



KingMakers
IAS Academy

Good Morning Test

(GMT)

Prelims Compilation

December - 2025

KingMakers IAS Academy

Chennai I Trichy I Madurai I Coimbatore I Salem I Namakkal I Pondicherry I Thanjavur I New Delhi

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KingMakers IAS Academy

GOOD MORNING TEST (GMT)
DECEMBER 2025
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POLITY AND GOVERNANCE

1. SIMULTANEOUS ELECTIONS

1. Consider the following statements:

1. Simultaneous elections refers to holding elections to Lok Sabha, all state Legislative Assemblies, and urban and rural local bodies at the same time.
2. The constitution of India explicitly allows premature dissolution of legislatures by using the phrase “unless sooner dissolved.”
3. The right to vote is a fundamental right under Part III of the Constitution of India.
4. The Election Commission derives its authority to schedule elections under the Representation of the People Act, 1951.

Which of the above statements are correct?

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

Answer: (d) 1, 2 and 4 only

Explanation:

In NEWS: Union Law Ministry defends simultaneous polls proposal; says curtailing tenure not against basic structure of Constitution

Simultaneous Elections

- Simultaneous elections, popularly referred to as “**One Nation, One Election**”, means holding elections to **Lok Sabha, all state Legislative Assemblies, and urban and rural local bodies (municipalities and panchayats)** at the same time. **Hence statement 1 is correct.**
- Currently, all these elections are held independently of one another, following timelines dictated by the terms of every individual elected body.

Constitutional Provisions & Basic Structure

- **Articles 83(2) and 172(1)** state that Lok Sabha and State Assemblies have a five-year term “**unless sooner dissolved.**” **Hence statement 2 is correct.**
- The phrase “unless sooner dissolved” allows **premature dissolution** and makes the five-year term **not absolute.**
- The Law Ministry states that **curtailing tenure for one-time synchronisation does not violate the basic structure.**
- The **42nd Amendment (1976)** extended legislative terms to six years; the **44th Amendment** restored the five-year term, showing tenure is **amendable.**
- If a term can be **extended**, it can also be **curtailed** through amendment without violating the basic structure.

Rights of Electorate

- The **right to vote** under Article 326 is a **constitutional and statutory right**, not a fundamental right. **Hence statement 3 is incorrect.**
- Mid-term elections do **not limit the plenary power** of the electorate.

- The Supreme Court in **Kuldip Nayar v. Union of India (2006)** held that the right to vote is **not a fundamental right.**

Federal Structure

- The Law Ministry argues that synchronisation **does not infringe federalism.**
- Dr. B.R. Ambedkar described India’s Constitution as **federal in normal times and unitary during emergencies.**
- A constitutional amendment to align elections **does not disturb this flexible balance.**
- The Ministry claims that simultaneous elections **do not erode separation of powers.**

Role of Election Commission (ECI)

- The Election Commission derives autonomy from **Article 324.**
- It schedules elections under **Sections 14 and 15** of the Representation of the People Act, 1951. **Hence statement 4 is correct.**
- Even under the proposed framework, ECI retains **superintendence, direction, and control** over elections.
- In exceptional circumstances, ECI may **recommend deferment** of elections to the President.

Disqualification of Voters (Contextual Reference)

- Under the Representation of the People Act, 1951, a person can be disqualified from voting due to:
 - Non-citizenship
 - Unsoundness of mind as declared by a competent court
 - Conviction for corrupt practices
 - Other electoral offences

PYQ REFERENCE: (2017)

Q. Consider the following statements:

1. The Election Commission of India is a five-member body.
2. Union Ministry of Home Affairs decides the election schedule for the conduct of both general elections and bye-elections.
3. Election Commission resolves the disputes relating to splits/mergers of recognised political parties.

Which of the statements given above is/are correct?

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

Source: <https://www.thehindu.com/news/national/union-law-ministry-defends-simultaneous-polls-proposal-says-curtailing-tenure-not-against-basic-structure-of-constitution/article70330978.ece/amp/>

2. Fast Track Special Courts (FTSCs)

2. Fast Track Special Courts (FTSCs) are primarily established to expedite trials for:

1. Rape cases
2. Cases under the POCSO Act
3. Dowry Prohibition Act cases

Select the correct answer using the code given below:

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

Answer: (b) 1 and 2 only

Explanation:

In NEWS: Fast Track Special Courts (FTSCs)

The Fast Track Special Courts (FTSCs):

● The Fast Track Special Courts (FTSCs) Scheme is a **Centrally Sponsored Scheme** in India aimed at the expeditious trial and disposal of cases related to **rape and offences under the Protection of Children from Sexual Offences (POCSO) Act.**

Hence option (b) is correct.

● The scheme was **launched in October 2019** and has been extended until March 31, 2026, following the enactment of the Criminal Law (Amendment) Act, 2018 and the order of Hon'ble Supreme Court [Suo Motu Writ (Criminal) No. 1/2019].

● The scheme is implemented by the **Department of Justice, Ministry of Law and Justice**, to support state governments in establishing these specialized courts.

● The FTSCs are funded through the **non-lapsable Nirbhaya Fund**, a corpus dedicated to the safety and security of women.

● The funding pattern for the Central and State Governments is typically 60:40, with a 90:10 ratio for North Eastern and some hilly states, and 100% central funding for Union Territories without a legislature.

Key Objectives:

● The primary goal of the FTSC Scheme is to provide swift justice to victims of sexual offences and strengthen the deterrence framework for sexual offenders.

● **Speedy Justice:** To ensure timely trials and disposal of pending cases, which helps mitigate the trauma and distress for survivors.

● **Case Backlog Reduction:** To reduce the large backlog of pending cases related to rape and the POCSO Act in regular courts.

● **Implementation of Law:** To implement the provisions of the Criminal Law (Amendment) Act, 2018, which mandated stringent punishments for sexual offences, and comply with Supreme Court directives for speedy disposal of POCSO cases.

PYQ REFERENCE: (2022)

Q. Which of the following is/are the exclusive power(s) of Lok Sabha?

1. To ratify the declaration of Emergency
2. To pass a motion of no-confidence against the Council of Ministers
3. To impeach the President of India

Select the correct answer using the code given below:

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2202164®=3&lang=1>

3. Rehabilitation Council of India (RCI) Act, 1992

3. Which of the following objectives is not included in the mandate of the Rehabilitation Council of India Act, 1992?

- (a) To maintain the Central Rehabilitation Register (CRR)
- (b) To accredit institutions offering rehabilitation courses
- (c) To regulate and standardize training programmes
- (d) To provide direct financial assistance to persons with disabilities

Answer: (d) To provide direct financial assistance to persons with disabilities

Explanation:

In NEWS: India's Commitment to Disability Rights

Rehabilitation Council of India (RCI) Act, 1992:

● The Rehabilitation Council of India Act was passed by the Indian Parliament in 1992.

● The Act provides statutory status to the Rehabilitation Council of India (RCI).

● RCI was originally set up as a registered society in 1986 before becoming a statutory body.

● The Act came into force to regulate training programmes and services for persons with disabilities.

● It aims to maintain high standards of education and professional training in rehabilitation and special education.

According to the Act and RCI's official mandate:

● To regulate and monitor training programmes and courses for rehabilitation professionals and special educators.

● To standardize syllabi, curricula, and training standards for all institutions across India offering rehabilitation or special-education courses.

● To recognize and accredit institutions (universities/colleges/training providers) that offer courses in rehabilitation, special education, and related fields.

● To recognize qualifications granted by Indian institutions (and in certain cases foreign institutions, on reciprocal basis) for rehabilitation professionals.

● To maintain the Central Rehabilitation Register (CRR), a registry of all qualified and certified rehabilitation professionals and personnel working with persons with disabilities.

● To promote research in rehabilitation, special education, and allied fields.

● The Act also empowers RCI to take action against unqualified or unauthorized persons who attempt to deliver rehabilitation or special-education services.

Hence option (d) is correct.

PYQ REFERENCE: (2013)

Q. The Government enacted the Panchayat Extension to Scheduled Areas (PESA) Act in 1996. Which one of the following is not identified as its objective?

- (a) To provide self-governance
- (b) To recognize traditional rights
- (c) To create autonomous regions in tribal areas**
- (d) To free tribal people from exploitation

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2197426®=3&lang=1>

4. HIV/AIDS (Prevention and Control) Act, 2017

4. With reference to India's HIV/AIDS (Prevention and Control) Act, 2017, consider the following statements:

1. The HIV/AIDS (Prevention and Control) Act, 2017 mandates confidentiality of HIV-related information and prohibits its disclosure without consent.
2. The Act makes it unlawful for employers, educational institutions, or healthcare providers to discriminate against people living with HIV.
3. Under the Act, the government is obligated to provide Anti-Retroviral Therapy (ART) to all who seek it.

How many of the above statements are correct?

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

Answer: (c) All three

Explanation:

In NEWS:

- World AIDS Day is observed on December 1 every year.
- The theme for 2025 is 'Overcoming disruption, transforming the AIDS response'.
- Strong Policy Framework in India: Landmark measures like the HIV/AIDS (Prevention and Control) Act, 2017 safeguard the rights of people living with HIV and prohibit discrimination.
- Progress through the National AIDS and STD Control Programme (NACP). India has reduced new infections and expanded access to ART through evolving strategies across NACP phases.

HIV/AIDS (Prevention and Control) Act, 2017:

1. The Act aims to **prevent and control the spread of HIV and AIDS** and protect the rights of persons living with HIV (PLHIV).
2. It is the **first national law in India** specifically addressing the rights and protection of people affected by HIV/AIDS.
3. The Act **prohibits all forms of discrimination** against PLHIV in employment, education, healthcare, housing, public facilities, insurance, and government services.
4. It mandates **confidentiality** of a person's HIV status; disclosure is permitted only with **informed written consent** or by a court order.

5. The Act provides for **HIV-related information to be kept strictly private**, including medical records and test results.

6. It ensures **equal access to healthcare**, including Anti-Retroviral Therapy (ART) and opportunistic infection management.

7. The Act places a legal obligation on the **Central and State Governments** to provide HIV prevention, testing, treatment, and counselling services.

8. It mandates the government to **frame guidelines** for HIV testing, treatment protocols, and safe practices.

9. The Act protects PLHIV from **forced testing**; HIV testing must be **voluntary, informed, and confidential**.

10. It prohibits the **denial of employment**, termination, or unfair treatment due to HIV status.

11. It explicitly bans discrimination in **educational institutions**, ensuring admission and continued study without stigma.

12. The Act requires **HIV-related services to be accessible, affordable, and of good quality** for all individuals.

Hence option (c) is correct.

PYQ REFERENCE: (2013)

Q. Which of the following diseases can be transmitted from one person to another through tattooing?

1. Chikungunya
2. Hepatitis B
3. HIV-AIDS

Select the correct answer using the codes given below:

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2196475®=3&lang=1>

5. Organ transplants in India

5. Consider the following statements:

Statement I: The primary legislation governing organ and tissue transplantation in India is the Transplantation of Human Organs and Tissues Act (THOTA), 1994.

Statement II: THOTA permits the removal, storage and transplantation of human organs only for therapeutic purposes, and prohibits all forms of commercial trade in human organs.

Statement III: In the case of living donors, only near relatives such as spouse, parents, siblings and children are ordinarily allowed to donate organs.

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 Statement III is correct and that explain 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: What are the legalities involved in organ transplants?

Key Legal Framework & Legalities for Organ Transplant in India:

● The primary legislation governing organ and tissue transplantation in India is the **Transplantation of Human Organs and Tissues Act (THOTA), 1994. Hence statement I is correct.**

● THOTA permits the **removal, storage and transplantation** of human organs **only for therapeutic purposes**, and **prohibits all forms of commercial trade** in human organs.

● In the case of **living donors**, only **near relatives** such as spouse, parents, siblings and children are ordinarily allowed to donate organs. **Hence, Both Statement II and Statement III are correct and both of them explain Statement I.**

● **Organ donation by non-relatives** or distant relatives is allowed **only with prior approval** of an **Authorisation Committee**, which ensures that no commercial transaction is involved.

● The Act recognises **brain-stem death** and permits **deceased-donor organ transplantation**, subject to proper declaration and consent.

● Only **registered hospitals** are permitted to conduct the removal or transplantation of human organs; any transplant in an **unregistered hospital is illegal.**

● Offering, giving, or receiving **any monetary payment or reward** for an organ is a **punishable offence** under THOTA.

● **Donors must be adults (18 years or above)** to legally donate organs.

● Organs or tissues **cannot be removed from minors or mentally challenged persons**, except under narrowly defined statutory exceptions.

● Hospitals performing transplants must ensure **full disclosure of risks and complications** to both donors and recipients before the procedure.

● The **National Organ and Tissue Transplant Organisation (NOTTO)** is the central authority responsible for coordination, registry management, allocation of organs, and overall oversight of the transplant system in India.

● The effectiveness of THOTA depends on **adoption and implementation by state governments**, and gaps in state-level adoption can create regulatory inconsistencies.

PYQ REFERENCE: (2020)

Q. Consider the following statements:

1. Genetic changes can be introduced in the cells that produce eggs or sperms of a prospective parent.
2. A person's genome can be edited before birth at the early embryonic stage.
3. Human induced pluripotent stem cells can be injected into the embryo of a pig.

Which of the statements given above is/are correct?

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

Source: <https://www.thehindu.com/sci-tech/health/what-are-the-legalities-involved-in-organ-transplants-explained/article70368786.ece#:~:text=In%20India%2C%20it%20is%20governed,but%20vital%20organs%20are%20functioning.>

6. The National Intelligence Grid (NATGRID)

6. Consider the following agencies:

1. Intelligence Bureau (IB)
2. Research and Analysis Wing (RAW)
3. Enforcement Directorate (ED)
4. Income Tax Department

Which of the above are linked to NATGRID for intelligence purposes?

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

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

Explanation:

In NEWS: National intelligence grid gains traction as Central agencies, police scour for information

National Intelligence Grid (NATGRID):

● NATGRID stands for **National Intelligence Grid**, an integrated intelligence network of India.

● It was **conceptualized after the 2008 Mumbai terror attacks** to improve **counter-terrorism efforts**.

● The objective of NATGRID is to **link databases of core security agencies for real-time intelligence sharing.**

● NATGRID connects **agencies such as IB, RAW, CBI, Enforcement Directorate, Income Tax Department, CBIC, and others. Hence all are correct.**

● It provides access to a **wide range of personal and financial data** such as banking, tax, travel, and immigration records.

● The system is designed to **detect suspicious patterns, prevent terrorist attacks, and assist ongoing investigations.**

● NATGRID operates under the **Home Ministry**, with a **Board of Governors** and a **Chief Executive Officer (CEO)** for administration.

● It ensures **controlled and secure access** to data, with strict protocols to protect **privacy and civil liberties.**

● The system uses **advanced analytics, data mining, and artificial intelligence tools** to identify threats.

● NATGRID is part of India's larger **counter-terrorism and internal security architecture** and complements agencies like **NIA and NSG.**

● Its implementation has been **phased**, initially focusing on **linking 10 core databases**, and later expanding to include more agencies.

● NATGRID is often compared to **global intelligence systems** like the USA's **NSA** and UK's **MI5 intelligence network**, though it is **strictly domestic in scope.**

PYQ REFERENCE: (2025)

Q. With reference to the Government of India, consider the following information:

Organization - Some of its functions - It works under

1. Directorate of Enforcement - Enforcement of the Fugitive Economic Offenders Act, 2018 - Internal Security Division-I, Ministry of Home Affairs
2. Directorate of Revenue Intelligence - Enforces the Provisions of the Customs Act, 1962 Department of Revenue, Ministry of Finance
3. Directorate General of Systems and Data Management - Carrying out big data analytics to assist tax officers for better policy and nabbing tax evaders Department of Revenue, Ministry of Finance

In how many of the above rows is the information correctly matched?

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

Source:

<https://www.thehindu.com/news/national/national-intelligence-grid-slowly-gathers-pace-receives-45k-requests-a-month/article70369184.ece>

7. Chief Information Commissioner

7. With reference to the Central Information Commission (CIC), consider the following statements:

1. The Central Information Commission is a constitutional body established under the Right to Information Act, 2005.
2. It is the apex authority for matters relating to implementation of the RTI Act for Central Government public authorities.
3. Chief Information Commissioner is appointed by the President of India
4. The decisions of the CIC are binding on public authorities, not subject to judicial review.
5. The CIC submits its Annual Report on RTI implementation to Parliament.

Which of the statements given above are correct?

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

Answer: (a) 2, 3 and 5 only

Explanation:

In NEWS: The President of India administered the 'Oath of Office' to Shri Raj Kumar Goyal as Chief Information Commissioner in the Central Information Commission at a ceremony

Central Information Commission:

● The Central Information Commission is a **statutory body** established under the Right to Information Act, 2005. **Hence statement 1 is incorrect.**

● It is the **apex authority for matters related to the implementation of the RTI Act** with respect to Central Government public authorities. **Hence statement 2 is correct.**

● It was **established under Section 12 of the RTI Act, 2005** and became operational in October 2005

● It is an Independent statutory body and **not a constitutional body**

● Its decisions are binding on public authorities, **subject to judicial review** **Hence statement 4 is incorrect.**

Composition

● Chief Information Commissioner (CIC) – Head of the Commission

● Up to 10 Information Commissioners (ICs)

Appointment

● Appointed by the **President of India** **Hence statement 3 is correct.**

● On the recommendation of a Selection Committee consisting of:

○ Prime Minister (Chairperson)

○ Leader of Opposition in Lok Sabha

● A Union Cabinet Minister nominated by the Prime Minister

Jurisdiction

● Covers Central Government ministries and departments

● Central Public Sector Undertakings

● Statutory and constitutional bodies under the Union Government

Functions

● **Hears appeals against decisions of First Appellate Authorities under the RTI Act.**

● Inquires into complaints related to:

○ Refusal of information

○ Delay in providing information

○ Non-appointment of Public Information Officers

○ Excessive fees demanded

● Monitors implementation of the RTI Act by public authorities

● Submits Annual Report on RTI implementation to Parliament **Hence statement 5 is correct.**

● Issues guidelines for effective RTI implementation

● Promotes awareness and capacity building among officials and citizens

Quasi-judicial powers, including:

● Summoning individuals

● Requiring production of documents

● Taking evidence on affidavit

● Can impose penalty on Public Information Officers:

● ₹250 per day of delay

● Maximum penalty: ₹25,000

● Can recommend disciplinary action against erring officials

PYQ REFERENCE: (2016)

Q. Consider the following statements:

1. The Chief Secretary in a State is appointed by the Governor of that State.

2. The Chief Secretary in a State has a fixed tenure.

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2203912®=3&lang=1>

8. Mercy Plea

8. With reference to the role of the President in deciding a Mercy Plea, consider the following statements:

- I. The President exercises discretionary powers independent of the Council of Ministers.
- II. The power of the President under Article 72 is subject to limited judicial review.

Which of the statements given above are not correct?

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

Answer: (a) Only I

Explanation:

In NEWS: President rejects mercy plea of man convicted of rape, murder of two-year-old girl

Mercy Plea:

- A Presidential Mercy Petition in India is a final appeal by a death-row convict to the President under **Article 72 of the Constitution**, seeking pardon, reprieve, or commutation of sentence after exhausting all other legal remedies like appeals and curative petitions,
- It is filed after all judicial appeals (trial, High Court, Supreme Court, curative) are dismissed, the convict or family can file.
- The President acts on the advice of the Council of Ministers (specifically the Ministry of Home Affairs) and the power is subject to limited judicial review.
- The President acts on the advice of the Council of Ministers (specifically the Ministry of Home Affairs) and the power is subject to limited judicial review. **Hence statement I is incorrect and statement II is correct.**
- No specific time limit for the President to decide, but the Bharatiya Nagarik Suraksha Sanhita (BNSS) introduces new timelines for filing post-appeal dismissal, typically 30 days, and 60 days for Governor's rejection to reach the President.

Process:

- Petition submitted to the President's Secretariat.
- Forwarded to the Ministry of Home Affairs (MHA).
- MHA seeks state government's input and recommends a decision.
- President makes the final decision, acting on the MHA's advice (bound by Cabinet's advice).

PYQ REFERENCE: (2025)

Q. Consider the following statements with regard to pardoning power of the President of India:

- I. The exercise of this power by the President can be subjected to limited judicial review.
- II. The President can exercise this power without the advice of the Central Government.

Which of the statements given above is/are correct?

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

Source:

<https://www.thehindu.com/news/national/president-murmu-rejects-mercy-plea-of-man-convicted-for-rape-murder-of-two-year-old-in-maharashtra/article70395699.ece>

9. National Makhana Board

9. With reference to the National Makhana Board, consider the following statements:

1. It has been announced to promote the production, processing and export of makhana in India.
2. It functions under the Ministry of Agriculture and Farmers Welfare.
3. Bihar is the largest producer of makhana in India.
4. Makhana is a dryland crop mainly cultivated under rainfed conditions.

Which of the statements given above are correct?

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

Answer: (c) 1, 2 and 3 only

Explanation:

In NEWS: National Makhana Board holds first meeting; ₹476-crore Central Sector Scheme rolled out for holistic development of makhana sector

National Makhana Board:

- The National Makhana Board has been announced by the Union Government to promote and develop the makhana sector in India. **Hence statement 1 is correct.**
- It functions under the **Ministry of Agriculture and Farmers Welfare**. **Hence statement 2 is correct.**
- **Bihar** is the largest producer of makhana in India and is the proposed location for the Board's headquarters. **Hence statement 3 is correct.**
- Makhana is an **aquatic crop** traditionally cultivated in ponds, wetlands and floodplains. **Hence statement 4 is incorrect.**
- The Board aims to improve productivity, post-harvest processing, value addition and exports of makhana.
- Makhana cultivation supports rural livelihoods, particularly in the Mithila region of Bihar.
- Apart from Bihar, makhana is also grown in states such as **West Bengal and Assam**.

PYQ REFERENCE:

Q. With reference to the "Tea Board" in India, consider the following statements:

1. The Tea Board is a statutory body.
2. It is a regulatory body attached to the Ministry of Agriculture and Farmers Welfare.
3. The Tea Board's Head Office is situated in Bengaluru.
4. The Board has overseas offices at Dubai and Moscow.

Which of the statements given above are correct?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2203165®=3&lang=1>

10. Lok Adalats

10. With reference to Lok Adalats, consider the following statements:

- Lok Adalats are given Constitutional status under the 58th constitutional amendment act, 1987.
- Lok Adalats can take up both pending court cases and pre-litigation disputes.
- Lok Adalats can take up both compoundable and non-compoundable criminal offences.
- The award of a Lok Adalat is final and binding on all parties, and no appeal lies against it.
- Lok Adalats are not bound by the Code of Civil Procedure or the Indian Evidence Act.

How many of the above statements are correct?

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

Answer: (b) Only three

Explanation:

In NEWS: Lok Adalats: Justice That Speaks for the People

Lok Adalats:

- Lok Adalats are a form of **Alternative Dispute Resolution (ADR)** aimed at speedy and amicable settlement of disputes.
- The constitutional basis of Lok Adalats lies in **Article 39A**, which mandates equal justice and free legal aid.
- Lok Adalats are given statutory status under the **Legal Services Authorities Act, 1987**. **Hence statement 1 is incorrect.**
- They are organised by **Legal Services Authorities** at the national, state, district and taluk levels.
- Lok Adalats can take up **both pending court cases and pre-litigation disputes**. **Hence statement 2 is correct.**
- Only **compoundable criminal offences** can be taken up by Lok Adalats. Disputes involving **non-compoundable criminal offences** cannot be taken up by Lok Adalats. **Hence statement 3 is incorrect.**
- Lok Adalats follow **conciliation and compromise**, and do not adjudicate disputes in an adversarial manner.
- The award passed by a Lok Adalat is **deemed to be a decree of a civil court**.
- The award of a Lok Adalat is **final and binding on all parties**, and no appeal lies against it. **Hence statement 4 is correct.**

- If a dispute is settled in a Lok Adalat, the **court fee already paid is refunded** to the parties.
- Lok Adalats are **not bound by the Code of Civil Procedure or the Indian Evidence Act**. **Hence statement 5 is correct.**
- Permanent Lok Adalats** are established specifically for disputes related to **Public Utility Services**.
- Permanent Lok Adalats have the power to **decide disputes on merits** if parties fail to reach a settlement.
- Lok Adalats play a significant role in **reducing pendency of cases** and improving access to justice.

PYQ REFERENCE: (2025)

Q. Consider the following statements about Lokpal:

- The power of Lokpal applies to public servants of India, but not to the Indian public servants posted outside India.
- The Chairperson or a Member shall not be a Member of the Parliament or a Member of the legislature of any State or Union Territory and only the Chief Justice of India, whether incumbent or retired, has to be its Chairperson.
- The Chairperson or a Member shall not be a person of less than forty-five years of age on the date of assuming office as the Chairperson or Member, as the case may be.
- Lokpal cannot inquire into the allegations of corruption against a sitting Prime Minister of India.

Which of the statements given above is/are correct?

- (a) III only
(b) II and III
(c) I and IV
(d) None of the above statements is correct

Source:

<https://www.pib.gov.in/PressNoteDetails.aspx?NoteId=156468&ModuleId=3®=3&lang=1>

11. Adoption in India

11. Consider the following statements regarding adoption in India:

- Adoption in India is governed by the Juvenile Justice (Care and Protection of Children) Act, 2015 and Adoption Regulations, 2022.
- The Central Adoption Resource Authority (CARA) is a statutory body under the Ministry of Social Justice and Empowerment.
- Adoption orders are issued by the District Magistrate in India.
- Resident Indians, NRIs, OCIs and foreign nationals can adopt through prescribed procedures.

Which of the statements given above are correct?

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

Answer: (a) 1, 3 and 4 only

Explanation:

In NEWS: Adoption in India - Legal Framework, Procedures and Child Protection Mechanisms

Adoption in India:

Legal & Institutional Framework

- Adoption in India is governed by the Juvenile Justice (Care and Protection of Children) Act, 2015, as amended, along with Adoption Regulations, 2022. **Hence statement 1 is correct.**
- The adoption framework is child-centric and emphasises transparency in matching children with prospective adoptive parents.
- Family-based care is preferred over institutional care for the holistic development of children.
- The Central Adoption Resource Authority (CARA) is a statutory body under the Ministry of Women and Child Development. **Hence statement 2 is incorrect.**
- CARA acts as the nodal authority for adoption of orphaned, abandoned and surrendered children.
- CARA also regulates relative adoption, step-parent adoption and foster adoption.

Eligibility & Adoption Process

- Resident Indians, NRIs, OCIs and foreign nationals can adopt through prescribed procedures. **Hence statement 4 is correct.**
- Single women are permitted to adopt children of any gender.
- Single men are not permitted to adopt a girl child.
- Couples with two or more children can adopt only children with special needs or those difficult to place.
- There is no fixed income criterion, but financial stability of adoptive parents is assessed.
- Differently-abled persons may adopt subject to suitability assessment.
- Registration and document submission must be completed within a prescribed time limit.

Adoption Order & Post-Adoption

- Adoption orders are issued by the District Magistrate. **Hence statement 3 is correct.**
- Post-adoption follow-ups are mandatory to ensure the child's well-being.
- Passport and travel-related support is provided only after post-adoption compliance.

Special Adoption Categories

- Step-parent adoption requires consent of concerned biological and step-parents.
- Relative adoption allows close family members to adopt a child.
- Sibling adoption aims to keep siblings together wherever possible.
- Immediate Placement allows adoption of older children and those hard to place.

Safeguards & Governance

- Only children declared legally free for adoption can be placed for adoption.
- Adoption outside the authorised system is prohibited except under personal law provisions.
- Adoption procedures do not discriminate on the basis of caste, religion or creed.

- A fixed fee structure and grievance redress mechanisms are in place to prevent exploitation.

Source:

<https://www.pib.gov.in/PressNoteDetails.aspx?NoteId=156517&ModuleId=3®=3&lang=1>

12. Viksit Bharat- G RAM G Bill 2025

12. With reference to the Viksit Bharat-G RAM G Bill, 2025, consider the following statements:

- It seeks to replace MGNREGA with a new statutory framework for rural employment.
- It is designed as a Centrally Sponsored Scheme (CSS).
- The guaranteed wage employment has been enhanced from 100 days to 125 days per rural household per year.
- The ceiling on administrative expenditure has been raised from 6% to 9%.
- It provides for an aggregated 60-day no-work period during peak agricultural seasons.

Which of the statements given above are correct?

- I, II and III only
- I, II, III and IV only
- I, II, III, IV and V
- II, III and V only

Answer: (c) I, II, III, IV and V

Explanation:

In NEWS: Viksit Bharat- G RAM G Bill 2025 - "Reforming MGNREGA for Viksit Bharat"

Viksit Bharat-G RAM G Bill, 2025:

Core Objective

- Replaces MGNREGA with a new statutory framework aligned with Viksit Bharat 2047. **Hence statement I is correct.**
- Renamed as **Guarantee for Rozgar and Ajeevika Mission (Gramin)**.

Employment Guarantee

- Enhances guaranteed wage employment from **100 days to 125 days** per rural household per year. **Hence statement III is correct.**
- Provides an **aggregated 60-day no-work period** during peak agricultural seasons. **Hence statement V is correct.**

- **Unemployment allowance payable after 15 days** if work is not provided (State liability).

Nature of Work

- Focus on **unskilled manual work**.
- Employment linked to **durable rural infrastructure** creation.

Four Priority Infrastructure Verticals

- Water security** (water-related works)
- Core rural infrastructure**
- Livelihood-related infrastructure**
- Extreme weather mitigation works**

Planning & Governance

- Decentralised planning through **Viksit Gram Panchayat Plans**.

- Assets integrated into **Viksit Bharat National Rural Infrastructure Stack**.

- Spatial integration with **PM Gati Shakti**.

Financial Architecture

- Shift from **demand-based funding to normative funding**.
- Converts scheme from **central sector to centrally sponsored scheme (CSS)**. **Hence statement II is correct.**

- **Cost-sharing:**

- **60:40** (Centre:States)

- **90:10** for NE & Himalayan States

- **100% Central funding** for UTs without legislature

- Estimated annual outlay: **₹1.51 lakh crore** (Central share ~₹95,692 crore).

Administrative Changes

- Administrative expenditure ceiling increased from **6% to 9%**. **Hence statement IV is correct.**

- Strengthens staffing, training, and technical capacity.

Transparency & Accountability

- Use of **AI, biometric authentication, GPS, mobile-based monitoring**.

- **Real-time MIS dashboards** and **weekly public disclosures**.

- **Social audits mandatory every six months**.

- Centre empowered to **investigate, suspend funds, and issue corrective directions**.

Institutional Framework

- Central & State **Gramin Rozgar Guarantee Councils**.

- National & State **Steering Committees**.

- **Gram Panchayats** to implement at least **50% of works (cost-wise)**.

- Strengthened role of **Gram Sabhas**.

Expected Outcomes

- Higher rural incomes and reduced distress migration.

- Improved water security, climate resilience, and market connectivity.

- Better Centre-State partnership and fiscal predictability.

PYQ REFERENCE: (2018)

Q. With reference to Pradhan Mantri Kaushal Vikas Yojana, consider the following statements:

1. It is the flagship scheme of the Ministry of Labor and Employment.

2. It, among other things, will also impart training in soft skills, entrepreneurship, financial and digital literacy.

3. It aims to align the competencies of the unregulated workforce of the country to the National Skill Qualification Framework.

Which of the statements given above is/are correct?

(a) 1 and 3 only

(b) 2 only

(c) 2 and 3 only

(d) 1, 2 and 3

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2205734®=3&lang=1>

13. Retired judges

13. Consider the following statements:

Statement-I: Any retired judge of the Supreme Court of India can be called back to sit and act as a Supreme Court judge by the President with prior permission of the Chief Justice of India.

Statement-II: The Indian Constitution provides for the appointment of ad hoc judges in the Supreme Court.

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 is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct, and Statement-II is not the correct explanation for 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: Retired judges don't want to sit as junior ad hoc judges: CJI

Retired Judges in India: Constitutional Provisions

- **Supreme Court:**

- Retirement age: **65 years** (Article 124)

- A retired SC judge **cannot plead or act** before any court or authority in India (Article 124(7)).

- **High Courts:**

- Retirement age: **62 years** (Article 217)

- A retired HC judge **cannot practice** in the same High Court, but may practice in other HCs or the Supreme Court.

Appointment of Retired Judges as Ad hoc Judges of the Supreme Court:

- **Article 127** of the Indian Constitution provides for the appointment of **ad hoc judges** in the Supreme Court. **Hence statement II is correct.**

- The **Chief Justice of India (CJI)** is empowered to request the appointment of an ad hoc judge to the Supreme Court. **Hence statement I is incorrect.**

- The person so requested may be a **retired judge of the Supreme Court** or a **retired judge of a High Court** who is **qualified for appointment as a Supreme Court judge**.

- Such appointment may be made **at any time** to act as a judge of the Supreme Court for a **temporary period**.

- The provision is generally invoked in cases of **lack of quorum** or **excessive pendency of cases** in the Supreme Court.

- The appointment requires the **previous consent of the President of India**.

- The **consent of the retired judge** proposed to be appointed is also mandatory.

- An ad hoc judge so appointed **enjoys all the jurisdiction, powers and privileges** of a sitting judge of the Supreme Court.

- However, an ad hoc judge **does not become a permanent judge** of the Supreme Court.

Post-Retirement Appointments - Retired judges are often appointed to:

- Tribunals (e.g., NGT, CAT, SAT, etc.)
- Commissions of Inquiry
- Lokpal/Lokayukta
- NHRC / SHRC
- Ad hoc judges in Supreme Court (Article 127)
- Arbitration panels

PYQ REFERENCE: (2021)

Q. With reference to Indian judiciary, consider the following statements:

1. Any retired judge of the Supreme Court of India can be called back to sit and act as a Supreme Court judge by the Chief Justice of India with prior permission of the President of India.
2. A High Court in India has the power to review its own judgement as the Supreme Court does.

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

Source:

<https://www.thehindu.com/news/national/retired-hc-judges-embarrassed-to-sit-as-junior-ad-hoc-judges-to-clear-pendency-cji/article70411233.ece>

14. Sessions of the Parliament

14. Consider the following statements:

1. The Speaker of the Lok Sabha has the power to prorogue a session of the Parliament.
2. The constitution mandates the parliament of India to conduct the session within the three month interval.
3. At least 50% of the total strength of the House must be present to conduct business.

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: Winter Session concludes with over 100% productivity

Sessions of the Parliament:

Constitutional Provisions

- **Article 85(1):**
 - The **President shall summon each House of Parliament** at such time and place as they think fit.

- There **must be at least 1 session every 6 months**, i.e., **Parliament should meet at least twice a year. Hence statement 2 is incorrect.**

● **Article 85(2):**

- The **President can prorogue** (end a session) and **dissolve the Lok Sabha. Hence statement 1 is incorrect.**

● **Article 85(3):**

- The **maximum gap between two sessions** cannot exceed **6 months.**

Quorum Requirement:

- At least 10% of the total strength of the House must be present to conduct business. **Hence statement 3 is incorrect.**

Types of Sessions: - India's Parliament typically meets three times a year:

● **Budget Session (February – May)**

- Most important and longest session.
- Begins with the President's Address to both Houses.
- The Union Budget is presented.
- Split into two parts with a recess in between.

● **Monsoon Session (July – August/September)**

- Held during the monsoon season.
- Focuses on legislation and pending bills.

● **Winter Session (November – December)**

- Shortest session.
- Generally used to discuss pressing matters and pass urgent legislation.

PYQ REFERENCE: (2020)

Q. Consider the following statements:

1. The President of India can summon a session of the Parliament at such a place as he/she thinks fit.
2. The Constitution of India provides for three sessions of the Parliament in a year, but it is not mandatory to conduct all three sessions.
3. There is no minimum number of days that the Parliament is required to meet in a year.

Which of the statements given above is/are correct?

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

Source:

<https://www.thehindu.com/news/national/parliament-adjourns-sine-die-as-winter-session-concludes/article70414696.ece>

15. India's Literacy 2030 Goal

15. Consider the following statements:

1. India aims to achieve 100% literacy by 2030, in line with UN Sustainable Development Goal (SDG) 4 on quality education.
2. As per India's Ministry of Education, states like Himachal Pradesh, Mizoram, Goa, Tripura, and Ladakh have achieved the 'fully literate' status.

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's '100% literacy by 2030' goal hits Bihar wall

India's Literacy 2030 Goal:

● India aims to achieve **100% literacy by 2030**, in line with **UN Sustainable Development Goal (SDG) 4** on quality education. **Hence statement 1 is correct.**

● **Current Challenge:** Some states, especially **Bihar**, are lagging in implementing adult literacy programmes, posing a barrier to achieving the national target.

● **ULLAS Scheme:**

○ Stands for **Understanding Lifelong Learning for All in Society**.

○ Requires states to **identify non-literates aged 15 and above**, provide basic literacy and numeracy training, and certify learners upon passing a test.

● **Monitoring:** The **National Literacy Mission Authority (NLMA)** and the **Education Ministry** monitor adult literacy programmes under ULLAS.

Fully Literate States:

● 'Fully Literate' states are those that reach or surpass the 95 per cent literacy rate level, as per **India's Ministry of Education**.

● In other words, in a fully literate state, nearly all eligible individuals of **seven years** of age and above **can write and read**, which highlights widespread access to foundational education and successful state-level reform.

● **List Of Fully Literate States In India:**

- **Mizoram** - 98.2 Per Cent - 2025
- **Goa** - 96 Per Cent - 2025
- **Tripura** - 95.6 Per Cent - 2025
- **Himachal Pradesh** - 95 Per Cent - 2025
- **Ladakh** (Union Territory) - 97 Per Cent - 2024.

Hence statement 2 is correct.

● **Bihar's Status:**

○ Bihar has **not yet participated fully** in the ULLAS programme.

○ Funds released by the Centre for adult literacy in Bihar **remain unutilised**.

Source: <https://indianexpress.com/article/india/india-literacy-2030-goal-hits-bihar-wall-10427620/>

16. Panchayats Extension to Scheduled Areas (PESA) Act, 1996

16. Under the PESA Act, 1996, which of the following require mandatory consent of the Gram Sabha?

1. Land acquisition in Scheduled Areas
2. Minor forest produce
3. Declaration of wildlife sanctuaries
4. Approving village plans

Select the correct answer using the code below:

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

Answer: (b) 1, 2 and 4 only

Explanation:

In NEWS: PESA Mahotsav - Celebrating Community-Led Governance under the PESA Act

Panchayats Extension to Scheduled Areas (PESA) Act, 1996:

● The Panchayats (Extension to Scheduled Areas) Act, 1996 **extends the 73rd Constitutional Amendment to Fifth Schedule Areas**, empowering tribal communities with self-governance.

● In 1996, the Panchayats (Extension to Scheduled Areas) Act (PESA) came into force, giving similar powers to tribal communities in Scheduled Areas to self-govern.

● This landmark legislation restores and protects the rights of tribal communities over their land, water, forest resources, culture, and governance systems.

● It extends decentralised democracy to tribal communities by empowering tribal Gram Sabhas.

● The PESA Act also recognises that tribal communities have unique traditional governance systems and special developmental needs.

● Eight of the ten states with tribal Scheduled Areas have framed their PESA rules, while Odisha and Jharkhand have created draft rules.

Salient Features of the PESA Act:

● State laws must be in consonance with tribal customary laws and practices.

● Approval of the Gram Sabha is mandatory before village Panchayats implement any development plan; the Gram Sabha decides beneficiaries of welfare programmes.

● A village is defined by the community (habitation or group of habitations/hamlets sharing traditions and customs), not by administrative boundaries.

● The Village Panchayat must obtain a certificate from the Gram Sabha confirming proper utilisation of plan and programme funds.

● Every village shall have a Gram Sabha consisting of all adults registered to vote in that village Panchayat area.

● Reservation of seats for SCs, STs and others must be proportional to their population; STs get at least 50%

reservation if their population is less than 50%, and chairpersons at all levels must be STs.

- The Gram Sabha has the authority to safeguard its way of life, traditions, natural resources, and traditional dispute-resolution mechanisms.
- If any Scheduled Tribe remains unrepresented through elections, the State Government may nominate representatives at the block or district level.

Functions & Powers of Gram sabha under the act:

- Mandatory consent for **land acquisition**, resettlement, and rehabilitation.
- Power to prevent illegal land alienation and restore unlawfully transferred land.
- Ownership and control over minor forest produce (MFP).
- **Control over minor water bodies and local resources.**
- Safeguarding traditions, customs, and cultural identity.
- Regulating or prohibiting intoxicants (liquor).
- Controlling money lending to Scheduled Tribes.
- Managing village markets and local fairs (melas).
- Identifying development projects and **approving village plans/programs.**
- Controlling institutions and functionaries in social sectors.
- Managing local plans and resources, including tribal sub-plans.
- Mandatory recommendations for prospecting licenses/mining leases for minor minerals.
- Resolving local disputes in accordance with customary laws.

Hence option (b) is correct.



PYQ REFERENCE: (2013)

Q. The Government enacted the Panchayat Extension to Scheduled Areas (PESA) Act in 1996. Which one of the following is not identified as its objective?

- To provide self-governance
- To recognize traditional rights
- To create autonomous regions in tribal areas**
- To free tribal people from exploitation

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2207293®=3&lang=1>

17. Right to a healthy environment

17. In which among the following provisions does the constitution of India ensure the pollution-free environment?

- Article 14
- Article 21
- Article 48A
- Article 51A

How many of the above statements are correct?

- Only one
- Only two
- Only three
- All four

Answer: (d) All four

Explanation:

In NEWS: On the right to a healthy environment

RIGHT TO A HEALTHY ENVIRONMENT:

Constitutional & Legal Dimensions

- The **right to a clean and healthy environment** has been judicially interpreted as an integral part of the **right to life under Article 21** of the Constitution.
- The Supreme Court of India historically stated that people have a right to be free from the adverse effects of climate change recognised by **Articles 14 and 21** of the Indian Constitution. **Hence 1 and 2 are correct.**
- **Articles 48A and 51A(g)** impose duties on the **State and citizens respectively** to protect and improve the environment.
- The Supreme Court has consistently read **Articles 21, 48A and 51A(g)** together to establish the State's constitutional obligation to ensure pollution-free air and water. **Hence 3 and 4 are correct.**
- Environmental protection has been strengthened through **judicial activism and PILs under Articles 32 and 226.**

Judicial Evolution

- The right to a pollution-free environment was first recognised in **Rural Litigation and Entitlement Kendra v. State of U.P. (1985)**.
- In **M.C. Mehta v. Union of India (1987)**, the Supreme Court explicitly held that the right to live in a pollution-free environment is part of Article 21.
- In **Subhash Kumar v. State of Bihar (1991)**, the Court affirmed that environmental protection is a constitutional duty of the State.
- In **M.K. Ranjitsinh v. Union of India (2024)**, the Supreme Court recognised the **right against adverse effects of climate change** under Articles 21 and 14.

Environmental Principles

- The doctrine of **absolute liability** applies to disasters involving hazardous substances, as evolved in the **Oleum Gas Leak case**.
- The **precautionary principle** mandates preventive action even in the absence of scientific certainty.
- The **polluter pays principle** requires polluters to bear the cost of pollution control and environmental restoration.
- Both principles were elaborated in **Vellore Citizens' Welfare Forum v. Union of India (1996)**.

Public Trust Doctrine

- Under the **public trust doctrine**, the State acts as a trustee of natural resources for public use and welfare.
- The doctrine was clearly articulated in **M.C. Mehta v. Kamal Nath**, limiting State misuse of natural resources.
- **Article 39(b) and (c)** reinforce public ownership of material resources and prevent concentration of wealth.

PYQ REFERENCE: (2019)

Q. Consider the following statements:

1. As per recent amendment to the Indian Forest Act, 1927, forest dwellers have the right to fell the bamboos grown on forest areas.
2. As per the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, bamboo is a minor forest produce.
3. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 allows ownership of minor forest produce to forest dwellers.

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

Source: <https://www.thehindu.com/news/national/on-the-right-to-a-healthy-environment/article70425821.ece>

18. 'Veer Bal Diwas' & 'Pradhan Mantri Rashtriya Bal Puraskar'

18. With reference to Veer Bal Diwas and Pradhan Mantri Rashtriya Bal Puraskar (PMRBP), consider the following statements:

1. Veer Bal Diwas is observed to commemorate the courage and sacrifice of India's young heroes of the 1857 rebellion.
2. Pradhan Mantri Rashtriya Bal Puraskar is awarded to children for excellence in Bravery, Art & Culture, Environment, Social Service, Science & Technology, and Sports.
3. The awards are conferred by the Prime Minister of India during the national programme.
4. Veer Bal Diwas and PMRBP are organized by the Ministry of Women and Child Development.

Which of the statements given above are correct?

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

Answer: (b) 1, 2 and 4 only

Explanation:

In NEWS: Ministry of Women and Child Development to observe 'Veer Bal Diwas' at national level & 'Pradhan Mantri Rashtriya Bal Puraskar' to be conferred tomorrow. **Hence statement 4 is correct.**

Veer Bal Diwas

- **Purpose:** Observed to **commemorate the courage, sacrifice, and exemplary values of India's young heroes**, notably the young martyrs of the 1857 rebellion. **Hence statement 1 is correct.**
- **National Level Observation:** Organized annually at the national level by the **Ministry of Women and Child Development**.
- **Programme Highlights:** Includes storytelling, cultural performances, and messages from leaders to inspire children and youth.
- **Key Participants:** School children, awardees, and dignitaries, including the **Prime Minister and Union Ministers**.

