokra Craft

65. Dokra craft refers to

- (a) Bamboo handicrafts with a handmade drawing
- (b) A traditional metal craft that involves the lost-wax technique
- (c) A traditional craft of making painted and embossed pottery
- (d) A terracotta artwork depicting figurines of gods and goddesses.

Answer: (b) A traditional metal craft that involves the lost-wax technique

Explanation:

In NEWS: PM Modi gifted Macron a traditional Dokra artwork of musicians playing Indian instruments.

Dhokra Craft:

- Dhokra is non-ferrous metal casting using the lost-wax casting technique. **Hence option (b) is correct.**
- Dokra is made using non-ferrous metals like brass, bronze, and copper.
- This sort of metal casting has been used in India for over 4,000 years and is still used.
- One of the earliest known lost wax artifacts is the dancing girl of Mohenjo-daro.
- The name "Dokra" comes from the Dhokra Damar tribes, the traditional metal artisans of Chhattisgarh, Odisha, West Bengal, and Jharkhand.
- Dhokra horses, elephants, peacocks, owls, religious images, measuring bowls, and lamp caskets etc., are highly appreciated.

The Lost-Wax Casting Process:

- Creating a Clay Core – The base structure of the artifact.
- Wax Molding – A layer of beeswax is applied, and fine designs are carved on it.
- Clay Coating & Drying – Another layer of clay is applied over the wax, forming a mold.
- Heating & Wax Removal – The mold is heated, and the wax melts away, leaving a hollow space.
- Metal Pouring – Molten brass or bell metal is poured into the mold.
- Cooling & Finishing – Once solidified, the mold is broken, revealing the final metal artwork.



66. 8th Pay Commission

66. With reference to the 'Pay commission' in India, consider the following statements.

1. A Pay Commission decides both the salary and allowances of Central government staff.
2. For every 10 years the central government implements a pay commission to revise employee remuneration.
3. It is the obligation of the government to accept the recommendations of the pay commission.

Select the answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (a) 1 and 2 only

Explanation:

In NEWS: The Union government has approved the setting up of the 8th Pay Commission, and its Chairman and members will be appointed soon.

Pay Commission:

- A Pay Commission, set up by the government of India, decides the salary and compensation of Central government staffers and allowances of pensioners. **Hence statement 1 is correct.**
- The 8th Pay Commission will recommend revisions in the salary and pension structure of the beneficiaries, resulting in a hike in the remuneration and allowances.
- Pay commissions consult with central and state governments, along with other stakeholders, before recommending salary structures, benefits, and allowances for government employees. Their recommendations are often adopted by state-owned organisations.
- Generally, every 10 years, the central government implements a pay commission to revise employee remuneration. **Hence statement 2 is correct.**
- The commission also suggests formulas for revising dearness allowance and dearness relief for central government employees and pensioners, aiming to offset the impact of inflation.
- The recommendations are suggestive, there is no obligation on the government to accept the recommendations of the pay commission. **Hence statement 3 is incorrect.**
- Since 1947, seven Pay Commissions have been constituted, with the last one constituted in 2014 and implemented on January 1, 2016. The 7th pay commission saw an expenditure

increase of Rs 1 lakh crore for fiscal 2016-17. The chairman of the 7th Pay Commission is Justice Ashok Kumar Mathur.

67. Initiatives for Digital Healthcare

67. Consider the following pairs:

S.No.	India's Digital health Infrastructure	Objectives
1	Ayushman Bharat Digital Mission	integrating healthcare service providers and patients through unique health IDs.
2	e-Sanjeevani platform	digitization of vaccination services
3	U-Win Portal	facilitating doctor-to-patient consultations remotely
4	Tele MANAS	e-Hospital, e-BloodBank and Online Registration System (ORS)

How many of the above pairs are correctly matched?

- (a) Only one
 (b) Only two
 (c) Only three
 (d) All four

Answer: (a) Only one

Explanation:

In NEWS: The WEF article, "India Can Be a Global Pathfinder in Digital Health" explores how India's digital healthcare initiatives position the country as a leader in health technology.