Pradhan Mantri Rashtriya Bal Puraskar (PMRBP)

- **Objective:** To **recognise, encourage, and inspire young talent** in diverse fields and promote a culture of excellence among children.
- **Nature of Award:** **Prestigious national honour** for children showing exceptional achievements.
- **Fields Recognised:** **Bravery, Art & Culture, Environment, Social Service, Science & Technology, and Sports**. **Hence statement 2 is correct.**
- **Selection:** Awarded annually to outstanding children from across **States and Union Territories**.
- **Conferment:** Conferred by the **President of India** during a special ceremony on **26 December**. **Hence statement 3 is incorrect.**

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=2208359®=3&lang=1>

19. Santhali Language

19. Consider the following statements with respect to the Santhali language:

- I. Santhali was accorded constitutional recognition by its inclusion in the Eighth Schedule through the 71st Constitutional Amendment Act, 1992.
- II. It is predominantly spoken by tribal communities across Jharkhand, Odisha, West Bengal, and Bihar.
- III. The Santhali translation of the Constitution of India is rendered in the Ol Chiki script.

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: (b) II and III only

Explanation:

In NEWS: The President of India, Smt Droupadi Murmu, released the Constitution of India in the Santhali language.

Santhali language:

- The Santhali language, which was included in the Eighth Schedule of the Constitution through the **92nd Amendment Act, 2003**, is one of the most ancient living languages of India. It is spoken by a significant number of tribal people in Jharkhand, Odisha, West Bengal and Bihar. **Hence statement I is incorrect and Statement II is correct.**

- The Santhali language belongs to the Austroasiatic language family

- The Santhali translation of the Constitution of India is rendered in the **OI Chiki script**. **Hence statement III is correct.**

- This year marks the centenary of the OI Chiki script.

Authoritative versions of the Indian constitution:

As per Article 394A of the Constitution:

- English
- Hindi (Devanagari script)

Non-authoritative translated versions

- The Constitution has been translated into all **22 languages** listed in the Eighth Schedule.

- These translations are meant for reference, accessibility, and awareness, and do not have legal authority.

- **Eighth Schedule languages (22):**

- Assamese, Bengali, Bodo, Dogri, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Maithili, Malayalam, Manipuri (Meitei), Marathi, Nepali, Odia, Punjabi, Sanskrit, Santali, Sindhi, Tamil, Telugu, Urdu.

PYQ REFERENCE: (2024)

Q. The Constitution (71st Amendment) Act, 1992 amends the Eighth Schedule to the Constitution to include which of the following languages?

1. Konkani
2. Manipuri
3. Nepali
4. Maithilis

Select the correct answer using the code given below:

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2208453®=3&lang=1>

20. Bureau of Port Security (BoPS)

20. With reference to the Bureau of Port Security (BoPS), consider the following statements:

1. BoPS is a statutory body under the Merchant Shipping Act 2025 responsible for regulatory oversight of ships and port security.

2. BoPS functions under the Ministry of Defence and oversees the Indian Navy's coastal operations.

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: The Centre has set up the Bureau of Port Security under the Merchant Shipping Act 2025 to ensure regulatory oversight, coordination, and compliance with international security standards amid growing maritime and cybersecurity threats.

Bureau of Port Security (BoPS):

- **Established under:** Section 13 of the **Merchant Shipping Act 2025**. **Hence statement 1 is correct.**

- **Modeled on:** Bureau of Civil Aviation Security (BCAS).

- **Reporting to:** Ministry of Ports, Shipping and Waterways. **Hence statement 2 is incorrect.**

- **Nature:** Statutory body with legal authority to enforce compliance with national and international port security standards.

- **Primary role:** Regulatory oversight and coordination for security of **ships and port facilities**.

Key Functions of BoPS

- **Regulatory Oversight:** Enforce **International Ship and Port Facility Security (ISPS) Code** compliance.

- **Coordination:** Act as a **single nodal agency**, reducing overlaps among Coast Guard, Navy, CISF, and state maritime police.

- **Security Threat Management:** Monitor and counter threats such as:

- Maritime terrorism
- Arms, drug, and human trafficking
- Poaching, piracy, illegal migration
- Cybersecurity threats in port IT infrastructure

- **Standardisation & Training:**

- CISF designated as **Recognised Security Organisation** under BoPS

- Conducts **security assessments, training**, and develops standardised security plans for major and non-major ports

- **Information Sharing:** Collect and exchange security-related information with national cybersecurity and law enforcement agencies.

- **Graded Security Measures:** Implement security in **phased/graded manner** according to port risk profile.

Source: <https://www.thehindu.com/news/national/what-is-the-bureau-of-port-security-and-its-role/article70433567.ece>

21. The Special Marriage Act, 1954

21. Q. Which of the following statements are correct about the Special Marriage Act, 1954:

1. The Special Marriage Act falls under the Concurrent List of the Seventh Schedule of the Constitution.
2. Under the Special Marriage Act, a notice of intended marriage must be given to the Marriage Officer at least 30 days prior to solemnization.
3. The minimum age for marriage under the Act is 21 years for both males and females.
4. The Special Marriage Act is administered by the Ministry of Law and Justice.

Select the correct answer using the code given below:

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

Answer: (b) 1, 2 and 4

Explanation:

In NEWS: Delhi HC can test constitutional validity of Special Marriage Act provisions: How SC order paved the way

The Special Marriage Act, 1954:

- The Special Marriage Act, 1954 provides a **civil form of marriage** independent of religious personal laws.
- The Act is applicable to **all Indian citizens**, irrespective of the religion they profess.
- Marriages solemnised under the Special Marriage Act are valid throughout the territory of India.
- The Act allows marriage between two persons belonging to the **same religion or different religions**.
- The minimum age for marriage under the Act is **21 years for males and 18 years for females**. **Hence statement 3 is incorrect.**
- The Act mandates a **30-day notice period** prior to the solemnization of marriage. **Hence statement 2 is correct.**
- The notice of intended marriage must be **entered in the Marriage Notice Book and published** by the Marriage Officer.
- Any person can raise an objection to the marriage within the notice period under the Act.
- Objections under the Special Marriage Act can be made only on grounds specified in the Act.
- The Act provides for **registration of marriages** already solemnised under other personal laws.
- The Special Marriage Act is administered by the **Ministry of Law and Justice**. **Hence statement 4 is correct.**
- The Act deals with matters related to **marriage and divorce**, which fall under the **Concurrent List** of the Seventh Schedule. **Hence statement 1 is correct.**
- A marriage under the Special Marriage Act does not affect the **religion of the parties**.
- Succession to property of persons married under the Act is governed by the **Indian Succession Act, 1925**, unless parties are Hindu, Buddhist, Sikh or Jain.

- The Act permits solemnization of marriage before a **Marriage Officer appointed by the State Government**.

PYQ REFERENCE: (2019)

Q. Which Article of the Constitution of India safeguards one's right to marry the person of one's choice?

- (a) Article 19
(b) **Article 21**
(c) Article 25
(d) Article 29

Source: <https://indianexpress.com/article/legal-news/delhi-hc-constitutional-validity-special-marriage-act-provisions-sc-order-paved-way-10439327/>

SCHEMES

22. PM VIKAS scheme

22. With reference to the PM VIKAS scheme, consider the following statements:

1. It is a Central Sector Scheme aimed at socio-economic empowerment of minorities.
2. Under the scheme, at least 75% beneficiaries under modern skilling must be placed in the organized sector as categorised in the National Skill Quality Framework.
3. The scheme provides 3% reservation for PwDs across all components.

Which of the statements given above is/are correct?

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

Answer: (c) 1 and 3 only

Explanation:

The Pradhan Mantri Virasat Ka Samvardhan (PM VIKAS):

- PM VIKAS is a **Central Sector Scheme** focusing on the socio-economic empowerment of six notified minorities through skill development; entrepreneurship among minority women; and education support for school dropouts. **Hence statement 1 is correct.**
- The main objectives of Pradhan Mantri Virasat Ka Samvardhan (PM VIKAS) scheme in promoting skill development and employment opportunities for minority youth, are as under:-
 - To build capacity of minority communities through targeted interventions by providing skill training support in need-based courses and ensuring employment / livelihood opportunities for them.
 - To preserve and promote the cultural heritage including traditional arts and craft forms by propagation of literature/ documents/ manuscripts and showcasing their unique Intangible Cultural Heritage (ICH).

- To empower women from minority communities and instil confidence amongst them by providing leadership and entrepreneurship training and support.
- To improve employability of and generate better livelihood opportunities for minorities through market and credit linkages.
- The scheme has been recently rolled out and as per the scheme guidelines, **3 percent** of the total seats are reserved for **Persons with Disability (PwDs)** across all the scheme components. **Hence statement 3 is correct.**
- Under the PM VIKAS scheme, the implementing agencies are required to ensure placement of candidates as per the scheme guidelines and it forms a part of the MoUs, that the Ministry signs with the implementing agencies.
- Under non-traditional (modern) skilling, PIAs are required to ensure placement of **at least 75 percent** skilled beneficiaries in some form of employment (wage/ self-employment/ apprenticeship), of which **at least 50 percent** should be placed in organized sector, as categorised in the National Skill Quality Framework (NSQF)/ Common Cost Norms (CCN). **Hence statement 2 is incorrect.**

PYQ REFERENCE: (2016)

Q. Regarding 'Atal Pension Yojana', which of the following statements is/are correct?

1. It is a minimum guaranteed pension scheme mainly targeted at unorganized sector workers.
2. Only one member of a family can join the scheme.
3. Same amount of pension is guaranteed for the spouse for life after subscriber's death.

Select the correct answer using the code given below.

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2197162®=3&lang=1>

23. PM Dhan-Dhaanya Krishi Yojana

23. Consider the following statements regarding PM Dhan-Dhaanya Krishi Yojana:

1. It aims to strengthen Farmer Producer Organisations (FPOs) and improve farmers' income, productivity, and market access.
2. It comes under the Ministry of food and public distribution.

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: PM Dhan-Dhaanya Krishi Yojana – FPO Sangam Day 1 concludes in New Delhi.

PM Dhan-Dhaanya Krishi Yojana:

- **PM Dhan-Dhaanya Krishi Yojana** is a **central government initiative** under the Ministry of Agriculture & Farmers' Welfare. **Hence statement 2 is incorrect.**
- The scheme aims to **strengthen Farmer Producer Organisations (FPOs)** and improve farmers' **income, productivity, and market access.** **Hence statement 1 is correct.**
- It focuses on **oilseed crops** and allied value chains, promoting **integrated and natural farming practices.**
- **FPOs** are supported for **capacity building, aggregation of produce, value addition, and marketing linkages.**
- The programme promotes **digital agriculture, micro-irrigation, protected cultivation, and sustainable farming practices.**
- It encourages **institutional financing for FPOs** to enhance production and strengthen the agribusiness ecosystem.
- The scheme is implemented in **selected districts** called **Dhan-Dhaanya districts**, identified for **oilseed cultivation and allied activities.**
- The initiative organises **FPO Sangam events** to showcase best practices, products, and foster **collaboration between farmers, government, and private sector.**
- The programme contributes to **Doubling of Farmer's Income (DFI)** targets by improving **productivity, value chains, and market access.**
- PM Dhan-Dhaanya Krishi Yojana also facilitates **knowledge sharing, exposure visits, and training of FPOs and farmer members.**

PYQ REFERENCE:

Q. With reference to the Pradhan Mantri Shram Yogi Maan-dhan (PM-SYM) Yojana, consider the following statements :

1. The entry age group for enrolment in the scheme is 21 to 40 years.
2. Age specific contribution shall be made by the beneficiary.
3. Each subscriber under the scheme shall receive a minimum pension of Rs. 3,000 per month after attaining the age of 60 years.
4. Family pension is applicable to the spouse the unmarried daughters.

Which of the statements given above are correct?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2201150®=3&lang=1>

24. JI-VAN Yojana

24. With reference to the Pradhan Mantri JI-VAN Yojana, which one of the following is NOT its objective?

- (a) Promoting the establishment of advanced biofuel projects using agricultural residues and other renewable feedstock.
- (b) Providing remunerative income to farmers by enabling value-addition to crop residues that would otherwise be burnt.

- (c) Reducing dependence on crude oil imports by increasing domestic production of second-generation ethanol.
 (d) Supporting only first-generation biofuel technologies based on food-grain feedstock.

Answer: (d) Supporting only first-generation biofuel technologies based on food-grain feedstock.

Explanation:

In NEWS: Government Boosts Advanced Biofuel Production Through Expanded JI-VAN Yojana

JI-VAN Yojana & Advanced Biofuels:

- The Pradhan Mantri **JI-VAN Yojana (2019, amended 2024)** aims to establish **advanced biofuel projects** using lignocellulosic biomass and renewable feedstocks.
- Promotes **2G and 3G ethanol technologies** and strengthens India's biofuel ecosystem. **Hence option (d) is incorrect.**
- Provides **financial assistance** for both **commercial** and **demonstration-scale** advanced biofuel plants.
- Supports **R&D adoption** for advanced biofuel production technologies.

Objectives

- Utilise **agricultural residues and biomass** to produce advanced biofuels.
- Provide **remunerative income to farmers** from crop residues otherwise burnt or wasted.
- Create **rural and urban employment** through new biofuel value chains.
- Address **air pollution** from stubble burning and **soil/water pollution** from municipal waste.
- Contribute to **Swachh Bharat Mission** and waste management.
- Reduce **crude oil import dependence** and strengthen **energy security**.
- Assist in meeting **Ethanol Blended Petrol (EBP) targets**.

Projects Established

- **2G Paddy Straw-based Ethanol Plant** - IOCL, Panipat (Haryana).
- **2G Bamboo-based Biorefinery** - Numaligarh Refinery Ltd., Numaligarh (Assam).
- **3G Ethanol Plant** using refinery off-gas - IOCL, Panipat.

PYQ REFERENCE: (2020)

Q. According to India's National Policy on Biofuels, which of the following can be used as raw materials for the production of biofuels?

1. Cassava
2. Damaged wheat grains
3. Groundnut seeds
4. Horse gram
5. Rotten potatoes
6. Sugar beet

Select the correct answer using the code given below:

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2198765®=3&lang=1>

25. The pension reforms in India

25. With reference to pension schemes in India, consider the following statements:

1. The Indira Gandhi National Old Age Pension Scheme (IGNOAPS) was launched in 1995 to provide financial assistance to persons aged above 65 living below the poverty line (BPL).
2. The Old Pension Scheme (OPS) covered formal sector government employees and was non-contributory, guaranteeing defined benefits after retirement.
3. The New Pension Scheme (NPS) was launched in 2004 with a contributory model, including formal sector corporate employees.
4. Atal Pension Yojana (APY) is a contributory pension scheme for individuals aged 18 to 40 which is aimed at informal sector workers, allowing monthly, quarterly, or half-yearly contributions.

Which of the statements given above is/are correct?

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

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

Explanation:

In NEWS: The evolution of pension reforms in India - There has been a gradual but decisive shift from a welfare-based social assistance to a more participatory inclusion framework

Evolution of Pension Reforms in India:

- India is experiencing a **rapidly ageing population**, with over **153 million people aged above 60**, projected to reach **347 million by 2050**.
- More than **88% of senior citizens** currently work in the **informal economy**, without access to pensions or social security.
- The **Indira Gandhi National Old Age Pension Scheme (IGNOAPS)** was launched in **1995** to provide **financial assistance to persons aged above 65 living below the poverty line (BPL)**. **Hence statement 1 is correct.**
- **IGNOAPS** has gradually expanded eligibility and increased financial support, offering **direct, regular income** to vulnerable older adults in the unorganised sector.
- **Old Pension Scheme (OPS)** covered formal sector government employees and was **non-contributory**, guaranteeing defined benefits after retirement. **Hence statement 2 is correct.**
- The **New Pension Scheme (NPS)**, launched in **2004**, replaced OPS with a **contributory model**, including formal sector corporate employees. **Hence statement 3 is correct.**
- **NPS 2.0** allows **100% equity allocation** and a **flexible multiple scheme framework (MSF)**, targeting younger, high-risk, high-reward investors.

● **Atal Pension Yojana (APY)**, launched in **2015-16**, is a **contributory pension scheme** for individuals aged **18-40**, aimed at **informal sector workers**, allowing monthly, quarterly, or half-yearly contributions. **Hence statement 4 is correct.**

● APY guarantees a **minimum pension** at retirement, even if returns fall short, promoting **long-term financial security and savings behaviour**.

● **Labour Codes** introduced a **uniform definition of wages**, requiring basic pay to constitute at least **50% of total earnings**, strengthening pension and social security benefits.

● The evolution of pension reforms follows a **hierarchical pattern**:

- **Stage 1:** Social protection via IGNOAPS and OPS.
- **Stage 2:** Financial inclusion and investment behaviour via NPS, NPS 2.0, and APY.

● **Awareness gaps** remain significant: LASI 2017-18 data shows **42% of individuals aged above 55** were unaware of NPS and eligibility criteria.

● The **e-SHRAM portal** was launched to create a **national database of informal sector workers**, facilitating registration and access to social security schemes.

● Over **75% of women and 68% of men above 55** work in the informal sector, highlighting the need for **inclusive social protection measures**.

● Challenges in implementation include **Aadhaar-bank account linkage errors**, low **digital literacy (63% of elderly do not know how to use the Internet)**, and fragmented awareness.

● Overall, pension reforms in India reflect a **shift from welfare-based social assistance to a participatory inclusion framework**, targeting both formal and informal sector workers.

● Continued revisions and initiatives aim to **enhance financial inclusion, dignity, and social security** for the elderly population.

PYQ REFERENCE: (2016)

Q. Regarding 'Atal Pension Yojana', which of the following statements is/are correct?

1. It is a minimum guaranteed pension scheme mainly targeted at unorganized sector workers.
2. Only one member of a family can join the scheme.
3. The same amount of pension is guaranteed for the spouse for life after the subscriber's death.

Select the correct answer using the code given below.

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

Source:

https://epaper.thehindu.com/reader?utm_source=Hindu&utm_medium=Menu&utm_campaign=Header&gl=1*sri40h*gcl_au*MTc5MDE4NTEwMS4xNzI2ODg4MDgzLjE5MzY1MDc1NjIuMTcyODM2MzY0Ny4xNzI4MzYzNjQ3

26. Aarogya Maitri Project

26. Which of the following best describes the purpose of the BHISHM Cube?

- (a) A mobile laboratory for detecting biological threats
- (b) A portable, modular hospital system for rapid disaster response
- (c) A logistics cube for military ammunition
- (d) A cold-storage unit for vaccines during pandemics

Answer: (b) A portable, modular hospital system for rapid disaster response

Explanation:

In NEWS: India Deploys BHISHM Cube Under Aarogya Maitri Project to Aid Cyclone-Hit Sri Lanka

BHISHM:

● The Arogya Maitri project is an Indian initiative to provide essential medical supplies to developing nations during crises.

● A key component is the BHISHM Cube, a portable, self-contained hospital that can be deployed quickly for disaster relief

● **The Bharat Health Initiative for Sahyog Hita & Maitri (BHISHM)** is an innovative emergency medical aid program.

● At its core are compact, portable **"mini cubes" filled with essential medicines** and equipment, designed for rapid deployment in various emergencies.

● The BHISHM system is highly modular and scalable. Thirty-six mini cubes combine to form a mother cube, and two mother cubes create a full BHISHM Cube.

● Each complete cube can **support medical care for up to 200 cases, including surgical procedures.**

● The system incorporates advanced technology, featuring inventory management via **Radio-frequency identification (RFID) and digital support in 180 languages.**

● A standout feature of the BHISHM Cube is its rapid deployment capability. In mass casualty incidents, the entire unit can be set up within 12 minutes, bridging the crucial gap between primary and definitive care during the critical "golden hour" of emergencies.

● The cube comprises 72 easily transportable components, designed for versatile delivery methods including hand-carry, bicycle, or even drone transport.

● The cubes are also built to withstand harsh conditions, being robust, waterproof, and lightweight. Their flexible configuration allows deployment in diverse emergency scenarios.

● The system can be quickly dispatched via airdrop or ground transportation, ensuring swift response to crises anywhere.

● Further, advanced medical equipment within the cube is RFID-tagged for efficient management.

● A state-of-the-art software system, accessible via a provided tablet, allows operators to quickly locate items, monitor usage and expiry dates, and maintain readiness for future deployments.

● The BHISHM Cube also integrates cutting-edge technologies such as Artificial Intelligence and data analytics.

● It also enhances disaster response by facilitating effective coordination, real-time monitoring, and efficient management of medical services in the field.

Hence option (b) is correct.

Project BHISHM

(Bharat Health Initiative for Sahyog Hita and Maitri)

Aarogya Maitri Health Cube



PYQ REFERENCE: (2016)

Q. 'Project Loon', sometimes seen in the news, is related to

- (a) waste management technology
- (b) wireless communication technology**
- (c) solar power production technology
- (d) water conservation technology

Source: <https://www.newsonair.gov.in/india-deploys-bhishm-cube-under-aarogya-maitri-project-to-aid-cyclone-hit-sri-lanka/>

27. 'One Nation, One Licence, One Payment'

27. Which of the following best describes the "One Nation, One Licence, One Payment" proposal?

- (a) A scheme to provide a single licence for all digital content platforms to share user data.
- (b) A framework for AI developers to use copyrighted content for training by paying standardised royalties via a central authority.
- (c) A government policy for single-window clearance of media broadcast licences across India.
- (d) A GST-related reform to unify indirect tax payments for digital services under one roof.

Answer: (b) A framework for AI developers to use copyrighted content for training by paying standardised royalties via a central authority.

Explanation:

In NEWS: India recommends AI firms to pay creator royalties at rates set by govt panel

One Nation, One Licence, One Payment:

- One Nation, One Licence, One Payment is a proposed national framework for regulating the use of copyrighted content in **AI training**.
- The proposal comes from a working paper under the **Department for Promotion of Industry and Internal Trade (DPIIT)**.
- It recommends a **mandatory blanket licence** for AI companies to use legally accessed copyrighted works for model training.
- AI developers would be required to **pay royalties** to creators and rights holders for content used to train AI models.

- A new centralised authority called **CRCAT (Copyright Royalties Collective for AI Training)** is recommended for collection and distribution of royalties.
- **Royalty rates** would be set by a **government-appointed committee**, not by the AI companies.
- The proposal includes **retroactive royalty payments** for content already used by existing AI systems.
- The framework aims to replace multiple private licensing deals and reduce transaction costs for both creators and AI firms.
- It rejects voluntary or market-based licensing, citing unequal bargaining power between creators and tech companies.
- The model seeks to balance **AI innovation, creator protection, and copyright compliance**.

Hence option (b) is correct.

Source: <https://indianexpress.com/article/business/india-recommends-ai-firms-to-pay-creator-royalties-at-govt-panel-set-rates-10410785/>

28. Technology Development Fund scheme

28. Which of the following best describes the strategic objective of the Technology Development Fund (TDF) scheme under DRDO?

- (a) To support Indian industry in creating homegrown defence technologies for the Armed Forces.
- (b) To support foreign collaborations for acquiring advanced defence technologies
- (c) To develop civilian technologies for dual-use applications
- (d) To provide grants exclusively for academic research in defence sciences

Answer: (a) To support Indian industry in creating homegrown defence technologies for the Armed Forces.

Explanation:

In NEWS: DRDO hands over seven technologies developed under Technology Development Fund scheme to the Armed Forces

DRDO – Technology Development Fund (TDF):

- DRDO has handed over **seven new indigenous technologies** developed under the Technology Development Fund (TDF) to the Indian Armed Forces. **Hence option (a) is correct.**
- These technologies include:
 - High-voltage power supply for airborne self-protection jammers
 - Tide-efficient gangway for naval jetties
 - Advanced very-low-frequency/high-frequency switching matrix systems
 - VLF loop aerials for underwater platforms
 - Indigenous water-jet propulsion system for fast interceptor craft
 - A process for recovery of lithium precursors from used lithium-ion batteries
 - Long-life seawater battery system for underwater sensing and surveillance
- All technologies were developed by Indian industry with testing and guidance from DRDO and the three Services.

- The focus of the TDF scheme is on **import substitution**, development of **critical and strategic defence technologies**, and strengthening the domestic defence ecosystem.
- The Empowered Committee of DRDO approved **12 new projects** across aerospace, naval systems, strategic systems, and electronic warfare under the TDF scheme.
- The Committee stressed the need for **faster processing and delivery** of TDF projects to meet the evolving requirements of the Armed Forces.
- The initiative supports the national vision of **Aatmanirbhar Bharat** by promoting indigenous research, development, and defence production.

PYQ REFERENCE: (2020)

Q. In India, under cyber insurance for individuals, which of the following benefits are generally covered, in addition to payment for the loss of funds and other benefits?

1. Cost of restoration of the computer system in case of malware disrupting access to one's computer
2. Cost of a new computer if some miscreant wilfully damages it, if proved so
3. Cost of hiring a specialized consultant to minimize the loss in case of cyber extortion
4. Cost of defence in the Court of Law if any third-party files a suit

Select the correct answer using the code given below:

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2199589®=3&lang=1>

29. Sanchar Saathi app

29. With reference to the Sanchar Saathi portal, consider the following statements:

1. It allows users to block lost or stolen mobile phones using the IMEI number.
2. It provides a facility to check the authenticity of a mobile handset before purchase.
3. It automatically tracks user location to prevent fraud.

Which of the statements given above is/are correct?

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

Answer: (a) 1 and 2 only

Explanation:

In NEWS: Sanchar Saathi app must be pre-installed on phones: DoT

Sanchar Saathi

- Sanchar Saathi is a citizen centric initiative of the **Department of Telecommunications (DoT)** to empower mobile subscribers, strengthen their security and increase awareness about citizen centric initiatives of the Government.
- Sanchar Saathi is available in the form of Mobile App and web portal (www.sancharsaathi.gov.in). Sanchar Saathi provides various citizen centric services.

Function/Module	What it does
Central Equipment Identity Register (CEIR)	Lets users block or trace lost or stolen mobile phones using IMEI number — once blocked, the phone cannot be used on any Indian network. Hence statement 1 is correct.
Know Your Mobile (KYM)	allows users to check the genuineness/authenticity of a mobile handset (check IMEI) — useful when buying second-hand phones.
SIM / Connections Check	Lets users view all mobile connections registered under their name; allows them to report/terminate unauthorized or unwanted connections.
Fraud / Scam Reporting (Chakshu)	Users can report suspected malicious or fraudulent calls, SMS, messages (spam, phishing, impersonation) — helps prevent misuse of telecom networks.
Verification before Purchase	Buyers can verify if a handset is valid (not stolen / fake) before purchasing — discouraging sale of stolen or blacklisted devices. Hence statement 2 is correct.

Statement 3 is not one of its objectives.

PYQ REFERENCE: (2022)

Q. With reference to "Software as a Service (SaaS)", consider the following statements:

1. SaaS buyers can customise the user interface and can change data fields.
2. SaaS users can access their data through their mobile devices.
3. Outlook, Hotmail and Yahoo! Mail are forms of SaaS.

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

Source: [https://www.thehindu.com/sci-](https://www.thehindu.com/sci-tech/technology/pre-install-sanchar-saathi-app-on-new-phones-by-march-2026-dot-tells-phone-makers/article70345721.ece)

[tech/technology/pre-install-sanchar-saathi-app-on-new-phones-by-march-2026-dot-tells-phone-makers/article70345721.ece](https://www.thehindu.com/sci-tech/technology/pre-install-sanchar-saathi-app-on-new-phones-by-march-2026-dot-tells-phone-makers/article70345721.ece)

30. DHRUVA

30. With reference to DHRUVA, consider the following statements:

1. It provides UPI-like digital address labels that users can share instead of their physical address.
2. It operates on top of a geo-coded system called DIGIPIN.
3. The system allows permanent, unrestricted access to a user's address for authorised service providers.

Which of the statements given above is/are correct?

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

Answer: (b) 1 and 2 only

Explanation:

In NEWS: Postal department considers UPI-like 'labels' for addresses

The system, called DHRUVA, will provide users a convenient way to share their addresses across platforms; users can grant firms limited address access, after which the label needs re-authorisation

About DHRUVA:

● The Department of Posts is developing DHRUVA, a system that provides UPI-like digital address labels for users. **Hence statement 1 is correct.**

● DHRUVA stands for **Digital Hub for Reference and Unique Virtual Address**.

● The system aims to make address sharing simple by allowing users to create a virtual address label similar to a UPI handle.

● Users can share this label with e-commerce platforms, delivery agents, or service providers instead of giving their full physical address.

● Access to the actual address will be **consent-based**, meaning firms can view the address only after the user authorises it.

● The authorisation will be **time-bound (not permanent)**, and firms must request fresh permission after the access period expires. **Hence statement 3 is incorrect.**

● The digital address system will operate on top of DIGIPIN, a geo-coded system where every 4×4 metre grid in India has a unique alphanumeric code. **Hence statement 2 is correct.**

● DIGIPIN provides precise, standardised location data that removes confusion caused by unstructured or informal addresses.

● The system aims to improve delivery efficiency, emergency services, logistics, and last-mile connectivity.

● DHRUVA is designed as a **digital public infrastructure**, encouraging voluntary participation by private platforms.

● A dedicated non-profit entity is proposed to govern and operate the system.

● Overall, DHRUVA seeks to provide a secure, accurate, and user-controlled digital alternative to traditional postal addresses.

PYQ REFERENCE: (2022)

Q. Consider the following:

1. Aarogya Setu
2. CoWIN
3. DigiLocker
4. DIKSHA

Which of the above are built on top of open-source digital platforms ?

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

Source: <https://www.thehindu.com/news/national/postal-department-mulls-system-for-upi-like-labels-for-physical-addresses/article70358112.ece>

31. GREAT SCHEME

31. Consider the following statements with reference to Grant for Research and Entrepreneurship across Aspiring Innovators in Technical Textiles (GREAT) scheme:

1. It is a grant-scheme under National Technical Textiles Mission (NTTM).
2. Up to ₹50 lakh in funding is provided to an eligible startup or innovator under the GREAT scheme.
3. Building and construction textiles, high-performance and speciality fibres and home textiles are also covered under the scheme.
4. The applicant (startup/innovator) must contribute at least 40% of the project cost.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation:

In NEWS: The Ministry of Textiles has launched "Grant for Research and Entrepreneurship across Aspiring Innovators in Technical Textiles (GREAT)"

GREAT scheme:

● GREAT is a grant-scheme under National Technical Textiles Mission (NTTM), run by Ministry of Textiles (MoT), Government of India. **Hence statement 1 is correct.**

● It is aimed at promoting research, innovation, entrepreneurship in the domain of technical textiles. The idea is to help innovators, researchers, startups or entrepreneurs turn prototypes or early-stage innovations into marketable products or technologies.

Objectives and Broader Purpose

● To translate research, prototypes, and early-stage innovations in technical textiles into commercially viable products, technologies, and market-ready solutions.

- To promote self-reliance and domestic capability (“Make in India”) in advanced textile materials such as high-performance fibres, speciality textiles, composites, and sustainable materials.
- To strengthen the startup and innovation ecosystem in technical textiles, fostering new entrepreneurs and giving opportunities to young innovators and researchers.
- To support key strategic and high-growth sectors, including protective gear, medical textiles, industrial textiles, composites, smart textiles, and other categories with strong export and strategic potential.

What the grant offers / Who qualifies

- Up to ₹50 lakh in funding is provided to an eligible startup or innovator under the GREAT scheme. **Hence statement 2 is correct.**

- The funding support is available for a maximum duration of 18 months.

The scheme covers a broad range of technical textile application areas, including:

- Agro-textiles
- Building and construction textiles
- Geotextiles
- Home textiles
- Industrial textiles
- Medical and healthcare textiles
- Protective textiles
- Packaging textiles
- Sports textiles
- Sustainable and biodegradable textiles
- High-performance and speciality fibres
- Smart textiles, including innovations using composites, nanofibres, and other advanced technologies

- **Hence statement 3 is correct.**

- The grant is provided as grant-in-aid — meaning the Ministry of Textiles does not take equity, royalty, or ownership of the innovation.

- The applicant (startup/innovator) must contribute at least 10% of the project cost, deposited in two equal instalments during the project period. **Hence statement 4 is incorrect.**

The scheme functions through a network of approved incubators, such as:

- IITs, NITs and other academic institutions
- Textile research associations
- Centres of Excellence in technical textiles
- Startups must partner with one of these incubators to apply.
- The incubators themselves receive an additional 10% of the grant amount as an incentive for providing technical and infrastructural support.

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2200820®=3&lang=1>

32. Handicraft Sector

32. Consider the following schemes:

1. SFURTI Scheme
2. SVAMITHVA Scheme
3. SAMARTH Scheme
4. SVANidhi Scheme

Which of the above mentioned schemes are related to the Handicrafts sector?

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

Answer: (a) 1 and 3 only

Explanation:

In NEWS: Handicrafts at the Heart of India’s Rural Economy

Handicraft Sector:

- Handicrafts are predominantly handmade products with aesthetic, cultural, or ethnic value, distinct from machine-made goods.
- India has **318 GI-tagged handicraft products** and around **455 formally classified craft categories**.
- The handicraft sector is labor-intensive, decentralized, and largely concentrated in rural and semi-urban areas.
- India has **64.66 lakh handloom and handicraft artisans**, with major concentrations in UP, Rajasthan, Assam, Odisha, West Bengal, and Tamil Nadu.
- Women constitute **64% of total artisans** and **71% of handloom weavers**, highlighting strong female participation.
- The sector includes significant representation from **SC, ST, and OBC communities**, promoting inclusive growth.
- The **Pehchan Artisan ID program** has registered **32 lakh artisans**, including **20 lakh women**, to bring them into the formal economy.
- Handicraft exports reached **₹33,122.79 crore in 2024-25**, up from ₹20,082.53 crore in 2014-15.
- Key export categories include **woodware, art metal wares, handprinted textiles, embroidered goods, and imitation jewellery**.
- The **USA accounts for 37% of India’s handicraft exports**, while 61% goes to other international markets.

Key Government Schemes & Initiatives:

1. **NHDP (National Handicraft Development Programme):** ₹837 crore outlay (FY2022-26); supports artisans through clusters, skill development, marketing, and social security.
2. **CHCDS (Comprehensive Handicrafts Cluster Development Scheme):** ₹142.5 crore; develops modern artisan clusters with infrastructure, technology, and market support.
3. **SFURTI (Scheme of Fund for Regeneration of Traditional Industries):** Promotes over 100 handicraft clusters and rural entrepreneurship. **Hence 1 is correct.**
4. **Ambedkar Hastshilp Vikas Yojana:** Supports formation of artisan collectives or producer companies for financial and marketing integration.
5. **Skill Development Programs under NHDP:** Includes Guru Shishya Prashikshan, NSQF-based training, design & technology workshops, and improved toolkits.
6. **ODOP (One District One Product):** Promotes district-level GI products and preserves traditional craft skills.
7. **PLI (Production-Linked Incentive) for MSMEs:** Enhances production and investment in textiles, handicrafts, and technical textiles.

8. **SAMARTH Scheme:** Provides skill training and placement for artisans and weavers. **Hence 3 is correct.**

9. **Market & Export Support:** Initiatives include Indie Haat, IITF exhibitions, RoSCTL/RoDTEP, and NiryatProtsahan & Niryat Disha mission.

Policy and Legal Support:

- GST rationalization reduces taxes on idols, paintings, terracotta, handbags, and artware.
- Labour codes provide **universal minimum wages, social security, and gender equality** for workers.
- Initiatives promote “**Vocal for Local**”, indigenous production, and sustainable livelihoods.

Cultural Recognition:

- National Handicrafts Awards and **Shilp Guru Awards** recognize outstanding artisans, promoting cultural heritage and innovation.

Note:

SVAMITVA Scheme: Provides rural property cards; not related to handicrafts.

SVANidhi Scheme: Micro-credit scheme for street vendors; not related to handicrafts. **Hence 2 and 4 are incorrect.**

PYQ REFERENCE: (2020)

Q. Which of the following statements correctly explains the impact of the Industrial Revolution on India during the first half of the nineteenth century?

- (a) Indian handicrafts were ruined.
- (b) Machines were introduced in the Indian textile industry in large numbers.
- (c) Railways lines were laid in many parts of the country.
- (d) Heavy duties were imposed on the imports of British manufactures.

Source:

<https://www.pib.gov.in/PressNoteDetails.aspx?NoteId=156396&ModuleId=3®=3&lang=1>

33. National Energy Conservation Day

33. With respect to India’s energy conservation initiatives, which among the following statements are correct?

1. Pradhan Mantri Surya Ghar Muft Bijli Yojana (2024) aims to install rooftop solar in 1 crore households.
2. Revamped Distribution Sector Scheme (RDSS) aims to improve the financial and operational health of DISCOMs.
3. The UJALA scheme aims to provide energy-efficient LED bulbs to domestic consumers at affordable prices.

Select the correct 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: National Energy Conservation Day: Saving Energy, Securing Future

National Energy Conservation Day

- India observes National Energy Conservation Day on **14 December** each year to promote awareness and acknowledge contributions towards efficient energy use.
- National Energy Conservation Day, or Rashtriya Urja Sanrakshan Diwas, observed annually since **1991**, was established to promote awareness of reducing energy use and encouraging efficient practices across various sectors.
- Following the enactment of the **Energy Conservation Act, 2001, the Bureau of Energy Efficiency (BEE)** began leading nationwide efforts, including outreach programmes, school competitions, and the national awards.

India’s Current Energy Landscape:

- India is among the **world’s top three** energy consumers, and electricity demand continues to grow every year.
- PM Surya Ghar mission has added 7 GW of clean energy and connected nearly 24 lakh households with solar energy by December 2025.
- The transition from Perform, Achieve and Trade (PAT) to Carbon Credit Trading Scheme (CCTS) marks a major shift, putting carbon-intensity reduction and tradable credits at the heart of industrial energy policy.
- Digital platforms are modernising energy-efficiency governance by strengthening monitoring, compliance, and transparency.
- India’s clean energy capacity now crosses the 50% non-fossil milestone, reflecting the growing success of renewable expansion, efficiency schemes, and grid stability improvements.

Industrial Energy Efficiency

- The **Carbon Credit Trading Scheme (CCTS)** is a market-based framework for industrial decarbonisation.
- CCTS assigns **Greenhouse Gas Emission Intensity (GEI)** targets to energy-intensive industries.
- Industries exceeding targets earn **Carbon Credit Certificates** that can be traded.
- In December 2025, sectors such as cement, aluminium, refineries, textiles and petrochemicals transitioned from **PAT** to **CCTS**.
- The **Perform, Achieve and Trade (PAT)** scheme laid the foundation for industrial energy efficiency.
- PAT rewarded over-achievers with **Energy Saving Certificates (ESCerts)**.

Household Energy Efficiency

- The **Standards & Labelling (S&L) Programme** covers **28 appliance categories**, of which **17 are mandatory**.
- Star labelling enables informed consumer choices and promotes efficient manufacturing.
- **UJALA** (launched in January 2015) aims to provide affordable LED lighting.
- Over **36.87 crore LED bulbs** have been distributed under UJALA. UJALA has resulted in **47,883 million kWh** annual energy savings. **Hence statement 3 is correct.**

Solar & Distribution Reforms

- Pradhan Mantri Surya Ghar Muft Bijli Yojana (2024) aims to install rooftop solar in 1 crore households. **Hence statement 1 is correct.**
- The scheme provides up to 300 units of free electricity per month. As of December 2025, 23.9 lakh homes have installed rooftop solar.
- Revamped Distribution Sector Scheme (RDSS) was launched in 2021. RDSS aims to improve the financial and operational health of DISCOMs. **Hence statement 2 is correct.**

Digital, Institutional & Behavioural Frameworks

- The National Mission on Enhanced Energy Efficiency (NMEEE) provides India's policy framework for efficiency.
- NMEEE includes initiatives like PAT, MTEE, EEFP and FEEED.
- Urja Dakshata Information Tool (UDIT) provides nationwide data on energy consumption and savings.
- The LiFE (Lifestyle for Environment) movement promotes responsible consumption behaviour.

Public Participation & Awareness

- The National Energy Conservation Awards (NECA) have been conferred annually since 1991.
- The National Energy Efficiency Innovation Awards (NEEIA) were introduced in 2021.
- A nationwide National Painting Competition on Energy Conservation is organised every year on 14 December.
- These initiatives promote early awareness and mass participation in energy conservation.

Global Leadership & International Engagement

- India joined the International Energy Efficiency Hub in 2024.
- India has committed to achieving net-zero emissions by 2070.
- India's 2030 NDCs include a 45% reduction in emissions intensity of GDP.
- India aims for 50% non-fossil installed power capacity by 2030.
- India also targets creation of 2.5-3 billion tonnes of additional carbon sinks.
- India promotes sustainable lifestyles globally through the LiFE movement.

Global Initiatives & Rankings

- India co-founded the International Solar Alliance (ISA).
- India launched the Global Biofuels Alliance (GBA) during its G20 Presidency.
- GBA currently includes 25 countries and 12 international organisations.
- ISA aims to mobilise USD 1 trillion in solar investments by 2030.
- According to IRENA Renewable Energy Statistics 2025, India ranks:
 - 3rd in solar energy
 - 4th in wind energy
 - 4th globally in total renewable capacity

PYQ REFERENCE: (2025)

Q. Consider the following statements about 'PM Surya Ghar Muft Bijli Yojana':

- It targets installation of one crore solar rooftop panels in the residential sector.
- The Ministry of New and Renewable Energy aims to impart training on installation, operation, maintenance and repairs of solar rooftop systems at grassroot levels.
- It aims to create more than three lakhs skilled manpower through fresh skilling, and upskilling, under scheme component of capacity building.

Which of the statements given above are correct?

- I and II only
- I and III only
- II and III only
- I, II and III

Source:

<https://www.pib.gov.in/PressNoteDetails.aspx?NoteId=156480&ModuleId=3®=3&lang=1>

34. ASPIRE

34. Consider the following statements regarding the ASPIRE scheme:

- ASPIRE is implemented by the Ministry of Micro, Small and Medium Enterprises.
- The scheme primarily focuses on promoting innovation and entrepreneurship in urban industrial clusters.
- Under the scheme, Government agencies are eligible for financial assistance up to ₹1 crore for procuring plant and machinery and private agencies can receive assistance up to ₹75 lakh for the same purpose.

Which of the statements given above is/are correct?

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

Answer: (a) 1 and 3 only

Explanation:

In NEWS: The Government implements ASPIRE to promote entrepreneurship and livelihood opportunities in rural areas

● The "Scheme for Promotion of Innovation, Rural Industry, and Entrepreneurship" (ASPIRE) is a key Indian government initiative by the Ministry of MSME to boost rural economies by fostering innovation, creating jobs, and supporting micro-enterprises through a network of Livelihood Business Incubators (LBIs). **Hence statement 1 is correct.**

● **Establishment:** Sets up Livelihood Business Incubators (LBIs) in rural and underserved areas. **Hence statement 2 is incorrect.**

● **Implementation:** Mentored by expert institutions (Mentor Institutes).

● **Support:** Offers financial assistance for machinery and operational costs, plus handholding for sustainability.

● **Funding & Support**

- Machinery: Up to ₹1 crore for government agencies, ₹75 lakh for private.
- Operational Costs: Up to ₹1 crore for running incubation and skill programs. **Hence statement 3 is correct.**

● **Who Can Benefit**

- Individuals over 18 starting rural/agro-based businesses.
- Registered Micro, Small & Medium Enterprises (MSMEs).

Objective:

- To set up a network of Livelihood Business Incubators (LBIs), predominantly in the rural and underserved areas, to promote innovation and accelerate entrepreneurship for the following :
 - Generate employment opportunities by facilitating formal, scalable micro-enterprise creation in the agro-rural sector.
 - Skill, up-skill, re-skill unemployed, self-employed/ wage earners in new technologies in the agro-rural sector.
 - Provide skilled human capital to nearby industrial clusters and promote innovations for strengthening the competitiveness in the MSME sector.

PYQ REFERENCE: (2016)

Q. Pradhan Mantri MUDRA Yojana is aimed at (a) bringing the small entrepreneurs into formal financial system

- (b) providing loans to poor farmers for cultivating particular crops
- (c) providing pensions to old and destitute persons
- (d) funding the voluntary organizations involved in the promotion of skill development and employment generation

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2204536®=3&lang=1>

35. Pradhan Mantri Matsya Sampada Yojana

35. How many of the following activities are covered under the Centrally Sponsored Scheme (CSS) component of Pradhan Mantri Matsya Sampada Yojana?

1. Deep-sea fishing support
2. Research and training
3. Nucleus breeding centers
4. cold chains and fish markets

Select the correct answer using the code given below:

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

Answer: (b) Only two

Explanation:

In NEWS: Pradhan Mantri Matsya Sampada Yojana - World Fisheries Day

- The Pradhan Mantri Matsya Sampada Yojana (PMMSY) is an initiative launched by the Government of India to establish a comprehensive framework and reduce infrastructural gaps in the fisheries sector.
- The scheme was announced in the parliament of India on 5 July 2019.

Objective

- Achieve a Blue Revolution by sustainable and responsible development of fisheries.
- Increase fish production and productivity, modernize post-harvest infrastructure, and enhance exports.
- Double fishers' incomes and generate employment in coastal and inland areas.
- Promote technology adoption, entrepreneurship, and scientific management of fisheries.