Digital Healthcare Infrastructure in India:

1. Ayushman Bharat Digital Mission (ABDM):

- The ABDM aims to create a nationwide digital health ecosystem by integrating healthcare service providers and patients through unique health IDs. **Hence pair 1 is correct.**
- Key features of ABDM include:
 - Health ID: A unique identifier for individuals to store and share medical records.
 - Healthcare Professionals Registry (HPR): A comprehensive database of registered healthcare professionals.
 - Health Facility Registry (HFR): A digital repository of healthcare facilities across India.
 - Unified Health Interface (UHI): An open network facilitating digital health services.

2. Telemedicine and e-Sanjeevani:

- The e-Sanjeevani platform, launched by the Ministry of Health and Family Welfare (MoHFW), enables remote consultations, reducing the burden on physical healthcare facilities. **Hence pair 2 is incorrect.**
- The platform consists of two modules:

- e-Sanjeevani OPD: Facilitating doctor-to-patient consultations remotely.
- e-Sanjeevani AB-HWC: Connecting Health and Wellness Centers (HWCs) with specialist doctors for better healthcare accessibility in remote areas.

3. U-Win Portal:

- The U-WIN Portal is developed for the complete digitization of vaccination services, and maintaining vaccination records for pregnant women and children from birth to 17 years under the Universal Immunization Programme. **Hence pair 3 is incorrect.**
- The portal is available in 11 regional languages, including Hindi.

4. Aarogya Setu App:

- Using Aarogya Setu, one can register for an Ayushman Bharat Health Account and leverage it for interaction with participating healthcare providers, and allows one to receive digital lab reports, prescriptions and diagnosis seamlessly from verified healthcare professionals and health service providers.

5. e-Hospital:

- As part of the Digital India initiative of the Ministry of Electronics and Information Technology, e-Hospital, e-BloodBank and Online Registration System (ORS) applications were developed.
- This one-stop solution helps in connecting patients, hospitals and doctors on a single digital platform.

6. National Tele Mental Health Programme (Tele MANAS):

- The Government has launched a "National Tele Mental Health Programme" on 10th October, 2022, to further improve access to quality mental health counselling and care services in the country. **Hence pair 4 is incorrect.**
- As on January 20, 2025, 36 States/ UTs have set up 53 Tele MANAS Cells and have started tele mental health services. More than 17.6 lakh calls have been handled on the helpline number.

68. PM-PRANAM

68. Which one of the following is the correct description of "PM-PRANAM"?

- (a) It is an initiative to promote the sustainable and judicious use of chemical fertilizers and encourage the adoption of bio-fertilizers and organic fertilizers.
- (b) It is an international alliance and a network of individuals and farming organizations interested in supporting and strengthening the development of organic animal husbandry.
- (c) It is a digital platform fully integrated with service providers and built on blockchain that lets buyers, sellers and third parties trade fertilizers quickly and securely.
- (d) It is a platform with a mission of encouraging the farmers to form Farmer Product Organisations or Agribusiness Consortia, thus facilitating the access to global open markets to sell their products.

Answer: (a) It is an initiative to promote the sustainable and judicious use of chemical fertilizers and encourage the adoption of bio-fertilizers and organic fertilizers.

Explanation:

In NEWS:

- Union cabinet entails an extension of the one-time special package on DAP (Diammonium Phosphate) till December, 2025.
- This is done to ensure its affordable availability to farmers involving an estimated budget of Rs 3,850 crore.
- The PM-PRANAM (PM Programme for Restoration, Awareness Generation, Nourishment, and Amelioration of Mother Earth) scheme can potentially contribute towards reducing Central subsidy burden by encouraging balanced use of fertilisers.

PM-PRANAM:

- The PM-PRANAM (Prime Minister Programme for Restoration, Awareness, Generation, Nourishment, and Amelioration of Mother Earth scheme) is a flagship initiative of the Government of India, introduced in the Union Budget 2023-24, to promote the sustainable and judicious use of chemical fertilizers and encourage the adoption of bio-fertilizers and organic fertilizers.

Hence option (a) is correct.

- The primary goal of the PM-PRANAM is to address a pressing issue – the excessive use of chemical fertilizers and pesticides in agriculture.
- In pursuit of higher production, there is an excess use of fertilizers and pesticides that is making the mother earth sick and reducing its production capacity.
- It is a well known fact that excess chemical use can cause serious ailments like cancer etc.
- There is a need to adopt soil test based balanced use of fertilizers by integrating bio/ organic fertilizers into agriculture for nutrition security of soil.