Components

- **Central Sector Scheme (CS):** 100% central funding, including research, training, nucleus breeding, and innovative projects.
- **Centrally Sponsored Scheme (CSS):** Shared between Centre and State; covers beneficiary-oriented and non-beneficiary-oriented activities like pond development, cold chains, fish markets, and deep-sea fishing support. **Hence option (b) is correct.**

Major Interventions

- **Infrastructure:** Fishing harbours, landing centers, cold storage, ice plants, processing units.
- **Aquaculture Development:** Inland, brackish, saline, and ornamental fisheries; new hatcheries; Recirculatory Aquaculture Systems (RAS).
- **Fisheries Management:** Monitoring, control, surveillance (MCS), disease diagnostics, quality testing labs, and aquatic health management.
- **Capacity Building:** Training of fishers, Sagar Mitras, fish farmer producer organizations (FFPOs).
- **Innovation & Technology:** Startups, incubation centers, traceability systems, value chain modernization.

PYQ REFERENCE: (2020)

Q. Under the Kisan Credit Card scheme, short-term credit support is given to farmers for which of the following purposes?

1. Working capital for maintenance of farm assets
2. Purchase of combine harvesters, tractors and mini trucks.
3. Consumption requirements of farm households
4. Post-harvest expense
5. Construction of family house and setting up of village cold storage facility.

Select the correct answer using the code given below:

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2205026®=3&lang=1>

36. SVANidhi

36. With reference to PM SVANidhi, consider the following statements:

1. It is a Central Sector Scheme implemented by the Ministry of Housing and Urban Affairs.
2. It provides collateral-free working capital loans to street vendors.
3. An interest subsidy of 7% per annum is provided and credited directly to the beneficiary's bank account.
4. Only street vendors registered under the Street Vendors Act, 2014 are eligible.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation:

In NEWS: SVANidhi: Empowering Street Vendors

PM SVANidhi:

● PM SVANidhi is a **Central Sector Scheme** launched in **June 2020** to provide **collateral-free working capital loans** to **street vendors** affected by the COVID-19 pandemic, with the objective of supporting livelihoods and promoting formalisation.

Key Features

- **Target group:** Street vendors vending on or before **24 March 2020** (including hawkers, pushcart vendors, and those in peri-urban areas).
- **Loan amount:**
 - First loan: up to **₹10,000**
 - Second loan: up to **₹20,000**
 - Third loan: up to **₹50,000**
- **Interest subsidy:** **7% per annum**, credited quarterly directly to the beneficiary's bank account. **Hence statement 3 is correct.**
- **Tenure:** Up to **1 year**, with monthly instalments.
- **Collateral:** **None.** **Hence statement 2 is correct.**
- **Incentives:**
 - **Digital transaction incentive** for cashless payments.
 - Credit limit enhancement on timely repayment.

Institutional Framework

- **Nodal Ministry:** Ministry of Housing and Urban Affairs (MoHUA). **Hence statement 1 is correct.**
- **Implementing agencies:** Urban Local Bodies (ULBs), Banks, NBFCs, MFIs
- **Identification:** Through **ULBs**, vendor certificates/LoRs under the **Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014**

● Registration under the **Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014** is **not mandatory**. Vendors without certificates can be covered through **Letters of Recommendation (LoRs)** issued by Urban Local Bodies. **Hence statement 4 is incorrect.**

PYQ REFERENCE: (2016)

Q. With reference to 'Stand Up India Scheme', which of the following statements is/are correct?

1. Its purpose is to promote entrepreneurship among SC/ST and women entrepreneurs.
2. It provides for refinance through SIDBI.

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2206995®=3&lang=1>

37. PM-SETU Scheme

37. Which of the following best describes the PM-SETU (Prime Minister Skilling and Employability Transformation through Upgraded ITIs) scheme?

- (a) A government-led initiative to provide financial aid to technical colleges for research and innovation.
- (b) An industry-led initiative to upgrade ITIs, enhance employability, and create a scalable pipeline of skilled manpower.
- (c) A scheme to establish rural entrepreneurship and startup incubation centres across India.
- (d) A programme focused solely on higher education reforms in engineering and management institutes.

Answer: (b) An industry-led initiative to upgrade ITIs, enhance employability, and create a scalable pipeline of skilled manpower.

Explanation:

In NEWS: Ministry of Skill Development and Entrepreneurship invites Industry to lead Upgradation of ITIs under PM-SETU Scheme

PM-SETU SCHEME:

- PM-SETU stands for **Prime Minister Skilling and Employability Transformation through Upgraded ITIs**.
- The scheme is implemented by the **Ministry of Skill Development and Entrepreneurship (MSDE)** through **State/UT Governments** and the **Directorate General of Training (DGT)**.
- PM-SETU represents a shift from a **government-led skilling model to an industry-led model**.
- PM-SETU includes upgradation of **five National Skill Training Institutes (NSTIs)**.
- These NSTIs are located at **Bhubaneswar, Chennai, Hyderabad, Kanpur and Ludhiana**.

● The upgraded NSTIs are envisaged as **Global Centres of Excellence**.

Objectives & Outcomes

● PM-SETU aims to bridge **skill gaps in the existing ITI ecosystem**.

● The scheme seeks to improve **employability, apprenticeship opportunities and workforce readiness**.

● PM-SETU is designed to create a **scalable pipeline of skilled manpower for industry**.

Hence option (b) is correct.

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=2208158®=3&lang=1>

38. Pradhan Mantri Gram Sadak Yojana (PMGSY)

38. With reference to the Pradhan Mantri Gram Sadak Yojana (PMGSY), consider the following statements:

1. It was launched to provide all-weather road connectivity to unconnected rural habitations.
2. It is a Centrally Sponsored Scheme fully funded by the Union Government and implemented by the States.
3. Eligibility for connectivity under PMGSY is based solely on economic backwardness of villages.

Which of the statements given above is/are correct?

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

Answer: (a) 1 and 2 only

Explanation:

In NEWS: Pradhan Mantri Gram Sadak Yojana (PMGSY) - Celebrating 25th Anniversary

● The Pradhan Mantri Gram Sadak Yojana (PMGSY), meaning Prime Minister's Village Road Scheme, is India's flagship program launched in 2000 to provide all-weather road connectivity to unconnected rural habitations, serving as a poverty reduction strategy by improving access to markets, education, and healthcare, and creating jobs, with high technical standards and a multi-tiered quality control system. **Hence statement 1 is correct.**

● **Centrally Sponsored:** A 100% centrally funded scheme, implemented by states. **Hence statement 2 is correct.**

● **Phased Implementation:** Includes PMGSY-I, II, III, IV and special projects like for Left Wing Extremism (LWE) areas.

● **Quality Control:** A 3-tier system (Executive Engineer, State Agency, National Quality Monitors) ensures high standards.

● **Decentralized Planning:** Involves local planning for road development

● Implementation monitored through OMMAS (Online Management, Monitoring, and Accounting System), a GIS-based portal.

● **Connectivity:** Connect eligible unconnected rural habitations (500+ population in plains, 250+ in hilly/special areas) with all-weather roads. **Hence statement 3 is incorrect.**

● **Poverty Alleviation:** Boost socio-economic development and reduce poverty through better access.

● **Sustainable Management:** Ensure long-term maintenance and quality of the rural road network.

Technology & Innovation:

1. **OMMAS** – Real-time digital monitoring of physical & financial progress; PMIS module manages PMGSY-III activities; ensures transparency.

2. **Quality Monitoring** – NQMs & SQMs inspect via **QMS app**; geo-tagged photos & real-time reports uploaded to OMMAS.

3. **e-MARG** – Performance-Based Maintenance; payments linked to road condition & assets; outcome-focused.

4. **GPS-VTS** – Mandatory since 2022 for all machinery; tracks usage, location, and duration; improves quality & transparency.

5. **Technical Standards** – Eco-friendly materials; IRC, MoRTH, NHA standards; global codes (AASHTO, ASTM, Euro).

6. **Green Materials** – Fly ash, slag, C&D waste, plastic, crumb rubber, bio-bitumen, geosynthetics, GGBS, bamboo barriers, bio-engineering.

PYQ REFERENCE: (2018)

Q. With reference to Pradhan Mantri Kaushal Vikas Yojana, consider the following statements :

1. It is the flagship scheme of the Ministry of Labour and Employment.
2. It, among other things, will also impart training in soft skills, entrepreneurship, financial and digital literacy.
3. It aims to align the competencies of the unregulated workforce of the country to the National Skill Qualification Framework.

Which of the statements given above is/are correct?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2208381®=3&lang=1>

39. PM-YUVA 3.0

39. What is the main objective of the Prime Minister's Scheme for Mentoring Young Authors (PM-YUVA 3.0)?

- (a) To promote young writers exclusively in fiction and poetry
- (b) To encourage young writers to contribute to nation-building through their writings
- (c) To provide financial assistance to all students under the National Education Policy (NEP) 2020
- (d) To translate classical texts into regional languages

Answer: (b) To encourage young writers to contribute to nation-building through their writings

Explanation:

In NEWS: Results of PM-YUVA 3.0 Declared: 43 Young Authors Chosen in 22 Indian Languages and English

Prime Minister's Scheme for Mentoring Young Authors (PM-YUVA 3.0):

Ministry: Ministry of Education (implemented by National Book Trust, India)

Objective:

- Encourage young writers (<30 years) to contribute to nation-building through writing.
- Promote inclusive literary development across India in multiple languages.
- Align with **National Education Policy (NEP) 2020** to nurture talent in non-fiction writing. **Hence option (b) is correct.**

Key Features:

- **Selection:** 43 young authors chosen through an All-India contest.
- **Languages:** 22 official Indian languages + English (e.g., Hindi, Tamil, Assamese, Bodo, Sanskrit, Urdu).
- **Mentorship & Support:** 6-month mentorship by eminent scholars; scholarship of ₹50,000/month; lifetime royalty of 10% on the book.
- **Themes:** Contribution of Indian Diaspora in Nation Building, Indian Knowledge System, Makers of Modern India (1950–2025).
- **Focus Areas:** History, culture, science, philosophy, governance, social reform, global engagement.
- **National Camp:** To be organised during the New Delhi World Book Fair (10–18 Jan 2026).
- **Outcome:** First set of books to be published next year, aiming to nurture a new generation of writers representing Indian literature domestically and internationally.

PYQ REFERENCE: (2025)

Q. Consider the following statements regarding AI Action Summit held in Grand Palais, Paris in February 2025:

I. Co-chaired with India, the event builds on the advances made at the Bletchley Park Summit held in 2023 and the Seoul Summit held in 2024.

II. Along with other countries, US and UK also signed the declaration on inclusive and sustainable AI.

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

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=2209781®=3&lang=1>

40. PM-KUSUM 2.0

40. With reference to PM-KUSUM 2.0, consider the following statements:

1. PM-KUSUM 2.0 aimed at promoting decentralised solar energy in agriculture
2. PM-KUSUM is implemented by the Ministry of Power.

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: Centre readies PM-KUSUM 2.0 as focus shifts to feeder-level solarisation

PM-KUSUM 2.0 (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan):

- PM-KUSUM 2.0 is proposed as a **new scheme**, not a formal extension of the existing PM-KUSUM programme.
- **PM-KUSUM 2.0** is a government scheme under MNRE aimed at **promoting decentralised solar energy in agriculture** by providing reliable daytime electricity to farmers, reducing DISCOM subsidies, replacing diesel pumps, enhancing farmer income through surplus power sale, and supporting India's renewable energy and climate goals. **Hence statement 1 is correct.**
- The current PM-KUSUM scheme is scheduled to **conclude in March 2026.**
- PM-KUSUM is implemented by the **Ministry of New and Renewable Energy (MNRE)**. **Hence statement 2 is incorrect.**
- The total outlay of the current PM-KUSUM phase is **₹34,422 crore**. PM-KUSUM aims to add about **34,800 MW of decentralised solar capacity**. As of November 2025, about **10,203 MW** of solar capacity has been installed under PM-KUSUM.
- PM-KUSUM comprises **three components: Component A, Component B and Component C.**
 - Component A supports **decentralised, grid-connected solar power plants** developed by farmers, cooperatives or FPOs.
 - Component B promotes **standalone solar-powered agricultural pumps** that are **not connected to the grid**.
 - Component C focuses on **solarisation of grid-connected agricultural pumps and feeders.**
- Under PM-KUSUM, **Central Financial Assistance (CFA)** generally covers **30% of benchmark project cost**, rising to **50% in hilly and North-Eastern states**. PM-KUSUM supports India's goals of **renewable energy expansion, agricultural power reliability and climate mitigation.**

PYQ REFERENCE:

Q. Consider the following statements: (2016)

1. The International Solar Alliance was launched at the United Nations Climate Change Conference in 2015.

2. The Alliance includes all the member countries of the United Nations.

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

Source: <https://www.downtoearth.org.in/energy/centre-readies-pm-kusum-20-as-focus-shifts-to-feeder-level-solarisation>

41. Schemes in 2025: Ministry of Micro, Small & Medium Enterprises

41. Match the following schemes with its primary objective:

Scheme	Objective
1. MSME Champions Scheme	A. Expand credit, startup support, and ease scaling of MSMEs
2. Credit Guarantee Scheme (CGTMSE)	B. Help MSMEs solve problems, enhance competitiveness, and adopt technology
3. Financial & Budget-linked Reforms	C. Provide collateral-free credit to micro and small enterprises
4. PM Employment Generation Programme (PMEGP)	D. Promote self-employment and entrepreneurship

Select the answer using the code given below:

- (a) 1-A, 2-B, 3-C, 4-D
 (b) 1-B, 2-C, 3-A, 4-D
 (c) 1-C, 2-A, 3-D, 4-B
 (d) 1-D, 2-C, 3-B, 4-A

Answer: (b) 1-B, 2-C, 3-A, 4-D

Explanation:

In NEWS: Year End Review 2025: Ministry of Micro, Small & Medium Enterprises

Ministry of Micro, Small & Medium Enterprises (MSME):

- MSME Champions Scheme** – Help MSMEs solve problems, enhance competitiveness, and adopt technology.
- Credit Guarantee Scheme (CGTMSE / CGSMSE)** – Provide collateral-free credit to micro and small enterprises.
- PM Employment Generation Programme (PMEGP)** – Promote self-employment and entrepreneurship.
- MSE Cluster Development Programme (MSE-CDP)** – Develop common facilities and infrastructure for MSME clusters.
- International Cooperation Scheme** – Facilitate MSME participation in global markets.

6. **Promotion in North Eastern Region & Sikkim** – Strengthen MSME infrastructure and innovation in NER & Sikkim.

7. **Marketing & Procurement Support Scheme** – Improve market access for MSMEs.

8. **DC MSME Scheme (ICT & Awards)** – Promote technology adoption and quality through awards.

9. **Udyam Registration & EODB** – Formalise MSMEs and provide access to benefits and government schemes.

10. **Financial & Budget-linked Reforms** – Expand credit, startup support, and ease scaling of MSMEs.

PYQ REFERENCE: [2005]

Q. Which of the following pairs are correctly matched?

Enterprise Industrial Group

- | | |
|---------------|-------------------|
| 1. VSNL | 1. Bharati Group |
| 2. Mundra SEZ | 2. Adani Group |
| 3. CMC Ltd | 3. Tata Group |
| 4. IPCL | 4. Reliance Group |

Select the correct answer using the codes given below:

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

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=2209712®=3&lang=1>

42. Schemes in 2025: Ministry of Labour & Employment

42. Which among the following schemes/initiatives comes under the Ministry of Labour & Employment?

- Pradhan Mantri Viksit Bharat Rozgar Yojana (PMVBRY)
- EPFO Digital Transformation
- National Career Service (NCS) Portal
- e-Shram Platform

Select the correct answer using the code given below:

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

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

Explanation:

In NEWS: Year End Review 2025 – Ministry of Labour & Employment

Schemes under Ministry of Labour & Employment:

- Four Labour Codes (effective 21 Nov 2025)** – Simplify and modernise labour laws; protect workers.
- Pradhan Mantri Viksit Bharat Rozgar Yojana (PMVBRY)** – Generate 3.5 crore jobs over 2 years.
- Social Protection Coverage Expansion** – Provide social security to 64.3% of the workforce.
- EPFO Digital Transformation** – Streamline claim settlement, pensions, and account access.

5. **ESIC Expansion** – Expand healthcare access and medical infrastructure for workers.
6. **National Career Service (NCS) Portal** – Facilitate employment matching and skill development.
7. **e-Shram Platform & Platform Worker Module** – Formalise unorganised and platform workers and provide social security access.

Hence all are correct.

PYQ REFERENCE: (2018)

Q. With reference to Pradhan Mantri Kaushal Vikas Yojana, consider the following statements

1. It is the flagship scheme of the Ministry of Labour and Employment.
2. It, among other things, will also impart training in soft skills, entrepreneurship, financial and digital literacy.
3. It aims to align the competencies of the unregulated workforce of the country to the National Skill Qualification Framework.

Which of the statements given above is/are correct ?

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

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=2209767®=3&lang=1>

SCIENCE & TECHNOLOGY

43. From gene modification to genome editing

43. With reference to genome editing, consider the following statements:

1. Genome editing techniques like CRISPR can alter DNA without introducing any foreign gene.
2. All genome-edited plants in India are regulated in the same manner as genetically modified (GM) crops.

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: From gene modification to genome editing – India’s journey

Gene modification and Genome editing

- Gene modification involves insertion of a **foreign gene** into an organism to introduce a new trait.
- Genome editing enables **precise alteration** of an organism’s own DNA without necessarily adding foreign genes.
- CRISPR, TALENs and ZFNs are the major genome-editing tools used worldwide. **Hence statement 1 is correct.**

- Genome editing is **faster, cheaper and more accurate** than traditional genetic modification

India’s Early Work on Genetic Modification

- India began research on genetically modified (GM) crops in the **1990s**.
- Bt cotton, approved in **2002**, remains the **only GM crop** commercially cultivated in India.
- GM brinjal and GM mustard have faced **regulatory hesitation** due to biosafety concerns and public resistance.
- Public concerns around GM include ecological impact, corporate control and food safety.

Rise of Genome Editing in India

- Indian institutions such as **ICAR, IARI, IISc and DBT-funded labs** are developing genome-edited crops.
- Genome editing in India focuses on improving traits like **disease resistance, climate resilience and nutrition**.
- Research is ongoing in rice, wheat, banana, tomato and several millet crops.
- Indian genome-editing research aims to overcome the limitations of long breeding cycles.

Regulatory Changes (2022 Guidelines)

- In 2022, India **relaxed regulations** for certain categories of genome-edited plants.
- SDN-1 and SDN-2 edits, which do **not introduce foreign DNA**, are exempted from strict GM regulations. **Hence statement 2 is incorrect.**
- SDN-3 edits, which involve insertion of foreign genetic material, are treated **at par with GM crops**.
- The regulatory relaxation aims to promote innovation while maintaining biosafety.

Significance for India

- Genome editing can help India develop **climate-resilient crops** suited for extreme weather.
- It offers potential for **higher crop yields** and reduced vulnerability to pests and diseases.
- Genome editing may reduce India’s **dependence on foreign GM seed companies**.
- The technology aligns with India’s goals of **Atmanirbhar Bharat** in agricultural biotechnology.

PYQ REFERENCE: (2019)

Q. What is Cas9 protein that is often mentioned in news?

- (a) A molecular scissors used in targeted gene editing
- (b) A biosensor used in the accurate detection of pathogens in patients
- (c) A gene that makes plants pest-resistant
- (d) A herbicidal substance synthesized in genetically modified crops

Source:

<https://indianexpress.com/article/explained/explained-sci-tech/from-gene-modification-to-genome-editing-indias-journey-10382129/>

44. Dutch disease

44. In the context of economic phenomena, Which of the following best describes the “real exchange rate” effect in Dutch Disease?

- (a) Sustained capital inflows leading to nominal currency appreciation
- (b) A boom in one sector of the economy leads to the contraction of other tradable sectors
- (c) Contraction of foreign exchange reserves due to rising imports
- (d) Protectionist trade measures increasing the price of imported goods

Answer: (b) A boom in one sector of the economy leads to the contraction of other tradable sectors

Explanation:

In NEWS: Why manufacturing has lagged in India

● India has lagged behind China and South Korea because the share of manufacturing in India’s GDP has remained relatively constant and has recently lost ground to services, limiting productivity and income growth.

Dutch Disease:

● The term “**Dutch disease**” was coined to explain the decline of manufacturing in the Netherlands after the discovery of natural gas in the Groningen fields in 1959.

● Dutch disease refers to a **situation where a boom in one sector of the economy leads to the contraction of other tradable sectors, especially manufacturing. Hence option (b) is correct.**

● A key mechanism of Dutch disease is the **appreciation of the real exchange rate, not necessarily the nominal exchange rate.**

● Increased export earnings from a booming sector raise domestic incomes and wages across the economy.

● **Higher wages and prices** reduce the international competitiveness of manufacturing exports.

● Dutch disease can occur even without natural resources if a non-tradable sector expands rapidly.

● Expansion of high-wage government employment can generate Dutch disease-like effects by raising domestic prices and wages.

● An appreciated real exchange rate makes imports cheaper and exports more expensive in real terms.

● Dutch disease primarily affects tradable sectors, while non-tradable sectors often expand.

● The phenomenon can lead to premature de-industrialisation in developing economies.

PYQ REFERENCE: (2022)

Q. Which one of the following situations best reflects “Indirect Transfers” often talked about in media recently with reference to India?

- (a) An Indian company investing in a foreign enterprise and paying taxes to the foreign country on the profits arising out of its investment.
- (b) A foreign company investing in India and paying taxes to

the country of its base on the profits arising out of its investment.

(c) An Indian company purchases tangible assets in a foreign country and sells such assets after their value increases and transfers the proceeds to India.

(d) A foreign company transfers shares and such shares derive their substantial value from assets located in India.

Source:

<https://www.thehindu.com/business/Economy/why-manufacturing-has-lagged-in-india/article70433540.ece>

45. Optically stimulated luminescence (OSL) dating

45. With reference to Optically Stimulated Luminescence (OSL) dating, consider the following statements:

1. OSL dating is used to determine the time elapsed since mineral grains were last exposed to sunlight.
2. Quartz and feldspar are the most commonly used minerals in OSL dating.
3. Unlike radiocarbon dating, OSL dating does not rely on radioactive decay of carbon isotopes.
4. OSL dating is primarily applicable to organic materials like bones and charcoal.

Which of the statements given above are correct?

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

Answer: (c) 1, 2 and 3 only

Explanation:

In NEWS: Did an ancient Vaigai flood contribute to Keezhadi’s abandonment?

Optically Stimulated Luminescence (OSL) Dating:

● Optically Stimulated Luminescence (OSL) dating is used to determine the **time elapsed since mineral grains were last exposed to sunlight. Hence statement 1 is correct.**

● **Quartz and feldspar** are the most commonly used minerals in OSL dating. **Hence statement 2 is correct.**

● OSL dating measures the accumulation of trapped electrons caused by natural background radiation.

● Exposure to sunlight resets the luminescence signal in mineral grains.

● OSL dating is particularly useful for dating **sediments rather than organic materials.**

○ **Note:** Organic materials like bones or charcoal are dated using **radiocarbon (C-14) dating, not OSL. Hence statement 4 is incorrect.**

● The technique is widely applied in **archaeology, geology and paleoclimatology.**

● OSL dating can be used to **estimate the age of sediment deposition events.**

● The effective dating range of OSL extends from a few decades to about **200,000 years.**

- Incomplete exposure to sunlight before burial can result in age overestimation in OSL dating.
- Unlike radiocarbon dating, OSL dating **does not rely on radioactive decay of carbon isotopes. Hence statement 3 is correct.**
- OSL dating requires laboratory stimulation of mineral samples using light rather than heat.
- The method is suitable for environments where organic remains are absent or poorly preserved.
- OSL dating provides information about the **burial age of sediments**, not the age of the landform itself.
- Environmental radiation dose rates influence the accuracy of OSL age estimates.
- OSL dating has been used to establish timelines for prehistoric human occupation sites.

Source: <https://www.thehindu.com/sci-tech/science/did-an-ancient-vaigai-flood-contribute-to-keezhadi-abandonment/article70432766.ece>

46. Hypoxia

46. Hypoxia refers to a condition in which

- There is excess oxygen in the blood and tissues
- There is insufficient oxygen in tissues or cells to meet metabolic needs
- Carbon dioxide levels in the blood are abnormally low
- The pH of blood is higher than normal

Answer: (b) There is insufficient oxygen in tissues or cells to meet metabolic needs

Explanation:

In NEWS: Hypoxia rewires membrane lipids, drives pancreatic cells to move: IIT-Bombay study

Hypoxia:

- Hypoxia is a condition in which tissues or cells receive insufficient oxygen to meet their metabolic demands. **Hence option (b) is correct.**
- It can occur due to low oxygen in the blood, reduced oxygen-carrying capacity, poor circulation, or cellular inability to use oxygen.
- The main types of hypoxia are hypoxic (hypoxemic), anemic, circulatory (ischemic), and histotoxic hypoxia.
- At the cellular level, hypoxia activates Hypoxia-Inducible Factors (HIFs), which regulate genes involved in angiogenesis, glycolysis, and erythropoiesis.
- Hypoxia shifts energy production from oxidative phosphorylation to anaerobic glycolysis, leading to lactate accumulation.
- In cancer, hypoxia promotes metastasis, cell migration, therapy resistance, and metabolic reprogramming.
- Hypoxia also causes remodeling of cell membranes and lipid metabolism, which can alter membrane fluidity and cell motility.
- Physiological adaptations to hypoxia include increased hemoglobin concentration, capillary density, and myoglobin content in muscles.
- Chronic hypoxia can trigger angiogenesis via VEGF and stimulate erythropoiesis via erythropoietin (EPO).

- Hypoxia plays a critical role in development, exercise physiology, high-altitude adaptation, and pathological conditions like ischemia and tumors.

PYQ REFERENCE: (2024)

Q. Which one of the following is synthesised in human body that dilate blood vessels and increases blood flow?

- Nitric oxide
- Nitrous oxide
- Nitrogen dioxide
- Nitrogen Pentoxide

Source: <https://www.thehindu.com/sci-tech/science/hypoxia-rewires-membrane-lipids-drives-pancreatic-cells-to-move-iit-bombay-study/article70320407.ece>

47. Brain-Computer Interface

47. With the present state of development, Brain-Computer Interface (BCI) can effectively perform in which among the following?

- Restoring speech and communication
- Assisting people with paralysis
- Enhancing human-machine interaction
- Performing remote brain surgeries

Select the correct answer using the code given below:

- 1 and 2 only
- 2, 3 and 4 only
- 1, 2 and 3 only
- 1, 2, 3 and 4

Answer: (c) 1, 2 and 3 only

Explanation:

In NEWS: How can India benefit from neurotechnology?

Brain-Computer Interface (BCI):

- A Brain-Computer Interface (BCI) is a **direct communication pathway** between the human brain and an external device.
- BCIs detect **electrical signals** from neurons and convert them into commands for computers or machines.
- BCIs can be **invasive, partially invasive, or non-invasive** depending on how close the sensors are to brain tissue.
- Invasive BCIs require implantation of electrodes inside the brain and provide **highest signal accuracy**.
- Non-invasive BCIs use external devices like **EEG caps, fNIRS, and MEG scanners**.
- BCIs are used in **neuroprosthetics**, enabling movement for people with paralysis or limb loss.
- BCIs support **speech restoration**, allowing people with motor-neuron diseases to communicate.
- They enable **control of robotic arms, wheelchairs, and digital devices** through thought signals.
- BCIs are being developed for **medical rehabilitation, defence applications, and human-machine teaming**.

- **Neuralink, Blackrock Neurotech**, and several global labs are pioneers in invasive BCI research.
- India's work in BCI is led by institutions like **IITs, IISc**, and DRDO labs for neuro-signalling research.
- Ethical concerns include **privacy of neural data**, autonomy, long-term safety, and misuse for surveillance.

Note: Performing remote brain surgeries is not a function of BCIs; this is related to robotic surgery, not neural interface technology. Hence 4 is incorrect.

PYQ REFERENCE: (2020)

Q. With the present state of development, Artificial Intelligence can effectively do which of the following?

1. Bring down electricity consumption in industrial units
2. Create meaningful short stories and songs
3. Disease diagnosis
4. Text-to-Speech Conversion
5. Wireless transmission of electrical energy

Select the correct answer using the code given below:

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

Source: <https://www.thehindu.com/sci-tech/science/how-can-india-benefit-from-neurotechnology-explained/article70373670.ece>

48. Gaganyaan mission

48. Which of the following best describes the core purpose of the Gaganyaan mission?

- (a) To enable India's participation in lunar crew landings
 (b) To validate technologies essential for sustained human presence in space
 (c) To test India's capability for autonomous docking with space stations
 (d) To establish India's first robotic mission to Mars

Answer: (b) To validate technologies essential for sustained human presence in space

Explanation:

In NEWS: Govt: First Gaganyaan mission uncrewed flight before March next year

Gaganyaan Mission:

- **Gaganyaan is India's first human spaceflight mission**, undertaken by the **Indian Space Research Organisation (ISRO)**.
- The mission aims to **send a crew of 2-3 Indian astronauts** to an orbit of about **400 km** above Earth.
- The astronauts will stay in space for **approximately 3 days** before returning with a planned splashdown in the **Indian Ocean**.
- The mission uses the **HLVM3 (Human-rated LVM3)** as the launch vehicle, modified with improved reliability and safety features.

- The spacecraft consists of an **Orbital Module**, comprising the **Crew Module (CM)** and the **Service Module (SM)**.
- The **Crew Module** is designed to provide **life support, a pressurised environment, and crew safety systems**.
- ISRO has developed a **Crew Escape System (CES)** to ensure astronaut safety during launch emergencies.
- Multiple **uncrewed test flights** are planned, including the **Test Vehicle Demonstration (TV-D1)** mission, to validate the crew escape system and orbital module performance.
- The first **uncrewed Gaganyaan mission** will carry a humanoid robot named **Vyommitra** to study systems before human launch.
- The **Indian Navy** is responsible for astronaut **recovery operations** using specialised teams and equipment.
- Astronaut training is being conducted at the **Astronaut Training Facility in Bengaluru**, with support earlier from Russia's **Gagarin Cosmonaut Training Centre**.
- The mission focuses heavily on new technologies such as **environmental control and life support systems (ECLSS)**, crew safety, guidance, and re-entry systems.
- Gaganyaan aims to demonstrate Indian capability for **independent human spaceflight**, marking a major step toward future **Indian space station** plans.
- The mission promotes development of a **domestic human spaceflight ecosystem**, involving multiple Indian industries and research institutions.

Hence option (b) is correct.

PYQ REFERENCE: (2025)

Q. Consider the following space missions :

- I. Axiom-4
- II. SpaDeX
- III. Gaganyaan

How many of the space missions given above encourage and support microgravity research?

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

Source:

https://indianexpress.com/article/cities/bangalore/govt-first-gaganyaan-mission-uncrewed-flight-before-march-next-year-10403093/#google_vignette

49. MAVEN (Mars Atmosphere and Volatile Evolution) spacecraft

49. MAVEN, recently seen in news for Mars exploration, is a mission of which among the following space agencies?

- (a) ISRO
 (b) NASA
 (c) ESA
 (d) JAXA

Answer: (b) NASA

Explanation:

In NEWS: NASA loses contact with MAVEN spacecraft after a decade in Mars orbit

MAVEN (Mars Atmosphere and Volatile Evolution):

- MAVEN stands for **Mars Atmosphere and Volatile Evolution**.
- It is a **NASA spacecraft** launched to study the **Martian atmosphere**. **Hence option (b) is correct.**
- The primary objective of MAVEN is to understand the **loss of volatiles (gases) from Mars over time**.
- MAVEN aims to investigate the **history of Mars' atmosphere, climate, and habitability**.
- The spacecraft helps scientists study **how the Sun and solar wind strip away the Martian atmosphere**.
- MAVEN was launched on **18 November 2013** aboard an **Atlas V rocket** from Cape Canaveral.
- It **entered orbit around Mars on 22 September 2014**.
- MAVEN carries instruments to measure **composition, structure, and escape of Mars' upper atmosphere**.
- Data from MAVEN helps in understanding **why Mars lost its water and became inhospitable** over billions of years.
- The mission is a part of NASA's **Mars Scout Program**.
- MAVEN works in coordination with other Mars missions like **Mars Reconnaissance Orbiter (MRO)** and **Mars Odyssey**.
- The spacecraft is designed for a **primary mission of one Earth year**, but it has continued to provide data well beyond its initial mission.

PYQ REFERENCE: (2017)

Q. What is the purpose of 'evolved Laser Interferometer Space Antenna' (eLISA) project?

- (a) To detect neutrinos
- (b) To detect gravitational waves**
- (c) To detect the effectiveness of missile defence system
- (d) To study the effect of solar flares on our communication systems

Source: <https://www.thehindu.com/sci-tech/science/nasa-loses-contact-with-maven-spacecraft-after-a-decade-in-mars-orbit/article70386103.ece>

50. Pinaka Long Range Guided Rocket (LRGR-120)

50. Pinaka LRGR-120, recently tested by India, is distinguished from the earlier Pinaka Mk-I system primarily by:

- (a) Its ability to be launched from naval ships
- (b) Indigenous GPS/INS-based guidance for long-range precision targeting**
- (c) Hypersonic speed exceeding Mach 5
- (d) Capability to carry nuclear warheads

Answer: (b) Indigenous GPS/INS-based guidance for long-range precision targeting

Explanation:

In NEWS: DRDO successfully tests 120-km strike range Pinaka rockets

Pinaka Long Range Guided Rocket (LRGR-120):

- Pinaka LRGR-120 is a **long-range guided artillery rocket** developed by DRDO.
- It can strike targets at a range of **up to 120 km**.
- The rocket is **launched from the Pinaka multi-barrel rocket launcher (MBRL) system**.
- It uses **GPS/INS-based guidance** for enhanced accuracy. **Hence option (b) is correct.**
- The system is designed to provide **precision strike capability for the Indian Army**.
- It **enhances India's indigenous multi-barrel rocket capabilities** for deep-strike and battlefield operations.



PYQ REFERENCE: (2023)

Q. Consider the following statements:

1. Ballistic missiles are jet-propelled at subsonic speeds throughout their flights, while cruise missiles are rocket-powered only in the initial phase of flight.
2. Agni-V is a medium-range supersonic cruise missile, while BrahMos is a solid-fuelled intercontinental ballistic missile.

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**

Source: <https://www.thehindu.com/sci-tech/science/drdo-successfully-tests-120-km-strike-range-pinaka-rockets/article70450556.ece>

51. Soar Initiative

51. Which of the following best describes the SOAR initiative launched by the Government of India?

- (a) A programme to promote artificial intelligence research in government labs
- (b) A funding scheme for AI start-ups and technology incubation centres
- (c) A structured skill development initiative to build AI-readiness, workplace skills, and career competencies among learners
- (d) A digital literacy campaign targeting rural households**

Answer: (c) A structured skill development initiative to build AI-readiness, workplace skills, and career competencies among learners

Explanation:

In NEWS: Impact of Soar Initiative

SOAR (Skilling for AI Readiness) Initiative:

- SOAR stands for **Skilling for AI Readiness**, a skill development initiative by the **Ministry of Skill Development and Entrepreneurship (MSDE)**. **Hence option (c) is correct.**
- The initiative was launched as part of India's **Azadi Ka Amrit Mahotsav** celebrations.
- SOAR aims to build **personal, professional, and workplace readiness** among learners.
- It focuses on strengthening **essential competencies** such as communication, critical thinking, digital literacy, and behavioural skills.
- The programme includes **curated modules, guided learning, and practical engagement** to prepare participants for technology-driven work environments.
- SOAR helps learners **progress across diverse career pathways** by equipping them with confidence and capabilities required in modern workplaces.
- Multiple courses under SOAR are delivered in collaboration with **industry partners** such as **Microsoft, HCL Technologies, and NASSCOM**.
- The initiative equips **students and educators** with **foundational and applied AI skills**, promoting AI awareness and educator capability.
- SOAR contributes to India's broader goal of **AI-readiness and skill development for future technologies**.

PYQ REFERENCE: (2019)

Q. Atal Innovation Mission is set up under the

- (a) Department of Science and Technology
- (b) Ministry of Labour and Employment
- (c) NITI Aayog**
- (d) Ministry of Skill Development and Entrepreneurship

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2204136®=3&lang=1>

52. EXERCISE EKATHA - 2025

52. Consider the following statements about Exercise Ekatha - 2025:

1. It is a bilateral military exercise between India and the Maldives.
2. The exercise focuses primarily on cybersecurity and space warfare operations.

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: DCNS VISIT TO MALDIVES CLOSING CEREMONY OF EXERCISE EKATHA - 2025

Exercise Ekatha:

- **Exercise Ekatha** is an annual **bilateral military exercise** between **India and the Maldives** involving their naval and marine forces. **Hence statement 1 is correct.**
- The primary aim of Exercise Ekatha is to **enhance interoperability and operational cooperation** in shared maritime security challenges. The exercise focuses on tactical skills such as **surveillance, boarding operations, special operations, tactical diving and search-and-rescue drills** (based on earlier editions and objectives). **Hence statement 2 is incorrect.**
- The **8th edition of Exercise Ekatha** commenced in 2025 at the **Maldives National Defence Force (MNDF) Central Area Command in Addu, Maldives**.
- Senior officials from both countries, including defence attachés and commanders, participate in the exercise to strengthen naval cooperation.
- India's **Deputy Chief of Naval Staff (DCNS)** attended the **closing ceremony of Exercise Ekatha - 2025** in the Maldives.
- The exercise underscores the **bilateral defence cooperation** and contributes to **regional maritime security** in the Indian Ocean Region.

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2204321®=3&lang=1>

53. 'TARAGIRI'

53. With reference to Taragiri (Yard 12653), consider the following statements:

1. It is the fourth frigate of the Nilgiri-class (Project 17A).
2. It has around 75% indigenous content and was constructed using the Integrated Construction methodology.
3. Its weapons and sensors include BrahMos SSM, MF-STAR radar, and MRSAM.
4. It is a nuclear-powered multi-role stealth destroyer.

Which of the statements given above is/are not correct?

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

Answer: (b) 4 only

Explanation:

In NEWS: DELIVERY OF 'TARAGIRI', THE FOURTH NILGIRI CLASS (PROJECT 17A) INDIGENOUS ADVANCED STEALTH FRIGATE

About Taragiri:

1. Taragiri is the **fourth ship** of the Nilgiri-class (Project 17A) frigates.
2. It is the **third P17A frigate built by Mazagon Dock Shipbuilders Ltd (MDL)**.
3. Delivered to the **Indian Navy on 28 November 2025**.
4. Project 17A frigates are **stealth, multi-mission platforms** designed for modern maritime operations.
5. The ship is named after the former **INS Taragiri, a Leander-class frigate** that served from **1980 to 2013**.
6. Designed by the **Warship Design Bureau (WDB)** of the Indian Navy.
7. Built using **Integrated Construction**, enabling a reduced build time of **81 months**.
8. Fitted with **CODOG propulsion** (Combined Diesel or Gas) with **Controllable Pitch Propellers** (not nuclear-powered). **Hence statement 4 is incorrect.**
9. Major weapons include: **BrahMos SSM, MF-STAR radar, MRSAM, 76mm SRGM, 30mm and 12.7mm CIWS**, rockets, and torpedoes.
10. Has an **indigenisation level of about 75%**, supporting over **200 MSMEs**.

PYQ REFERENCE: (2016)

Q. Which one of the following is the best description of 'INS Astradharini', that was in the news recently?

- (a) Amphibious warfare ship
- (b) Nuclear-powered submarine
- (c) Torpedo launch and recovery vessel**
- (d) Nuclear-powered aircraft carrier

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2196229®=3&lang=1>

54. SAMUDRA PRATAP

54. 'Samudra Pratap', recently seen in the news, is best associated with:

- (a) Anti-submarine warfare
- (b) Coastal surveillance only
- (c) Marine pollution response and firefighting**
- (d) Amphibious assault operations

Answer: (c) Marine pollution response and firefighting

Explanation:

In NEWS: INDIAN COAST GUARD INDUCTS ITS FIRST POLLUTION CONTROL VESSEL - YARD 1267 SAMUDRA PRATAP- CONSTRUCTED AT GOA SHIPYARD LTD

SAMUDRA PRATAP:

- *Samudra Pratap* is the **first in-built Pollution Control Vessel (PCV)** inducted into the Indian Coast Guard. **Hence option (c) is correct.**
- The vessel was inducted into service on **23 December 2025**.
- *Samudra Pratap* has been **indigenously designed and built at Goa Shipyard Limited (GSL)**.
- The ship has more than **60% indigenous content**, aligning with **Aatmanirbhar Bharat** and **Make in India** initiatives.

- *Samudra Pratap* is the **largest ship in the Indian Coast Guard fleet**.
- The vessel has a length of **114.5 metres**, breadth of **16.5 metres**, and a displacement of **4,170 tonnes**.
- It is equipped with a **30 mm CRN-91 gun** and **two 12.7 mm stabilised remote-controlled guns**.
- The ship features an **Integrated Bridge System** and an **Integrated Platform Management System**, both indigenously developed.
- *Samudra Pratap* is the **first Indian Coast Guard vessel** to be equipped with **Dynamic Positioning (DP-1) capability**.
- The vessel has been certified with **FiFi-2 / FFV-2 notation**, indicating advanced firefighting capability.
- It is equipped with a **high-capacity external firefighting system** for maritime emergency response.
- The ship is capable of **oil spill detection and pollution response** within the **Exclusive Economic Zone (EEZ) and beyond**.
- The pollution response systems include an **oil fingerprinting machine** and a **gyro-stabilised standoff active chemical detector**.
- The vessel can **recover pollutants from viscous oil**, analyse contaminants, and **separate oil from contaminated water**.
- *Samudra Pratap* was inducted under the **02 Pollution Control Vessel (PCV) Project** of Goa Shipyard Limited.

PYQ REFERENCE: (2016)

Q. Which one of the following is the best description of 'INS Astradharini', that was in the news recently?

- (a) Amphibious warfare ship
- (b) Nuclear-powered submarine
- (c) Torpedo launch and recovery vessel**
- (d) Nuclear-powered aircraft carrier

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2208089®=3&lang=1>

55. INS Mahe

55. Consider the following statements regarding INS Mahe:

1. INS Mahe is the first ship of the Mahe-class Anti-Submarine Warfare Shallow Water Craft (ASW-SWC) built by Cochin Shipyard Limited.
2. It is the largest Indian Navy warship powered by a diesel-engine and water-jet propulsion system.
3. INS Mahe has a displacement of over 2,500 tonnes.
4. INS Mahe is designed primarily for anti-submarine warfare operations in shallow coastal waters.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 4 only

Explanation:

In NEWS: Strategic significance of INS Mahe and why Navy is inducting 16 such ships

INS Mahe

- INS Mahe is the first ship of the Mahe-class Anti-Submarine Warfare Shallow Water Craft (ASW-SWC) built by Cochin Shipyard Limited. **Hence statement 1 is correct.**
- The Mahe-class ships are designed for anti-submarine warfare operations in shallow coastal waters, including detection and neutralisation of submarines. **Hence statement 4 is correct.**
- INS Mahe has a displacement of around 896 tonnes and a length of approximately 78 metres. **Hence statement 3 is incorrect.**
- It is the largest Indian Navy warship powered by a diesel-engine and water-jet propulsion system. **Hence statement 2 is correct.**
- INS Mahe has a maximum speed of about 25 knots and an endurance of around 1,800 nautical miles.
- The vessel is equipped with advanced hull-mounted SONAR and underwater sensors designed for littoral (shallow-water) submarine detection.
- INS Mahe can undertake low-intensity maritime operations (LIMO), mine-laying, search and rescue (SAR), and coastal surveillance.
- The ship has more than 80% indigenous content, involving several Indian defence companies and MSMEs.
- INS Mahe is part of the Navy's plan to induct 16 ASW-SWC ships to replace the ageing Abhay-class corvettes.
- The Mahe-class ships form the first layer of India's coastal anti-submarine defence grid across both eastern and western seaboard.

PYQ REFERENCE: (2019)

Q. Which one of the following is the best description of 'INS Astradharini', that was in the news recently?

- (a) Amphibious warfare ship
- (b) Nuclear-powered submarine
- (c) Torpedo launch and recovery vessel**
- (d) Nuclear-powered aircraft carrier

Source:

https://indianexpress.com/article/explained/strategic-significance-of-ins-mahe-and-why-navy-is-inducting-16-such-ships-10387685/#google_vignette

56. INS Vaghsheer

56. Consider the following statements with respect to INS Vaghsheer:

- I. It is a Kalvari-class diesel-electric attack submarine.
- II. It has an endurance of nearly 50 days.
- III. President Droupadi Murmu embarked on the submarine recently, becoming the first President of India to undertake such a sortie.

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: (a) I and II only

Explanation:
In NEWS:

- President Droupadi Murmu undertook a submarine sortie onboard the Indian Navy's indigenous Kalvari-class submarine INS Vaghsheer from the Karwar Naval Base in Karnataka.
- She embarked on the submarine on December 28, 2025, becoming only the second President of India to undertake such a sortie after former President A.P.J. Abdul Kalam. **Hence statement III is incorrect.**

INS Vagsheer:

- INS Vagsheer (S26) is a **Kalvari-class diesel-electric attack submarine** of the Indian Navy. **Hence statement I is correct.**
- It is the **sixth and final submarine** of the first batch built under **Project-75**.
- The submarine was **launched in April 2022** and **commissioned in January 2025**.
- INS Vagsheer was constructed by **Mazagon Dock Shipbuilders Limited, Mumbai**.
- It has a **displacement of about 1,615 tonnes when surfaced and 1,775 tonnes when submerged**.
- The submarine is about **67.5 metres long** with a **beam of 6.2 metres**.
- It operates with a **crew of around 43 personnel**, including officers and sailors.
- Propulsion is provided by **diesel-electric engines**, with **air-independent propulsion planned during mid-life refit**.
- INS Vagsheer can achieve a **maximum speed of about 20 knots while submerged**.
- It has an **endurance of nearly 50 days** and a **test diving depth of around 350 metres**. **Hence statement II is correct.**
- The submarine is armed with **six torpedo tubes** capable of launching torpedoes, anti-ship missiles and laying naval mines.
- INS Vagsheer is named after an earlier Indian Navy submarine and the term "**Vagsheer**" refers to a type of sandfish.