Objectives of PM-PRANAM:

- encouraging balanced and sustainable chemical fertiliser use
- promoting uptake of alternate fertilisers (such as Fermented Organic Manure (FOM), liquid FOM, Phosphate Rich Organic Manure (PROM) and urea gold)
- advancing natural and organic farming practices
- furthering natural resources conservation technologies.

69. Pink fire retardant

69. With reference to the pink fire retardant, which among the following statements are correct?

1. Pink fire retardant is a mix of ammonium polyphosphate which is used to extinguish or slow down the spread of fires.
2. The ammonium polyphosphate evaporates easily like water which can make the fire dissipate quickly.
3. These toxic metals such as chromium and cadmium in fire retardant can cause cancer, and kidney and liver diseases in humans.

Select the answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (c) 1 and 3 only

Explanation:

In NEWS: Environmental experts have said that spraying fire retardant using planes is ineffective, expensive and a growing source of pollution for rivers and streams

Pink fire retardant:

- Fire retardant is a mix of chemicals used to extinguish or slow down the spread of fires. There are different types of fire retardant but to tackle wildfires, authorities most commonly use Phos-Chek — a brand of fire retardant — which mostly contains an ammonium phosphate-based slurry. **Hence statement 1 is correct.**

- Typically, it is made of salts such as ammonium polyphosphate, which does not evaporate easily like water and stays for longer. **Hence statement 2 is incorrect.**

- Colour is usually added to the fire retardant to ensure that firefighters can see it against the landscape. This helps them create fire lines around the fire retardant, potentially saving lives and property.

Concerns:

- Environmental experts have said that spraying fire retardant using planes is ineffective, expensive and a growing source of pollution for rivers and streams.
- These toxic metals include chromium and cadmium which can cause cancer, and kidney and liver diseases in humans. **Hence statement 3 is correct.**
- However, their adverse impact on the environment is of more concern, especially when retardants enter waterways. For instance, the aforementioned toxic metals can kill aquatic life.

70. Indian Cybercrime Coordination Centre (I4C)

70. With reference to the Indian Cybercrime Coordination Centre (I4C), consider the following statements

1. It is an initiative of the Ministry of Information Technology to deal with cybercrime in the country in a coordinated and comprehensive manner.
2. It aims to act as a nodal point to curb Cybercrime in the country.

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

Answer: (b) 2 only

Explanation:

In NEWS: Centre, States roped in 54,800 to monitor online content: report

The Union Ministry of Home Affairs and various State governments have roped in around 54,800 persons as volunteers against cyber crime to flag unlawful content on the Internet, according to the Ministry's annual report for the year 2023-24.

About Indian Cybercrime Coordination Centre

- Indian Cybercrime Coordination Centre (I4C) is an **initiative of the Ministry of Home Affairs**, Government of India to deal with cyber crime in the country in a coordinated and comprehensive manner. **Hence statement 1 is incorrect.**
- I4C focuses on tackling all the issues related to Cybercrime for the citizens, which includes improving coordination between various Law Enforcement Agencies and the stakeholders, driving change in India's overall capability to tackle Cybercrime and to improve citizen satisfaction levels.
- Indian Cybercrime Coordination Centre scheme was approved on 05th October 2018.
- Since its roll out, it has worked towards enhancing the nation's collective capability to tackle cybercrimes and develop effective coordination among the Law Enforcement Agencies.
- The I4C was dedicated to the Nation on 10th January 2020 by Hon'ble Home Minister.

Objectives of I4C

- To act as a nodal point to curb Cybercrime in the country. **Hence statement 2 is correct.**
- To strengthen the fight against Cybercrime committed against women and children.
- Facilitate easy filing Cybercrime related complaints and identifying Cybercrime trends and patterns.
- To act as an early warning system for Law Enforcement Agencies for proactive Cybercrime prevention and detection.
- Awareness creation among public about preventing Cybercrime.
- Assist States/UTs in capacity building of Police Officers, Public Prosecutors and Judicial Officers in the area of cyber forensic, investigation, cyber hygiene, cyber-criminology, etc.