Source:

<https://www.thehindu.com/news/national/president-droupadi-murmu-submarine-sortie-karwar-naval-base-ins-vaghsheer/article70445841.ece>

57. S-500 system

57. With reference to India-Russia defence cooperation, consider the following statements:

- 1. The S-500 system is capable of intercepting short, medium, and intermediate-range ballistic missiles at ranges up to 600 km.
- 2. India has already signed a deal to acquire five S-500 units.

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: India, Russia Defence Ministers to meet, S-500 acquisition on agenda

S-500 Air Defence System

● The S-500 (NATO reporting name: 55R6M "Triumfator-M") is a **next-generation Russian surface-to-air missile (SAM) system**.

● Designed to **intercept a wide range of aerial threats**, including **ballistic missiles, aircraft, and hypersonic targets**.

● Considered an upgrade and complement to the **S-400 system**.

Capabilities

● **Ballistic missile interception range: up to 600 km. Hence statement 1 is correct.**

● **Airborne targets interception range: up to 400 km.**

● **Altitude coverage: Up to 180–200 km**, capable of targeting **stratospheric threats**.

● Can **track and engage multiple targets simultaneously** (aircraft, missiles, drones, hypersonic vehicles).

● Uses advanced **radar systems** with enhanced detection and fire-control capabilities.

Strategic Significance for India

● Under discussion for acquisition as part of **India-Russia defence cooperation. Hence statement 2 is incorrect.**

● Will **complement India's existing S-400 systems**, strengthening **national missile defence**.

● Enhances India's **air defence shield** under **Mission Sudarshan Chakra**, a decade-long initiative to protect key national and strategic assets.

● Critical for **deterrence against missile threats** and boosting **strategic autonomy** in air defence.

Operational & Technological Aspects

● Can intercept **short, medium, and intermediate-range ballistic missiles**.

● Advanced **multi-layered missile defence** capability.

● Integrated with **radar and command systems** for coordinated air and missile defence.

PYQ REFERENCE: (2018)

Q. What is "Terminal High Altitude Area Defense (THAAD)", sometimes seen in the news?

- (a) An Israeli radar system
- (b) India's indigenous anti-missile programme
- (c) An American anti-missile system**
- (d) A defence collaboration between Japan and South Korea.

Source: <https://www.thehindu.com/news/national/india-russia-defence-ministers-to-meet-in-delhi-on-december-4-s-500-acquisition-on-agenda/article70334727.ece>

58. EKUVERIN

58. Exercise EKUVERIN is a Joint Military Exercise between

- (a) India and Australia
- (b) India and Maldives
- (c) India and Mauritius
- (d) India and New Zealand

Answer: (b) India and Maldives

Explanation:

In NEWS: Ministry of Defence: INDIA- MALDIVES JOINT MILITARY EXERCISE EKUVERIN COMMENCES IN KERALA

Exercise EKUVERIN:

● The 14th edition of the Joint Military Exercise EKUVERIN between **the Indian Army and the Maldives National Defence Force (MNDF)** has commenced at Thiruvananthapuram, Kerala. The exercise will be conducted from 02 to 15 December 2025. **Hence option (b) is correct.**

● The Indian Army contingent of 45 personnel, represented by a battalion of the GARHWAL RIFLES, is participating alongside an equal-strength Maldivian contingent represented by the MNDF.

● EKUVERIN in Dhivehi translates to 'Friends', underscoring the deep-rooted bonds of friendship, mutual trust and military cooperation between the two nations.

● Conducted alternately in both countries since 2009, Exercise EKUVERIN continues to be a shining example of India's Neighbourhood First Policy and its commitment to building enduring defence partnerships with friendly nations.

● The two-week-long exercise aims to enhance interoperability and operational synergy in Counter-Insurgency and Counter-Terrorism operations across jungle, semi-urban and coastal terrain.

● It will witness participation of troops from both sides sharing best practices, tactical drills and joint operational planning to strengthen their capability to respond to common security challenges in the region.

● The exercise reflects the growing defence cooperation and mutual commitment of India and the Maldives towards regional peace and stability in the Indian Ocean Region.

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2197611®=3&lang=1>

59. SURYAKIRAN exercise

59. Consider the following statements with respect to exercise Suryakiran:

- I. It is a bilateral military exercise conducted annually between the Indian Army and Nepal Army.
- II. The exercise included Humanitarian Assistance and Disaster Relief (HADR) drills.

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: (c) Both I and II

Explanation:

In NEWS: SURYAKIRAN-XIX: India-Nepal Army exercise concludes in Uttarakhand

SURYAKIRAN-XIX:

- Exercise SURYAKIRAN is a bilateral military exercise conducted annually between the Indian Army and Nepal Army. **Hence statement I is correct.**
- SURYAKIRAN-XIX (19th edition) was held in Uttarakhand, India.
- The exercise aims to enhance interoperability, counter-terrorism cooperation, and jungle warfare skills between both armies.
- Troops from Indian Army's Kumaon Regiment and equivalent Nepal Army units participated.
- The exercise included Humanitarian Assistance and Disaster Relief (HADR) drills. **Hence statement II is correct.**
- It also focused on counter-insurgency operations, mountain warfare, and best practices in UN peacekeeping operations.
- SURYAKIRAN is one of the largest military exercises conducted between the two countries.
- The exercise strengthens the traditional military ties and people-to-people relations between India and Nepal.

Source: [https://www.thehindu.com/news/national/india-nepal-army-exercise-concludes-in-uttarakhand/article70376384.ece#:~:text=The%20India%2DNepal%20joint%20military,\(December%209%2C%202025\)](https://www.thehindu.com/news/national/india-nepal-army-exercise-concludes-in-uttarakhand/article70376384.ece#:~:text=The%20India%2DNepal%20joint%20military,(December%209%2C%202025))

60. EXERCISE GARUDA SHAKTI & HARIMAU SHAKTI

60. Consider the following statements about India's recent joint military exercises:

1. Garuda Shakti is a joint special forces exercise between India and Indonesia, conducted in Himachal Pradesh.
2. Harimau Shakti is a bilateral exercise between India and Malaysia, focused on desert warfare and held in Rajasthan.

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- INDONESIA JOINT SPECIAL FORCES EXERCISE GARUDA SHAKTI COMMENCES IN HIMACHAL PRADESH
- INDIA-MALAYSIA TO PARTICIPATE IN JOINT MILITARY TRAINING EXERCISE HARIMAU SHAKTI IN THE DESERTS OF RAJASTHAN

Garuda Shakti - India-Indonesia Joint Special Forces Exercise

- Bilateral **special forces exercise** between India and Indonesia.

- Held in **Himachal Pradesh**. **Hence statement 1 is correct.**
- Focuses on **counter-terrorism operations, joint tactics, and interoperability.**
- Enhances **defence cooperation** and **strategic partnership** between the two countries.

Harimau Shakti - India-Malaysia Joint Military Exercise

- Bilateral **army exercise** between India and Malaysia.
- Conducted in the **deserts of Rajasthan**. **Hence statement 2 is correct.**
- Focuses on **desert warfare, tactical coordination, and joint operational preparedness.**
- Strengthens **military-to-military ties** and enhances **regional security cooperation.**

Both exercises demonstrate India's use of **defence diplomacy** to boost **regional strategic partnerships** and **combat readiness.**

PYQ REFERENCE: (2024)

Q. Which of the following statements about 'Exercise Mitra Shakti-2023' are correct?

1. This was a joint military exercise between India and Bangladesh.
2. It commenced in Aundh (Pune).
3. Joint response during counter-terrorism operation was a goal of this operation.
4. Indian Air Force was a part of this exercise.

Select the answer using the code given below :

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2198755®=3&lang=1>
<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2199345®=3&lang=1>

61. Operation Trident

61. Consider the following statements:

Statement-I: Operation Trident was conducted after the declaration of war between India and Pakistan in 1971.

Statement-II: The operation primarily targeted Pakistani naval assets to prevent them from attacking Indian coasts.

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 is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct, and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

Answer: (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

Explanation:

In NEWS: Navy Day 2025: Story of Operation Trident, the 1971 Bangladesh War operation commemorated today

Operation Trident:

- **Operation Trident** was a **naval operation conducted by the Indian Navy** during the **Indo-Pakistan War of 1971**.
 - It took place on **4 December 1971**, targeting the **Pakistani naval base at Karachi**.
 - The operation involved the use of **missile boats** of the **25th "Killer" Missile Squadron** of the Indian Navy.
 - It was the **first time the Indian Navy used anti-ship missiles in combat**.
 - The operation resulted in the **sinking or damaging of several Pakistani vessels**, including the destroyer **PNS Khyber** and the minesweeper **PNS Muhafiz**.
 - It also **crippled Karachi port**, a key logistics hub for Pakistan, significantly impacting their war effort.
 - The success of Operation Trident demonstrated **India's naval strike capability** and marked a **turning point in naval warfare in the region**.
 - **December 4** is now celebrated as **Navy Day** in India, in honour of Operation Trident.
 - The operation was led by **Commodore Babru Bhan Yadav** and involved coordination between missile boats, aircraft, and support vessels.
 - Operation Trident was followed by **Operation Python**, another successful naval strike on Karachi during the same war.
- Hence, Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I**

PYQ REFERENCE: (2024)

Q. Operations undertaken by the Army towards upliftment of the local population in remote areas to include addressing of their basic needs is called:

- a) Operation Sankalp
- b) Operation Maitri
- c) Operation Sadbhavana**
- d) Operation Madad

Source:

<https://indianexpress.com/article/explained/everyday-explainers/navy-day-2025-history-pakistan-war-1971-trident-10401623/>

62. 'Operation Sagar Bandhu'

62. Operation Sagar Bandhu, recently in the news, is related to:

- (a) India's naval exercise in the Indian Ocean
- (b) Humanitarian assistance and disaster relief mission by India
- (c) Joint missile defence exercise with Sri Lanka
- (d) India-Sri Lanka space cooperation program

Answer: (b) Humanitarian assistance and disaster relief mission by India

Explanation:

In NEWS: India launches 'Operation Sagar Bandhu' to provide relief supplies to Sri Lanka

Operation Sagar Bandhu:

1. Operation Sagar Bandhu is a **Humanitarian Assistance and Disaster Relief (HADR) mission** conducted by India. **Hence option (b) is correct.**
2. The operation was triggered by **Cyclone Ditwah in Sri Lanka**, which caused floods, landslides, and widespread destruction.
3. The primary objective is to **provide immediate relief and rescue assistance** to the affected population.
4. Agencies involved include:
 - **Indian Air Force** for airlifting relief material.
 - **Indian Navy** for logistics and supplies.
 - **National Disaster Response Force (NDRF)** for rescue operations.
5. Relief materials provided include **tents, blankets, tarpaulins, hygiene kits, and ready-to-eat food**.
6. Significance of the operation:
 - Demonstrates India's **Neighbourhood First policy**.
 - Enhances India's **soft power and regional goodwill**.
 - Showcases India's **rapid HADR capability** in the region.

Source: <https://www.newsonair.gov.in/india-provides-53-tons-of-relief-conducts-rescue-operations-in-sri-lanka-under-operation-sagar-bandhu/>
<https://www.thehindu.com/news/international/cyclone-ditwah-in-sri-lanka-pm-modi-announces-assistance-under-operation-sagar-bandhu/article70335028.ece>

63. Operation Sagar Bandhu

63. With reference to Operation Sagar Bandhu, consider the following statements:

1. It is a bilateral military exercise between India and Sri Lanka.
2. It involved deployment of Indian naval ships, aircraft and medical teams.

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 pledges \$450 million to aid Sri Lanka's recovery

OPERATION SAGAR BANDHU:

- *Operation Sagar Bandhu* is an **Indian humanitarian assistance and disaster relief (HADR) operation**. **Hence statement 1 is incorrect.**
- It was launched to assist **Sri Lanka** following severe damage caused by a **cyclone and flooding**.
- The operation reflects India's **Neighbourhood First Policy** and commitment to regional support.

Agencies Involved

- The operation involved coordinated efforts of the **Indian Air Force, Indian Navy and Indian Army**. **Hence statement 2 is correct.**
- **National Disaster Response Force (NDRF)** teams were deployed for rescue and relief operations.
- Indian civilian and military agencies worked together under a **whole-of-government approach**.

Mode of Assistance

- Relief assistance was delivered through **air and sea routes**.
- Indian Air Force transport aircraft were used for **airlifting relief material and personnel**.
- Indian Navy ships were deployed to deliver **large volumes of humanitarian aid**.

Nature of Aid Provided

- Assistance included **food supplies, medicines, tents, tarpaulins and hygiene kits**.
- **Medical teams and field hospitals** were deployed to provide emergency healthcare.
- **Bailey bridge components** were supplied to restore damaged road connectivity.
- Satellite-based communication systems were used to support **coordination and telemedicine**.

Strategic Significance

- *Operation Sagar Bandhu* reinforced India's role as a **first responder in the Indian Ocean Region**.
- It strengthened **India-Sri Lanka cooperation** in disaster management.
- The operation highlighted the importance of **civil-military coordination** in humanitarian crises.

Source: <https://www.thehindu.com/news/national/india-announces-450-million-relief-package-for-sri-lankas-post-cyclone-recovery/article70428547.ece>

64. Project Suncatcher

64. Project Suncatcher, sometimes seen in the news, is associated with:

- Artificial photosynthesis for hydrogen production
- Space-based solar power generation and wireless energy transmission
- Solar-powered satellite propulsion systems
- Deep-space exploration using solar sails

Answer: (b) Space-based solar power generation and wireless energy transmission

Explanation:

In NEWS: Data centres in space? Here's what Google's Project Suncatcher attempts to do, and why

Project Suncatcher:

- Project Suncatcher is associated with the concept of **space-based solar power (SBSP)**.
- It involves **collecting solar energy in outer space** and transmitting it wirelessly to Earth. **Hence option (b) is correct.**
- The energy captured under Project Suncatcher is proposed to be transmitted using **microwave or laser beams**.

- Solar panels under the project are placed on **orbiting satellites**, not on the Earth's surface.
- Space-based solar systems can generate power **continuously**, unaffected by night, clouds, or seasons.
- Project Suncatcher is led by the **United States**, not by any United Nations agency.
- The project explores the use of **rectennas** on Earth to receive transmitted energy.
- Space-based solar power systems face challenges related to **high launch costs and space debris**.
- Project Suncatcher has potential **dual-use implications**, including civilian energy supply and strategic applications.
- There is currently **no operational commercial-scale SBSP system** under Project Suncatcher.

PYQ REFERENCE: (2011)

Q. Satellites used for telecommunication relay are kept in a geostationary orbit. A satellite is said to be in such as orbit when:

- The orbit is geosynchronous.
- The orbit is circular.
- The orbit lies in the plane of the earth's equator.
- The orbit is at an altitude of 22,236 km.

Select the correct answer using the codes given below:

- 1, 2 and 3 only
- 1, 3 and 4 only
- 2 and 4 only
- 1, 2, 3 and 4

Source:

<https://indianexpress.com/article/explained/explained-sci-tech/google-project-suncatcher-data-centres-space-10414483/>

65. Proton Exchange Membrane (PEM) Electrolysers

65. Consider the following statements:

- Use of liquid electrolyte
- Faster response to power fluctuations
- Use of non-precious metal catalysts
- Lower capital cost than alkaline electrolysers

How many of the above are the characteristics of Proton Exchange Membrane (PEM) Electrolysers?

- Only one
- Only two
- Only three
- All four

Answer: (a) Only one

Explanation:

In NEWS: IIT Madras study finds electrolyser design can cut green hydrogen emissions by up to 25 per cent, flags material risks

Proton Exchange Membrane (PEM) Electrolysers

- Proton Exchange Membrane (PEM) electrolysers use a **solid polymer electrolyte** to split water into hydrogen and oxygen. **Hence statement 1 is incorrect.**
- In PEM electrolysers, **protons pass through the membrane**, while electrons flow through an external circuit.
- PEM electrolysers require **platinum-group metal catalysts** such as platinum and iridium. **Hence statement 3 is incorrect.**
- Titanium is commonly used in **bipolar plates** of PEM electrolysers due to corrosion resistance.
- PEM electrolysers can operate efficiently with **intermittent renewable energy sources**.
- Hydrogen produced by PEM electrolysers is of **high purity**.
- PEM electrolysers generally have a **higher capital cost** than alkaline electrolysers. **Hence statement 4 is incorrect.**
- The life-cycle carbon footprint of hydrogen from PEM electrolysers depends on **electrolyser design and material choice**.
- Coated bipolar plates in PEM electrolysers increase **manufacturing emissions** but improve **operational efficiency and lifespan**.
- PEM electrolysers are dependent on **imported critical minerals**, posing supply-chain risks.
- PEM electrolysers have **faster start-up and shut-down times** compared to alkaline electrolysers. **Hence statement 2 is correct.**
- PEM electrolysers are considered suitable for **decentralised green hydrogen production**.

PYQ REFERENCE: (2023)

Q. With reference to green hydrogen, consider the following statements:

1. It can be used directly as a fuel for internal combustion.
2. It can be blended with natural gas and used as fuel for heat or power generation.
3. It can be used in the hydrogen fuel cell to run vehicles.

How many of the above statements are correct?

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

Source: <https://www.downtoearth.org.in/energy/iit-madras-study-finds-electrolyser-design-can-cut-green-hydrogen-emissions-by-up-to-25-per-cent-flags-material-risks>

66. Thorium Reserves in India

66. Consider the following statements:

- I. India has the largest thorium reserve globally.
- II. India has limited uranium and abundant thorium reserves.

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

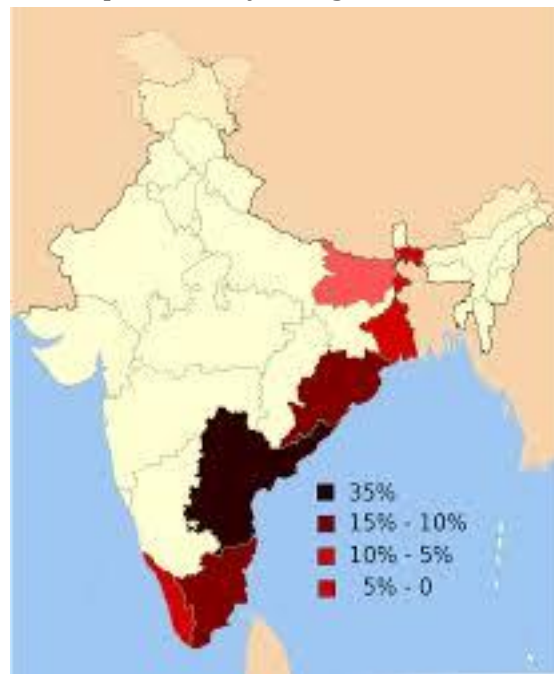
Answer: (c) Both I and II

Explanation:

In NEWS: PARLIAMENT QUESTION: LEVERAGING INDIA'S THORIUM RESERVES

Thorium Reserves in India:

- India has about 25% of the world's known thorium reserves, making it the largest thorium reserve holder globally. **Hence statement I is correct.**
- India has limited uranium and abundant thorium reserves. **Hence statement II is correct.**
- Thorium unlike uranium, is a fertile material and need to be converted to fissile uranium-233 in a nuclear reactor, before it can be used to generate energy by nuclear fission.
- Main States: Odisha, Tamil Nadu, Kerala, Andhra Pradesh, Jharkhand, and West Bengal are rich in these deposits.
- Thorium is mainly found in monazite, a mineral in beach sands, particularly along the East and West Coasts.



PYQ REFERENCE: (2022)

Q. With reference to India, consider the following statements?

1. Monazite is a source of rare earths.
2. Monazite contains thorium.
3. Monazite occurs naturally in the entire Indian coastal sands in India.
4. In India, Government bodies only can process or export monazite.

Which of the statements given above are correct?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2205825®=3&lang=1>

67. Exercise Desert Cyclone II

67. Exercise Desert Cyclone II is a joint military exercise between India and which among the following countries?

- (a) France
- (b) United Arab Emirates
- (c) Saudi Arabia
- (d) Oman**

Answer: (b) United Arab Emirates

Explanation:

In NEWS: Indian Army contingent leaves for India-U.A.E. joint exercise Desert Cyclone II

Exercise Desert Cyclone II

● **Desert Cyclone II** is the **second edition** of the **India-U.A.E. Joint Military Exercise**. **Hence option (b) is correct.**

● The exercise is being conducted at **Abu Dhabi, United Arab Emirates**.

● It is scheduled from **18 to 30 December 2025**.

● The **Indian Army contingent** consists of **45 personnel**, mainly from a **Mechanised Infantry Regiment battalion**.

● The **U.A.E. Land Forces** are represented by a contingent from the **53 Mechanised Infantry Battalion**.

● The primary objective of the exercise is to **enhance interoperability and strengthen defence cooperation** between India and the U.A.E.

● The exercise focuses on **sub-conventional operations in urban environments under a United Nations mandate**.

● Training includes **fighting in built-up areas, heliborne operations, and mission planning**.

● The exercise involves the **integration of Unmanned Aerial Systems (UAS) and counter-UAS techniques**.

● Desert Cyclone II aims to improve cooperation in **peacekeeping, counter-terrorism and stability operations**.

● The exercise reflects the **deepening strategic partnership and military diplomacy** between India and the U.A.E.

● It contributes to developing **interoperable military capabilities** and promotes regional peace and security.

Source: <https://www.thehindu.com/news/national/indian-army-contingent-leaves-for-india-uae-joint-exercise-desert-cyclone-ii/article70408078.ece>

68. 'Manhattan Project'

68. 'Extreme Ultraviolet (EUV) Lithography Technology', recently seen in the news is related to

- (a) Semiconductor manufacturing
- (b) Space exploration
- (c) Nuclear energy production
- (d) Genetic engineering

Answer: (a) Semiconductor manufacturing

Explanation:

In NEWS: How China built 'Manhattan Project' to rival the West in AI chips

About Manhattan Project:

● The term "Manhattan Project of China" refers to **China's secret, high-priority initiative to achieve semiconductor self-sufficiency**, particularly in **extreme ultraviolet (EUV) lithography technology**. **Hence option (a) is correct.**

● It is called this because it mirrors the **scale, secrecy, and national importance** of the U.S. Manhattan Project, which developed the atomic bomb during World War II.

● EUV lithography is a **cutting-edge semiconductor manufacturing technology** that uses **extreme ultraviolet**

light (wavelength ~13.5 nanometers) to etch extremely small patterns on silicon wafers, forming the integrated circuits (ICs) for advanced chips.

● **Objective:** Develop **domestically-made advanced semiconductor chips** to reduce dependence on Western suppliers like ASML.

● **Technology Focus:** **EUV lithography machines**, which use extreme ultraviolet light to etch circuits thinner than a human hair, essential for AI, smartphones, and military tech.

● **Timeline:** Prototype completed in **early 2025**; goal for working chips is **2028-2030**.

● **Significance:**

- Strengthens **China's technological independence**.
- Reduces **Western leverage** over critical chip supply chains.
- Mirrors the **strategic ambition and secrecy** of the Manhattan Project in the U.S.

PYQ REFERENCE: (2016)

Q. What is 'Greased Lightning-10 (GL-10)', recently in the news?

- (a) Electric plane tested by NASA
- (b) Solar-powered two-seater aircraft designed by Japan
- (c) Space observatory launched by China
- (d) Reusable rocket designed by ISRO

Source: <https://epaper.thehindu.com/ccidist-ws/th/th international/issues/162051/OPS/G2QFAPTEV.1+GU7FAMD2B.1.html>

69. Superkilonova

69. A kilonova, which forms part of a superkilonova event, is associated with:

- (a) Explosion of a white dwarf star
- (b) Merger of two neutron stars
- (c) Collapse of a massive star into a black hole
- (d) Collision of galaxies

Answer: (b) Merger of two neutron stars

Explanation:

In NEWS: Superkilonova: double whammy

A **superkilonova** is a **newly proposed and extremely rare cosmic explosion** that appears to combine the characteristics of both a **supernova** and a **kilonova**.

● A **supernova** occurs when a massive star explodes at the end of its life.

● A **kilonova** occurs when **two neutron stars merge**, producing heavy elements and intense radiation. **Hence option (b) is correct.**

In a **superkilonova**, scientists believe:

● A massive star explodes in a **supernova**.

● Instead of forming a single compact object, the explosion leaves behind **two neutron stars**.

● These neutron stars **merge very quickly**, triggering a **kilonova-like explosion**.

● The result is a **double explosion**, first a supernova, followed by a kilonova observed as one unusually powerful event.

Significance of a superkilonova:
● Advances stellar evolution theories:

It challenges existing ideas about how massive stars collapse and form compact remnants.

● Source of heavy elements:

Like kilonovas, superkilonovas may help explain the origin of heavy elements such as **gold, platinum, and uranium** in the universe.

● Multimessenger astronomy:

These events can emit both **light and gravitational waves**, allowing scientists to study the universe using multiple signals.

● Bridges two cosmic phenomena:

It connects supernova physics with neutron star merger physics, improving understanding of extreme cosmic events.

PYQ REFERENCE: (2023)
Q. Consider the following pairs:

	Objects in space	Description
1	Cepheids	Giant clouds of dust and gas in space
2	Nebulae	Stars which brighten and dim periodically
3	Pulsars	Neutron stars that are formed when massive stars run out of fuel and collapse

How many of the above pairs are correctly matched?

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

Source: <https://www.thehindu.com/sci-tech/science/what-is-a-superkilonova/article70422320.ece>

70. Directed Energy Weapon Systems
70. Which of the following are the applications of Directed Energy Weapons (DEWs)?

- Counter-UAV operations
- Missile interception
- Precision laser cutting in factories
- neutralizing space debris

Select the correct answer using the code given below.

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

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

Explanation:

In NEWS: Apollo Micro Systems gets access to two Directed Energy Weapon Systems tech of DRDO

Directed Energy Weapon (DEW)

● A directed energy weapon is a ranged weapon that damages or destroys a target by firing highly focused energy such as **lasers, microwaves, particle beams, or sound beams without using a solid projectile** (like bullets or missiles).

● DEWs work by concentrating energy on a target to cause damage, disruption, or DEWs are being researched and developed by many countries for applications such as missile defence, counter-drone operations, and disabling enemy equipment.

● Most DEW technologies remain in experimental or early deployment stages, though some systems are being tested in real world defence contexts.

Military Applications:

● **Anti-drone / Counter-UAV systems** – disable or destroy unmanned aerial vehicles.

● **Missile Defence** – intercept and destroy incoming missiles using high-energy lasers.

● **Ship / Vehicle Defence** – protect naval ships, tanks, and aircraft from projectiles or drones.

● **Electronic Warfare** – disrupt enemy electronics, communications, and sensors using microwave DEWs.

● **Personnel Incapacitation** – non-lethal DEWs like acoustic or microwave devices can deter or disperse crowds.

Civil and Industrial Applications:

● **Satellite Defence / Space Applications** – neutralize space debris or hostile satellites.

● **Scientific Research** – lasers used in precision cutting, fusion experiments, or particle acceleration.

● **Industrial Use** – high-power lasers for welding, cutting, and material processing (civilian adaptation).

Emerging / Future Applications

● **Border Security** – track and neutralize unauthorized drones.

● **Cyber-Physical Attack Prevention** – disable sensors or hardware remotely.

● **Medical & Health Applications** – low-energy DEWs (like therapeutic lasers) for targeted treatment (non-lethal).

Hence all are correct.

PYQ REFERENCE: (2020)
Q. Consider the following activities:

- Spraying pesticides on a crop field
- Inspecting the craters of active volcanoes
- Collecting breath samples from spouting whales for DNA analysis

At the present level of technology, which of the above activities can be successfully carried out by using drones?

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

Source:

<https://www.thehindu.com/business/Industry/apollo-micro-systems-gets-access-to-two-directed-energy-weapon-systems-tech-of-drdo/article70425162.ece>

71. 'ANJADIP'

71. Which of the following are the salient features of the Anti-Submarine Warfare Shallow Water Craft 'Anjadip'?

- I. Equipped with Lightweight Torpedoes
- II. Fitted with indigenously designed Anti-Submarine Rockets
- III. Uses shallow water SONAR for underwater threat detection

Select the correct answer using the code given below.

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

Answer: (d) I, II and III

Explanation:

In NEWS: DELIVERY OF 'ANJADIP' - THIRD ANTI SUBMARINE WARFARE SHALLOW WATER CRAFT TO THE INDIAN NAVY

● 'Anjadip', the third of eight ASW SWC (Anti-Submarine Warfare Shallow Water Craft), indigenously designed and built by Garden Reach Shipbuilders and Engineers (GRSE), Kolkata, was delivered to the Indian Navy on 22 Dec 2025 at Chennai.

● The ASW SWC ships have been designed and constructed as per the Classification Rules of Indian Register of Shipping (IRS) under a **Public-Private-Partnership (PPP)**, thus demonstrating the success of collaborative defence manufacturing.

● These ships at approx. 77m length, are the largest Indian Naval Warships propelled by Waterjets and are equipped with state of the art **Lightweight Torpedoes, indigenously designed Anti-Submarine Rockets and shallow water SONAR**, enabling effective detection and engagement of underwater threats. **Hence all are correct.**

● The ship will strengthen the Navy's Anti-Submarine, coastal surveillance and mine laying capabilities.

● The ship is a reincarnation of the erstwhile INS Anjadip, a Petya class Corvette decommissioned in 2003.

● The ship derives its name from **Anjadip Island located off the coast of Karwar, Karnataka**, underscoring India's commitment to safeguarding its expansive maritime domain.

● Anjadip's delivery is yet another milestone in the Indian Navy's quest for indigenous shipbuilding upholding the Government's vision of 'Aatmanirbhar Bharat' with over 80% indigenous content.

● The ship stands as a testament to the growing domestic defence manufacturing ecosystem and reducing dependency on imports.

PYQ REFERENCE: (2016)

Q. Which one of the following is the best description of 'INS Astradharini', that was in the news recently?

- (a) Amphibious warfare ship
- (b) Nuclear-powered submarine
- (c) Torpedo launch and recovery vessel**
- (d) Nuclear-powered aircraft carrier

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2207446®=3&lang=1>

72. Micrometeoroids

72. Consider the following statements:

1. Micrometeoroids are naturally occurring particles, many of which originate from collisions within the asteroid belt.
2. The Inter-Agency Space Debris Coordination Committee (IADC) formulates technical guidelines for space debris mitigation with participation from agencies such as NASA, ESA, ISRO, and JAXA.

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: How are we protecting astronauts from deadly space debris?

MICROMETEORIDS & ORBITAL DEBRIS (MMOD):

● **Micrometeoroids** are naturally occurring particles, mostly originating from **asteroid belt collisions**, with sizes ranging from **a few micrometres to about 2 mm**, and travel at speeds up to **72 km/s**. **Hence statement 1 is correct.**

● **Orbital debris** consists of **human-made, non-functional objects** in Earth's orbit, originating from **exploded rocket stages, defunct satellites, accidental collisions, and anti-satellite (ASAT) tests**.

● Orbital debris typically travels at an average speed of **around 10 km/s**, making even small fragments capable of causing catastrophic damage to spacecraft.

● A cascading chain reaction of collisions among space debris that could make space operations infeasible is known as the **Kessler Syndrome**.

● **Low Earth Orbit (LEO)**, extending roughly from **200 km to 2,000 km**, contains the **highest concentration of orbital debris**.

● Objects larger than **10 cm** in Earth orbit are **actively tracked**, while millions of smaller debris fragments remain **uncatalogued**.

The Inter-Agency Space Debris Coordination Committee (IADC):

● The **Inter-Agency Space Debris Coordination Committee (IADC)** provides technical standards for debris mitigation involving agencies such as **NASA, ESA, ISRO, and JAXA**. **Hence statement 2 is correct.**

● The space debris mitigation guidelines adopted by **UNCOPUOS** are **non-binding "soft law" norms**, lacking enforcement mechanisms.

Source: <https://www.thehindu.com/sci-tech/science/how-are-we-protecting-astronauts-from-deadly-space-debris/article70426332.ece>

73. Sahyog Portal

73. The Sahyog Portal, recently seen in the news was launched to:

- (a) Promote digital payments between government agencies.
- (b) Support rural digital literacy programs.
- (c) Facilitate takedown of illegal online content by authorised agencies.
- (d) Enable Aadhaar verification of social media users.

Answer: (c) Facilitate takedown of illegal online content by authorised agencies.

Explanation:

In NEWS: 'Disturbing public order' accounts for 50% of takedown notices to X

Sahyog Portal:

- Sahyog Portal is a digital platform launched by the Union Government of India to enable State police and authorised government agencies to issue takedown requests to social media intermediaries.
- It aims to ensure the expeditious removal of unlawful or harmful online content, particularly in matters related to public order, national security, and violations of law. **Hence option (c) is correct.**
- The portal operates as part of the implementation framework of the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.
- It functions as a centralised interface for transmitting takedown notices, reducing procedural delays in urgent cases.
- The mechanism underscores the need to balance national security concerns with freedom of speech and expression.
- The portal has also brought attention to issues of intermediary liability, procedural safeguards, and digital rights in India.

PYQ REFERENCE (2018)

Q. The terms 'WannaCry, Petya and Eternal Blue' sometimes mentioned in the news recently are related to

- (a) Exoplanets
- (b) Cryptocurrency
- (c) Cyber attacks**
- (d) Mini satellites

Source:

<https://indianexpress.com/article/india/disturbing-public-order-accounts-for-50-of-takedown-notices-to-x-10433772/>

74. Kashiwazaki-Kariwa Nuclear Power Plant

74. Which of the following is the world's largest nuclear power plant by installed capacity?

- (a) Zaporizhzhia Nuclear Power Plant
- (b) Kashiwazaki-Kariwa Nuclear Power Plant
- (c) Bruce Nuclear Generating Station
- (d) Kudankulam Nuclear Power Plant

Answer: (b) Kashiwazaki-Kariwa Nuclear Power Plant

Explanation:

In NEWS: Japan prepares to restart world's biggest nuclear plant, 15 years after Fukushima

KASHIWAZAKI-KARIWA NUCLEAR POWER PLANT:

- Kashiwazaki-Kariwa Nuclear Power Plant is located in Niigata Prefecture, Japan.
- It is operated by the Tokyo Electric Power Company (TEPCO).
- It is the world's largest nuclear power plant by installed capacity. **Hence option (b) is correct.**
- The plant has an installed capacity of about 7,965 MW.
- It consists of seven nuclear reactors.
- The reactors are of the Boiling Water Reactor (BWR) type.
- The plant uses enriched uranium as nuclear fuel.
- In Boiling Water Reactors, water acts as both coolant and moderator.
- Steam generated in the reactor core is used directly to drive turbines.

PYQ REFERENCE: (2020)

Q. With reference to the "fast breeder reactor" (FBR), consider the following statements:

1. It generates more nuclear fuels than it consumes.
2. It does not use moderators.
3. It is the second stage of India's three stage nuclear programme.

How many of the statements given above are correct?

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

Source:

<https://www.thehindu.com/news/international/japan-prepares-to-restart-worlds-biggest-nuclear-plant-15-years-after-fukushima/article70424778.ece>

75. The Mars Atmosphere and Volatile Evolution (MAVEN) mission

75. The Mars Atmosphere and Volatile Evolution (MAVEN) mission was launched by which of the following space agencies?

- (a) European Space Agency
- (b) Indian Space Research Organisation
- (c) National Aeronautics and Space Administration
- (d) China National Space Administration

Answer: (c) National Aeronautics and Space Administration

Explanation:

In NEWS: NASA loses contact with MAVEN, which reached Mars with Mangalyaan

The Mars Atmosphere and Volatile Evolution (MAVEN) mission:

● MAVEN is a **Mars orbiter mission** of the **National Aeronautics and Space Administration (NASA)**. **Hence option (c) is correct.**

● The mission was **launched in 2013** and entered **Mars orbit in 2014**.

● MAVEN is designed to study the **upper atmosphere of Mars**.

● MAVEN aims to understand how **Mars lost most of its atmosphere** over time.

● The mission focuses on the role of the **Sun and solar wind** in stripping away Martian atmospheric gases.

● MAVEN studies the **evolution of volatile compounds** such as carbon dioxide, nitrogen and water.

● The mission investigates the interaction between the **Martian atmosphere and the solar wind**.

● MAVEN provides data on **atmospheric escape processes** on Mars.

● The mission helps explain the transition of Mars from a **warm and wet past** to a **cold and dry present**.

● MAVEN carries instruments to study **neutral gases, ions, electrons, and magnetic fields**.

● The mission measures **rates of atmospheric loss** to space.

● Findings from MAVEN help scientists understand the **habitability of Mars in the past**.

● MAVEN contributes to comparative planetology by studying how **planetary atmospheres evolve**.

● The mission supports future **human and robotic exploration of Mars** by improving knowledge of space weather around the planet.

PYQ REFERENCE: (2016)

Q. Consider the following statements:

The Mangalyaan launched by ISRO

1. is also called the Mars Orbiter Mission
2. made India the second country to have a spacecraft orbit the Mars after USA
3. made India the only country to be successful in making its spacecraft orbit the Mars in its very first attempt

Which of the statement(s) given above is/are correct?

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

Source: <https://www.thehindu.com/sci-tech/science/nasa-loses-contact-with-maven-which-reached-mars-with-mangalyaan/article70424712.ece>

76. BlueBird Block-2

76. The BlueBird Block-2 satellite launched on ISRO's LVM3 is a

- (a) Communication satellite
- (b) Earth observation satellite
- (c) Remote sensing satellite
- (d) Navigation satellite

Answer: (a) Communication satellite

Explanation:

In NEWS: Prime Minister congratulates space scientists and engineers for successful launch of BlueBird Block-2 by LVM3-M6

BlueBird Block-2:

● The LVM3-M6 / BlueBird Block-2 Mission is a dedicated commercial mission onboard the LVM3 launch vehicle, which will launch the BlueBird Block-2 **communication satellite** of AST SpaceMobile, USA. This mission marks the 6th operational flight of LVM3. **Hence option (a) is correct.**

● LVM3, developed by ISRO, is a three-stage launch vehicle comprising two solid strap-on motors (S200), a liquid core stage (L110), and a cryogenic upper stage (C25).

● It has a lift-off mass of 640 tonnes, a height of 43.5 m, and a payload capability of 4,200 kg to Geosynchronous Transfer Orbit (GTO).

● In its earlier missions, LVM3 successfully launched Chandrayaan-2, Chandrayaan-3, and two OneWeb missions carrying 72 satellites.

● The previous launch of LVM3 was the LVM3-M5/CMS-03 mission, that was successfully accomplished on November 02, 2025.

Key Feature:

- Provides direct-to-cell satellite broadband connectivity
- Enables mobile phone connectivity from space without ground towers
- Uses large phased-array antennas to connect directly with standard smartphones
- Designed to work with existing 4G/5G mobile networks

Orbit: Low Earth Orbit (LEO)

Significance:

- Supports connectivity in remote, rural, maritime, and disaster-prone areas
- Demonstrates commercial heavy-lift capability of ISRO's LVM3
- Strengthens India's role in global commercial satellite launches

PYQ REFERENCE: (2019)

Q. For the measurement/estimation of which of the following are satellite images/remote sensing data used?

1. Chlorophyll content in the vegetation of a specific location
2. Greenhouse gas emissions from rice paddies of a specific location
3. Land surface temperatures of a specific location

Select the correct answer using the code given below.

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2207983®=3&lang=1>

77. Malaria Elimination in India

77. Consider the following statements regarding India's malaria elimination strategy:

1. India aims to eliminate malaria nationwide by the year 2030.
2. India has set a target of achieving zero indigenous malaria cases by 2027.
3. India's malaria elimination targets are aligned with the World Health Organization's global malaria strategy.

How many of the statements given above are correct?

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

Answer: (c) All three

Explanation:

In NEWS: Invasive mosquito species threatens India's 2030 malaria elimination goal

Vector: Anopheles stephensi

- *Anopheles stephensi* is an **invasive mosquito species** in India. It is a **major urban malaria vector**.
- Breeding sites include **artificial containers, water tanks, tyres, and construction sites**.
- It efficiently transmits **Plasmodium falciparum** and **Plasmodium vivax**.
- Urban transmission is facilitated by **high population density, informal settlements, and construction activity**.

Malaria Elimination in India:

- India aims to **eliminate malaria by 2030**.
- **Intermediate goal: Zero indigenous malaria cases by 2027**.
- These targets align with the **WHO Global Technical Strategy for Malaria**.

Hence all the statements are correct.

Malaria Burden

- Malaria cases in India declined from **11.7 lakh in 2015** to around **2.27 lakh in 2024**.
- Malaria deaths in India have decreased by **78%** over the past decade.
- India is currently in the **pre-elimination phase**.
- Malaria is **not uniformly distributed**, but persists in **specific high-burden pockets**.

High-Burden Areas

- Key high-burden states/districts: **Odisha, Tripura, Mizoram**.
- **Border districts** of northeastern India are affected due to **cross-border transmission** from **Myanmar and Bangladesh**.
- Tribal, forested, and migratory population areas require **special surveillance**.

PYQ REFERENCE: (2017)

Q. Consider the following statements:

1. In tropical regions, Zika virus disease is transmitted by 'the same mosquito that transmits dengue.
2. Sexual transmission of Zika virus disease is possible

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

Source: <https://www.thehindu.com/sci-tech/health/invasive-mosquito-species-that-thrives-in-cities-threatens-indias-2030-malaria-elimination-goal/article70440000.ece#:~:text=Urban%20malaria%2C%20driven%20largely%20by,released%20Malaria%20Elimination%20Technical%20Report%2C>

78. Lambda-Cold Dark Matter (LCDM)

78. Recently, Scientists observed that dark energy may actually be weakening, putting the brakes on the universe's acceleration. In the context of dark energy, consider the following statements:

1. Around 70% of the Universe consists of Dark Matter, whereas 25% consists of Dark Energy.
2. Dark Matter can highly emit, absorb, or reflect light.
3. Dark Energy acts as a repulsive force counteracting gravity.

How many of the statements given above are correct?

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

Answer: (a) Only one

Explanation:

In NEWS: A twist in the tale: are scientists wrong about dark energy?

Lambda-Cold Dark Matter (LCDM) Model

- LCDM is the **standard cosmological model** describing the large-scale structure and evolution of the Universe.
- The symbol Λ (**Lambda**) represents **Dark Energy**.
- **Cold Dark Matter (CDM)** refers to **non-relativistic, weakly interacting matter**.
- LCDM assumes the Universe is **homogeneous and isotropic on large scales**.
- The model is based on the **General Theory of Relativity**.

Composition of the Universe (as per LCDM)

- About **68-70%** of the Universe consists of **Dark Energy**.
- About **25-27%** consists of **Dark Matter**. **Hence statement 1 is incorrect.**
- Only about **5%** is **ordinary (baryonic) matter**.

- Dark Energy causes the **accelerated expansion of the Universe**.

Dark Matter (CDM) Characteristics

- Cold Dark Matter moves at **non-relativistic speeds**.
- Dark Matter interacts **gravitationally but not electromagnetically**.
- CDM plays a crucial role in **galaxy formation**.
- Dark Matter does **not emit, absorb, or reflect light**. **Hence statement 2 is incorrect.**

Dark Energy (Λ) Characteristics

- Dark Energy is associated with **negative pressure**.
- It acts as a **repulsive force** counteracting gravity. **Hence statement 3 is correct.**
- Λ is mathematically equivalent to the **cosmological constant** proposed by Einstein.

Observational Evidence Supporting Λ CDM

- **Cosmic Microwave Background (CMB)** radiation observations support Λ CDM.
- Data from the **Planck Satellite** confirms Λ CDM parameters.
- **Type Ia Supernovae** observations indicate accelerated expansion.
- **Large-scale galaxy distribution** matches Λ CDM predictions.

Key Features

- The Universe began with the **Big Bang** approximately **13.8 billion years ago**.
- Λ CDM explains the **formation of cosmic web structures**.
- It successfully predicts **CMB anisotropies**.
- The model does not explain the **true nature of Dark Matter and Dark Energy**.

PYQ REFERENCE: (2015)

Q. In the context of modern scientific research, consider the following statements about 'IceCube', a particle detector located at South Pole, which was recently in the news:

1. It is the world's largest neutrino detector, encompassing a cubic kilometre of ice.
2. It is a powerful telescope to search for dark matter.
3. It is buried deep in the ice.

Which of the statements given above is/are correct?

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

Source: <https://www.thehindu.com/sci-tech/science/dark-energy-yonsei-university-universe-expansion-supernova-cosmology/article70448858.ece>

79. PRAGATI platform

79. Which of the following statements best describes the term 'PRAGATI', recently seen in the news?

- (a) A digital platform for real-time governance review by bringing together the Prime Minister, Union Secretaries, and State Chief Secretaries.

- (b) A rural development scheme aimed at promoting self-help groups and microfinance.
- (c) An initiative to promote renewable energy and green technology in urban areas.
- (d) A parliamentary committee for assessing financial performance of central ministries.