71. Vessels of the Indian Navy

Q. Consider the following pairs:

- | | |
|------------------|---|
| 1. INS Surat | - Stealth guided-missile frigate |
| 2. INS Nilgiri | - Stealth guided-missile destroyer |
| 3. INS Vaghsheer | -Kalvari-class diesel-electric attack submarine |
| 4. INS Utkarsh | - Multi-purpose vessel |

How many pairs given above are correctly matched?

- (a) Only one pair
 (b) Only two pairs
 (c) Only three pairs
 (d) All four pairs

Answer: (b) Only two pairs

Explanation:

In NEWS:

- PM Modi commissions **INS Surat, INS Nilgiri and INS Vaghsheer**: 'India has emerged a strong, responsible global leader'
- Larsen & Toubro (L&T) has successfully launched the second multi-purpose vessel (MPV) for the Indian Navy, named **INS Utkarsh**.

INS Surat, INS Nilgiri and INS Vaghsheer:

- The vessels that have entered the Navy are

- the destroyer INS Surat, the last of the four Visakhapatnam-class stealth guided-missile destroyers; **Hence pair 1 is incorrectly matched.**
- the frigate INS Nilgiri, the lead ship of a new class of seven stealth guided-missile frigates being built under Project 17 Alpha; and, **Hence pair 2 is incorrectly matched.**
- the submarine INS Vaghsheer, the sixth and the last of the first batch of the Kalvari-class diesel-electric attack submarines. **Hence pair 3 is correctly matched.**

INS Utkarsh

- INS Utkarsh measures 107 metres in length and 18.6 metres in width. It has a displacement of over 3,750 tonnes. The vessel is designed to achieve a maximum speed of 15 knots. It will enhance the Navy's maritime surveillance, patrolling, and disaster relief capabilities.
- The MPVs serve multiple roles, including towing ships, launching and recovering various targets, and operating unmanned autonomous vehicles. They act as trial platforms for indigenous weapons and sensors. The vessels contribute to humanitarian assistance and combat sea pollution. **Hence pair 4 is correctly matched.**

72. Blue Flag Certification

72. The iconic Blue Flag Certification is one of the world's most recognised voluntary awards for beaches, marinas, and sustainable tourism boats. In this context consider the following.

1. Kasarkod Beach
2. Chal Beach
3. Kovalam Beach
4. Eden Beach
5. Minicoy Thundi Beach

How many of the above are the Blue Flag Certified Beaches in India?

- (a) Only two
 (b) Only three
 (c) Only four
 (d) All five

Answer: (d) All five

Explanation:

In NEWS: Kerala's Chal beach gets Blue Flag certification

Blue Flag Certification:

- The Blue Flag is a certification by the Foundation for Environmental Education (FEE), Denmark that a beach, marina, or sustainable boating tourism operator meets its standards.
- The Blue Flag is a trademark owned by FEE, which is a not-for-profit non-governmental organisation consisting of 65 organisations in 77 member countries.
- FEE's Blue Flag criteria include standards for quality, safety, environmental education and information, the provision of services and general environmental management criteria.
- The Blue Flag is sought for beaches, marinas, and sustainable boating tourism operators as an indication of their high environmental and quality standards.



Criteria for Blue Flag Certification:

To receive this certification, a beach or marina must meet 33 strict criteria under four categories:

1. Environmental Education & Information

- Display of eco-information boards for visitors.
- Conducting awareness programs on marine conservation.

2. Water Quality

- Compliance with international water quality standards.
- Prevention of pollution from sewage and waste disposal.

3. Environmental Management

- Regular beach cleaning and waste disposal systems.
- Banning plastic use and ensuring proper recycling.
- Protection of coastal ecosystems and biodiversity.

4. Safety & Services

- Availability of lifeguards and first aid stations.
- Clean toilets, changing rooms, and drinking water facilities.
- Safe swimming zones and accessibility for differently-abled visitors.