Answer: (a) A digital platform for real-time governance review by bringing together the Prime Minister, Union Secretaries, and State Chief Secretaries.

Explanation:

In NEWS: Replicate PRAGATI in states, set up data strategy units: PM Modi

PRAGATI - Pro-Active Governance And Timely Implementation:

- It is an ICT-based, multi-purpose, multi-modal platform launched by the Prime Minister of India in 2015.
- **Objective:** To bring together the Prime Minister, Union Secretaries, and Chief Secretaries of the States on one platform for **real-time governance review**. **Hence option (a) is correct.**

Functions:

1. Monitors implementation of **flagship programmes and schemes**.
2. Tracks **projects involving investments above ₹500 crore**.
3. Reviews **public grievances and complaints** received through the CPGRAMS (Centralised Public Grievance Redress and Monitoring System).

Technology Used:

- Combines **video-conferencing, data management, and digital monitoring tools**.
- Enables the PM to directly interact with Central and State officials.

Impact:

- Faster resolution of bottlenecks in infrastructure projects.
- Enhances **accountability and transparency**.
- Helps improve **Centre-State coordination**.

PYQ REFERENCE: (2017)

Q. Which of the following statements best describes the term 'Scheme for Sustainable Structuring of Stressed Assets (S4A)', recently seen in the news?

- (a) It is a procedure for considering ecological costs of developmental schemes formulated by the Government.
- (b) **It is a scheme of RBI for reworking the financial structure of big corporate entities facing genuine difficulties.**
- (c) It is a disinvestment plan of the Government regarding Central Public Sector Undertakings.
- (d) It is an important provision in 'The Insolvency and Bankruptcy Code' recently implemented by the Government.

Source: <https://indianexpress.com/article/india/replicate-pragati-in-states-set-up-data-strategy-units-pm-modi-10443896/>

80. WAVES 2025

80. Consider the following statements:

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

Which of the statements given above is/are not 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 Hosts the WAVES 2025; Over 90 Countries Participate in the Pioneering Initiative of Ministry of Information and Broadcasting

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 incorrect.**
- 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.

PYQ REFERENCE: (2016)

Q. With reference to 'Agenda 21', sometimes seen in the news, consider the following statements:

1. It is a global action plan for sustainable development.
2. It originated in the World Summit on Sustainable Development held in Johannesburg in 2002.

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

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=2209982®=3&lang=1>

ENVIRONMENT AND AGRICULTURE

81. Pobitora Wildlife Sanctuary

81. Pobitora Wildlife Sanctuary is located in

- (a) Arunachal Pradesh
- (b) Assam
- (c) Gujarat
- (d) West Bengal

Answer: (b) Assam

Explanation:

In NEWS: Migratory birds have started arriving at the Pobitora Wildlife Sanctuary in Morigaon, Assam.



Pobitora Wildlife Sanctuary:

- Pobitora Wildlife Sanctuary is located in **Morigaon District, Assam**, approximately 40 km east of Guwahati. **Hence option (b) is correct.**
- It covers an area of around **38.85 square kilometres**.
- The sanctuary is renowned for having one of the **highest densities of one-horned rhinoceroses** in the world.
- Other wildlife found here include **elephants, wild buffalo, leopards, sambar deer, swamp deer, and hog deer**.
- Pobitora is also a hotspot for **bird species**, including greater adjutant storks, pelicans, and migratory birds.
- The sanctuary lies on the **floodplains of the Brahmaputra River**, providing rich grassland and wetland habitats.
- It faces conservation challenges such as **human-wildlife conflict, poaching, flooding, and habitat fragmentation**.
- Pobitora is part of India's **Project Rhino** initiative for rhino conservation.
- The sanctuary is a popular site for **safari tours, rhino sightings, and birdwatching**. It is an integral part of Assam's network of wildlife sanctuaries, alongside **Kaziranga and Manas National Parks**.

PYQ REFERENCE: (2018)

Q. In which one of the following States is Pakhui Wildlife Sanctuary located?

- (a) Arunachal Pradesh
- (b) Manipur
- (c) Meghalaya
- (d) Nagaland

Source: The Hindu

82. Tiger deaths in Madhya Pradesh

82. Consider the following statements with respect to tiger deaths in Madhya Pradesh:

- I. Madhya Pradesh has witnessed a year-on-year increase in reported tiger deaths over the last three years.
- II. In 2025, electrocution caused by illegal electric fencing accounted for the highest share of tiger deaths attributed to unnatural causes.
- III. Tiger deaths due to unnatural causes exceeded those resulting from natural causes in 2025.

Which of the statements given above is/are correct?

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

Answer: (b) I and II

Explanation:

In NEWS: 55 tigers dead in Madhya Pradesh in 2025, highest since Project Tiger was launched more than half century ago

- Madhya Pradesh has recorded **55 tiger deaths in 2025**, the **highest number** in a year since Project Tiger was launched in 1973.
- This figure surpasses the deaths recorded in the previous years, for example, 46 in 2024, 45 in 2023 and 43 in 2022, indicating a worrying upward trend. **Hence statement I is correct.**
- Of the 55 fatalities, forest officials estimate 11 were due to unnatural causes, including 8 out of 11 deaths due to electrocution from illegal electric fences used by villagers to protect crops, which can be fatal to dispersing tigers. **Hence statement II is correct and III is incorrect.**
- Most of the remaining deaths are thought to be from natural causes such as age, territorial conflicts, and disease, which may increase as tiger populations grow.
- The latest death involved a tiger found in the Sagar district's Dhana range, and investigations are ongoing to determine the exact cause.
- The Madhya Pradesh Forest Department has taken notice of the rising toll and directed senior officers to prioritise wildlife protection and reduce avoidable deaths.

PYQ REFERENCE: (2014) (2014)

Q. Other than poaching, what are the possible reasons for the decline in the population of Ganges River Dolphins?

- 1. Construction of dams and barrages on rivers
- 2. Increase in the population of crocodiles in rivers
- 3. Getting trapped in fishing nets accidentally
- 4. Use of synthetic fertilizers and other agricultural chemicals in crop-fields in the vicinity of rivers

Select the correct answer using the code given below.

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

Source: <https://indianexpress.com/article/india/55-tigers-dead-madhya-pradesh-2025-highest-project-10444866/>

83. Regeneration in species

83. Consider the following organisms:

- 1. Zebrafish
- 2. Planarian flatworms
- 3. Hydra
- 4. Axolotl
- 5. Starfish

How many of the above organisms can exhibit regeneration of their body parts?

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

Answer: (d) All five

Explanation:

In NEWS: In axolotls and flatworms, regeneration is a body-wide choreograph

Animals with High Regenerative Ability

- **Planarian flatworms** – can regenerate an entire body from small fragments
 - **Axolotl (salamander)** – regenerates limbs, spinal cord, heart tissue, and parts of the brain
 - **Starfish (sea stars)** – regenerate arms and sometimes the whole body
 - **Hydra** – regenerates complete organism from tiny body parts
 - **Sea cucumbers** – regenerate internal organs
 - **Zebrafish** – regenerate fins, heart muscle, and retina
- Hence all are correct.**

Animals with Partial Regeneration

- **Lizards** – regenerate tails (not bones completely)
- **Crabs & lobsters** – regenerate lost claws and legs
- **Frogs (tadpoles)** – regenerate tails and limbs (limited in adults)

Plants (High Regeneration)

- **Bryophyllum** – new plants from leaf margins
- **Potato** – regeneration from tuber “eyes”
- **Banana** – vegetative regeneration via rhizomes
- **Willow** – regrowth from cut stems

Key Mechanisms of Regeneration

1. **Stem Cell Activation** – Pluripotent stem cells (e.g., planarian neoblasts) migrate to injury sites and form needed tissues.
2. **Cellular Dedifferentiation** – Mature cells near wounds (e.g., in axolotls, zebrafish) revert to stem-like state, proliferate, and rebuild structures.
3. **Blastema Formation** – Undifferentiated cell mass forms at the wound, acting as a hub for tissue regrowth (muscle, bone, skin).
4. **Systemic Signaling** – Nervous system (axolotls) or gut-derived signals (flatworms) coordinate regeneration across the body.
5. **Epigenetic & Molecular Control** – Genes (Wnt, FGF, BMP, Notch) and growth factors guide cell growth, patterning, and differentiation to form correct structures.

PYQ REFERENCE: (2024)

Q. Consider the following :

1. Carabid beetles
2. Centipedes
3. Flies
4. Termites
5. Wasps

Parasitoid species are found in how many of the above kind of organisms?

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

Source: <https://www.thehindu.com/sci-tech/science/in-axolotls-and-flatworms-regeneration-is-a-body-wide-choreograph/article70424728.ece>

84. Kuno National Park

84. Consider the following statements regarding Kuno National Park:

1. It is known as the primary site for the reintroduction of cheetahs under Project Cheetah.
2. The park derives its name from the Kuno River, a tributary of the Narmada river.
3. The landscape of Kuno consists mainly of wet evergreen forests and montane forests.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) None of the above

Answer: (a) 1 only

Explanation:

In NEWS: M.P. CM releases 3 cheetahs into the Kuno National Park

Kuno National Park:

- Kuno National Park is located in the **Sheopur and Morena districts** of Madhya Pradesh.
- It was first declared **Kuno Wildlife Sanctuary in 1981** and later upgraded to a **National Park in 2018**.
- The park derives its name from the **Kuno River**, a tributary of the **Chambal**. **Hence statement 2 is incorrect.**
- The landscape of Kuno consists mainly of **dry deciduous forests and savanna grasslands**. **Hence statement 3 is incorrect.**

Project Cheetah:

- Kuno was selected as the **primary site for the reintroduction of cheetahs** under **Project Cheetah**. **Hence statement 1 is correct.**
- The first batch of **African cheetahs** was released into Kuno in **September 2022**.
- The park was chosen due to its **large contiguous habitat, low human interference, and healthy prey base**.

Challenges in Cheetah Reintroduction:

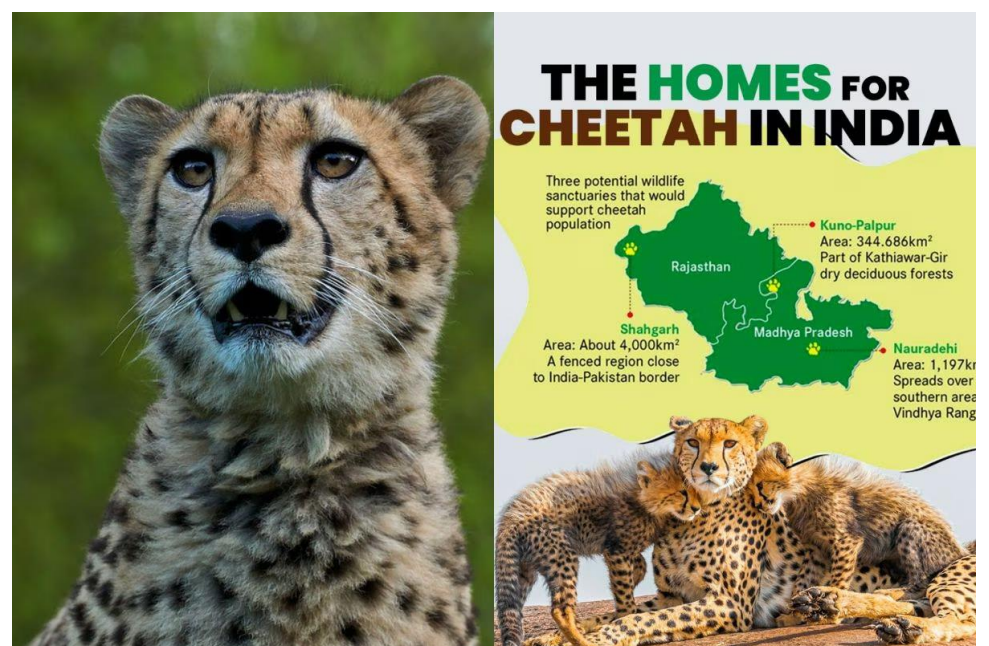
- The cheetah reintroduction project faces issues such as **mortality, heat stress, infections, and radio-collar-related injuries**.
- Kuno currently lacks adequate **fenced enclosures** required for the soft release of cheetahs.
- **Prey-predator imbalance** and **territorial stress** are emerging ecological concerns.
- Fringe villages around the park face potential **human-wildlife conflict** risks.
- The **Sahariya tribe** has been relocated from the region for wildlife conservation purposes.

Asiatic Lion Translocation:

- Kuno has also been proposed for the **translocation of Asiatic lions** from Gir, but the project remains delayed.

Biodiversity:

- The park hosts species such as **leopards, hyenas, jackals, chital, sambar, chinkara, nilgai, and wild boar**.
- More than **200 bird species**, including several **vultures and raptors**, are recorded from the park.
- The **Madhya Pradesh Forest Department** is responsible for managing and protecting the park.



PYQ REFERENCE: (2017)

Q. Recently there was a proposal to translocate some of the lions from their natural habitat in Gujarat to which one of the following sites?

- (a) Corbett National Park
- (b) Kuno Palpur Wildlife Sanctuary**
- (c) Mudumalai Wildlife Sanctuary
- (d) Sariska National Park

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/mp-cm-releases-three-cheetahs-into-the-wild-at-kuno-national-park/article70357817.ece>

85. Invasive species

85. Lantana camara, Chromolaena odorata and Prosopis juliflora caught attention in the news for which one of the following reasons common to all of them?

- (a) They are all invasive alien species spreading rapidly in India's natural ecosystems.
- (b) They are all medicinal plants newly added to the AYUSH herbal compendium.
- (c) They are all endangered native species under the Wildlife Protection Act.
- (d) They are all tree species recommended for large-scale afforestation by the Forest Department.

Answer: (a) They are all invasive alien species spreading rapidly in India's natural ecosystems.

Explanation:

In NEWS: India's natural areas losing 15,500 sq km a year to fast-spreading invasive species

- A recent study finds that each year, around 15,500 km² of India's natural areas are newly invaded by at least one alien plant species.
- The study estimates that about 144 million people, millions of livestock, and large areas of small-holder farmland are now exposed to at least one invasive plant species.
- **Among the most widespread invasive plants identified are Lantana camara, Chromolaena odorata and Prosopis juliflora.** These species now dominate in nearly two-thirds of India's natural ecosystems. **Hence option (a) is correct.**
- As a result, native ecosystems — forests, grasslands, savannas, wetlands — are losing their native plants and ecological balance, which threatens wildlife, reduces fodder and fuelwood availability, degrades soil fertility, and undermines livelihoods for rural, pastoral and tribal communities.

SOME INVASIVE SPECIES IN INDIA

- **Lantana camara** – Spreads aggressively in forests; toxic to many animals.
- **Prosopis juliflora** (Vilayati babul / Keekar) – Dominates arid and semi-arid lands; depletes groundwater.
- **Chromolaena odorata** (Siam weed) – Invades forest floors and grasslands.
- **Parthenium hysterophorus** (Congress grass) – Causes skin allergies and respiratory issues; dominates farmlands.

- **Ageratum conyzoides** (Goat weed) – Common in croplands; competes with native plants.
- **Mikania micrantha** (Mile-a-minute weed) – Smothers vegetation; major threat in Northeast India.
- **Eichhornia crassipes** (Water hyacinth) – Blocks waterways, reduces oxygen, kills fish.
- **Ipomoea carnea** – Poisonous shrub; dominates wetlands and riverbanks.
- **Akk** (Calotropis procera) – Dominates wastelands and dry regions.
- **Leucaena leucocephala** (Subabul) – Spreads rapidly; affects grasslands.

PYQ REFERENCE: (2018)

Q. Why is a plant called Prosopis juliflora often mentioned in the news?

- (a) Its extract is widely used in cosmetics.
- (b) It tends to reduce the biodiversity in the area in which it grows.**
- (c) Its extract is used in the synthesis of pesticides.
- (d) None of the above

Source: <https://www.downtoearth.org.in/wildlife-biodiversity/indias-natural-areas-losing-15500-sq-km-a-year-to-fast-spreading-invasive-species>

86. Vultures in India

86. Q. Consider the following pairs:

Vulture Species	IUCN Status
1. White-rumped Vulture	Critically Endangered
2. Egyptian Vulture	Vulnerable
3. Himalayan Vulture	Near Threatened
4. Griffon Vulture	Least Concern

How many of the above pairs are correctly matched?

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

Answer: (c) Only three

Explanation:

In NEWS: Wildlife body BNHS to release 6 critically endangered vultures in Assam in 2026

Vultures in India:

India has **nine species of vultures**, many of which are critically endangered due to rapid population decline.

Vulture Species	IUCN Status	Wildlife Protection Act, 1972
White-rumped Vulture (<i>Gyps bengalensis</i>)	Critically Endangered	Schedule I
Indian / Long-billed Vulture (<i>Gyps indicus</i>)	Critically Endangered	Schedule I
Slender-billed Vulture (<i>Gyps tenuirostris</i>)	Critically Endangered	Schedule I
Red-headed / King Vulture (<i>Sarcogyps calvus</i>)	Critically Endangered	Schedule I
Egyptian Vulture (<i>Neophron percnopterus</i>)	Endangered. Hence 3 is incorrect.	Schedule I
Himalayan Vulture (<i>Gyps himalayensis</i>)	Near Threatened	Schedule I
Griffon / Eurasian Griffon (<i>Gyps fulvus</i>)	Least Concern	Schedule IV
Cinereous Vulture (<i>Aegypius monachus</i>)	Near Threatened	Schedule I
Bearded Vulture / Lammergeier (<i>Gypaetus barbatus</i>)	Near Threatened	Schedule I

Threats & Conservation Efforts

- The biggest cause of vulture decline was the veterinary drug **diclofenac**, which is toxic to vultures feeding on contaminated cattle carcasses.
- India banned veterinary diclofenac in **2006**, but illegal use and multi-dose vials remain a concern.
- **Meloxicam** is the main vulture-safe NSAID promoted as an alternative.
- Vultures play a crucial ecological role by **cleaning carcasses**, preventing disease outbreaks.
- India has created multiple **Vulture Safe Zones** and launched the **Action Plan for Vulture Conservation 2020–2025**.
- Captive-breeding centres are located in **Pinjore (Haryana), Rani (Assam), Bhopal (MP)** and other regions to restore Gyps vulture populations.
- Other threats include habitat loss, power-line collisions, food scarcity, poisoning, and pesticide-contaminated carcasses.

PYQ REFERENCE: (2012)

Q. Vultures which used to be very common in Indian countryside some years ago are rarely seen nowadays. This is attributed to

- (a) the destruction of their nesting sites by new invasive species
(b) a drug used by cattle owners for treating their diseased cattle
 (c) scarcity of food available to them
 (d) a widespread, persistent and fatal disease among them

Source:

<https://www.thehindu.com/news/cities/mumbai/bnhs-to-release-sixcritically-endangeredvultures-in-assam-after-15-yearconservation-effort/article70357957.ece>

87. Western Tragopan

87. Consider the following statements with respect to the Western Tragopan:

- It is endemic to the Western Himalayan region
- It is listed as Endangered on the IUCN Red List
- It is the state bird of Rajasthan

Which of the statements given above are not correct?

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

Answer: (b) II and III only

Explanation:

In NEWS: Breeding project gives endangered western tragopan breathing space

The Western Tragopan:

- **The Western Tragopan (Tragopan melanocephalus) is a rare and brightly colored pheasant found in the Western Himalayas. Hence statement I is correct.**
- It is found mainly in the Western Himalayas, particularly in Himachal Pradesh and Uttarakhand.
- Its range also extends slightly into northern Pakistan, but India is a major part of its natural habitat.
- It is endemic to the Western Himalayan region, meaning it is naturally found only in this area.
- In India, it is the state bird of Himachal Pradesh and is considered one of the rarest living landfowl. **Hence statement III is incorrect.**
- It is listed as **Vulnerable** on the IUCN Red List due to habitat loss and hunting. **Hence statement II is incorrect.**
- Its natural habitat includes temperate forests with dense undergrowth at altitudes of 1,800–3,000 meters.
- The bird is known for its striking red and orange plumage with white spots, especially in males.
- Conservation efforts focus on habitat protection, anti-poaching measures, and community awareness programs.

- Protected Areas: Protected within areas like Great Himalayan National Park (GHNP).
- Captive Breeding: Programs at Sarahan Pheasantry aim to build a reserve population.
- Monitoring: Ongoing monitoring and community awareness campaigns.
- Habitat Management: Studies model habitat suitability to guide future strategies.

PYQ REFERENCE: (2025)

Q. Regarding Peacock tarantula (Gooty tarantula), consider the following statements:

- It is an omnivorous crustacean.
- Its natural habitat in India is only limited to some forest areas.
- In its natural habitat, it is an arboreal species.

Which of the statements given above is/are correct?

- I only
- I and III
- II only
- II and III

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/western-tragopan-india-steadied-by-captive-breeding-reintroduction-delayed/article70379668.ece>

88. Red-shanked douc monkeys

88. With reference to the Red-shanked douc monkey, consider the following statements:

- It is endemic to the tropical forests of Southeast Asia.
- It is listed as Critically Endangered on the IUCN Red List.
- It is primarily a frugivorous species and spends most of its time on the ground.

Which of the statements given above is/are correct?

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

Answer: (a) 1 and 2 only

Explanation:

In NEWS: Bengaluru Customs foil wildlife smuggling attempt at KIA

● Customs officials at the Kempegowda International Airport (KIA) thwarted a wildlife smuggling attempt on Wednesday, arresting a passenger from Bangkok after two red-shanked douc monkeys were found concealed in his check-in baggage. The primates, classified as an endangered species and protected under international wildlife laws, were rescued and handed over to animal welfare authorities. The officials said that the passenger has been arrested under provisions of the Wildlife Protection Act and Customs Act. Further probe is under way.

Red-shanked douc monkey (Pygathrix nemaeus)

- **Type:** Old World monkey (family *Cercopithecidae*), one of the most colourful primates.
- **Distribution:** Central Vietnam and parts of Laos; endemic to Southeast Asia. **Hence statement 1 is correct.**
- **Habitat:** Tropical evergreen and semi-evergreen forests; highly arboreal.
- **Distinct features:** Grey body, white forearms, **bright red lower legs ("red shanks")**, orange face, long white tail.
- **Diet:** Primarily folivorous (young leaves), also fruits, flowers. **Hence statement 3 is incorrect.**
- **Behaviour:** Diurnal, lives in multi-male multi-female groups.
- **Conservation status:** Critically Endangered (IUCN). **Hence statement 2 is correct.**
- **Major threats:**
 - Habitat loss and fragmentation (logging, infrastructure)
 - Hunting and illegal wildlife trade
- **Conservation significance:** Indicator of forest health; flagship species for biodiversity conservation in Indochina.



PYQ REFERENCE: (2013)

Q. In which of the following States is lion-tailed macaque found in its natural habitat?

- Tamil Nadu
- Kerala
- Karnataka
- Andhra Pradesh

Select the correct answer using the codes given below:

- 1, 2 and 3 only
- 2 only
- 1, 3 and 4 only
- 1, 2, 3 and 4

Source:

<https://www.thehindu.com/news/national/karnataka/bengaluru-customs-foil-wildlife-smuggling-attempt-at-kia/article70384600.ece>

89. Green Maritime in India

89. Consider the following pairs:

	Initiatives	Objectives
1	Harit Sagar Green Port Guidelines	Framework for carbon-neutral and ecosystem-safe port operations
2	Green Tug Transition Programme (GTTP)	Transition of harbour tugs to cleaner fuels
3	Harit Nauka Initiative	Promotion of green technologies in inland vessels
4	Coastal Green Shipping Corridor	Low-emission coastal shipping route between ports

How many of the pairs given above are correctly matched?

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

Answer: (d) All four

Explanation:

In NEWS: India's Green Maritime Odyssey

Flagship Initiatives and Programmes powering India's Green Maritime Economy

● **Harit Sagar Green Port Guidelines and Green:** These Guidelines act as a guiding tool for decision making in ensuring sustainability in development and operation of the Port and establishing frameworks towards attaining carbon neutrality with zero disturbance to the ecosystem dynamics of the surrounding aquatic and atmospheric environment. The guidelines promote use of sustainable materials, practices and technologies.

● **Green Tug Transition Programme (GTTP):** The Green Tug Transition Program (GTTP) as a key initiative under the 'Panch Karma Sankalp'. This landmark initiative is set to drive the transition from conventional fuel-based harbour tugs to greener, more sustainable alternatives, marking a major step in India's commitment to environmental sustainability and the advancement of its maritime sector. This program not only aligns with the country's environmental goals but also strengthens India's commitment to 'Make in India,' promoting domestic innovation and manufacturing in the maritime industry.

● **Harit Nauka (Green Vessel) Initiative:** The Harit Nauka guidelines for inland vessels have been launched which aim to promote adoption of greener technologies in inland waterway vessels.

● **Coastal Green Shipping Corridor:** A Coastal Green Shipping Corridor will be established, with the Kandla-Tuticorin corridor being the 1st to be developed in partnership with SCI, Deendayal Port Authority (DPA) and V. O. Chidambaranar Port Authority (VoCPA).

● **Sagarmala Programme:** A flagship initiative to transform India into a global maritime hub is a core pillar of the MIV 2030 and Maritime Amrit Kaal Vision 2047. The programme focuses on cutting logistics costs, enhancing trade efficiency, and creating employment through smarter and greener transport networks.

Hence all are correct.

PYQ REFERENCE: (2016)

Q. Which of the following best describes/describe the aim of 'Green India Mission' of the Government of India?

1. Incorporating environmental benefits and costs into the Union and State Budgets thereby implementing the 'green accounting'
2. Launching the second green revolution to enhance agricultural output so as to ensure food security to one and all in the future
3. Restoring and enhancing forest cover and responding to climate change by a combination of adaptation and mitigation measures

Select the correct answer using the code given below.

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2203895®=3&lang=1>

90. PM 1

90. With reference to PM1 (particulate matter smaller than 1 micron), consider the following statements:

1. PM1 is currently monitored under India's Continuous Ambient Air Quality Monitoring System (CAAQMS).
2. PM1 can penetrate the alveoli and enter the bloodstream, unlike PM10.
3. PM1 often constitutes nearly half of the PM2.5 concentration in polluted cities.
4. Both the World Health Organization (WHO) and India's CPCB have prescribed ambient air quality standards for PM1.

Which of the statements given above are correct?

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

Answer: (a) 2 and 3 only

Explanation:

In NEWS: India is focusing on PM10, but PM2.5 is the real threat

PM1 (Particulate Matter < 1 micron):

● PM1 refers to particulate matter with an aerodynamic diameter **less than 1 micrometre**.

- **Health risk:** PM1 is more harmful than PM2.5 due to its ability to **penetrate alveoli, enter the bloodstream and reach vital organs. Hence statement 2 is correct.**
- **Diseases linked:** Cardiovascular diseases, hypertension (including in children), cancer, respiratory illnesses, stroke and premature mortality.
- **Children at risk:** Studies show a sharp rise in **childhood hypertension** with increasing PM1 exposure.
- **Chemical toxicity:** PM1 carries **toxic metals** such as lead, cadmium, chromium and nickel and reactive organic compounds.
- **Surface-area effect:** Higher surface-area-to-volume ratio makes PM1 **chemically more reactive** than coarser particles.
- **Sources:** High-temperature combustion from **vehicular engines, industrial stacks, and recondensed metal and organic vapours.**
- **Contribution:** PM1 can form **around 50% of PM2.5 mass** in polluted urban environments. **Hence statement 3 is correct.**
- **Atmospheric role:** Contributes to **haze formation** and new particle formation in dense urban airsheds.
- **Monitoring gap in India:**
 - Not monitored under **CAAQMS. Hence statement 1 is incorrect.**
 - No **CPCB standards** or regulatory limits
 - Monitoring limited to short-term research studies
- **Data underestimation:** Hygroscopic growth in humid conditions leads to **significant underreporting**, especially during winter and rush hours.
- **Technological challenge:** Lack of approved real-time instruments and need for **sampler upgrades.**
- **Policy gap:** Bharat Stage VI norms regulate **particle number**, not PM1 mass concentration.
- **Global status:** Neither **WHO nor India** has prescribed ambient air quality standards for PM1. **Hence statement 4 is incorrect.**

PYQ REFERENCE:

Q. In the context of WHO Air Quality Guidelines, consider the following statements:

1. The 24-hour mean of PM2.5 should not exceed 15 $\mu\text{g}/\text{m}^3$ and annual mean of PM2.5 should not exceed 5 $\mu\text{g}/\text{m}^3$.
2. In a year, the highest levels of ozone pollution occur during the periods of inclement weather.
3. PM10 can penetrate the lung barrier and enter the bloodstream.
4. Excessive ozone in the air can trigger asthma.

Which of the statements given above are correct?

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

Source:

<https://indianexpress.com/article/explained/delhi-air-pollution-problem-10412892/>
<https://www.downtoearth.org.in/air/pm1-deadlier-than-pm25-but-not-monitored-what-india-can-do>

91. Nauradehi tiger reserve

91. Nauradehi Tiger Reserve, recently notified under Project Tiger, is located in which of the following states?

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

Answer: (b) Madhya Pradesh

Explanation:

In NEWS: Nauradehi tiger reserve to be third cheetah habitat in MP before next monsoon: CM Yadav

Nauradehi Tiger Reserve:

- Nauradehi Tiger Reserve is located in the state of **Madhya Pradesh. Hence option (b) is correct.**
- It was notified as a **Tiger Reserve under Project Tiger in 2023.**
- The reserve comprises **Nauradehi and Durgadevi Wildlife Sanctuaries.**
- It lies within the **Central Indian Landscape** and plays a role in tiger connectivity.
- The area is drained by tributaries of the **Ken and Narmada river systems.**
- The dominant vegetation type is **tropical dry deciduous forest.**
- The reserve contributes to genetic exchange between tiger populations of central India.

PYQ REFERENCE: (2015)

Q. From the ecological point of view, which one of the following assumes importance in being a good link between the Eastern Ghats and the Western Ghats?

- (a) Sathyamangalam Tiger Reserve**
- (b) Nallamala Forest
- (c) Nagarhole National Park
- (d) Seshachalam Biosphere Reserve

Source:

<https://www.thehindu.com/news/national/madhya-pradesh/nauradehi-tiger-reserve-to-be-third-cheetah-habitat-in-mp-before-next-monsoon-cm-yadav/article70394929.ece>

92. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

92. Consider the following statements with respect to the Convention on International Trade in Endangered Species of Wild Fauna and Flora:

- I. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species.
- II. The original Convention was brought out in five languages.
- III. Recently, the 20th meeting of the Parties to CITES (CoP20) was held in Samarkand, Uzbekistan.

Which of the statements given above is/are correct?

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

Answer: (b) I and III

Explanation:

In NEWS:

● The 20th meeting of the Parties to CITES (CoP20) was held in **Samarkand, Uzbekistan — coinciding with the 50th anniversary of the Convention. Hence statement III is correct.**

● Over 12 days and 114 agenda items, the meeting produced 353 decisions, 46 rounds of voting, and considered 50 listing proposals. In total, 77 species were newly added to the CITES appendices.

● Notable uplistings: among the new protections are many sharks and rays including the Oceanic whitetip shark, Whale shark and all species of Manta ray and Devil ray now under Appendix I (the highest protection).

CITES:

● CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments.

● Its aim is to ensure that **international trade in specimens of wild animals and plants does not threaten the survival of the species. Hence statement I is correct.**

● CITES was drafted as a result of a resolution adopted in 1963 at a meeting of members of IUCN (The World Conservation Union). **On 1 July 1975 CITES entered into force.**

● The original of the Convention was deposited with the Depositary Government in the **English, French and Spanish languages**, each version being equally authentic. The Convention is now also available in **Chinese and Russian. Hence statement II is correct.**

● Although CITES is legally binding on the Parties – in other words they have to implement the Convention – it does not take the place of national laws. Rather it provides a framework to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.

● For many years CITES has been among the conservation agreements with the largest membership, with now 185 Parties.

● The species covered by CITES are listed in three Appendices, according to the degree of protection they need.

○ **Appendix I** includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances.

○ **Appendix II** includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival.

○ **Appendix III** contains species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling the trade. Changes to Appendix III follow a distinct procedure from changes to Appendices I and II, as each Party's is entitled to make unilateral amendments to it.

PYQ REFERENCE: (2015)

Q. With reference to the International Union for Conservation of Nature and Natural Resources (IUCN) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which of the following statements is/are correct?

1. IUCN is an organ of the United Nations and CITES is an international agreement between governments.
2. IUCN runs thousands of field projects around the world to better manage natural environments.
3. CITES is legally binding on the States that have joined it, but this Convention does not take the place of national laws.

Select the correct answer using the code given below.

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

Source: https://www.downtoearth.org.in/wildlife-biodiversity/cites-cop20-global-south-drives-critical-changes-and-shapes-global-wildlife-trade-policies?utm_source=chatgpt.com

93. India's Solar Momentum

93. With reference to renewable energy in India, consider the following statements:

1. India has already achieved its target of 50% installed electricity capacity from non-fossil sources before 2030.
2. Under the PM Surya Ghar scheme, households are eligible to receive up to 300 units of free electricity per month.
3. The PLI scheme for Solar PV Modules provides incentives only for fully integrated manufacturing units.

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: (a) 1 and 2 only

Explanation:

In NEWS: India's Solar Momentum: 129 GW solar push takes non-fossil share beyond 50% of total installed capacity

India's Solar Momentum:

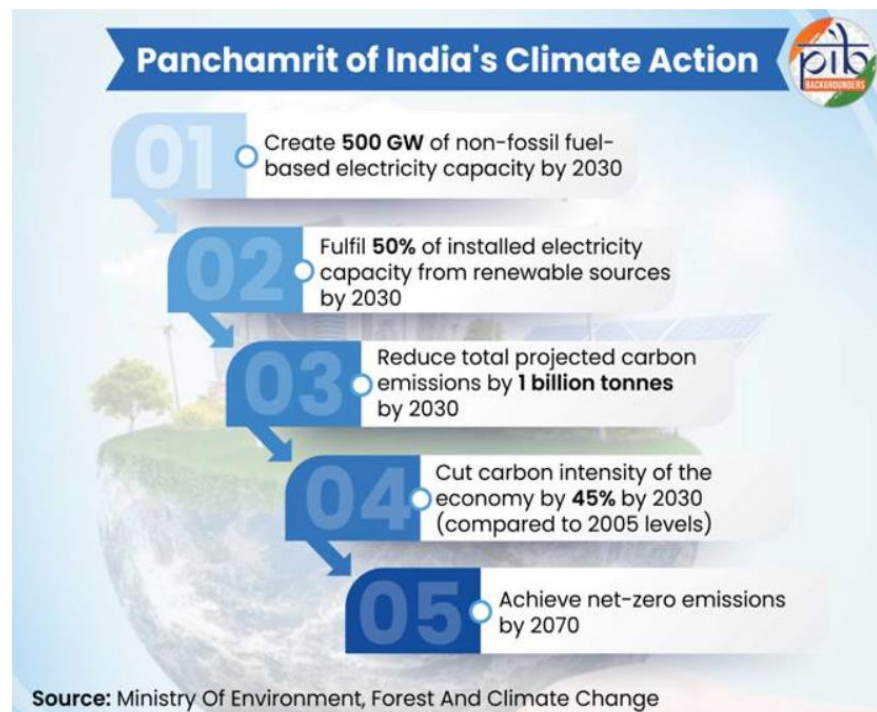
● India's solar journey is powering its emergence as a global clean energy leader.

● As the **founding member and host of the International Solar Alliance (ISA) headquarters in Gurugram**, India has championed solar energy deployment, finance, and technology transfer across more than **125 member nations**.

Driving the Green Transition: India's roadmap under Panchamrit Framework

● Rapid progress in renewable energy expansion is driven not only by market momentum but also by a robust policy and strategic framework. National targets and global climate commitments, outlined under the **Panchamrit Declaration at COP26 in Glasgow (November 2021)**, provide a clear roadmap for a sustainable energy future.

The five key components of the Panchamrit framework are as follows:



India's Solar Capacity & Milestones

- Solar capacity in India increased from **3 GW (2014)** to **129 GW (2025)** — **40-fold growth**.
- **Non-fossil installed capacity** crossed **259 GW**, now over **50%** of India's total 500 GW installed capacity.
- India ranks globally (IRENA 2025):
 - **3rd** in solar energy
 - **4th** in wind energy
 - **4th** in total renewable energy capacity
- Rajasthan, Gujarat, and Karnataka account for the **highest share of solar installations**.
- India is among the **top five solar-powered countries globally**.
- Ultra-mega solar parks are being developed under the **Solar Park Scheme**.
- The **PLI Scheme for High-Efficiency Solar PV Modules** promotes domestic manufacturing.
- India seeks to reduce reliance on imported solar modules, mainly sourced from **China**.
- The **National Solar Mission (NSM)** under NAPCC drives long-term solar deployment.

India's Solar Initiatives:

PM Surya Ghar

● PM Surya Ghar aims to install rooftop solar in **1 crore households** with up to **300 units of free electricity monthly**. **Hence statement 2 is correct.**

● It has an outlay of **₹75,021 crore**, supporting household-level renewable adoption.

● As of Dec 2025, **23.9 lakh homes** have installed **7 GW** rooftop solar under the scheme.

National Solar Mission (NSM)

● NSM, launched in **2010**, promotes large-scale solar deployment across India.

● India's solar portfolio under NSM includes **98.72 GW ground-mounted** and **22.42 GW rooftop** capacity.

● NSM supports India's target of **500 GW non-fossil fuel capacity by 2030**.

PLI Scheme for High-Efficiency Solar PV Modules

● PLI scheme with **₹24,000 crore outlay** incentivises domestic solar PV manufacturing.

● It aims to create **48,337 MW** both **fully integrated and partially integrated** solar PV manufacturing production capacity. **Hence statement 3 is incorrect.**

● As of 2025, the scheme has attracted **₹52,900 crore investment** and created **44,400 jobs**.

PM-KUSUM

● PM-KUSUM promotes solarisation in agriculture through pumps and RE plants.

● Over **9 lakh standalone solar pumps** and **10,535 grid-connected pumps** have been installed.

● The scheme is extended to **March 2026**, offering **30-50% CFA** for pumps up to **15 HP**.

Solar Parks & Ultra-Mega Solar Projects

● Solar Parks scheme targets **40 GW** capacity with large-scale infrastructure support.

● As of 2025, **55 solar parks** with **39,973 MW** capacity have been sanctioned.

● Installed capacity in solar parks has reached **14,922 MW**.

International Solar Alliance (ISA)

● ISA, headquartered in **Gurugram**, promotes global solar energy deployment.

● Its **8th Assembly (2025)** saw participation from **125+ countries**.

● ISA advances the global **One Sun, One World, One Grid** vision.

One Sun, One World, One Grid (OSOWOG)

● OSOWOG aims to **link international renewable energy grids** for shared solar power.

● It seeks a **transnational solar power network** for global energy security.

● The initiative strengthens India's leadership in global clean-energy diplomacy.

India's Global Solar Leadership

● India co-leads clean energy initiatives under **Mission Innovation and CEM**.

● India achieved its **2030 non-fossil electricity capacity target ahead of schedule**. **Hence statement 1 is correct.**

● Global bodies like the **IEA** recognise India as a key driver of global energy transitions.

PYQ REFERENCE: (2018)

Q. With reference to solar power production in India, consider the following statements:

1. India is the third-largest in the world in the manufacture of silicon wafers used in photovoltaic units.
2. The solar power tariffs are determined by the Solar Energy Corporation of India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Source:

<https://static.pib.gov.in/WriteReadData/specificdocs/documents/2025/dec/doc2025126720001.pdf>

94. India's achievements in Solar Energy

94. Consider the following statements:

- I. According to the IRENA Renewable Energy Statistics 2025, India ranks 3rd in solar energy globally.
- II. India hosted the 8th Assembly of the International Solar Alliance (ISA) in New Delhi in 2025.
- III. Solar energy capacity in India crossed 129 GW by 2025.

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: India's Solar Momentum - 129 GW solar push takes non-fossil share beyond 50% of total installed capacity

India's Solar Momentum:

● Hosting the 8th International Solar Alliance (ISA) Assembly in October 2025, India reaffirmed its commitment to advancing global solar adoption, resilient supply chains, and inclusive access. **Hence statement II is correct.**

● With 129 GW of solar capacity and over 259 GW of non-fossil electricity capacity as of October 2025, India has crossed the milestone of 50% non-fossil installed power capacity, marking a transformative shift toward low-carbon energy. **Hence statement III is correct.**

● India ranks 3rd in solar, and 4th in wind and total renewable energy capacity globally, according to the IRENA Renewable Energy Statistics 2025 **Hence statement I is correct.**

● This growth is supported by key government initiatives such as PM Surya Ghar, the National Solar Mission, the Production-Linked Incentive (PLI) Scheme for solar PV manufacturing, and the PM-KUSUM scheme for solarizing agriculture.

● Solar energy has grown over 40-fold since 2014, making it the largest contributor to the renewable energy mix.

● Internationally, India leads major clean-energy alliances, including the International Solar Alliance and the One Sun, One World, One Grid (OSOWOG) initiative, promoting global solar connectivity.

Initiatives in India:

● **PM Surya Ghar:** A national mission to provide rooftop solar systems to 1 crore households, offering up to 300 units of free electricity monthly to promote residential solar adoption.

● **National Solar Mission (NSM):** A flagship initiative launched in 2010 to promote large-scale deployment of solar energy and develop India's solar power capacity across various technologies.

● **Production-Linked Incentive (PLI) Scheme for Solar PV:** A scheme to boost domestic manufacturing of high-efficiency solar PV modules by offering financial incentives linked to production and performance.

● **PM-KUSUM Scheme:** A programme to promote solar use in agriculture by installing solar pumps, solarizing existing pumps, and enabling farmers to generate and sell solar power.

PYQ REFERENCE: (2018)

Q. With reference to solar power production in India, consider the following statements:

1. India is the third largest in the world in the manufacture of silicon wafers used in photovoltaic units.
2. The solar power tariffs are determined by the Solar Energy Corporation of India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2197444®=3&lang=1>

95. Rainfed Area Development (RAD)

95. The Rainfed Area Development (RAD) aims to make agriculture climate resilient primarily by

- (a) Expanding irrigated area through major and medium irrigation projects
- (b) Promoting Integrated Farming Systems suited to local ecological conditions
- (c) Maximizing fertilizer application in dryland areas
- (d) Encouraging use of genetically modified seeds

Answer: (b) Promoting Integrated Farming Systems suited to local ecological conditions

Explanation:

In NEWS: Support for Mixed Farming

Rainfed Area Development (RAD) scheme

● Rainfed Area Development (RAD) scheme was launched in 2014-15 to mainstream development of rainfed areas in a sustainable manner.

● It adopts an area-based approach, focuses on **Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variability. Hence option (b) is correct.**

● Under this system, crops/ cropping system is integrated with activities like horticulture, livestock, fishery, agro-forestry, apiculture etc. to enable farmers not only in maximizing farm returns for sustaining livelihood, but also to mitigate the impacts of drought, flood or other extreme weather events with the income opportunity from allied activities during crop damage.

● A financial assistance of up to **Rs. 30,000/- per family** can be given for adoption of integrated farming systems.

● A cluster of 100 hectare or more (contiguous or non-contiguous in difficult terrain with close proximity in a village/adjoining villages) may be adopted to derive noticeable impact of convergence and encourage local participation and for future replication of the model in larger areas.

The key objectives of the Mission are as follows:

- To undertake location specific and landscape-based approach to dry-land areas to ensure natural resources conservation and sustainable use, strengthening of agriculture production systems and livelihood development through integration/convergence of schemes in an area-based approach.
- To make agriculture more productive, sustainable, remunerative and climate resilient by promoting location specific Integrated/Composite Farming Systems.
- To conserve natural resources through appropriate soil and moisture conservation measures.
- To develop capacity of farmers and stakeholders in conjunction with other ongoing Missions such as National Food and Nutrition Security Mission, National Initiative for Climate Resilient Agriculture (NICRA) etc., in the domain of climate change adaptation measures.
- To improve the productivity of rainfed farming by mainstreaming rainfed technologies refined under All India Coordinated Research Project on Dry land Agriculture (AICRPDA-NICRA) and by leveraging resources/provisions made under other Schemes/Missions like Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), PMKSY-WDC, NFNSM, RKVY, Krishonnati Yojana, SMAE, National Mission on Natural Farming etc.

PYQ REFERENCE: (2013)

Q. Which of the following is the chief characteristic of 'mixed farming'?

- (a) Cultivation of both cash crops and food crops
- (b) Cultivation of two or more crops in the same field
- (c) Rearing of animals and cultivation of crops together**
- (d) None of the above

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2201000®=3&lang=1>

96. Socially Inclusive and Climate-Resilient Solar Adoption in Agriculture

96. Consider the following statements about SoLAR:

- I. It is a programme designed to promote solar energy solutions in agriculture in a way that is inclusive, sustainable, and climate-resilient.
- II. It is launched by the United Nations Environment Program.
- III. India is one of the participating countries in the SoLAR initiative.

Which of the statements given above are correct?

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

Answer: (a) I and III only

Explanation:

In NEWS:

SoLAR:

- SoLAR stands for "Socially Inclusive and Climate-Resilient Solar Adoption in Agriculture".
- It is a programme designed to promote solar energy solutions in agriculture in a way that is inclusive, sustainable, and climate-resilient. **Hence statement I is correct.**
- International Water Management Institute, IWMI) and Swiss Agency for Development and Cooperation (SDC) jointly launched the programme. **Hence statement II is incorrect.**
- It is an expanded multi-country programme aimed at accelerating socially inclusive and climate-resilient solar energy adoption in agriculture across India, Bangladesh, Kenya and Ethiopia. **Hence statement III is correct.**

Objectives:

- Promote solar-powered agricultural technologies (e.g., solar pumps, irrigation systems, cold storage).
- Support climate-resilient farming practices to reduce dependence on fossil fuels and increase energy efficiency.
- Encourage socially inclusive adoption, particularly among smallholder and marginal farmers, women, and rural communities.
- Facilitate knowledge sharing, capacity building, and technical support across participating countries.

PYQ REFERENCE: (2022)

Q. In the context of India's preparation for Climate-Smart Agriculture, consider the following statements:

1. The 'Climate-Smart Village' approach in India is a part of a project led by the Climate Change, Agriculture and Food Security (CCAFS), an international research programme.
2. The project of CCAFS is carried out under Consultative Group on International Agricultural Research (CGIAR) headquartered in France.
3. The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in India is one of the CGIAR's research centres.

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

Source: <https://www.downtoearth.org.in/energy/solar-phase-ii-launched-to-scale-climate-resilient-solar-irrigation-across-south-asia-and-east-africa>

97. Overview of India's Coffee Sector

97. Consider the following statements with respect to India's Coffee Sector:

1. India grows both Arabica in cooler highlands and Robusta in warmer, humid regions.
2. India is the 2nd largest producer of coffee, contributing to 3.5% of global coffee production.
3. India has Geographical Indication (GI) tags for five regional coffee varieties.
4. The Coffee Board of India functions under the administrative control of the Ministry of Commerce and Industry.

5. India is the 5th-largest coffee exporter globally among coffee-producing nations.

How many of the statements given above are correct?

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

Answer: (c) Only four

Explanation:

In NEWS: Brewing Prosperity: “India’s Coffee Story from Farm to Global Fame”

India’s Coffee Sector:

Historical Background

- India’s coffee journey began around **1600 AD** when **Sufi Saint Baba Budan** planted seven seeds brought from Yemen in **Baba Budan Giri (Karnataka)**.
- Commercial coffee plantations expanded during the **18th century**.

Cultivation & Ecology

- Indian coffee is grown under a **two-tier shade system** using evergreen and leguminous trees.
- Coffee cultivation spans **4.91 lakh hectares** across Western Ghats, Eastern Ghats, and North-Eastern states.
- **Smallholder farmers** account for **99% of holdings** and **70% of production**.
- Coffee plantations also grow spices such as **pepper, cardamom, vanilla, orange, and banana**.
- India grows both **Arabica** (cooler highlands) and **Robusta** (warmer, humid regions). **Hence statement 1 is correct.**
- India is the **7th-largest producer of coffee**, contributing **~3.5% of global production**. **Hence statement 2 is incorrect.**
- India produces **~3.6 lakh tonnes annually**, with **70% exported to 128 countries**.

Major Coffee Regions

- Karnataka, Kerala, and Tamil Nadu account for **96% of production**; Karnataka alone produces **~2.8 lakh tonnes**.
- India is divided into **13 agro-climatic coffee zones**:
 - **Traditional regions** – Karnataka, Kerala, Tamil Nadu
 - **Non-traditional** – Andhra Pradesh, Odisha
 - **North Eastern** – Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura
- Important recognised coffee regions include **Anamalais, Araku Valley, Bababudangiris, Chikkamagaluru, Coorg, Nilgiris, Sheveroys, Travancore, Wayanad**.

GI-Tagged Coffees

- India has **five regional GI coffees**:
 - Coorg Arabica
 - Wayanad Robusta
 - Chikmagalur Arabica
 - Araku Valley Arabica
 - Bababudangiris Arabica. **Hence statement 3 is correct.**
- Two specialty coffees have GI status:

- **Monsooned Malabar Robusta**
- (Also recognised) **Monsooned Malabar AA** and **Mysore Nuggets Extra Bold** (specialty varieties).

Specialty Coffees

- Specialty coffees represent the finest quality beans, distinguished by their exceptional **flavor, aroma, and appearance**.
- Specialty coffees are produced through **selective plucking** and **meticulous processing**.
- Key specialty coffees include
 - **Monsooned Malabar AA** – Known for its smooth, mellow flavour and low acidity, developed through a unique monsooning process along India’s western coast.
 - **Mysore Nuggets Extra Bold** – One of India’s finest Arabica coffees with large beans, rich aroma, and full-bodied flavour.
 - **Robusta Kaapi Royale** – A superior Robusta variety known for its bold flavor, excellent crema, and ideal for espresso blends.

Coffee Board of India (Statutory Body)

- In the **1940s**, India’s coffee industry faced a severe crisis, caused by **World War II**, declining prices, and widespread infestations of pests and diseases.
- To safeguard and revive the sector, the Government of India enacted the **“Coffee Act VII of 1942”**, leading to the establishment of the **Coffee Board of India** under the administrative control of the **Ministry of Commerce and Industry**. **Hence statement 4 is correct.**
- Has **33 members** including Chairman, CEO, growers, traders, State Governments, MPs.
- Mandate includes **R&D, market promotion, quality improvement, exports, and infrastructure support**.
- Runs **Integrated Coffee Development Project (ICDP)** for pulpers, drying yards, etc.
- Research Department is headquartered at **Central Coffee Research Institute (CCRI)**.

Exports & Global Position

- India is the **5th-largest coffee exporter** globally (among coffee-producing nations). **Hence statement 5 is correct.**
- Coffee exports crossed **USD 1.8 billion in FY 2024–25** (40% growth from previous year).
- April–September 2025 exports: **USD 1.07 billion** (15.5% growth).
- **Instant coffee** accounts for **38% of total exports**.
- Top export destinations: **Italy, Germany, Belgium, Russia, UAE**.

Policy Initiatives & Trade Reforms

- GST on **coffee extracts/instant coffee** reduced from **18% to 5%**, lowering retail prices by **11–12%**.
- **India–UK CETA**:
 - The UK gives **duty-free access** for Roast & Ground and instant coffee.
- **India–EFTA TEPA** (effective Oct 2025):
 - Switzerland, Norway, Iceland offer **zero-duty** on all coffee imports from India.
 - Expected to boost premium coffee exports.

Fine Cup Awards & KYK Programme

- **Fine Cup Awards** launched in 2002 recognize premium coffees.

- **Know Your Kaapi (KYK)** programme (2022-23) evaluates specialty coffees in six categories.
- **Koraput Coffee (Odisha)** won two Fine Cup Awards in 2024 (washed & natural process).

TDCCOL & Tribal Coffee

- **TDCCOL (Odisha)** procures tribal coffee using **doorstep procurement**.
- Ensures **fair pricing** with direct bank payments.
- Has launched **Koraput Coffee brand** (2019).
- TDCCOL has **eight Koraput Coffee cafés** across Odisha and New Delhi.

Future Outlook

- The Indian coffee market is expected to grow at **8.9% CAGR by 2028**.
- Out-of-home coffee segment to grow at **15-20% CAGR** (US\$2.6-3.2 billion by 2028).
- Coffee Board aims to increase production to **9 lakh tonnes by 2047**.

PYQ REFERENCE: (2010)

Q. Though coffee and tea both are cultivated on hill slopes, there is some difference between them regarding their cultivation. In this context, consider the following statements:

1. Coffee plant requires a hot and humid climate of tropical areas whereas tea can be cultivated in both tropical and subtropical areas.
2. Coffee is propagated by seeds but tea is propagated by stem cuttings only.

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2196210®=3&lang=1>

98. National Mission on Edible Oils

98. With reference to 'India's Edible Oil Ecosystem', which of the following statements are correct?

1. According to a NITI Aayog report 2024, India ranks first globally in the production of rice bran oil, castor seed, safflower, sesame, and niger.
2. The National Mission on Edible Oils (NMEO) is a central sector scheme launched to increase domestic production of edible oils.
3. The mission is implemented under the Ministry of commerce and industry.

Select the correct answer using the code given below:

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

Answer: (a) 1 only

Explanation:

In NEWS: National Mission on Edible Oils: Strengthening India's Edible Oil Ecosystem

India's Edible Oil Ecosystem

- According to a **NITI Aayog report (August 2024)**, India ranks **first globally** in the production of rice bran oil, castor seed, safflower, sesame, and niger. **Hence statement 1 is correct.**
- National Mission on Edible Oils (NMEO) aims to strengthen the country's oilseed ecosystem and achieve Atmanirbharta in edible oil production.
- The NMEO-OP (Oil Palm) aims to bring 6.5 lakh hectares under oil palm cultivation by 2025-26 and increase crude palm oil production to 28 lakh tonnes by 2029-30.
- By November 2025, 2.50 lakh hectares have been covered, bringing the total coverage of oil palm in the country to 6.20 lakh hectares. Crude Palm Oil (CPO) production has risen from 1.91 lakh tonnes in 2014-15 to 3.80 lakh tonnes in 2024-25.
- NMEO-OS (Oil Seeds) aims to increase oilseed production from 39 to 69.7 million tonnes by 2030-31 through cluster-based interventions and improved seed systems.

National Mission on Edible Oils:

- NMEO is a **Centrally Sponsored Scheme** launched to increase domestic production of edible oils. **Hence statement 2 is incorrect.**
- The mission has two components: **NMEO-Oil Palm (NMEO-OP)** and **NMEO-Oilseeds** (traditional oilseeds).
- NMEO-Oil Palm was launched in **2021** with an outlay of **₹11,040 crore**.
- The mission aims to reduce India's import dependence, as India imports around **60%** of its edible oil requirement.
- NMEO-OP promotes oil palm cultivation particularly in the **North-East states and Andaman & Nicobar Islands**.
- The scheme provides **financial assistance** for planting material, maintenance, fertilizers, and irrigation.
- NMEO introduces a **Viability Price (VP)** mechanism to ensure remunerative and stable prices for oil palm farmers.
- The mission aims to increase oil palm coverage to nearly **10 lakh hectares**.
- NMEO supports production of traditional oilseeds like **mustard, groundnut, soybean, sesame, sunflower, and safflower**.
- The scheme funds **HYV seed distribution**, mini-kits, and improved agronomic practices for oilseeds.
- NMEO strengthens **processing and post-harvest infrastructure** for edible oils, including oil mills.
- The mission is implemented by the **Department of Agriculture and Farmers Welfare (DAC&FW)** under the Ministry of Agriculture. **Hence statement 3 is incorrect.**
- NMEO encourages **crop diversification** from water-intensive crops to oilseeds.
- NMEO-OP includes **viability gap funding (VGF)** for oil palm processing units.
- The mission works with **State governments, ICAR, and KVVKs** for technology transfer.

PYQ REFERENCE: (2018)

Q. Consider the following statements:

1. The quantity of imported edible oils is more than the domestic production of edible oils in the last five years.
2. The Government does not impose any customs duty on all the imported edible oils as a special case.

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2200287®=3&lang=1>

99. Honey Mission program

99. Consider the following States:

1. Punjab,
2. Uttar Pradesh,
3. Bihar
4. Maharashtra

How many of the above are generally known as honey-producing States?

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

Answer: (d) All four States

Explanation:

In NEWS: Mention in PM's address in the 128th Episode of 'Mann Ki Baat'

The Honey Mission:

- The Honey Mission was launched in 2017-18 by the Khadi and Village Industries Commission (KVIC) under the Ministry of Micro, Small & Medium Enterprises to promote beekeeping across India.
- The programme aims to create sustainable livelihood opportunities for farmers, rural youth, women, and tribal communities through income generation from beekeeping.
- Under this mission, beneficiaries receive bee-boxes, live bee colonies, tool kits, and hands-on training in scientific beekeeping, hive management, honey extraction, and disease control.
- The mission also focuses on pollination services, which increase agricultural productivity and crop yield in the surrounding areas.
- The initiative contributes to the broader "Sweet Revolution", a national effort to increase honey production, improve quality, and generate rural employment.

Other initiatives facilitating Honey Production:

- Under 'A Scheme of Fund for Regeneration of Traditional Industries' (SFURTI) implemented by the Ministry of MSME, traditional beekeepers are provided with sustainable employment by organizing them into clusters, and supporting them with new machinery and training.
- Under the National Beekeeping & Honey Mission (NBHM) scheme under the Ministry of Agriculture, scientific beekeeping is promoted for holistic growth of the sector, leading to income and employment generation, livelihood support to farm and non-farm households.

Honey Production in India

- In recent years, India has become the second-largest exporter of natural honey.
- India produces between 1.2 to 1.3 lakh metric tonnes of honey per year on average.
- Production has grown steadily due to scientific beekeeping, government missions, and rising demand for natural products.
- Punjab, Haryana, Uttar Pradesh, Bihar, West Bengal, and Maharashtra are the leading producers. **Hence option (d) is correct.**
- South Indian states like Karnataka, Tamil Nadu, and Kerala also contribute significantly due to diverse flora.
- India exports around 1 lakh MT of natural honey annually.
- Major export destinations include the USA, UAE, Saudi Arabia, and Europe.
- India is setting new records in honey production. 11 years ago, honey production in the country was 76 thousand metric tons. It has now increased to more than 1.5 lakh metric tons.

PYQ REFERENCE: (2022)

Q. Consider the following States:

1. Andhra Pradesh
2. Kerala
3. Himachal Pradesh
4. Tripura

How many of the above are generally known as tea-producing States?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2196481®=3&lang=1>

100. Butterfly richness in India

100. Consider the following statements regarding butterfly diversity in India:

1. Kerala hosts the highest number of butterfly species in India.
2. Butterflies serve as reliable indicator species of ecosystem health.
3. All butterfly species recorded in India are endemic to the Western Ghats.

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: (a) 1 and 2 only

Explanation:

In NEWS: Study affirms Kerala's rich butterfly diversity

Butterfly richness in India

1. India is home to **about 1,300 species of butterflies**.
2. Kerala records the **highest butterfly species richness among Indian States within the Western Ghats. Hence statement 1 is correct.**
3. The **Western Ghats is one of the global biodiversity hotspots** contributing significantly to India's butterfly diversity.
4. Tropical evergreen and moist deciduous forests support **maximum butterfly diversity**.
5. Butterflies are considered **good bio-indicators** because they are highly sensitive to changes in climate, vegetation, and habitat quality. **Hence statement 2 is correct.**
6. A large proportion of butterfly species found in Kerala are **endemic to the Western Ghats. Hence statement 3 is incorrect.**
7. Forest fragmentation, monoculture plantations, and climate variability pose **major threats to butterfly diversity** in Kerala.
8. Protected areas in Kerala support **greater butterfly diversity compared to human-modified landscapes**.
9. Butterfly diversity is closely linked to the **availability of larval host plants and nectar resources**.
10. Long-term field surveys and citizen science initiatives have played a role in **documenting butterfly diversity in Kerala**.

PYQ REFERENCE: (2017)

Q. Due to some reasons, if there is a huge fall in the population of species of butterflies, what could be its likely consequence/consequences?

1. Pollination of some plants could be adversely affected.
2. There could be a drastic increase in the fungal infections of some cultivated plants.
3. It could lead to a fall in the population of some species of wasps, spiders and birds.

Select the correct answer using the code given below:

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

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/study-affirms-keralas-rich-butterfly-diversity/article70403285.ece>

101. National Bioenergy Programme (NBP)

101. The National Bioenergy Programme comprises which of the following sub-schemes?

1. Waste to Energy Programme
2. Biomass Programme
3. Biogas Programme
4. National Ethanol Blending Programme

Select the correct answer using the code below:

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

Answer: (a) 1, 2 and 3 only

Explanation:

In NEWS: National Bioenergy Programme (NBP)

India's National Bioenergy Programme (NBP), implemented by the Ministry of New and Renewable Energy (MNRE), aims to utilize biomass, dung, and urban/industrial waste for energy, promoting clean fuel, waste management, rural income, and GHG reduction through sub-schemes for Biomass (pellet/briquette), Biogas, and Waste-to-Energy projects, offering Central Financial Assistance (CFA) for setting them up until FY 2025-26.

The National Bioenergy Programme will comprise the following sub-schemes:

1. Waste to Energy Programme (Programme on Energy from Urban, Industrial and Agricultural Wastes /Residues)
2. Biomass Programme (Scheme to Support Manufacturing of Briquettes & Pellets and Promotion of Biomass (non-bagasse) based cogeneration in Industries)
3. Biogas Programme

Hence option (a) is correct.

Waste to Energy Programme:

- Implemented by MNRE since 2018 to generate biogas, Bio-CNG, and power from urban, industrial, and agricultural wastes.
- Under revised guidelines (2021-26), Central Financial Assistance is provided for large biogas, Bio-CNG, and power plants, excluding MSW-to-power projects.
- The Bio-CNG component supports the SATAT scheme of MoPNG, which targets 15 MMT of CBG from 5,000 plants, with long-term pricing assured by Oil Marketing Companies.

Biomass Programme:

- Promoted since the 1990s to support biomass power and bagasse cogeneration.
- The focus has shifted to manufacturing biomass pellets and briquettes for power generation and non-bagasse biomass-based projects.
- It supports the National Mission on Co-firing of Biomass in Thermal Power Plants, helping reduce stubble burning, with Central Financial Assistance available during 2021-26.

Biogas Programme:

- In operation since 1981-82 to promote clean biogas for cooking and lighting in rural areas.

- Support for medium-sized plants (25–2500 m³/day) for decentralised power and thermal energy has been provided since 2005–06.
- Under revised guidelines (2021–26), enhanced financial assistance is available for biogas plants ranging from 1 to 2500 m³ per day.

PYQ REFERENCE: (2019)

Q. In the context of which one of the following arc the terms ‘pyrolysis and plasma gasification’ mentioned?

- (a) Extraction of rare earth elements
- (b) Natural gas extraction technologies
- (c) Hydrogen fuel-based automobiles
- (d) Waste-to-energy technologies**

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2205039®=3&lang=2>

102. Polyommatus eriwanensis

102. What is the significance of ‘Polyommatus eriwanensis’, a blue butterfly endemic to Armenia, seen in the news?

- (a) It is being used in scientific research to develop genetically modified crops for pest control.
- (b) It has been chosen as the official emblem of COP17 of the Convention on Biological Diversity 2026.
- (c) It is a migratory species linking multiple countries through ecological corridors for ecosystem monitoring.
- (d) It is a recently discovered species in a remote Arctic ecosystem, symbolizing climate change impacts.

Answer: (b) It has been chosen as the official emblem of COP17 of the Convention on Biological Diversity 2026.

Explanation:

In NEWS: A butterfly is the face of COP17 to be held next year in Yerevan

- Armenia has unveiled the official logo and slogan for the 17th Conference of the Parties (COP17) to the Convention on Biological Diversity (CBD), scheduled to be held in Yerevan in October 2026. **Hence option (b) is correct.**
- The logo centres on the Erivan Anomalous Blue (a blue butterfly endemic to Armenia), symbolising biodiversity, ecosystem health and the need for “Taking action for nature” — the conference’s slogan.



Polyommatus eriwanensis:

Distribution:

- Endemic to Armenia, specifically around Yerevan and nearby regions.
- Not found naturally outside this area, making it a localised endemic species.

Habitat:

- Prefers grasslands, meadows, and open areas near the city of Yerevan.
- Relies on specific host plants for larval development (common for Lycaenidae species).

Appearance:

- Males have vivid blue upper wings; females are generally brownish with blue hints.
- Undersides are pale with distinctive spots, typical of the Polyommatus genus.

Ecological Significance:

- Serves as an indicator species for the health of local ecosystems.
- Pollinator for various native plants.
- Its presence reflects biodiversity and habitat integrity in Yerevan’s region.

Conservation Status:

- Being endemic, it is sensitive to habitat loss, urbanisation, and climate change.
- Highlighted in COP17 (2026) as the official logo species, bringing attention to biodiversity conservation in Armenia.

Source: <https://www.downtoearth.org.in/wildlife-biodiversity/a-butterfly-is-the-face-of-cop17-to-be-held-next-year-in-yerevan>

103. Arctic Report Card 2025

103. Which of the following are the possible impacts of Arctic warming?

1. Rise in global sea levels
2. Increased risks to Arctic navigation, indigenous livelihoods, and polar ecosystems
3. Occurrence of stronger storms, ex-typhoons, and floods at higher latitudes
4. Northward movement of boreal species and changes in phytoplankton affecting food chains
5. Release of greenhouse gases and pollutants
6. Altered river flows, glacial lake outburst floods, and landslides affecting human settlements

Select the correct answer using the code given below:

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

Answer: (d) 1, 2, 3, 4, 5 and 6

Explanation:

In NEWS: Equatorial Pacific shows early signals of El Niño return in 2026

Arctic Report Card 2025:

1. **Arctic warming rate is twice the global average**; 2025 was the **hottest year on record** for the region.
2. **Summer sea ice extent** has shrunk by **~50% since the 1980s**; oldest ice (>4 years) declined by **>95%**.
3. Greenland Ice Sheet and **mountain glaciers continue to lose mass**, contributing to **global sea-level rise**.
4. Arctic snow cover is **melting earlier**, reducing reflective surfaces and **accelerating warming**.
5. Warmer Arctic Ocean waters are increasing **storm intensity**, with Pacific cyclones reaching **higher latitudes**.
6. **Atlantification** (warmer Atlantic water moving north) weakens sea ice stability and disrupts ecosystems.
7. Arctic ecosystems show **borealisation**, with southern species moving north and native Arctic species declining.
8. Melting permafrost and glaciers are **polluting rivers** and increasing **local hazards** like floods and landslides.

Possible Impacts of Arctic Warming 2025

1. **Sea-level rise** from melting Greenland Ice Sheet and glaciers, threatening **coastal communities worldwide**.
2. **Thinning and reduced sea ice** increases risks for Arctic navigation, indigenous livelihoods, and polar ecosystems.
3. **Extreme weather events**: stronger storms, ex-typhoons, and floods at higher latitudes.
4. **Ecosystem disruption**: boreal species moving north, loss of Arctic species, changes in phytoplankton affecting the food chain.
5. **Permafrost thawing** releases greenhouse gases and pollutants, further amplifying climate change.
6. **Hydrological changes**: altered river flows, glacial lake outburst floods, and landslides affecting human settlements.

Hence all the statements are correct.

PYQ REFERENCE:(2011)

Q. The formation of ozone hole in the Antarctic region has been a cause, of concern. What could be the reason for the formation of this hole?

- (a) Presence of prominent tropospheric turbulence; and inflow of chlorofluorocarbons
- (b) Presence of prominent polar front and stratospheric clouds; and inflow of chlorofluorocarbons**
- (c) Absence of polar front and stratospheric clouds; and inflow of methane and chlorofluorocarbons.
- (d) Increased temperature at polar region due to global warming

Source:<https://www.downtoearth.org.in/climate-change/equatorial-pacific-shows-early-signals-of-el-ni%C3%B1o-return-in-2026>

104. The Global Environment Facility (GEF)

104. The Global Environment Facility (GEF) serves as the financial mechanism for which among the following international environmental conventions?

- I. Convention on Biological Diversity (CBD)
- II. United Nations Framework Convention on Climate Change (UNFCCC)
- III. United Nations Convention to Combat Desertification (UNCCD)

- IV. Stockholm Convention on Persistent Organic Pollutants
- V. Minamata Convention on Mercury.

Select the correct answer using the code given below.

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

Answer: (c) I, II, III, IV and V

Explanation:

In NEWS:

- The Global Environment Facility (GEF) has approved \$372 million for a new set of environment and biodiversity projects, with biodiversity conservation emerging as a key priority.
- The funding is drawn from multiple windows, including the GEF Trust Fund, Least Developed Countries Fund (LDCF), Special Climate Change Fund (SCCF), and the Global Biodiversity Framework Fund (GBFF), highlighting the integrated approach to climate adaptation and biodiversity protection.

Global Environment Facility (GEF) :

- Global Environment Facility (GEF) is a multilateral environmental fund **established in October 1991 (ahead of the 1992 Rio Earth Summit)** to provide grants and blended finance for global environmental projects, especially in developing countries and economies in transition.
- It is headquartered in Washington, D.C., USA and has **186 member countries working with international institutions, civil society and the private sector.**
- The GEF funds projects in key environmental areas such as biodiversity conservation, climate change mitigation and adaptation, international waters, land degradation, persistent organic pollutants (POPs), mercury, sustainable forest management, food security, and sustainable cities.
- It is the **largest source of multilateral funding for biodiversity globally**, distributing more than \$1 billion per year on average.
- It operates through a governing Assembly and Council, a Secretariat, and 18 implementing agencies such as **the World Bank, UNEP, UNDP**, regional development banks and conservation organisations.

The GEF serves as the financial mechanism for major international environmental conventions, including

- the Convention on Biological Diversity (CBD),
- United Nations Framework Convention on Climate Change (UNFCCC),
- United Nations Convention to Combat Desertification (UNCCD),
- the Stockholm Convention on POPs, and
- the Minamata Convention on Mercury.

Hence all are correct.

PYQ REFERENCE: (2014)

Q. With reference to 'Global Environment Facility', which of the following statements is/are correct?

- (a) It serves as financial mechanism for 'Convention on Biological Diversity' and 'United Nations Framework Convention on Climate Change'
- (b) It undertakes scientific research on environmental issues at global level
- (c) It is an agency under OECD to facilitate the transfer of technology and funds to underdeveloped countries with specific aim to protect their environment
- (d) Both (a) and (b)

Source: <https://www.downtoearth.org.in/wildlife-biodiversity/gef-clears-372-million-for-environment-projects-biodiversity-in-sharp-focus>

105. Heatwaves

105. Consider the following statements:

- Heatwaves caused more deaths than floods and storms in 2025.
- According to the India Meteorological Department (IMD), a heatwave is declared when maximum temperature reaches at least 40°C in plains, 37°C in coastal areas, and 30°C in hilly regions.
- The 1.5°C global warming threshold was crossed for the first time as a three-year average.

How many of the statements given above are correct?

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

Answer: (c) All three

Explanation:

In NEWS: Heatwaves were the deadliest climate disasters in 2025, hitting poorest hardest, WWA finds

Heatwaves - Definition:

● A **heatwave** is a **prolonged period of abnormally high temperatures** relative to the normal climate of a region.

India-specific (IMD) Definition

- According to the **India Meteorological Department (IMD)**, a heatwave is declared when **maximum temperature reaches at least 40°C in plains, 37°C in coastal areas, and 30°C in hilly regions, and**
- Temperature departure is **4.5°C to 6.4°C above normal**, or
 - Actual maximum temperature is **≥45°C**, irrespective of normal.

Hence statement 2 is correct.

Key findings from the World Weather Attribution (WWA), a scientific climate analysis group:

- Heatwaves were the **deadliest climate disasters in 2025**, surpassing floods, storms and wildfires in fatalities. **Hence statement 1 is correct.**
- **Poor and marginalised communities** were the worst affected by heatwaves in 2025.
- For the **first time**, the **three-year global average temperature crossed 1.5°C** above pre-industrial levels. **Hence statement 3 is correct.**
- 2025 was among the **hottest years on record**, though it did not surpass 2024.
- Heatwaves are described as **"silent killers"** due to underreported mortality.
- WWA identified **157 extreme weather events** meeting humanitarian impact criteria in 2025.
- **Floods and heatwaves** were the most frequent extreme events (49 each).
- Of **22 events studied in depth, 17 were made more severe or likely due to climate change.**
- In Europe, a single 2025 heatwave caused an estimated **24,400 deaths** across 854 cities.
- Heat-related mortality data is **largely unavailable in the Global South.**
- Since the **Paris Agreement (2015)**, global temperatures have risen by about **0.3°C**.
- Climate change has added **~11 extra extremely hot days per year globally.**
- Some heatwaves are now **up to 10 times more likely** than a decade ago.
- In **South Sudan**, climate change made a February heatwave **~4°C hotter.**
- Women were disproportionately affected due to dominance in **informal, heat-exposed work.**
- Only **1% of Juba (South Sudan)** has green space or shade.
- Climate change intensified **storms and floods** causing deaths and displacement in 2025.
- Climate Central found **all Atlantic hurricanes (2025)** were at least **14 km/h stronger** due to warming.
- The Paris Agreement has reduced projected warming from **~4°C to ~2.6°C**, but risks remain severe.

PYQ REFERENCE: (2025)

Q. The World Bank warned that India could become one of the first places where wet-bulb temperatures routinely exceed 35 °C. Which of the following statements best reflect(s) the implication of the above-said report?

- I. Peninsular India will most likely suffer from flooding, tropical cyclones and droughts.
- II. The survival of animals including humans will be affected as shedding of their body heat through perspiration becomes difficult.

Select the correct answer using the code given below.

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

Source: <https://www.downtoearth.org.in/climate-change/heatwaves-were-the-deadliest-climate-disasters-in-2025-hitting-poorest-hardest-wwa-finds>

ECONOMY

106. Unclaimed Financial Assets

106. Which among the following shall be considered unclaimed assets in India?

1. Fixed deposits and recurring deposits that have not been operated for ten years or more
2. Insurance policy proceeds that remain unpaid beyond the due date
3. Mutual fund redemption proceeds that could not be credited due to change in bank account
4. Dividends and shares that remain unclaimed and are transferred to statutory authorities
5. Pension and retirement benefits that are not claimed within the normal course

Select the correct answer using the code given below.

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

Answer: (d) 1, 2, 3, 4 and 5

Explanation:

In NEWS: Your Money, Your Right - Reclaiming Forgotten Financial Assets and Strengthening Citizen Ownership

Unclaimed financial assets:

● Unclaimed financial assets arise when money held with financial institutions is not claimed by the account holder or their legal heirs for a prolonged period. Such assets include:

- **Bank deposits** such as savings accounts, current accounts, fixed deposits and recurring deposits that have not been operated for ten years or more
- **Insurance policy proceeds** that remain unpaid beyond the due date
- **Mutual fund redemption** proceeds or dividends that could not be credited due to reasons such as change in bank account, bank account closure, incomplete bank account in records etc.
- **Dividends and shares** that remain unclaimed and are transferred to statutory authorities
- **Pension and retirement benefits** that are not claimed within the normal course. **Hence all are correct.**

● In most cases, assets may become unclaimed because of routine life events such as migration for work, changes in contact details, closure of old bank accounts, or lack of information among family members and legal heirs.



● To address this challenge in a structured and citizen-centric manner, the Government launched the “आपकी पूंजी, आपका अधिकार – Your Money, Your Right” initiative in October 2025 as a nationwide awareness and facilitation campaign.

● The initiative is coordinated by the **Department of Financial Services, Ministry of Finance, in collaboration with key financial sector fund regulators, including:**

- Reserve Bank of India (RBI)
- Insurance Regulatory and Development Authority of India (IRDAI)
- Securities and Exchange Board of India (SEBI)
- Investor Education and Protection Fund Authority (IEPFA)
- Pension Fund Regulatory and Development Authority (PFRDA)

● The central objective is **to help citizens identify, access and reclaim financial assets that legally belong to them**, using simple processes and transparent systems.

● Digital platforms such as **UDGAM, Bima Bharosa, MITRA and the IEPFA** portal help citizens trace and reclaim these assets.

PYQ REFERENCE: (2025)

Q. With reference to investments, consider the following:

1. Bonds
2. Hedge Funds
3. Stocks
4. Venture Capital

How many of the above are treated as Alternative Investment Funds?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2208730®=3&lang=1>

107. Open Market Operation (OMO)

107. Which of the following best describes “Open Market Operations”?

- (a) RBI's actions to fix the exchange rate of the rupee
- (b) Government's sale of its assets in the open market
- (c) RBI's buying and selling of government securities to control liquidity
- (d) Trading of shares by public sector banks

Answer: (c) RBI's buying and selling of government securities to control liquidity

Explanation:

In NEWS: RBI to conduct OMO purchases of Govt. securities of ₹100,000 crore to improve liquidity

Open Market Operations (OMO):

● Open Market Operations (OMOs) refer to the **outright purchase and sale of government securities** by the Reserve Bank of India (RBI). **Hence option (c) is correct.**

- OMOs are used as a monetary policy tool to **regulate liquidity** in the banking system.
 - When RBI **purchases** government securities, it **injects liquidity**, increasing money supply.
 - When RBI **sells** government securities, it **absorbs liquidity**, reducing money supply.
- OMOs influence **short-term interest rates, bond yields, and overall monetary conditions**.
- Unlike repo operations under the Liquidity Adjustment Facility (LAF), OMOs have a **permanent impact** on liquidity.
- OMOs are used to manage liquidity arising from factors like capital flows, government borrowing, and inflationary pressures.
- OMOs may involve both **Central Government Securities** and, occasionally, **State Development Loans (SDLs)**.
- RBI conducts OMOs through **market-based auctions** on electronic trading platforms.
- OMOs complement other liquidity tools such as **CRR, SLR, and repo/reverse repo** operations.
- RBI has also used variants like **Operation Twist**, involving simultaneous buying and selling of securities to manage the yield curve.
- OMOs play a critical role in ensuring **monetary transmission** and maintaining **financial market stability**.

PYQ REFERENCE: (2023)

Q. Which one of the following activities of the Reserve Bank of India is considered to be part of 'sterilization'?

- (a) Conducting 'Open Market Operations'**
 (b) Oversight of settlement and payment systems
 (c) Debt and cash management for the Central and State Governments
 (d) Regulating the functions of Nonbanking Financial Institutions

Source:

<https://www.thehindu.com/business/Economy/rbi-to-conduct-1-lakh-crore-omo-during-december-to-inject-liquidity/article70360863.ece>

108. The compensation cess levied under the Goods and Services Tax (GST) regime

108. The GST Compensation Cess is levied on which of the following products?

1. Tobacco
2. Pan Masala
3. Coal
4. Mobile Phones
5. Luxury cars

Select the correct answer using the code below:

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

Answer: (d) 1, 2, 3, 4 and 5

Explanation:

In NEWS: Centre to bring new levies on tobacco, pan masala as GST compensation cess set to lapse

- The GST Compensation Cess on tobacco and pan masala is set to lapse once pending borrowings are repaid.
- The Centre plans to introduce new levies to replace the compensation cess.
- A Central Excise (Amendment) Bill, 2025 will reintroduce excise duty on tobacco products.

GST Compensation Cess

- The GST Compensation Cess was introduced in 2017 under the GST (Compensation to States) Act.
- Its purpose was to compensate states for revenue loss after shifting to GST for five years.
- The cess is levied on specific "sin goods" such as **tobacco, pan masala, gutkha, coal, and luxury cars. Hence all are correct.**
- The proceeds of the cess are credited to a non-lapsable Compensation Fund.
- The original compensation period ended in June 2022.
- The cess was extended beyond 2022 only to repay borrowings taken during the pandemic to compensate states.
- The cess will lapse once all outstanding borrowings and interest liabilities are fully repaid (expected by 2026).
- After the cess ends, states will no longer receive GST revenue compensation.
- The Centre is planning new levies to maintain revenue collected from tobacco and pan masala after the cess expires.
- The end of the cess does not affect the GST rate structure, only the additional levy on sin goods.

PYQ REFERENCE: (2018)

Q. Consider the following items:

1. Cereal grains hulled
2. Chicken eggs cooked
3. Fish processed and canned
4. Newspapers containing advertising material

Which of the above items is/are exempted under GST (Good and Services Tax)?

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

Source:

<https://indianexpress.com/article/business/economy/centre-to-bring-new-levies-on-tobacco-pan-masala-as-gst-compensation-cess-set-to-lapse-10395012/>

109. Rupee's fall

109. Consider the following:

1. Imported inflation
2. Increase in export competitiveness
3. Decline in forex reserves
4. Decrease in remittance inflows

How many of the above are possible consequences of rupee depreciation?

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

Answer: (c) Only three

Explanation:

In NEWS: Weaker against dollar, euro, yen: Why the rupee's fall is 'real' this time

Rupee Depreciation

- Rupee depreciation means the Indian rupee loses value against the US dollar or other major currencies.
- It takes more rupees to buy one unit of foreign currency.
- India follows a managed float system, so the RBI allows market-driven movements with limited intervention.

Causes of Rupee Depreciation

1. Rising US Federal Reserve interest rates strengthen the US dollar.

- A strong US dollar typically weakens emerging market currencies, including the rupee.
- Global geopolitical tensions trigger “flight to safety” towards the dollar.
- High global inflation and recession fears reduce foreign investment in India.

2. Domestic Macroeconomic Factors

- A high current account deficit (CAD) increases dollar demand and weakens the rupee.
- Rising trade deficit indicates more imports than exports, increasing dependence on dollars.
- High import dependence on crude oil expands dollar outflow when oil prices rise.
- Higher domestic inflation reduces the rupee's real purchasing power.

3. Capital Market Factors

- Foreign Portfolio Investors (FPIs) sell Indian equity/debt during global volatility.
- Capital outflows reduce demand for the rupee, leading to depreciation.
- Lower domestic interest rates relative to global rates push investors away.

4. RBI Policy and Forex Reserves

- Lower forex reserves limit RBI's ability to defend the currency.
- Excessive RBI intervention (selling dollars) can itself signal weakness.
- Reduced inflow of foreign direct investment (FDI) or remittances adds pressure.

5. Structural Factors

- Low export diversification weakens resilience to global shocks.
- Inadequate domestic manufacturing increases import dependence.
- Slow productivity growth makes the rupee structurally weaker over time.

Impact of Rupee Depreciation

1. Inflationary Impact

- Costlier imports—especially crude oil, gas, fertilizers, and electronics—raise inflation.
- Imported inflation affects food, transport, and manufacturing costs.

2. Impact on Trade

- Depreciation can make Indian exports more competitive.
- Export gains depend on global demand; during recessions, benefits are limited.
- Import-intensive industries face higher production costs.

3. Impact on Businesses

- Firms with external commercial borrowings face higher repayment burden.
- Costlier imported machinery and raw materials raise industrial costs.
- Sectors like aviation, auto, and power are especially affected due to import dependence.

4. Impact on External Sector

- CAD may worsen as import bills rise faster than export revenue.
- Forex reserves may decline if RBI intervenes heavily.
- Sovereign credit rating outlook may come under pressure if currency remains volatile.

5. Impact on Households

- Foreign travel, foreign education, and overseas medical treatment become costlier.
- Inflation reduces household purchasing power.

6. Impact on NRIs and Remittances

- Rupee depreciation increases the rupee-value of remittances sent by NRIs. **Hence statement 4 is incorrect.**
- This boosts household income for remittance-dependent families.

7. Impact on Investors

- FPI returns in rupee terms fall, causing further outflows.
- Stock market volatility increases during rapid rupee depreciation.

PYQ REFERENCE: (2021)

Q. Consider the following statements:

The effect of devaluation of a currency is that it necessarily

1. improves the competitiveness of the domestic exports in the foreign markets
2. increases the foreign value of domestic currency
3. improves the trade balance

Which of the above statements is/are correct?

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

Source:

<https://indianexpress.com/article/explained/explained-economics/how-the-rupees-fall-is-real-this-time-10395078/>

110. IMF Assessment of India's National Accounts statistics

110. Consider the following statements:

Statement-I: India received a 'C' grade from the IMF for its national accounts statistics.

Statement-II: The grade indicates shortcomings in India's GDP and GVA data that hamper surveillance.

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 is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct, and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct"

Answer: (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

Explanation:

In NEWS: IMF gives 'C' grade for India's national accounts statistics

IMF Grade for National Accounts:

● The IMF has given India's national accounts statistics a **grade of 'C', the second-lowest grade** in its data quality assessment.

Hence statement I is correct.

● A 'C' grade indicates that the country's macroeconomic data have shortcomings that somewhat hamper IMF surveillance.

● The grading covers datasets such as **GDP, GVA, national accounts, and inflation statistics.**

● The IMF noted that

○ India's GDP and GVA data do not adequately capture the informal sector.

○ India does not publish seasonally adjusted GDP data.

○ India's inflation data do not fully represent evolving household consumption patterns. **Hence statement II is correct and explains statement I.**

● India received the same 'C' grade in the previous annual review as well.

● The IMF flagged issues in the frequency and coverage of surveys used by India's National Statistical Office (NSO).

● The IMF clarified that the 'C' grade reflects data-quality concerns, not India's economic growth performance.

● The IMF recommended improvements in methodological transparency, high-frequency indicators, and statistical capacity.

PYQ REFERENCE: (2022)

Q. "Rapid Financing Instrument" and "Rapid Credit Facility" are related to the provisions of lending by which one of the following?

(a) Asian Development Bank

(b) International Monetary Fund

(c) United Nations Environment Programme Finance Initiative

(d) World Bank

Source:

<https://www.thehindu.com/business/Economy/imf-gives-india-a-c-on-its-gdp-and-other-national-accounts-data-the-second-lowest-grade/article70330780.ece>

111. The Trade Enablement and Marketing (TEAM) Scheme

111. With respect to the Trade Enablement and Marketing (TEAM) Scheme, Consider the following statements:

I. It is a Sub - Scheme of the scheme 'Raising and Accelerating MSME Performance' (RAMP).

II. It provides MSMEs direct access to a Government-backed digital commerce network called Open Network for Digital Commerce (ONDC), empowering MSMEs in e-commerce.

Which of the statements given above are correct?

(a) I only

(b) II only

(c) Both I and II

(d) Neither I nor II

Answer: (c) Both I and II

Explanation:

In NEWS: The Trade Enablement and Marketing (TEAM) Scheme leverages Digital Public Infrastructure to empower MSMEs

The Trade Enablement and Marketing (TEAM) Initiative

● The Trade Enablement and Marketing (TEAM) Initiative is a Sub- Scheme of the scheme 'Raising and Accelerating MSME Performance' (RAMP), which is a Central Sector Scheme. **Hence statement I is correct.**

● The outlay of MSME TEAM Initiative is Rs. 277.35 Cr. for the duration of 3 years from 2024 to 2027.

The TEAM Scheme leverages Digital Public Infrastructure to empower MSMEs in e-commerce by:

● Providing MSMEs direct access to a Government-backed digital commerce network called Open Network for Digital Commerce (ONDC) which offers ready-made online storefronts, integrated digital payment solutions, and logistics support. **Hence statement II is correct.**

Hence statement II is correct.

● Reducing the need for MSMEs to build their own e-commerce platforms by enabling onboarding and cataloguing through ONDC's interoperable systems.

● Using the TEAM portal to digitally register MSMEs, capture their business profiles, and match them efficiently to Seller Network Participants (SNPs) for streamlined onboarding and ongoing digital business support.

● Facilitating capacity-building workshops and support for MSMEs, ensuring they can readily use and benefit from e-commerce and digital market opportunities.

● MSME TEAM Initiative envisages to benefit 5 lakh Micro and Small Enterprises (MSEs) of which 50% are to be women owned MSEs.

PYQ REFERENCE:

Q. Which of the following can aid in furthering the Government's objective of inclusive growth?

1. Promoting Self-Help Groups
2. Promoting Micro, Small and Medium Enterprises
3. Implementing the Right to Education Act

Select the correct answer using the codes given below:

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2196859®=3&lang=1>

112. Great Nicobar Island mega-infrastructure project

112. With reference to the Great Nicobar Island Mega-Infrastructure Project, consider the following statements:

1. The project includes an international transshipment port, greenfield airport, and urban township.
2. It has received all statutory clearances, including forest, environmental, and CRZ, without any legal challenge.
3. It lies near the Malacca Strait, a key international maritime chokepoint.

Which of the statements given above is/are correct?

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

Answer: (b) 1 and 3 only

Explanation:

In NEWS: NGT reserves order on petitions over Nicobar project clearances

Great Nicobar Island Mega-Infrastructure Project (GNIP)

● GNIP aims to transform **Great Nicobar Island**, the southernmost and largest of the Nicobar Islands, into a **major transshipment and infrastructure hub**.

- Key components:
 - **International Container Transshipment Terminal (ICTT / Port)**
 - **Greenfield International Airport** (civil + potential military use)
 - **Township / Urban settlement**
 - **Power plants** (gand other supporting infrastructure. **Hence statement 1 is correct.**

● Project area: **~16,610 hectares (~166 sq km)**, including **~130 sq km of forest land**.

● Statutory clearances: **Forest, Environment, and Coastal Regulation Zone (CRZ)** approvals were granted in **2022**, but **legal challenges** continue. **Hence statement 2 is incorrect.**

Strategic & Economic Significance

● **Geostrategic location:** Close to the **Malacca Strait**, a key international maritime chokepoint. **Hence statement 3 is correct.**

● Enhances India's **maritime security and presence** in the Indian Ocean Region (IOR).

● Promotes **trade, international transshipment, and connectivity** for the Andaman & Nicobar Islands.

● Supports **Atmanirbhar Bharat** through indigenous infrastructure development.

Environmental & Social Concerns

● **Ecological risks:** Threats to tropical rainforests, endemic species, coral reefs, mangroves, and turtle nesting areas.

● **Forest diversion:** ~130 sq km forest land affected; Galatea Bay area was denotified from wildlife sanctuary for development.

● **CRZ concerns:** Some areas originally CRZ-1A (no-go zone) were reclassified as CRZ-1B, allowing development.

● **Tribal rights:** Nicobarese and Shompen (PVTG) communities face displacement and disruption of traditional lifestyles.

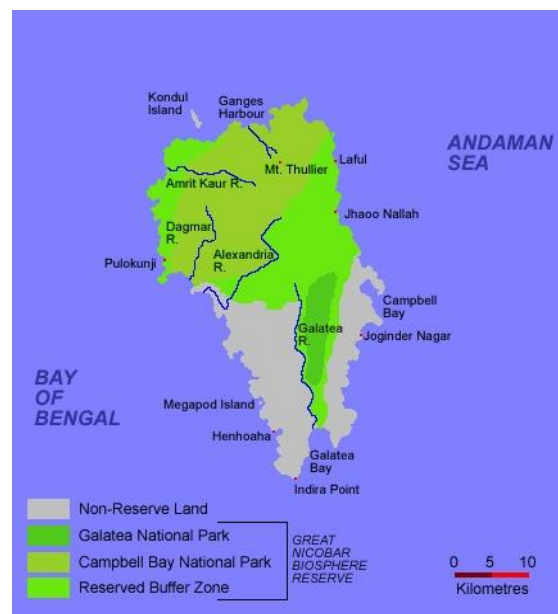
● **Natural hazards:** Region is **earthquake- and tsunami-prone**, increasing infrastructure vulnerability.