Blue Flag Certified Beaches in India

As of 2025, 13 beaches in India have received the Blue Flag Certification:

- Gujarat - Shivrajpur Beach
- Daman & Diu - Ghoghla Beach
- Goa - Kasarkod Beach, Kappad Beach
- Karnataka - Padubidri Beach
- Kerala - Kappad Beach, Chal Beach
- Andhra Pradesh - Rushikonda Beach
- Odisha - Golden Beach (Puri)
- Tamil Nadu - Kovalam Beach
- Puducherry - Eden Beach
- Lakshadweep - Minicoy Thundi Beach, Kadmat Beach. **Hence all are correct.**

● Golden Beach, Puri (Odisha) – First beach in India to receive Blue Flag certification.

● Minicoy Thundi & Kadmat Beaches (Lakshadweep) – Certified in 2022 for their pristine white sands and coral reefs.

India's Efforts to Promote Blue Flag Beaches:

BEAMS Program (Beach Environment & Aesthetic Management Services):

- Launched under India's Integrated Coastal Zone Management (ICZM).
- Aims to improve beach cleanliness, infrastructure, and sustainability.

Strict waste management and sewage treatment guidelines.

Ban on single-use plastics and promotion of eco-friendly tourism.

73. Sharavathy Lion-Tailed Macaque Sanctuary

73. In which one of the following States is Sharavathy Lion-Tailed Macaque Sanctuary located?

- Andhra Pradesh
- Telangana
- Madhya Pradesh
- Karnataka

Answer: (d) Karnataka

Explanation:

In NEWS: Pumped storage project in Sharavathy Lion-Tailed Macaque Sanctuary gets condition approval

Sharavathi Lion Tailed Macaque Wildlife Sanctuary:

● Sharavathi Wildlife Sanctuary is a protected wildlife sanctuary in the Western Ghats of Karnataka state in India. **Hence option (d) is correct.**

● It is named after the Sharavathi River flowing through the sanctuary.

● The sanctuary was expanded by adding the Aghanashini Lion Tailed Macaque Conservation Reserve (299.52 km² (115.65 sq mi)) and some of the reserved forests (200 km² (77 sq mi)) in Uttara Kannada & Shivamogga districts, to the existing sanctuary. After expansion, the sanctuary has been renamed as the **Sharavathi Lion Tailed Macaque Wildlife Sanctuary.**

● The expanded sanctuary is aimed at protecting the freshwater habitat of Myristica swamps that hosts many species like Lion Tailed Macaque, Leaf Nosed Bats, Hornbills etc.

Lion Tailed Macaque (Macaca silenus):

● The lion-tailed macaque (Macaca silenus), also known as the wanderer, is an Old World monkey endemic to the Western Ghats of South India.

● They are named not for their mane, but for their tail, which is long, thin, and naked, with a lion-like, black tail tuft at the tip.

● Lion Tailed Macaque (Macaca silenus) is classified as "Endangered" by IUCN.

● Lion-tailed macaques are covered in black fur, and have a striking gray or silver mane that surrounds the face in both sexes.

● The face itself is hairless and black in adults, but pinkish in infants less than a year old. Infants are born with no mane, which begins to grow about two months after birth.

● The size of their tail is about 25 cm (9.8 in) in length. Their eyes are a shade of hazelnut with highlighting black eyelids.

● Lion-tailed macaques, like other macaques, have deep cheek pouches used for storing food, and are quadrupedal with opposable digits.

● The mane that surrounds its face gives this monkey its German name Bartaffe – "beard ape". With a head-body length of 42–61 cm (17–24 in) and a weight of 2–10 kg (4.4 - 22.0 lb), it ranks among the smaller macaques species.

74. India's largest Floating Solar project

74. With reference to India's floating solar park project, which of the following statements is/are correct?

- Gujarat has the largest floating solar park in India with the total installed capacity of 600 MW.
- The project aims to significantly reduce carbon emissions by 2.3 lakh tons of CO₂, supporting India's goal of achieving net-zero emissions by 2070.

Select the correct answer using the code given below.

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer: (b) 2 only

Explanation:

In NEWS: Union Minister Joshi visits India's largest Floating Solar project in Omkareshwar in Madhya Pradesh.