Governance & Legal Issues

● **NGT review:** National Green Tribunal asked for a **High-Powered Committee (HPC)** review of the environmental clearance.

● **HPC report:** Submitted in sealed cover; some funds (~₹80 crore) released for mitigation plans.

● **Criticism:** Limited baseline data, procedural transparency issues, off-target mitigation measures, and tribal consent concerns.



PYQ REFERENCE: (2018)

Q. How is the National Green Tribunal (NGT) different from the Central Pollution Control Board (CPCB)?

1. The NGT has been established by an Act whereas the CPCB has been created by an executive order of the Government.
2. The NGT provides environmental justice and helps reduce the burden of litigation in the higher courts whereas the CPCB promotes cleanliness of streams and wells, and aims to improve the quality of air in the country.

Which of the statements given above is/are correct?

- (a) 1 only
(b) 2 Only
(c) Both 1 and 2
(d) Neither 1 nor 2

Source: <https://indianexpress.com/article/india/ngt-reserves-order-on-petitions-over-nicobar-project-clearances-10379318/>

113. Trade deficit

113. Consider the following:

1. Fall in global crude oil prices
2. Growth in IT and professional services exports
3. Higher remittances and invisibles
4. Appreciation of domestic currency

Which of the above are likely to reduce the trade deficit?

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

Answer: (a) 1, 2 and 3 only

Explanation:

In NEWS: Trade deficit falls to \$6.6 bn. in Nov. due to merchandise export growth

- India's trade deficit narrowed sharply by about 61% to ~USD 6.6 billion in November 2025 (year-on-year).
- The improvement was driven primarily by a surge in merchandise exports, the highest for November in over a decade.
- Merchandise exports rose strongly, led by engineering goods, electronics, pharmaceuticals, and gems & jewellery.
- Merchandise imports moderated slightly, especially due to lower imports of crude oil and gold.
- Services exports remained robust, providing a cushion through a sustained services trade surplus.

Trade Deficit

A trade deficit occurs when a country's imports of goods and services exceed its exports over a given period. It reflects the net outflow of foreign exchange due to trade.

General Causes for a Fall in Trade Deficit

Rise in Exports

- Improved global demand
- Greater competitiveness of domestic industries
- Diversification of export basket and markets
- Currency depreciation making exports cheaper **Hence 4 is incorrect**

Decline or Moderation in Imports

- Fall in global commodity prices (especially crude oil, coal, fertilisers) **Hence 1 is correct**
- Import substitution through domestic production
- Slowing domestic demand or economic moderation

Strong Services Trade Surplus

- Growth in IT, software, business, and professional services exports **Hence 2 is correct**
- Higher remittances and invisibles offsetting merchandise deficit **Hence 3 is correct**

Policy Interventions

- Export promotion schemes and production-linked incentives (PLI)
- Import restrictions or higher duties on non-essential goods
- Trade facilitation measures improving logistics and ease of export

Favourable Exchange Rate Movements

- Depreciation of domestic currency discourages imports and boosts exports

Geopolitical and External Factors

- Supply chain realignments benefiting exports
- Lower energy import bills due to diversified sourcing

A fall in the trade deficit usually signals export-led growth, controlled imports, and stronger external sector resilience, though a sharp fall due to weak imports may also indicate domestic demand slowdown.

PYQ REFERENCE: (2025)

Q. Consider the following statements:

- I. Capital receipts create a liability or cause a reduction in the assets of the Government.
- II. Borrowings and disinvestment are capital receipts.
- III. Interest received on loans creates a liability of the Government.

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

Source:

<https://www.thehindu.com/business/Industry/trade-deficit-falls-61-in-nov-2025-to-66-billion-on-surg-ing-merchandise-exports/article70398808.ece#:~:text=India's%20trade%20deficit%20plummeted%20by,as%20in%20November%201ast%20year.>

114. Asian Development Bank (ADB)

114. Which of the following projects have received loan assistance from the Asian Development Bank (ADB)?

1. Skill development through modernization of Industrial Training Institutes
2. Expansion of rooftop solar systems under Pradhan Mantri Surya Ghar: Muft Bijli Yojana
3. Strengthening of tertiary healthcare infrastructure in Assam
4. National Health Mission (NHM) health system strengthening programme
5. Promotion of ecotourism and sustainable agriculture in Meghalaya

Select the correct answer using the code below:

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

Answer: (d) 1, 2, 3 and 5

Explanation:

In NEWS: India, ADB sign loans worth over \$2.2 billion for development projects

India-ADB Loan Agreements

India and the Asian Development Bank (ADB) have signed five loan agreements worth over USD 2.2 billion to support key development initiatives across skill development, renewable energy, healthcare, urban transport, and sustainable livelihoods.

Key Projects Covered:

Pradhan Mantri Skilling and Employability Transformation Programme

- Modernisation of 650 Industrial Training Institutes (ITIs) across 12 States.
- Upgradation of 5 National Skill Training Institutes as Centres of Excellence.
- Focus on future-ready skills such as renewable energy, electric mobility, and advanced manufacturing.
- Loan amount: USD 846 million.

Accelerating Affordable Rooftop Solar Systems Development Programme

- Supports Pradhan Mantri Surya Ghar: Muft Bijli Yojana.
- Aims to expand rooftop solar capacity, particularly for low- and middle-income households.
- Contributes to India's clean energy transition and energy security.
- Loan amount: USD 650 million.

Assam State Tertiary Health Care Augmentation Project (ASTHA)

- Strengthening tertiary healthcare infrastructure and medical education in Assam.
- Upgradation of medical facilities in Guwahati, Dibrugarh, Silchar, and other cities.
- Loan amount: USD 398.8 million. Hence statement 2 is correct.

Chennai Metro Rail Investment Project - Tranche 2

- Construction of around 20 km of new metro corridors and 18 stations.
- Emphasis on climate-resilient, inclusive, and sustainable urban transport.
- Loan amount: USD 240 million.

Integrated Ecotourism and Sustainable Agri-based Livelihood Project in Meghalaya

- Promotion of ecotourism and climate-smart agriculture.
- Focus on livelihood generation for rural, women, and indigenous communities.
- Loan amount: USD 77 million.

National Health Mission health system strengthening has received World Bank assistance, not ADB. Hence option (d) is correct.

Asian Development Bank (ADB)

- The Asian Development Bank (ADB) is a multilateral development finance institution aimed at promoting economic growth and regional cooperation in Asia and the Pacific.
- ADB was established in 1966 and has its headquarters in Manila, Philippines.

- The Bank provides loans, grants, technical assistance, and policy advice to its developing member countries.
- ADB's primary objective is to help its members reduce poverty and improve quality of life in the Asia-Pacific region.
- ADB supports projects in sectors such as infrastructure, energy, transport, health, education, urban development, and climate resilience.
- India is a founding member of the Asian Development Bank.
- ADB raises funds mainly through international capital markets and contributions from its member countries.
- The Asian Development Fund (ADF) is ADB's concessional financing window for low-income and vulnerable countries.

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2204373®=3&lang=1>

115. Weakening of Rupee

115. With reference to the impact of rupee depreciation, consider the following statements:

1. It makes foreign travel and overseas education cheaper for Indian residents.
2. It can increase the cost of servicing external debt denominated in foreign currency.
3. It can contribute to widening of the Current Account Deficit.

Which of the statements given above is/are correct?

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

Answer: (a) 2 and 3 only

Explanation:

In NEWS: Rupee breaches 91 level, turns weakest Asian currency in '25

Causes of Rupee Weakening:

Domestic Factors

1. High Trade Deficit – Higher imports than exports increase demand for dollars.
2. Foreign Capital Outflows – FPI/FII selling in equity and debt markets raises dollar demand.
3. Imported Inflation Pressure – Large imports of crude oil, gold, fertilizers, electronics.
4. Lower Export Growth – Global slowdown and trade uncertainties reduce forex inflows.
5. Interest Rate Differential – If Indian rates are less attractive than US rates, capital flows out.
6. Market Expectations & Speculation – Expectations of further depreciation fuel dollar buying.
7. Limited RBI Intervention – RBI allows market-determined movement, intervenes mainly to curb volatility, not defend a fixed level.

Global / External Factors

8. Strong US Dollar – Tight US monetary policy and safe-haven flows strengthen USD.

9. Global Risk Aversion – Geopolitical tensions, global slowdown push investors to safe assets.

10. Rising Crude Oil Prices – Increases India's import bill and dollar demand.

11. Global Financial Tightening – Higher yields in advanced economies pull capital away from EMs.

Structural Factors

12. Dependence on Energy Imports – Makes rupee vulnerable to commodity price shocks.

13. Current Account Deficit (CAD) – Persistent CAD puts downward pressure on currency.

14. External Debt Servicing – Higher dollar liabilities increase forex demand.

Impacts of Weakening Rupee:

Imported Inflation

● A weaker rupee makes imports more expensive, especially for oil, coal, gold, electronics, and intermediate goods. That can feed into broader inflationary pressures domestically.

Costlier Travel and Education Abroad

● Citizens financing overseas education, foreign travel, or remittances face higher costs in rupee terms as each dollar costs more. **Hence statement 1 is incorrect**

Export Competitiveness — Mixed Effects

● A weaker rupee may boost export competitiveness by making Indian goods cheaper in global markets.

● But if trade uncertainties (e.g., tariffs) persist, the potential export advantage could be limited.

Current Account and External Balances

● Higher import costs can widen the current account deficit (CAD). **Hence statement 3 is correct**

● Rising costs for servicing dollar-denominated debt can add to corporate and government external obligations. **Hence statement 2 is correct**

Market Sentiment & Assets

● Volatility in the currency market can spill over into equities and bonds, weakening investor confidence and influencing portfolio flows.

PYQ REFERENCE: (2021)

Q. Consider the following statements:

The effect of devaluation of a currency is that it necessarily

1. Improves the competitiveness of the domestic exports in the foreign markets
2. Increases the foreign value of domestic currency
3. Improves the trade balance

Which of the above statements is/are correct?

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

Source: The Hindu

116. CoalSETU

116. Consider the following statements with respect to the CoalSETU policy:

1. Coking coal is included in the CoalSETU auction window.
2. Coal linkage holders can export up to 50% of the coal obtained under CoalSETU.
3. Coal obtained can be used for resale within India.

Which of the statements given above is/are correct?

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

Answer: 2 only

Explanation:

In NEWS: Govt Approves 'CoalSETU' Policy for Coal Linkage Auctions

● CoalSETU stands for **Coal Linkage for Seamless, Efficient & Transparent Utilisation**.

● It is a new policy window under the existing Non-Regulated Sector (NRS) Linkage Auction Policy of 2016 intended to reform coal allocation and enhance the use of domestic coal resources.

● A significant reform is that coal linkage holders can now **export up to 50% of the coal** they secure through the CoalSETU window. **Hence statement 2 is correct.**

● This reflects India's surplus domestic coal production and aims to enhance coal exports.

● A new auction window called the CoalSETU window has been introduced for **long-term coal linkages**.

● Under this window, any domestic industrial consumer (except traders) can bid for coal linkages without end-use restrictions.

● **Coking coal will not be offered** under this window. **Hence statement 1 is incorrect.**

● **Coal obtained via this route can be used for:**

- Own consumption
- Coal washing
- Export (up to 50% of allocated quantity)
- Other permitted uses (but not resale within India). **Hence statement 3 is incorrect.**

The policy was approved to:

- Improve ease of doing business in the coal sector.
- Make coal allocation more transparent and efficient.
- Accelerate utilisation of domestic coal reserves.
- Reduce dependence on imported coal.

PYQ REFERENCE: (2019)

Q. Consider the following statements:

1. Coal sector was nationalized by the Government of India under Indira Gandhi.
2. Now, coal blocks are allocated on lottery basis.
3. Till recently, India imported coal to meet the shortages of domestic supply, but now India is self-sufficient in coal production.

Which of the statements given above is/are correct?

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

Source: <https://www.newsonair.gov.in/govt-approves-coalsetu-policy-for-coal-linkage-auctions/>

117. Risk-based deposit insurance framework

117. Which of the following parameters are likely to be used for assessing the risk of a bank under Risk-based deposit insurance framework (RDIF)?

1. Capital adequacy ratio
2. Asset quality and non-performing assets
3. Liquidity and profitability
4. Corporate governance standards

Select the correct answer using the code below:

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

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

Explanation:

In NEWS: RBI Board approves risk-based deposit insurance for banks

Risk-Based Deposit Insurance Framework (RDIF):

● The Risk-Based Deposit Insurance Framework (RDIF) is a regulatory mechanism in which the **premiums that banks pay for deposit insurance are determined based on their individual risk profiles**, instead of applying a uniform flat rate to all banks.

Objective:

● The primary goals of RDIF are to **ensure that insurance premiums reflect the riskiness of each bank, to discourage excessive risk-taking (moral hazard), and to enhance the stability and resilience of the banking sector.**

Current System in India:

● At present, the **Deposit Insurance and Credit Guarantee Corporation (DICGC)** provides deposit insurance to banks, with **all banks paying the same fixed premium**, regardless of their financial health or risk exposure.

Need for RDIF:

● It ensures that **banks with higher risk profiles contribute higher premiums**, while **safer banks pay lower premiums**, creating a fair and incentive-driven system.

● RDIF **encourages banks to adopt prudent risk management practices** to lower their insurance costs.

● It **strengthens the deposit insurance fund**, thereby providing greater protection to depositors in case of bank failures.

● Implementation of RDIF **aligns India with international best practices**, where risk-sensitive deposit insurance is widely adopted to maintain financial stability.

Mechanism of Operation:

● Banks are assessed based on multiple risk parameters, including **capital adequacy, asset quality (non-performing assets), liquidity position, profitability, and corporate governance standards. Hence all are correct.**

● A **composite risk score** is calculated for each bank, reflecting its overall financial health and risk exposure.

● Based on this score, **deposit insurance premiums are scaled**: higher-risk banks pay **higher premiums**, while lower-risk banks pay **lower premiums**, thereby incentivizing better risk management.

PYQ REFERENCE: (2012)

Q. Consider the following:

1. Hotels and restaurants
2. Motor transport undertakings
3. Newspaper establishments
4. Private medical institutions

The employees of which of the above can have the 'Social Security' coverage under Employees' State Insurance Scheme?

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

Source: <https://www.thehindu.com/business/rbi-board-approves-risk-based-deposit-insurance-framework-for-banks/article70416093.ece>

118. Exports in India

118. Consider the following statements regarding exports in India:

1. Maharashtra, Gujarat, Tamil Nadu, Karnataka and Telangana together contribute around two-thirds of India's total exports.
2. Engineering goods constitute the largest share of India's merchandise exports.
3. The United States is among India's largest export destinations.

Which of the statements given above is/are correct?

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

Answer: (d) 1, 2 and 3

Explanation:

In NEWS: How exports are concentrated in few States

EXPORTS IN INDIA:

● Exports refer to goods and services produced domestically and sold to foreign countries.

● India follows a mixed export strategy involving merchandise and services exports.

● Services exports constitute a significant share of India's total exports.

● **Maharashtra, Gujarat, Tamil Nadu, Karnataka and Telangana** together contribute around two-thirds of India's total exports. **Hence statement 1 is correct.**

Composition of India's Exports

- **Engineering goods** constitute the largest share of India's merchandise exports. **Hence statement 2 is correct.**
- **Petroleum products** are among India's top export items despite India being a net crude oil importer.
- **Gems and jewellery** form a major component of India's export basket.
- Agricultural exports include rice, spices, marine products and sugar.
- India is the world's leading exporter of rice.
- **Pharmaceutical exports** from India are dominated by generic medicines.

Services Exports

- IT and IT-enabled services account for the largest share of India's services exports.
- India is one of the world's largest exporters of **software services**.
- **Remittances** are classified under primary income and not services exports in the Balance of Payments.

Direction of Trade

- The **United States** is among India's largest export destinations. **Hence statement 3 is correct.**
- The **European Union** collectively accounts for a major share of India's exports.
- **ASEAN** is an important regional destination for Indian exports.

Policy & Institutional Framework

- India's foreign trade policy is formulated by the **Ministry of Commerce and Industry**.
- The **Directorate General of Foreign Trade (DGFT)** implements the Foreign Trade Policy.
- The **Foreign Trade Policy** aims to promote exports, enhance competitiveness and simplify procedures.
- Export promotion councils are product-specific and sector-specific bodies.
- **Special Economic Zones (SEZs)** are treated as foreign territory for trade operations and duties.

Trade Facilitation & Logistics

- The National Logistics Policy aims to reduce logistics costs as a percentage of GDP.
- High logistics costs adversely affect export competitiveness.
- The Trade Facilitation Agreement is administered by the **World Trade Organization (WTO)**.

PYQ REFERENCE: (2020)

Q. With reference to the international trade of India at present, which of the following statements is/are correct?

1. India's merchandise exports are less than its merchandise imports.
2. India's imports of iron and steel, chemicals, fertilisers and machinery have decreased in recent years.
3. India's exports of services are more than its imports of services.
4. India suffers from an overall trade/current account deficit.

Select the correct answer using the code given below:

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

Source:

<https://www.thehindu.com/business/Economy/how-exports-are-concentrated-in-few-states/article70429584.ece>

119. RBI LIQUIDITY MEASURES

119. Consider the following instruments used by the RBI to inject durable liquidity:

1. Open Market Purchase of Government Securities
2. USD-INR Buy/Sell Swap
3. Marginal Standing Facility (MSF)

How many of the above are used for durable liquidity injection?

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

Answer: (b) Only two

Explanation:

In NEWS: RBI announces fresh measures to inject ₹2.90 lakh cr. liquidity

RBI LIQUIDITY MEASURES:

- The Reserve Bank of India announced measures to inject about **₹2.90 lakh crore of durable liquidity** into the banking system.
- **Durable liquidity** refers to liquidity injected for a **longer-term** horizon, unlike overnight repo operations.
- The liquidity infusion was undertaken **without changing the policy repo rate**.
- The measures were announced amid **tight systemic liquidity conditions**.

Instruments Used

- **Open Market Operations (OMOs)** involve the **purchase or sale of government securities** by the RBI.
- **Dollar-rupee swap:** RBI also announced a **USD-INR buy/sell swap** as part of its liquidity infusion measures. A dollar-rupee swap injects **rupee liquidity while absorbing dollars** from the system. **Hence 1 and 2 are correct.**
- **Foreign exchange swap** operations affect **both liquidity conditions and forex markets**.

Note: Marginal Standing Facility (MSF) is an overnight emergency facility, not durable liquidity. **Hence 3 is incorrect.**

Rationale for the Measures

- Advance tax outflows can temporarily **tighten banking system liquidity**.
- RBI's intervention in the foreign exchange market can impact **domestic rupee liquidity**.
- Ensuring adequate liquidity is essential for **smooth transmission of monetary policy**.

Impact

- Liquidity infusion by RBI can help **soften government bond yields**.
- Adequate liquidity supports **credit flow to productive sectors of the economy**.
- Liquidity measures are aimed at maintaining **financial stability**, not at fiscal financing

PYQ REFERENCE: (2015)

Q. With reference to Indian economy, consider the following:

1. Bank rate
2. Open market operations
3. Public debt
4. Public Revenue

Which of the above is/are component/components of Monetary Policy?

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

Source: <https://www.thehindu.com/business/rbi-announces-fresh-measures-to-inject-290-lakh-crore-liquidity/article70430766.ece>

120. Subansiri Lower Hydroelectric Project

120. Which of the following statements about the Subansiri Lower Hydroelectric Project is/are correct?

1. It is India's largest hydropower project with a total capacity of 2,000 MW.
2. It exclusively supplies electricity to Arunachal Pradesh and Assam.
3. It supports renewable energy targets, and contributes to India's Net Zero and green energy goals.

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: Union Minister of Power, Housing & Urban Affairs, inaugurated the **commercial operation of Unit-2 (250 MW)** of the 2000 MW Subansiri Lower Hydroelectric Project (8×250 MW) through virtual mode on **23 December 2025**.

Subansiri Lower Hydroelectric Project:

- The Subansiri Lower Hydroelectric Project (SLHEP) is **India's largest hydropower project**, with a total installed capacity of **2,000 MW (8×250 MW units)**. **Hence statement 1 is correct.**
- **Location:** It is situated on the **Subansiri River**, a tributary of the Brahmaputra, spanning **Arunachal Pradesh and Assam** in North-East India.

- **Design:** The project is a **Run-of-the-River scheme with small pondage**, diverting water through eight Head Race Tunnels (HRTs) to generate electricity.

- **Dam Specifications:** The dam is a **116-metre-high concrete gravity dam**, the largest in North-East India, providing flood moderation and water management.

- **Electricity Generation:** SLHEP generates around **7,422 million units (MU) annually** and supplies electricity to **16 states**, with free allocations to Arunachal Pradesh and Assam. **Hence statement 2 is incorrect.**

- **Grid Impact:** The project **strengthens the national grid**, supports renewable energy targets, and contributes to India's **Net Zero and green energy goals**. **Hence statement 3 is correct.**

- **Engineering Features:** The project features **India's heaviest hydro generator rotors, largest stators, and biggest main inlet valves**, with innovations like the **largest aggregate processing plants, highest-capacity batching plant**, and first use of **Rotec's Tower Belt for dam concreting** in India.

- **Flood Management:** Provides a **442 million cubic metre flood cushion**, with about one-third of the gross reservoir storage (1,365 million cubic metres) reserved to absorb excess water during floods.

- **Socio-economic Impact:**

- Employment for around **7,000 local people daily** during construction.

- Promotes livelihoods in **piggery, sericulture, handloom**, benefiting local communities, especially women.

- Boosts **tourism, river navigation, and potential small-scale industries** in the region.

- **CSR & Development Work:** NHPC invested around **₹155 crore in CSR initiatives**, including schools, toilets, drinking water facilities, and rural infrastructure projects.

- **Implementation & Commissioning:** Unit-2 (250 MW) became operational in **December 2025**, with remaining units to be commissioned in a phased manner by **2026-27**.

- **NHPC Profile:** NHPC, a 100% green energy company, has an installed capacity of **8,333 MW from 30 power stations** and is diversifying into **solar, wind, and green hydrogen**.

PYQ REFERENCE: (2022)

Q. Consider the following statements:

1. Gujarat has the largest solar park in India.
2. Kerala has a fully solar powered International Airport.
3. Goa has the largest floating solar photovoltaic project in India.

Which of the statements given above is/are correct?

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

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=2207797®=3&lang=1>

121. Kimberly Process

121. Which of the following statements are correct with respect to Kimberly Process?

- I. It is a global certification system established in 2003 by governments, industry, and civil society
- II. It aims to stop the trade of "conflict diamonds".
- III. It is a UN-backed initiative.
- IV. The participant countries must enforce stringent legal and regulatory standards to control the import and export of rough diamonds.

Select the correct answer using the code given below.

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

Answer: (c) I, II, III and IV

Explanation:

In NEWS: India to assume prestigious Chairpersonship of Kimberly Process from Jan 1 2026

● India has been selected to assume the chairpersonship of the Kimberley Process (KP) from 1 January 2026, taking over as Vice Chair from 25 December 2025.

● This is the **third time India will lead the KP.**

● The Kimberley Process (KP) is a **global certification system established in 2003** by governments, industry, and civil society to stop the trade of "conflict diamonds"—rough diamonds funding rebel wars against legitimate governments. **Hence statements I and II are correct.**

● It works by requiring participants to implement safeguards, certifying rough diamond shipments as conflict-free in tamper-resistant containers, and preventing trade with non-members, covering over 99% of the rough diamond trade.

● Supported by the UN to enhance global peace and security by preventing conflict diamonds. **Hence statement III is correct.**

● It includes 86 countries (EU counts as one), representing over 99% of the global rough diamond trade, plus industry and civil society observers.

● Participant countries must enforce stringent legal and regulatory standards to control the import and export of rough diamonds and ensure adherence to KP requirements.

● Trade is permitted only between certified KP members who comply fully with these international standards, safeguarding the legitimacy of the diamond trade. **Hence statement IV is correct.**

PYQ REFERENCE: (2023)

Q. Consider the following statements :

Statement - I: Switzerland is one of the leading exporters of gold in terms of value.

Statement - II: Switzerland has the second largest gold reserves in the world.

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 is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect**
- (d) Statement-I is incorrect but Statement-II is correct

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2208375®=3&lang=1>

122. Global iron ore industry

122. With reference to the global iron ore industry, consider the following statements:

1. China is the largest producer and exporter of iron ore in the world.
2. Australia is the largest consumer and importer of iron ore globally.
3. India is among the top five producers of iron ore globally.

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: Inside China's bid to tame global iron ore market, and extract better terms

Global Iron Ore Industry:

● Iron ore is the **primary raw material** used in the production of steel.

● The industry is closely linked to **global infrastructure, construction, and manufacturing.**

● Iron ore is traded internationally mainly in the form of **lumps, fines, and pellets.**

Major Producing Countries

● **Australia** is the **largest producer and exporter** of iron ore in the world.

● **China** has large iron ore reserves but relies heavily on **imports due to low-grade ores. Hence statements 1 and 2 are incorrect.**

● **Brazil** is the **second-largest producer** of iron ore.

● **India** is among the **top five producers** of iron ore globally. **Hence statement 3 is correct.**

● Other important producers include **Russia, South Africa, and Canada.**

Major Iron Ore Companies

● **Vale (Brazil)** is one of the world's largest iron ore mining companies.

● **Rio Tinto** and **BHP** are major Australian iron ore producers.

● **Fortescue Metals Group** is a key iron ore exporter from Australia.

Trade & Consumption

- **China** is the **largest consumer and importer** of iron ore globally.
- Iron ore prices are influenced by **Chinese steel demand**.
- Seaborne iron ore trade dominates global supply chains.

Types of Iron Ore

- **Hematite (Fe₂O₃)** is the most commonly used iron ore due to high iron content.
- **Magnetite (Fe₃O₄)** has higher iron content but requires beneficiation.
- **Goethite** and **limonite** are lower-grade iron ores.

PYQ REFERENCE: [1996]

Q. Which one of the following elements is alloyed with iron to produce steel which can resist high temperatures and also have high hardness and abrasion resistance?

- (a) Aluminium
- (b) Chromium**
- (c) Nickel
- (d) Tungsten

Source:

https://epaper.thehindu.com/reader?utm_source=Hindu&utm_medium=Menu&utm_campaign=Header&gl=1*sri40h*gcl_au*MTc5MDE4NTEwMS4xNzI2ODg4MDgzLjE5MzY1MDc1NjluMTcyODM2MzY0Ny4xNzI4MzYzNjQ3

123. National Technology Readiness Assessment Framework (NTRAF)

123. With reference to the National Technology Readiness Assessment Framework (NTRAF), consider the following statements:

1. It provides direct financial support to startups and research institutions for technology development.
2. It acts as a regulatory body overseeing technology deployment across sectors.

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: (d) Neither 1 nor 2

Explanation:

In NEWS: Principal Scientific Adviser Unveils "National Technology Readiness Assessment Framework (NTRAF)" to Standardise Innovation Assessment in India

National Technology Readiness Assessment Framework (NTRAF):

- The **National Technology Readiness Assessment Framework (NTRAF)** is an Indian government framework.
- It is designed to **assess the maturity level of technologies** developed in India.
- NTRAF is based on the concept of **Technology Readiness Levels (TRLs)**.
- It provides a **uniform, standardized mechanism** for technology evaluation across sectors.
- The framework aims to **bridge the gap between R&D and commercialization**.

Note: NTRAF is **not a funding scheme**. It is a framework, **not a regulatory authority**.

Hence, Both 1 and 2 are correct.

Key Features

- Uses **TRL levels (TRL 1 to TRL 9)** to measure technology readiness.
- Applicable to **strategic, civilian, and dual-use technologies**.
- Can be used by **government departments, PSUs, startups, academia, and industry**.
- Helps in deciding **whether a technology is lab-ready, pilot-ready, or market-ready**.
- Encourages **evidence-based decision-making** in technology adoption.

Institutional Aspects

- NTRAF is associated with the **Office of the Principal Scientific Adviser (PSA) to the Government of India**.
- It aligns with national initiatives such as **Make in India** and **Startup India**.
- It supports **mission-mode programmes** and large public procurement projects.

PYQ REFERENCE: (2017)

Q. With reference to 'National Skills Qualification Framework (NSQF)', which of the statements given below is/are correct?

1. Under NSQF, a learner can acquire the certification for competency only through formal learning.
2. An outcome expected from the implementation of NSQF is the mobility between vocational and general education.

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2209568®=3&lang=1>
<https://www.psa.gov.in/national-technology-readiness>

124. Offshore Wind Energy

124. With reference to Offshore Wind Energy in India, consider the following statements:

1. The National Institute of Wind Energy (NIWE) conducts resource assessment and block identification for projects.
2. India has set a target of 30 GW of offshore wind by 2030 under national renewable goals.
3. India currently has no operational offshore wind power projects.

Which of the statements given above is/are correct?

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

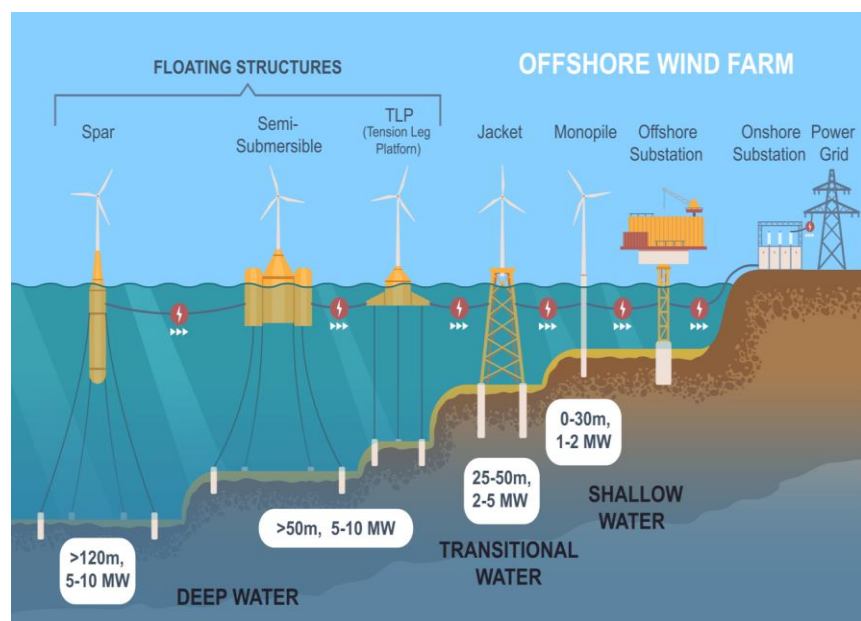
Answer: (d) 1, 2 and 3

Explanation:

In NEWS: Energy storage, offshore wind now central to Tamil Nadu's clean power future

Offshore wind energy in India:

- India has a long coastline (about 7,600 km), giving it very high theoretical offshore wind energy potential — estimated around ~120–140 GW by 2050, with ~36 GW off Gujarat's coast and ~35 GW off Tamil Nadu's coast alone.
- Despite this potential, India currently has no operational offshore wind power projects. **Hence statement 3 is correct.**



Policy and Government Action

National Offshore Wind Energy Policy (2015)

● India notified the National Offshore Wind Energy Policy in October 2015 to provide the regulatory framework for offshore wind development.

● The Ministry of New and Renewable Energy (MNRE) is the nodal body, and the National Institute of Wind Energy (NIWE) conducts resource assessment and block identification for projects. **Hence statement 1 is correct.**

Offshore Wind Energy Lease Rules (2023)

● New lease rules were issued in December 2023 to regulate allocation of ocean areas for offshore wind farms, administered by MNRE.

Viability Gap Funding (VGF) Scheme

- The Union Cabinet approved a VGF scheme (₹7,453 cr) to support early offshore wind projects, including funding for:
 - 1 GW of offshore capacity (500 MW each in Gujarat and Tamil Nadu),
 - Port infrastructure upgrades to enable installation and logistics.

Targets:

- India has set a target of 5 GW of offshore wind by 2022 (missed) and 30 GW by 2030 under national renewable goals.

Hence statement 2 is correct.

PYQ REFERENCE: (2018)

Q. With reference to solar power production in India, consider the following statements:

1. India is the third largest in the world in the manufacture of silicon wafers used in photovoltaic units.
2. The solar power tariffs are determined by the Solar Energy Corporation of India.

Which of the statements given above is/are correct?

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Source: <https://www.downtoearth.org.in/energy/energy-storage-offshore-wind-now-central-to-tamil-nadus-clean-power-future>

INTERNATIONAL RELATIONS

125. Ukraine

125. Consider the following statements regarding Ukraine:

1. Ukraine shares land borders with Russia, Belarus, Poland, Slovakia, Hungary, Romania, and Moldova.
2. The Black Sea lies to the south of Ukraine, and the Sea of Azov lies to its southeast.
3. The Donbas region lies along the western border with Poland and Slovakia.
4. The Crimean Peninsula is located between the Black Sea and the Sea of Azov.

Which of the statements given above is/are correct?

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

Answer: (b) 1, 2 and 4 only

Explanation:

In NEWS: Why is there no peace in Ukraine?

● While Ukraine faces the possibility of a prolonged war with Russia, a controversial 28-point peace plan from the Trump administration proposes recognition of Russian control over key territories. With pressure mounting on President Zelenskyy, the prospect of a ceasefire grows increasingly complicated amid military setbacks

Ukraine Border:

- Ukraine is located in Eastern Europe and is the **second-largest country in Europe** by area (after Russia).
- Ukraine shares land borders with **seven countries**.
- Ukraine's longest border is with **Russia**, extending over **2,000 km**.
- The Russia-Ukraine border runs along Ukraine's **east and northeast**.
- Ukraine shares a northern border with **Belarus**.
- To the west, Ukraine borders **Poland, Slovakia, and Hungary**.
- Ukraine's southwestern border is shared with **Romania and Moldova**.
- The **Black Sea** lies to the south of Ukraine.
- The **Sea of Azov** is located to Ukraine's southeast.
- The **Crimean Peninsula**, annexed by Russia in 2014, lies between the Black Sea and the Sea of Azov.
- The Donetsk and Luhansk regions, part of the **Donbas**, lie along the eastern border with Russia.
- Border tensions have been concentrated along the **Donbas frontlines** since 2014.
- The Belarus-Ukraine border gained strategic importance during the conflict due to military movements.
- The **Poland-Ukraine border** became a major humanitarian corridor for refugees.
- Ukraine is a **buffer state** between Russia and NATO-aligned countries in Eastern Europe.
- NATO member states **Poland, Slovakia, Hungary, and Romania** share borders with Ukraine.
- Moldova's breakaway region **Transnistria** is strategically sensitive due to Russian presence.
- The Carpathian Mountains lie along Ukraine's western borders with Poland, Slovakia and Hungary.
- Several major river systems, including the **Dnieper**, flow close to or across strategic border areas.
- Ukraine's border geography makes it central to **European security, energy transit, and NATO-Russia relations**.

Hence statements 1,2 and 4 are correct.

PYQ REFERENCE: (2023)

Q. Consider the following countries:

1. Bulgaria
2. Czech Republic
3. Hungary
4. Latvia
5. Lithuania
6. Romania

How many of the above-mentioned countries share a land border with Ukraine?

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

Source:

<https://www.thehindu.com/news/international/why-is-there-no-peace-in-ukraine-explained/article70349317.ece>

126. India-Russia relationship

126. Consider the following statements regarding Russia's relations with India:

1. Russia has become one of India's largest crude oil suppliers, enhancing India's energy security at affordable prices.
2. Russia assists India in civil nuclear projects, including the Kudankulam Nuclear Power Plant.
3. Both nations support the International North-South Transport Corridor (INSTC) and the Chennai - Vladivostok Maritime Corridor to diversify supply chains.
4. Both India and Russia are members of BRICS, SCO, and G20.

How many of the above statements are correct?

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

Answer: (d) All four

Explanation:

In NEWS: India-Russia friendship remains steady like the pole star, says PM

India-Russia Relations:

- The PM described India-Russia friendship as "*steady like the pole star*", indicating long-term strategic continuity.
- **Historical Partnership:** India and Russia share a **special and privileged strategic partnership**, rooted in decades of cooperation since the Soviet era.
- **Energy Cooperation:** Russia has become one of India's **largest crude oil suppliers**, enhancing India's energy security at affordable prices. **Hence statement 1 is correct.**
- **Defence Collaboration:** The two countries continue collaboration in defence areas such as **BrahMos missile, nuclear submarine leasing, and spare-parts supply**, despite Western sanctions on Russia.
- **Nuclear Energy:** Russia assists India in civil nuclear projects, including the **Kudankulam Nuclear Power Plant**. **Hence statement 2 is correct.**
- **Trade Growth:** Bilateral trade has grown rapidly, crossing **USD 65+ billion**, largely driven by energy imports.
- **Connectivity Initiatives:** Both nations support the **International North-South Transport Corridor (INSTC)** and the **Chennai-Vladivostok Maritime Corridor** to diversify supply chains. **Hence statement 3 is correct.**
- **Geopolitical Balancing:** India maintains strategic autonomy, engaging Russia despite global tensions arising from the **Ukraine conflict**.
- **Technology & Space Cooperation:** Russia remains a partner in sectors such as **space** (e.g., training Indian astronauts for Gaganyaan) and advanced technologies.
- **Multilateral Forums:** Both countries coordinate closely in platforms like **BRICS, SCO, and G20**, advocating a multipolar world order. **Hence statement 4 is correct.**
- **Diaspora and Cultural Ties:** People-to-people contacts, cultural exchanges, and education (notably Indian students in Russia) strengthen bilateral ties.

PYQ REFERENCE: (2019)

Q. Recently, India signed a deal known as ‘Action Plan for Prioritization and Implementation of Cooperation Areas in the Nuclear Field’ with which of the following countries?

- (a) Japan
- (b) Russia**
- (c) The United Kingdom
- (d) The United States of America

Source: <https://www.thehindu.com/news/national/india-russia-friendship-remains-steady-like-the-pole-star-says-pm/article70363160.ece>

127. ‘Yellow Line’

127. The Yellow Line, seen in the news recently divides Gaza into

- (a) Israeli-controlled zones and Palestinian areas under the ceasefire
- (c) Northern Gaza and Southern Gaza administrative regions
- (c) Areas controlled by the UN and areas under Hamas governance
- (d) Civilian zones and military zones

Answer: (a) Israeli-controlled zones and Palestinian areas under the ceasefire

Explanation:

In NEWS: What is the ‘Yellow Line’ that may define new Gaza border?

Yellow Line:

- The **Yellow Line** is a demarcation line inside Gaza created under the October 2025 ceasefire agreement between Israel and Hamas. **Hence option (a) is correct.**
- It divides Gaza into areas under **Israeli military control** and areas where **Palestinians are allowed to return.**
- Israel has pulled its forces back to this line but still controls **more than half of Gaza**, including key agricultural zones and the border with Egypt.
- Israeli military leadership has referred to it as a “**new border line,**” indicating it could become a long-term boundary if negotiations stall.
- The line was **supposed to be temporary**, but critics fear it may create a **de facto partition** of Gaza and limit future reconstruction and governance.

PYQ REFERENCE: (2018)

Q. The term “two-state solution” is sometimes mentioned in the news in the context of the affairs of

- (a) China
- (b) Israel**
- (c) Iraq
- (d) Yemen

Source:

<https://indianexpress.com/article/explained/explained-global/yellow-line-new-gaza-border-10411372/>

128. International Maritime Organization (IMO)

128. Consider the following statements with respect to the International Maritime Organization (IMO) council:

- I. It oversees budget, strategy, and policy implementation.
- II. Its members are elected every two years by the IMO Assembly.
- III. India was elected for the first time to the IMO Council for 2026–27.

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: (a) I and II only

Explanation:

In NEWS: India **Re-elected** to the IMO Council for 2026–27 with Highest Vote Tally. **Hence statement III is incorrect.**

International Maritime Organization (IMO)

- The International Maritime Organization (IMO) is a specialized agency of the United Nations responsible for regulating international shipping.
- The IMO develops global standards for the safety, security, and environmental performance of international shipping.
- One of the IMO’s key responsibilities is to create and maintain a regulatory framework that is fair, effective, and universally followed by the maritime industry.
- IMO conventions—such as SOLAS, MARPOL, and STCW—form the foundation of international maritime law.
- The Organization consists of an Assembly, a Council and five main Committees: the Maritime Safety Committee; the Marine Environment Protection Committee; the Legal Committee; the Technical Cooperation Committee and the Facilitation Committee and a number of Sub-Committees support the work of the main technical committees.

Election to the IMO Council

- The IMO has a governing body called the IMO Council, and its members are elected every two years by the IMO Assembly. **Hence statement II is correct.**
- All IMO member states can participate in electing the Council.
- The Council has 40 member states, divided into three categories:
 - Category A
 - 10 countries with the largest interest in providing international shipping services (major maritime nations).
 - Category B
 - 10 countries with the largest interest in international seaborne trade.
 - Category C
 - 20 countries that have special interests in maritime transport or represent different regions of the world to ensure balance.

Purpose of the IMO Council

- Acts as the executive body of the IMO.
- Manages the work of the organization between Assembly sessions.
- Oversees budget, strategy, and policy implementation. **Hence statement 1 is correct.**

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2196103®=3&lang=1>

129. UNESCO Executive Board

129. With reference to the UNESCO Executive Board, consider the following statements:

1. The Executive Board is one of UNESCO's three constitutional organs responsible for overseeing the implementation of programmes and shaping strategic priorities.
2. India is a founding member of UNESCO and has been re-elected to the UNESCO Executive Board for the 2025–29 term.

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 Re-Elected to UNESCO Executive Board for 2025–29 Term

UNESCO Executive Board:

- The Executive Board is one of UNESCO's three constitutional organs responsible for overseeing the implementation of programmes and shaping strategic priorities. **Hence statement 1 is correct.**
- It consists of **58 Member States** elected by the **General Conference** for a term of **four years**.
- The Executive Board acts as the **executive arm** of UNESCO, ensuring that the decisions of the General Conference are implemented.
- It examines the **programme** and **budget** prepared by the Director-General before they are submitted to the General Conference.
- The Board is responsible for **overseeing the administration**, management, and coordination of UNESCO's activities.
- It provides **policy guidance** and recommends programme priorities for UNESCO's global initiatives.
- The Executive Board meets **twice a year** in ordinary sessions; extraordinary sessions may be convened when necessary.
- Decisions of the Executive Board are generally taken by **majority vote**.
- The Board prepares the **agenda** for the sessions of the General Conference.
- It serves as a link between the **General Conference (policy-making body)** and the **Secretariat (administrative body)**.

- India, a founding member of UNESCO, has been regularly elected to the Executive Board and contributes actively to decision-making in education, culture, science, and communication sectors. **Hence statement 2 is correct.**

PYQ REFERENCE:(2022)

Q. With reference to the "United Nations Credentials Committee", consider the following statements:

1. It is a committee set up by the UN Security Council and works under its supervision.
2. It traditionally meets in March, June and September every year.
3. It assesses the credentials of all UN members before submitting a report to the General Assembly for approval.

Which of the statements given above is/are correct?

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

Source: <https://www.newsonair.gov.in/india-re-elected-to-unesco-executive-board-for-2025-29-term/>

130. World Inequality Report 2026

130. According to the World Inequality Report 2026, which among the following statements are correct?

1. It is published annually by the World Economic Forum.
2. The top 10% of earners in India capture more than 50 % of the national income.
3. India is described as one of the most unequal countries globally in terms of income distribution.

Select the correct answer using the code below:

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

Answer: (b) 2 and 3 only

Explanation:

In NEWS: World Inequality Report 2026: Top 10% earners in India capture 58% of national income, bottom 50% get only 15%

World Inequality Report 2026:

- The World Inequality Report is published by the **World Inequality Lab**. **Hence statement 1 is incorrect.**
- The report is coordinated by economists including Thomas Piketty, Lucas Chancel, and Emmanuel Saez.
- It uses the World Inequality Database (WID) as its primary data source.
- The report analyses long-term trends in income, wealth, gender, and carbon inequality.

India-Specific Findings

- The **top 10%** of earners in India capture around **58% of the national income. Hence statement 2 is correct**
- The **bottom 50%** of the population receives only about **15% of national income.**
- The **top 1%** in India hold nearly **40% of the total national wealth.**
- India is described as one of the **most unequal countries** globally in terms of income distribution. **Hence statement 3 is correct**
- Wealth inequality in India remains significantly higher than income inequality.
- The bottom 50% of wealth holders in India possess less than 10% of total wealth.
- Gender inequality remains high, with India's female labour force participation still below 20%.
- The wealth gap between rural and urban households continues to widen.
- The report highlights that inequality in India rose sharply after the 1990s economic reforms.

Global Findings

- Globally, the **top 1%** holds about **one-third of total wealth.**
- The **bottom 50%** share **less than 8%** of global wealth.
- A global trend of rising billionaire wealth relative to national GDPs is observed.
- Carbon inequality is widening, with the richest 10% responsible for nearly half of global emissions.
- Wealth inequality remains higher than income inequality worldwide.