Omkareshwar Floating Solar Park:

- The Omkareshwar Floating Solar Park is a significant renewable energy project located in the **Khandwa district of Madhya Pradesh, India. Hence statement 1 is incorrect.**
- It is the largest floating solar park in India and one of the largest in the world.
- It is part of India's push to expand its renewable energy capacity, specifically solar energy, while utilizing the existing water bodies to reduce land acquisition challenges.
- **The National Thermal Power Corporation (NTPC)**, India's largest power generation company, is involved in the development of the floating solar project.
- **The Madhya Pradesh Urja Vikas Nigam Limited (MPUVNL)** is working alongside NTPC for the implementation of this renewable energy project.

Significance:

- **Capacity:** The total installed capacity of the park is 600 MW (megawatt), making it one of the largest floating solar parks in India.
- **Area:** It covers an area of around 500 hectares on the reservoir.
- **Renewable Energy Expansion:**
 - It is a critical step towards meeting India's ambitious target of 500 GW of non-fossil fuel-based energy capacity by 2030, and its contribution helps achieve India's clean energy goals.
 - The project aims to significantly reduce carbon emissions by 2.3 lakh tons of CO₂, supporting India's goal of achieving net-zero emissions by 2070. **Hence statement 2 is correct.**
- **Dual Use of Water Bodies:** By utilizing the surface of water bodies like reservoirs for solar energy generation, this project addresses the issue of land availability that is often a challenge for solar installations.
- **Floating Solar Panels:** The floating solar technology allows solar panels to be installed on water surfaces, using specialized structures that float on the water. This minimizes land use while maximizing energy generation.
- **Cooling Effect:** The presence of water helps in cooling the solar panels, which improves their efficiency compared to traditional land-based solar power plants.
- **Environmental Impact:** Floating solar parks like Omkareshwar also have a positive environmental impact by reducing water evaporation from reservoirs and improving the local ecology.

75. Crafts from the South

75. Consider the following pairs:

	GI tagged products	Respective states
1	Kalamkari Painting on Bamboo	Andhra Pradesh
2	Pochampally Ikat	Telangana
3	Kanchipuram Silk	Tamil Nadu
4	Etikoppaka Dolls	Kerala

Which of the pairs given above is/are correct?

- (a) 1 and 3 only
- (b) 2 and 4 only
- (c) 1, 2 and 3 only
- (d) 2, 3 and 4 only

Answer: (c) 1, 2 and 3 only

Explanation:

In NEWS: President Murmu's invite for this year's Republic Day reception set to honour crafts from South

- A specially curated craft box with symbolic meaning from five southern States (Tamil Nadu, Kerala, Karnataka, Telangana, and Andhra Pradesh) will be sent to invitees; curated in collaboration with National Institute of Design.
- The craft products in the invitation box are all made in the southern States, have GI (geographical indicator) tags, and are drawn from the "One District One Product" scheme.

South Indian GI tagged crafts:
Art in a box

President Droupadi Murmu's guests are set to receive a gift box containing the best of south India's GI-tagged crafts. **Here are some products featured in the hamper:**


Pochampally Ikat on a pencil pouch:

This Telangana staple is known for its distinct geometric patterns and bold colours


Etikoppaka toys:

The soft wood and lacquer toys from the eponymous village in Andhra Pradesh are valued for the use of natural dyes and themes depicting everyday life


Kalamkari on bamboo:

These goodies will arrive in a bamboo box decorated with Kalamkari motifs, pen-drawn with natural dyes


Kanchipuram silk as a pouch:

The handloom silk, world renowned for its richness and elegance, makes its way from Tamil Nadu

Kalamkari Painting on Bamboo Weave Box: Crafted by Nimmalakunta artisans from **Andhra Pradesh. Hence pair 1 is correctly matched.**

Pochampally Ikat: Reusable cover showcasing **Telangana's** famed textile craft. **Hence pair 2 is correctly matched.**

Mysore's Ganjifa Art Fridge Magnet: Inspired by traditional Ganjifa playing cards of **Karnataka.**

Kanchipuram Silk : Handwoven pouch from **Tamil Nadu. Hence pair 3 is correctly matched.**

Etikoppaka Dolls: Male and female wooden dolls crafted by **Andhra Pradesh** artisans. **Hence pair 4 is incorrectly matched.**

Screwpine Bookmark: Woven by artists from **Kerala** using traditional screwpine leaves.

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