Structural Factors Identified

- Taxation systems significantly influence inequality outcomes across countries.
- Privatisation, low social-sector spending, and weak labour protections contribute to widening inequality.
- Redistributive policies like progressive taxation and public welfare spending reduce inequality.
- The report emphasises that inequality is a political and policy-driven outcome, not an inevitable economic trend.

India – Policy Implications

- The report calls for stronger progressive taxation in India, including inheritance and wealth taxes.
- It highlights the need for investment in health, education, and social protection.
- It recommends strengthening labour rights and formalisation of employment.
- It notes that reducing inequality is essential for sustainable economic growth.

Source: <https://indianexpress.com/article/business/top-10-earners-in-india-capture-58-of-national-income-bottom-50-get-only-15-world-inequality-report-2026-10412748/>

131. Vijay Diwas

131. Consider the following statements :

- Vijay Diwas is observed on 16 December every year in India to commemorate India's victory in the 1971 Indo-Pak war.
- The 1971 Indo-Pak war. led to the creation of Bangladesh as an independent nation.

Which of the statements given above is/are correct?

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

Answer: (c) Both I and II

Explanation:

In NEWS: Prime Minister pays tribute to brave soldiers on Vijay Diwas

- Vijay Diwas is observed on **16 December every year** in India to commemorate **India's victory in the 1971 Indo-Pak war. Hence statement I is correct.**
- The day marks the surrender of the Pakistani armed forces in East Pakistan, leading to the creation of Bangladesh as an independent nation.
- The 1971 war lasted only 13 days and is considered one of the shortest wars in history.
- On this day, India pays tribute to the courage, sacrifice, and valour of its armed forces.
- Approximately 93,000 Pakistani soldiers surrendered, making it one of the largest military surrenders since World War II.
- The war led to the creation of **Bangladesh as an independent nation. Hence statement II is correct.**
- Vijay Diwas symbolizes the triumph of justice, freedom, and humanitarian values.

PYQ REFERENCE: (2021)

Q. Consider the following statements:

- 21st February is declared to be the International Mother Language Day by UNICEF.
- The demand that Bangla has to be one of the national languages was raised in the Constituent Assembly of Pakistan.

Which of the above statements is/are correct?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2204386®=3&lang=1>

132. Biological Weapons Convention

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

- I. The convention was signed in 1975
- II. India is a signatory to the convention
- III. The convention applies to all pathogens and toxins, whether naturally occurring or genetically engineered.

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: (b) II and III only

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 incorrect.**
- **India signed the BWC in 1973** and ratified it in 1974. **Hence statement II is correct.**
- As of May 2025, 119 states have become party to the treaty.
- 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).
- The BWC applies to all pathogens and toxins, whether naturally occurring or genetically engineered, that could be used as weapons. **Hence statement III is correct.**
- The BWC is reviewed every five years at Review Conferences, where states discuss compliance, emerging threats, and strengthening measures.

PYQ REFERENCE: (2020)

Q. Consider the following pairs:

International Agreement/set-up Subject

- | | |
|-------------------------|---------------------------------|
| 1. Alma-Ata Declaration | Healthcare of the people |
| 2. Hague Convention | Biological and chemical weapons |
| 3. Talanoa Dialogue | Global climate change |

4. Under2 Coalition Child rights

Which of the pairs above is/are correctly matched?

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

Source: <https://www.thehindu.com/sci-tech/science/does-india-need-to-upgrade-its-biosecurity-measures-explained/article70400364.ece>

133. India - Ethiopia

133. With reference to India–Ethiopia economic relations, consider the following statements:

- I. India is among the top three foreign investors in Ethiopia.
- II. Ethiopia is a beneficiary under India’s Duty-Free Tariff Preference (DFTP) scheme.
- III. More than half of Indian investment in Ethiopia is in the services sector.

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: (a) I and II only

Explanation:

In NEWS: India’s Engagements with Ethiopia

India–Ethiopia Relations and PM Modi’s 2025 Visit

- Prime Minister Narendra Modi’s **first bilateral visit to Ethiopia** in December 2025, as part of a three-nation tour, marked a significant milestone in ties between the two countries.
- India and Ethiopia maintain robust political engagement through regular high-level meetings, including interactions on the sidelines of G20, BRICS, and UN platforms, as well as frequent ministerial and official exchanges.
- Ethiopia is an important partner for India in Africa, being a BRICS member, a key voice of the Global South, and a long-term development partner.
- Economic relations form a central pillar of the partnership, with bilateral trade reaching USD 550.19 million in 2024–25 and India enjoying a strong trade surplus.
- **Indian companies are among the top three foreign investors in Ethiopia**, with over 675 firms investing more than USD 6.5 billion, particularly in manufacturing, textiles, and pharmaceuticals, generating substantial local employment. **Hence statement I is correct and III is incorrect.**
- Ethiopia also benefits from India’s **Duty-Free Tariff Preference scheme** for Least Developed Countries. **Hence statement II is correct.**
- People-to-people ties are reinforced by a small but historically significant Indian diaspora, contributions in

education and capacity building, and extensive training programmes under ITEC.

- Defence, parliamentary exchanges, renewable energy, wildlife conservation, and multilateral cooperation further broaden the relationship.
- A major outcome of the visit was the elevation of India-Ethiopia ties to a **Strategic Partnership and the conferment of Ethiopia's highest civilian honour on Prime Minister Modi.**
- Both leaders reaffirmed their shared commitment to the Global South, counter-terrorism, climate action, renewable energy, and cooperation through international initiatives such as ISA, CDRI, IBCA, and GBA.

PYQ REFERENCE: (2022)

Q. Consider the following statements:

1. Vietnam has been one of the fastest growing economies in the world in the recent years.
2. Vietnam is led by a multi-party political system.
3. Vietnam's economic growth is linked to its integration with global supply chains and focus on exports.
4. For a long time Vietnam's low labour costs and stable exchange rates have attracted global manufacturers.
5. Vietnam has the most productive e-service sector in the Indo-Pacific region.

Which of the statements given above are correct?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2205431®=3&lang=1>

134. India-Oman FTA

134. Consider the following statements:

Statement-I: India and Oman signed a Comprehensive Economic Partnership Agreement (CEPA) in both goods and services.

Statement-II: Oman is India's largest trading partner in the Gulf region.

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 is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct, and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

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

Explanation:

In NEWS: India-Oman Free Trade Agreement to Unlock New Opportunities Across Key Sectors

India-Oman FTA:

- India and Oman signed a **Comprehensive Economic Partnership Agreement (CEPA)**, commonly referred to as a Free Trade Agreement (FTA). **Hence statement I is correct.**
 - Negotiations began in **November 2023** and concluded in **2025.**
 - The agreement was **signed in Muscat in December 2025** during the official visit of the Indian Prime Minister.
 - The CEPA covers **trade in goods and services, investment facilitation, customs cooperation, and standards regulation.**
 - Bilateral trade between India and Oman was around **USD 10-11 billion in 2024-25**, with India having a trade deficit due to energy imports.
 - The agreement provides **preferential access for Indian goods to Oman, covering about 98% of products.**
 - Key beneficiary sectors include **textiles, apparel, automobiles, auto components, agrochemicals, gems and jewellery, renewable energy, food processing, logistics, and services.**
 - Oman acts as a **gateway to GCC markets, East Africa, and parts of Central Asia**, enhancing India's regional economic footprint.
 - The pact is expected to **boost Indian exports, diversify markets, reduce trade barriers, and strengthen investment and services cooperation.**
 - Being a **CEPA**, it goes beyond a traditional FTA by including **services, investments, standards, customs, and logistics cooperation**, not just tariff cuts.
 - The agreement strengthens India's **economic and strategic relations with Gulf countries**, supporting broader India-GCC engagement and energy security.
 - It facilitates **integration of Indian industries into global value chains** and enhances **India's role as a trade partner in the Middle East.**
- Note: Oman is **not** India's largest trading partner in the Gulf; countries like the **UAE and Saudi Arabia** have higher trade volumes with India. **Hence statement II is incorrect.**

PYQ REFERENCE: (2017)

Q. 'Broad-based Trade and Investment Agreement (BTIA)' is sometimes seen in the news in the context of negotiations held between India and

- (a) European Union**
- (b) Gulf Cooperation Council
- (c) Organization for Economic Cooperation and Development
- (d) Shanghai Cooperation Organization

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2205309®=3&lang=1>

135. India – New Zealand Free Trade Agreement

135. With reference to the India–New Zealand Free Trade Agreement (FTA), consider the following statements:

1. The Agreement provides 100% duty-free market access for Indian exports to New Zealand from the date of its entry into force.
2. Under the Agreement, Indian students are permitted to work up to 20 hours per week while pursuing studies in New Zealand.
3. India has excluded sensitive sectors such as dairy products, selected agricultural items, metals, arms and ammunition, and gems and jewellery from tariff concessions.

How many of the above statements are correct?

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

Answer: (c) All three

Explanation:

In NEWS: India – New Zealand Free Trade Agreement

- Following several rounds of negotiations, the India-New Zealand FTA was concluded in December 2025, becoming one of India's fastest-concluded FTAs.
- This FTA enhances market access and tariff preferences for Indian exports to New Zealand, while serving as a gateway to the wider Oceania and Pacific Island markets.
- Currently, New Zealand is India's second-largest trading partner in Oceania.
- Around 300,000 persons of Indian origin and NRIs live in New Zealand, making up nearly 5% of its population.

India–New Zealand FTA: outcomes

- **100% duty-free access** for Indian exports to New Zealand from Entry into Force. **Hence statement 1 is correct.**
- **USD 20 billion FDI commitment** by New Zealand over 15 years
- **MSME & job boost** via zero-duty access for textiles, apparel, leather, footwear, engineering goods, gems & jewellery, processed foods
- **India market access:** 70.03% tariff lines; **29.97% excluded** to protect sensitive sectors
- **Immediate duty elimination** on 30% tariff lines; balance phased over 3–10 years
- **Sensitive sectors excluded:** dairy, key agri products, sugar, fats & oils, metals, arms & ammunition **Hence statement 3 is correct.**
- **Tariff structure:**
 - 30%: immediate elimination
 - 35.6%: phased elimination
 - 4.37%: tariff reduction
 - 0.06%: TRQs (apples, kiwifruit, honey)
- **Agricultural Productivity Partnership:** Centres of Excellence, tech support, farmer capacity building
- **TRQ-based agri imports** with minimum import price & seasonal safeguards

- **Best-ever services offer** by NZ: 118 sectors; MFN in 139 sectors
- **First Health & Traditional Medicine Annex:** boosts AYUSH, yoga, wellness services
- **Student mobility:** 20 hrs/week work; post-study visas up to 4 years **Hence statement 2 is correct.**
- **5,000 skilled visas** for Indians (AYUSH, chefs, IT, healthcare, education, construction)
- **1,000 Working Holiday Visas** annually for Indian youth
- **Regulatory facilitation:** faster pharma approvals, GI protection, 48/24-hour customs clearance
- **Cultural cooperation:** AYUSH & Maori engagement enhances India's soft power

PYQ REFERENCE: (2017)

Q. Consider the following statements:

1. India has ratified the Trade Facilitation Agreement (TFA) of WTO.
2. TFA is a part of WTO's Bali Ministerial Package of 2013.
3. TFA came into force in January 2016.

Which of the statements given above is/are correct?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2207583®=3&lang=1>

136. OPEC+

136. Consider the following activities:

- I. OPEC+ decides production quotas or output targets for member countries.
- II. It announces collective production cuts or increases based on market conditions.
- III. It undertakes market monitoring through joint ministerial committees.
- IV. OPEC+ regulates oil transportation, refining, or distribution.
- V. It sets taxation or subsidy policies of member states.

How many of the above activities are regulated by the Petroleum and Natural Gas Regulatory Board (PNGRB) in India?

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

Answer: (b) Only three

Explanation:

In NEWS: China overtakes OPEC+ as the main oil price maker

Organization of the Petroleum Exporting Countries Plus (OPEC+):

- OPEC+ is an informal alliance of **OPEC members and non-OPEC oil-producing countries**.
- OPEC+ was formed in **2016** to coordinate oil production policies.
- Russia is a key non-OPEC member of OPEC+.
- OPEC+ does not have a permanent charter like OPEC.
- OPEC consists mainly of oil-exporting countries from **West Asia, Africa and Latin America**.
- Non-OPEC members of OPEC+ include **Russia, Kazakhstan and Mexico**.
- The United States is not a member of OPEC or OPEC+.
- India is not a member of OPEC or OPEC+.
- India imports a significant share of its crude oil from **OPEC countries**.
- OPEC+ production decisions have implications for **India's inflation, fiscal balance and external sector**.

Functions of OPEC+

- OPEC+ coordinates **crude oil production policies** among member and non-member countries.
- It aims to **stabilise global oil markets** by balancing supply and demand.
- OPEC+ seeks to reduce **excess volatility in international crude oil prices**.
- It facilitates **consultation and cooperation** between OPEC and non-OPEC oil producers.
- OPEC+ responds collectively to **global demand shocks**, such as recessions or pandemics.

Regulated / Coordinated Activities

- OPEC+ decides **production quotas or output targets** for member countries.
- It announces **collective production cuts or increases** based on market conditions.
- The grouping coordinates the **timing and scale of oil supply adjustments**.
- OPEC+ influences the **pace of unwinding or extending production curbs**.
- It undertakes **market monitoring** through joint ministerial committees.

Hence I, II, and III are correct.

Institutional Mechanisms

- The **Joint Ministerial Monitoring Committee (JMMC)** monitors compliance with production agreements.
- OPEC+ decisions are taken through **consensus-based consultations**.
- OPEC+ agreements are **not legally binding** but rely on voluntary compliance.

What OPEC+ Does NOT Regulate

- OPEC+ does not directly regulate **retail fuel prices** in member countries.
- It does not control **global oil demand**.
- OPEC+ does not regulate **oil transportation, refining, or distribution**.
- It does not set **taxation or subsidy policies** of member states. **Hence IV and V are incorrect.**

PYQ REFERENCE: (2025)

Q. Consider the following activities:

- Production of crude oil
- Refining, storage, and distribution of petroleum
- Marketing and sale of petroleum products
- Production of natural gas

How many of the above activities are regulated by the Petroleum and Natural Gas Regulatory Board (PNGRB) in India?

- Only one
- Only two**
- Only three
- All four

Source:

<https://www.reuters.com/markets/commodities/china-overtakes-opec-main-oil-price-maker-2025-12-22/>

137. The Indus Waters Treaty (IWT)

137. Consider the following statements:

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

How many of the above statements are correct?

- Only one
- Only two
- All three
- None

Answer: (a) Only one

Explanation:

In NEWS: Indus Waters Treaty on hold, green panel's nod for another hydel power project on Chenab

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.**

Source:

<https://indianexpress.com/article/cities/delhi/centre-panel-green-nod-dulhasti-hydel-project-chenab-10440001/>

GEOGRAPHY & MAPS

138. Kosi river

138. With reference to the Kosi River, consider the following statements:

- I. It originates in the Himalayas of southern Tibet.
- II. It is a tributary of the Ganga River.
- III. Indravati, Sun Kosi, Tama Kosi, Likhu, Dudh Kosi, Arun, and Tamor are its tributaries.

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: How the river Kosi’s shifting course exposes the perils of embankments

Kosi River

- The Kosi River is a trans-boundary river flowing through Tibet (China), Nepal, and India.
- It is one of the major tributaries of the Ganga River. **Hence statement II is correct.**
- The river originates in the Himalayas of southern Tibet. **Hence statement I is correct.**
- In Nepal, the river is formed by the confluence of seven rivers and is known as the Sapta-Kosi.
- The main tributaries of the Sapta-Kosi include the Indravati, Sun Kosi, Tama Kosi, Likhu, Dudh Kosi, Arun, and Tamor. **Hence statement III is correct.**
- The Kosi enters India in the state of Bihar near Bhimnagar.
- It flows southward in the plains of north Bihar before joining the Ganga near Kursela.
- The Kosi Basin carries one of the highest sediment loads among Himalayan rivers.
- Heavy sedimentation causes frequent changes in the river’s course.
- Over the last two centuries, the Kosi has shifted its course nearly 120 km westward.
- Due to its unpredictable shifts and flooding, it is known as the “Sorrow of Bihar.”

- The Kosi Barrage is located at Bhimnagar on the India–Nepal border.
- The Kosi Project includes the barrage and an extensive canal system for irrigation in Bihar.
- Embankments along the Kosi were constructed to contain floods but have also led to riverbed aggradation.
- The flood-prone area in the Kosi Basin remains one of the largest in India.
- The 2008 Kosi floods occurred due to a breach at Kusaha in Nepal and caused large-scale displacement in Bihar.
- The river is known for braided channels in the plains region.
- The Kosi Basin supports agriculture but remains vulnerable to monsoon flooding.
- High silt load originates from the young, geologically unstable Himalayan terrain.
- The river system plays a critical role in shaping the geomorphology of north Bihar.

PYQ REFERENCE: (2024)

Q. With reference to the Himalayan rivers Joining the Ganga downstream of Prayagraj from West to East, which one of the following sequences is correct?

- (a) Ghaghara — Gomati — Gandak — Kosi
- (b) Gomati — Ghaghara — Gandak - Kosi**
- (c) Ghaghara — Gomati — Kosi - Gandak
- (d) Gomati — Ghaghara — Kosi - Gandak

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/how-the-kosis-shifting-course-exposes-the-perils-of-embankments/article70275705.ece>

139. Alaknanda

139. “Alaknanda”, recently discovered using the James Webb Space Telescope, is

- (a) A newly discovered exoplanet in the Andromeda Galaxy
- (b) A newly discovered dwarf galaxy in the Local Group
- (c) A newly discovered spiral galaxy from the early universe
- (d) A newly discovered neutron star near the Milky Way

Answer: (c) A newly discovered spiral galaxy from the early universe

Explanation:

In NEWS: Pune researchers find spiral galaxy like Milky Way from early universe

Alaknanda Galaxy:

- Alaknanda is a **grand-design spiral galaxy** discovered in 2025.
- It is observed as it existed when the **universe was about 1.5 billion years old.**
- The galaxy is located in the **early universe**, making it one of the earliest known spiral galaxies.
- Its discovery challenges existing **models of galaxy formation**, which predicted well-structured spiral galaxies emerge much later.
- Alaknanda spans approximately **30,000 light-years in diameter**, smaller than the Milky Way (~100,000 light-years).
- The discovery was made using the **James Webb Space Telescope (JWST).**

- The galaxy exhibits a **central bulge, spiral arms, and rotational symmetry**, similar to mature spiral galaxies like the Milky Way.
- Its structure suggests that **spiral arms and stable disks can form rapidly**, much earlier than previously thought.
- The galaxy was named **Alaknanda** by the researchers from **Pune, India**, inspired by the Alaknanda River in the Himalayas.
- This finding provides **new insights into star formation and galaxy evolution** in the early universe.
- **Hence option (c) is correct.**

PYQ REFERENCE: (2019)

Q. Recently, Scientists observed the merger of giant blackholes' billions of light-years away from the Earth.

What is the significance of this observation?(a) 'Higgs boson particles' were detected.

(b) 'Gravitational waves' were detected.

(c) Possibility of inter-galactic space travel through 'wormhole' was confirmed.

(d) It enabled the scientists to understand 'singularity'.

Source:

<https://indianexpress.com/article/cities/pune/pune-researchers-find-spiral-galaxy-like-milky-way-from-early-universe-10399065/>

140. Shyok Tunnel

140. Which of the following statements most accurately describes the strategic and geographical significance of the Shyok Tunnel in Ladakh?

- (a) It connects Leh to Siachen glacier through the Shyok river valley, mainly supporting civilian traffic.
- (b) It is situated in Kargil district, linking NH-1A with Drass for regional connectivity.
- (c) It aims to provide all-weather connectivity between Leh and the northernmost border areas near the India-China Line of Actual Control (LAC).
- (d) It runs along the Indus river upstream of Pangong Tso, providing an alternative tourist route.

Answer: (c) It aims to provide all-weather connectivity between Leh and the northernmost border areas near the India-China Line of Actual Control (LAC).

Explanation:

In NEWS: Defence Minister inaugurates Shyok Tunnel in eastern Ladakh, 124 other strategic border infra projects

Shyok Tunnel:

- The **Shyok Tunnel** is located in **Ladakh**, on the **Shyok-Darbuk-DBO (Daulat Beg Oldi) road**, part of the **Darbuk-Shyok-DBO sector** in the Union Territory.
- It is being constructed to provide **all-weather connectivity** between **Leh and the northernmost border areas** near the India-China Line of Actual Control (LAC). **Hence option (c) is correct.**
- The tunnel passes through the **Shyok River valley**, which experiences **heavy snowfall and landslides** in winters, often disrupting road transport.

- The Shyok Tunnel is a **strategic infrastructure project** aimed at improving **troop movement, logistics, and supply lines** along the border.
- It is part of India's broader **Border Roads Organisation (BRO) initiatives** to enhance **defence mobility** along sensitive frontiers.
- Once operational, the tunnel will **reduce travel distance** on the Leh-DBO route and ensure **year-round connectivity** for both civilian and military purposes.
- The tunnel is **engineered with modern avalanche and landslide protection features** to withstand extreme weather conditions in the high-altitude region.

PYQ REFERENCE: (2023)

Q. With reference to India's projects on connectivity, consider the following statements :

1. East-West Corridor under Golden Quadrilateral Project connects Dibrugarh and Surat.
2. Trilateral Highway connects Moreh in Manipur and Chiang Mai in Thailand via Myanmar.
3. Bangladesh-China-India-Myanmar Economic Corridor connects Varanasi in Uttar Pradesh with Kunming in China.

How many of the above statements are correct?

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

Source: <https://indianexpress.com/article/india/defence-minister-inaugurates-shyok-tunnel-in-eastern-ladakh-124-other-strategic-border-infra-projects-10407776/>

141. Lendi Major Irrigation Project

141. The Lendi Major Irrigation Project is an inter-state project between which among the following states?

- (a) Maharashtra and Karnataka
- (b) Telangana and Andhra Pradesh
- (c) Maharashtra and Telangana
- (d) Madhya Pradesh and Maharashtra

Answer: (c) Maharashtra and Telangana

Explanation:

In NEWS: Status of Lendi Major Irrigation Project

Lendi Major Irrigation Project:

- The Lendi Major Irrigation Project is an inter-state project between Maharashtra and Telangana. **Hence option (c) is correct.**
- It is built across the Lendi River, a tributary of the Manjeera River.
- The dam is located near Gonegoan village in Mukhed taluka of Nanded district, Maharashtra.

Objectives:

- To provide irrigation to agricultural lands in both states.
- Total proposed irrigated area: around 49,000 acres.
- Telangana: ~22,000 to 38,000 acres (as per revised plans).

- Maharashtra: ~27,000 acres.
- Total water allocation: 6.36 TMC, shared between the two states.
- Water and project costs are shared between states in a 38 : 62 ratio (Telangana : Maharashtra).

Lendi River:

- The Lendi River is a small river that flows through the states of Maharashtra and Telangana.
- It originates near Waghala (also known as Waggaon) in Nanded district, Maharashtra.
- The river flows generally eastward, entering Nizamabad and Kamareddy districts in Telangana.
- Lendi is a tributary of the Manjeera River, which itself is a tributary of the Godavari River.
- It is a seasonal river, with water flow mainly during the monsoon.
- The river is important for local irrigation, agriculture, and drinking water needs in villages along its course.

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2197167®=3&lang=1>

142. Cyclone Naming System

142. Consider the following statements regarding the Cyclone Naming System in the North Indian Ocean region:

1. Cyclone naming in the North Indian Ocean is contributed by 13 countries under the World Meteorological Organization Panel on Tropical Cyclones.
2. Cyclone names are used only once and are not repeated.
3. A cyclone is named only after it reaches cyclonic storm intensity greater than 62 km/h winds.
4. The India Meteorological Department (IMD) is responsible for assigning cyclone names for this region.
5. Red alert indicates extremely severe weather and immediate action is required.

Which of the statements given above are correct?

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

Answer: (d) 1, 2, 3, 4 and 5

Explanation:

In NEWS: Cyclone Ditwah LIVE updates: Parts of T.N. receive rain; India evacuates last batch of stranded citizens from Sri Lanka

Cyclone Naming System:

1. Cyclone naming in the North Indian Ocean region began in 2004.
2. Names are contributed by 13 countries under the WMO/ESCAP (World Meteorological Organization/ Economic and Social Commission for Asia and the Pacific) Panel on Tropical Cyclones.

3. The 13 countries include India, Bangladesh, Pakistan, Sri Lanka, Maldives, Myanmar, Thailand, Oman, UAE, Iran, Qatar, Saudi Arabia, and Yemen.
4. Each country submits a list of names that are used sequentially.
5. Cyclone names are used only once and are not repeated.
6. A system is named only after it reaches cyclonic storm intensity (≥ 62 km/h winds).
7. The India Meteorological Department (IMD) is responsible for assigning cyclone names for this region.
8. Names must be short, non-offensive, culturally neutral, and easy to pronounce.

Cyclone Colour Code System:

1. IMD uses a four-level colour-coded warning system for cyclones and severe weather.
2. **Green alert** indicates no major weather event and no warning.
3. **Yellow alert** indicates that people should stay updated as weather conditions may worsen.
4. **Orange alert** indicates preparedness for likely severe weather or heavy rainfall.
5. Red alert indicates extremely severe weather and immediate action is required.
6. Red alerts are usually issued when widespread damage or evacuation is expected.

Hence all the statements are correct.

PYQ REFERENCE: (2015)

Q. In the South Atlantic and South-Eastern Pacific regions in tropical latitudes, cyclone does not originate. What is the reason?

- (a) Sea surface temperatures are low
- (b) **Inter-Tropical Convergence Zone seldom occurs**
- (c) Coriolis force is too weak
- (d) Absence of land in those regions

Source:

<https://www.thehindu.com/news/national/cyclone-ditwah-live-updates-rains-tamil-nadu-andhra-pradesh-sri-lanka-november-30-2025/article70340893.ece>

143. Solar storm

143. Which of the following phenomena directly contribute to the occurrence of solar storms?

1. Solar flares
2. Coronal Mass Ejections
3. Coronal holes
4. Magnetic reconnection

Select the correct answer using the code below:

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

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

Explanation:

In NEWS:

- Aditya-L1 in a global effort reveals why the 2024 solar storm behaved unusually
- In May 2024, Earth was hit by one of the strongest solar storms in over two decades, now widely referred to as Gannon's storm.
- The storm behaved unusually because two CMEs collided in space, triggering magnetic reconnection inside the CME itself, a rare phenomenon.
- This reconnection reversed and strengthened the magnetic field, greatly increasing the storm's intensity and energy, making it far more powerful than what a single CME would normally produce.

Solar storm:

A solar storm is a sudden explosion of particles, energy, magnetic fields, and material blasted into the solar system by the Sun.

Causes of Solar Storms:

- Solar storms are caused by **solar flares**, which release sudden bursts of electromagnetic energy.
- **Coronal Mass Ejections (CMEs)** eject large amounts of plasma and magnetic fields from the Sun.
- **Coronal holes** emit high-speed solar winds that disturb Earth's magnetosphere.
- **Magnetic reconnection** on the Sun releases huge energy, triggering strong storms.

Hence option (c) is correct.

Consequences of Solar Storms:

- They produce **auroras** near the poles.
- They cause **geomagnetic storms**, disturbing Earth's magnetic field.
- They can **damage satellites** and disrupt GPS navigation.
- They lead to **radio and communication blackouts**, especially in aviation.
- They may **overload power grids**, causing blackouts.
- They increase **radiation exposure** for astronauts and high-altitude flights.

PYQ REFERENCE: (2022)

Q. If a major solar storm (solar flare) reaches the Earth, which of the following are the possible effects on the Earth?

1. GPS and navigation systems could fail.
2. Tsunamis could occur at equatorial regions.
3. Power grids could be damaged.
4. Intense auroras could occur over much of the Earth.
5. Forest fires could take place over much of the planet.
6. Orbits of the satellites could be disturbed.
7. Shortwave radio communication of the aircraft flying over polar regions could be interrupted.

Select the correct answer using the code given below:

- (a) 1, 2, 4 and 5 only
- (b) 2, 3, 5, 6 and 7 only
- (c) 1, 3, 4, 6 and 7 only**
- (d) 1, 2, 3, 4, 5, 6 and 7

Source: <https://www.thehindu.com/sci-tech/science/aditya-l1-in-a-global-effort-reveals-why-the-2024-solar-storm-behaved-unusually/article70376131.ece>

144. Aravalli Range

144. Consider the following statements about the Aravalli Range:

1. It is a residual mountain range formed due to denudation of ancient fold mountains.
2. It acts as a watershed between the Indus and Ganga river systems.
3. The Luni River originates from the Aravalli Range and drains into the Rann of Kutch.

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: (d) 1, 2 and 3

Explanation:

In NEWS: Protests break out across Rajasthan to 'save' Aravalis

Aravalli Range:

- The **Aravalli Range** is one of the **oldest fold mountain ranges in the world** (Pre-Cambrian origin). **Hence statement 1 is correct.**
- Extends about **700–800 km** from **Palanpur (Gujarat)** to **Delhi**.
- Runs in a **southwest–northeast** direction.
- Highest peak: **Guru Shikhar (1,722 m)** in the **Abu Hills, Rajasthan**.
- Forms a **watershed** between the **Indus and Ganga river systems**. **Hence statement 2 is correct.**

Physiography & Geology

- Highly **eroded and discontinuous** due to age.
- Composed mainly of **gneiss, schist, granite, quartzite, and marble**.
- Rich in **minerals**: copper (Khetri), zinc, lead, marble.

Climatic Role

- Acts as a **climatic barrier**:
 - Prevents the **westward expansion of the Thar Desert**.
 - Influences the **South-West Monsoon**, causing rainfall in eastern Rajasthan.
- Absence of high elevation reduces orographic rainfall effectiveness.

Drainage

- **West-flowing rivers**: Luni (only long river, drains into Rann of Kutch). **Hence statement 3 is correct.**
- **East-flowing rivers**: Banas, Sahibi (tributary of Yamuna).
- Many rivers are **seasonal**.

Ecology & Biodiversity

- Hosts **dry deciduous and thorn forests**.
- Important wildlife areas:
 - Sariska Tiger Reserve
 - Ranthambore Tiger Reserve
 - Mount Abu Wildlife Sanctuary
- Acts as a **green barrier** against desertification.

Economic & Cultural Significance

- Traditional mining and pastoral activities.
- Sacred sites like **Mount Abu**.
- Urban pressures near Delhi–NCR region

Environmental Issues

- Illegal mining causing ecological degradation.
- Deforestation and urbanization.
- The Supreme Court has imposed **restrictions on mining** in parts of the Aravallis.

PYQ REFERENCE: (2023)

Q. Consider the following statements:

1. Amarkantak Hills are at the confluence of Vindhya and the Sahyadri Ranges.
2. Biligirirangan Hills constitute the easternmost part of Satpura Range.
3. Seshachalam Hills constitute the southernmost part of Western Ghats.

How many of the statements given above are correct?

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

Source: https://epaper.thehindu.com/ccidist-ws/th/th_international/issues/162774/OPS/GOCFAARC5.1+G6GFBF4ND.1.html
<https://indianexpress.com/article/india/no-way-this-is-acceptable-in-rajasthan-protests-mount-as-aravallis-face-mining-threat-10434439/>

145. Lightning in India

145. Consider the following statements regarding lightning in India:

- I. Lightning is recognized as a national-level natural disaster under the State Disaster Response Fund (SDRF).
- II. States cannot provide ex-gratia relief for lightning deaths unless it is notified as a national disaster.
- III. Lightning-related deaths are recorded as accidental deaths by the National Crime Records Bureau.

Which of the statements given above is/are correct?

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

Answer: (c) III only

Explanation:

In NEWS:

- Experts at the 9th National Lightning Conference in New Delhi said lightning kills more people than any other natural disaster in India but remains under-reported and poorly understood.
- Lightning strikes have **increased about 400% between 2019 and 2025**, according to the Annual Lightning Report 2024–25 by the Climate Resilient Observing Systems Promotion Council (CROPC), India Meteorological Department (IMD), and the Ministry of Earth Sciences.
- Traditionally high lightning activity in eastern and central India remains, but new hotspots are appearing in:
 - Northern & western states like Rajasthan, Gujarat, Haryana, Punjab, and Delhi
 - Regions along the Kaimur and Satpura ranges between the Ganga and Sone basins (Madhya Pradesh, Bihar, Uttar Pradesh)

Lightning - protection in India:

- Lightning is responsible for 33% of natural disaster deaths nationwide.
- However, lightning is not recognized as a national-level natural disaster in India, and thus is not covered under the central State Disaster Response Fund (SDRF). **Hence statement I is incorrect.**
- Presently, lightning-related deaths are categorized as "accidental deaths" by the National Crime Records Bureau (NCRB), not as a disaster **Hence statement III is correct.**
- Despite repeated demands by states like Bihar, West Bengal, and Odisha to classify lightning as a natural disaster (which would enable compensation via SDRF), the Central government has declined, citing the potential to prevent such deaths through awareness programs instead
- At the state level, some governments have declared lightning as a "state-specific disaster", allowing them to provide ex-gratia support. **Hence statement II is incorrect.**

Why Lightning Is Increasing in India

1. Intensification of Thunderstorms

- A warming climate is increasing the **frequency and intensity of thunderstorms**.
- Stronger updrafts within storm clouds enhance **charge separation**, leading to more lightning strikes.
- Higher atmospheric electricity is also associated with **extreme rainfall events and cloudbursts**.

2. Seasonal Expansion of Lightning Activity

- Lightning occurrences are **more spatially widespread during the southwest monsoon** compared to the pre-monsoon period.
- **Western and north-western India** experience higher lightning activity during the monsoon.
- Parts of the **west coast** record more lightning in the **pre-monsoon season** due to convective heating.

3. Climate Change Influence

- Rising temperatures and increased atmospheric moisture create conditions conducive to **strong convective storms**.
- Enhanced instability and moisture availability raise the **electrical potential of clouds**, resulting in increased lightning activity.

PYQ REFERENCE: (2013)

Q. During the thunderstorm, the thunder in the skies is produced by the

1. meeting of cumulonimbus clouds in the sky
2. lightning that separates the nimbus clouds
3. violent upward movement of air and water particles

Select the correct answer using the codes given below.

- (a) 1 only
(b) 2 and 3
 (c) 1 and 3
 (d) None of the above produces the thunder

Source: https://www.downtoearth.org.in/natural-disasters/lightning-remains-an-understated-disaster-in-india-as-experts-call-for-deeper-understanding-of-atmospheric-electricity#google_vignette

146. Dulhasti hydel power project

146. The Dulhasti hydel power project is located on which among the following rivers?

- (a) Narmada
 (b) Chenab
 (c) Sutlej
 (d) Yamuna

Answer: (b) Chenab

Explanation:

In NEWS: Centre's green panel gives its nod to Stage 2 Dulhasti hydel power project in J&K

- India's Ministry of Environment, Forest and Climate Change via its Expert Appraisal Committee (EAC) on hydel projects has granted environmental clearance to the 260 MW Dulhasti Stage-II hydropower project.
- Dulhasti Stage-II is a 260 MW run-of-the-river hydropower project on the **Chenab River. Hence option (b) is correct.**
- The project is located in **Kishtwar district of Jammu and Kashmir.**
- It is an extension (augmentation) of the existing 390 MW Dulhasti Stage-I hydropower project.
- The project consists of **two underground turbine units of 130 MW each.**
- NHPC Limited is the implementing agency of the Dulhasti Stage-II project.
- Water for Stage-II will be diverted from the Stage-I power station through a long headrace tunnel.
- Dulhasti Stage-II gained approval in the backdrop of India keeping the Indus Waters Treaty in abeyance.
- The project is expected to contribute to renewable energy generation and regional power security in Jammu and Kashmir.

PYQ REFERENCE: (2021)

Q. With reference to the Indus River system, of the following four rivers, three of them pour into one of them which joins the Indus direct. Among the following, which one is such river that joins the Indus direct?

- (a) Chenab**
 (b) Jhelum
 (c) Ravi
 (d) Sutlej

Source: [https://www.thehindu.com/sci-tech/energy-and-environment/centres-green-panel-gives-nod-to-dulhasti-hydel-power-project-on-chenab-river/article70442622.ece#:~:text=A%20panel%20under%20the%20Ministry,\(December%2027%2C%202025\).](https://www.thehindu.com/sci-tech/energy-and-environment/centres-green-panel-gives-nod-to-dulhasti-hydel-power-project-on-chenab-river/article70442622.ece#:~:text=A%20panel%20under%20the%20Ministry,(December%2027%2C%202025).)

HISTORY AND ART AND CULTURE

147. Dr Rajendra Prasad

147. Dr. Rajendra Prasad was associated with which of the following national movements?

1. Non-Cooperation Movement
2. Salt Satyagraha
3. Quit India Movement

Select the correct answer using the code 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: President of India pays floral tributes to Dr Rajendra Prasad on his birth anniversary

Dr. Rajendra Prasad:

- Dr. Rajendra Prasad was born on 3 December 1884 in Bihar and was a distinguished freedom fighter, lawyer, and statesman.
- He was a close associate of Mahatma Gandhi and actively participated in major national movements.
- He joined the **Non-Cooperation Movement** and later became a prominent leader in the **Salt Satyagraha and Quit India Movement. Hence option (d) is correct.**
- He played a key role in relief and rehabilitation during natural disasters, especially during the 1914 Bihar floods and the 1934 earthquake.
- He served as the President of the Indian National Congress multiple times, including during the crucial years 1934 and 1939.
- Dr. Prasad was elected as the President of the Constituent Assembly in December 1946, guiding the drafting of the Indian Constitution with impartiality and dignity.
- He signed the Constitution of India on 26 November 1950 as the head of the Constituent Assembly.
- After independence, he became India's first President and the only President to serve two full terms (1950–1962).

- As President, he upheld democratic values and maintained the constitutional balance between the executive and the legislature.
- He was known for his simple lifestyle, humility, and deep commitment to Gandhian principles.
- Dr. Prasad authored several important works, including "Atmakatha", "India Divided", and "Satyagraha at Champaran."
- He received the Bharat Ratna in 1962 for his service to the nation.
- Dr. Rajendra Prasad passed away on 28 February 1963, leaving behind a legacy of integrity, leadership, and constitutional morality.

PYQ REFERENCE: (2021)

Q. Who among the following is associated with 'Songs from Prison', a translation of ancient India religious lyrics in English?

- (a) Bal Gangadhar Tilak
- (b) Jawaharlal Nehru
- (c) Mohandas Karamchand Gandhi**
- (d) Sarojini Naidu

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2198048®=3&lang=1>

148. Poet Subramania Bharati

148. In 1906, he started printing a weekly newspaper named 'India', the first newspaper to print political cartoons in Tamil Nadu. He translated Patanjali's Yoga Sutra. He lived in exile in the French-controlled Pondicherry following an arrest warrant issued by the British Government. He was

- (a) Aurobindo Ghosh
- (b) Subramania Bharati
- (c) Rajagopalachari
- (d) Subramania Siva

Answer: (b) Subramania Bharati

Explanation:

In NEWS: Prime Minister pays Tributes to Mahakavi Subramania Bharati on his birth anniversary

Subramania Bharati:

- Subramania Bharati (born December 11, 1882, Ettaiyapuram, Madras Presidency, India—died September 12, 1921, Madras (now Chennai)) was an Indian writer of the nationalist period who is regarded as the father of the modern Tamil literary style.
- He is popularly known by his title Bharati or Bharathiyar and also by the other title "Mahakavi Bharati" ("the great poet Bharati").
- His works included patriotic songs composed during the Indian Independence movement.
- He fought for the emancipation of women, against child marriage, opposed the caste system, and advocated reforms of the society and religion.

Participation in the Freedom Movement:

- In 1904, he joined the Tamil newspaper Swadesamitran.
- Then in 1906, he started printing a weekly newspaper named India on red paper. This was the first newspaper to print political cartoons in Tamil Nadu.
- Bharathi participated in the Indian National Congress meeting held in Surat in 1907 along with V.O. Chidambaram Pillai and Mandayam Srinivachariar.
- He attended the Indian National Congress session in Calcutta held under Dadabhai Naoroji, which demanded Swaraj and boycott of British goods.
- In 1908, the British Government issued an arrest warrant for Bharathi which pushed him to live in exile in the French-controlled Pondicherry for about ten years until 1918.

Literary Works:

- His works include Panjali Sabatham, Kannan Paatu, Kuyil Paatu, Paapa Paatu, Chinnanchriu Kiliye and Vinayagar Nanmanimalai.
- He also translated Patanjali's Yoga Sutra and Bhagavat Gita to Tamil.
- Apart from this he also wrote various patriotic songs, religious verses, short stories and translations of speeches of reformist leaders.

Hence option (b) is correct.

PYQ REFERENCE: (2018)

Q. He wrote biographies of Mazzini, Garibaldi, Shivaji and Shrikrishna ; stayed in America for some time; and was also elected to the Central Assembly. He was

- (a) Aurobindo Ghosh
- (b) Bipin Chandra Pal
- (c) Lala Lajpat Rai**
- (d) Motilal Nehru

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2202020®=3&lang=1>

149. Muzaffarpur Conspiracy

149. Consider the following freedom fighters:

1. Khudiram Bose
2. Prafulla Chaki
3. Rash Behari Bose

Who of the above was/were actively associated with the Muzaffarpur Conspiracy?

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

Answer: (a) 1 and 2

Explanation:

In NEWS: Union Home Minister and Minister of Cooperation Shri Amit Shah pays tribute to the great patriot and immortal martyr Khudiram Bose ji on his birth anniversary

The Muzaffarpur Conspiracy:

● The Muzaffarpur Conspiracy refers to the **attempted assassination of British judge Kingsford in Muzaffarpur (1908)**, a key event in the Indian revolutionary movement. It is most closely associated with the Anushilan Samiti of Bengal.

● **Outcome:** The bomb was thrown at the wrong carriage, killing two British women instead of Kingsford.

● **Aftermath:** Arrest, trial, and execution/penalties of multiple revolutionaries under British law (later connected with the Alipore Bomb Case).

Key Individuals Involved:

● **Khudiram Bose** - Threw the bomb at the carriage believed to be carrying Kingsford. Captured, tried, and executed.

● **Prafulla Chaki** - Partner of Khudiram in the assassination attempt. Escaped after the bombing but shot himself to avoid arrest.

Hence option (a) is correct.

Members or associates of Anushilan Samiti who were linked to planning or supporting the act:

● **Barindra Kumar Ghosh** (Barin Ghosh) – Organizer and senior leader of Anushilan Samiti; involved in planning revolutionary activities.

● **Aurobindo Ghosh** – Senior ideologue; later acquitted in the Alipore Bomb Case (this case was related but not identical).

● **Ullaskar Dutta** – Bomb maker and key revolutionary technician.

● **Hemchandra Kanungo** – Trained in explosives; involved in training revolutionaries.

● **Bhupendranath Datta, Satyen Bose**, and several others associated with Anushilan Samiti.

Khudiram Bose:

● Khudiram Bose was born on 3 December 1889 in Habibpur, Bengal Presidency.

● He became interested in India's freedom struggle at a very young age.

● He joined the revolutionary organization **Anushilan Samiti**.

● He participated in distributing anti-British pamphlets and other revolutionary activities.

● He received training in explosives from senior revolutionaries.

● He was assigned, along with Prafulla Chaki, to assassinate British Magistrate Douglas Kingsford.

● On 30 April 1908, he threw a **bomb at a carriage in Muzaffarpur**, intending to target Kingsford.

● The bomb accidentally hit the wrong carriage, killing two British women instead.

● After the attack, Khudiram Bose was arrested by the British police.

● He was tried in court and found guilty despite being only 18 years old.

● He was sentenced to death by the British colonial government.

● Khudiram Bose was **executed on 11 August 1908**.

● He is remembered as one of the youngest martyrs of India's freedom movement.

● His courage inspired many future revolutionaries in the struggle for independence.

PYQ REFERENCE: (2022)

Q. Consider the following freedom fighters:

1. Barindra Kumar Ghosh
2. Jogesh Chandra Chatterjee
3. Rash Behari Bose

Who of the above was/were actively associated with the Ghadar Party?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2198008®=3&lang=1>

150. Mahad satyagraha

150. With reference to the Mahad Satyagraha, consider the following statements:

1. The movement aimed to secure the right of Dalits to enter into the temple in Mahad in present-day Raigad district of Maharashtra.
2. It was led by Dr. B. R. Ambedkar in 1927 which marked the first major mass mobilization of Dalits under his leadership.

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: How the Mahad satyagraha(s) shaped constitutional discourse

Mahad Satyagraha:

● The Mahad Satyagraha was led by **Dr. B. R. Ambedkar** in 1927.

● It took place at **Mahad** in present-day **Raigad district** of Maharashtra.

● The movement aimed to secure the right of **Dalits to access public water sources**, especially the **Chavdar Lake**. **Hence statement 1 is incorrect.**

● Although the Bombay Legislative Council permitted untouchables to use public tanks, **upper-caste groups continued to prevent access.**

● Ambedkar, along with thousands of followers, **symbolically drank water from Chavdar Lake** to assert civic rights.

● The movement marked the **first major mass mobilization** of Dalits under Ambedkar's leadership. **Hence statement 2 is correct.**

● It signified Ambedkar's shift from **petition-based advocacy to direct action.**

● The Mahad Satyagraha strengthened the **anti-untouchability movement** across India.

- After the Satyagraha, upper castes conducted **purification rituals** on the tank, rejecting Dalit access.
- A second phase of the movement took place in **1927–28**, demanding legal enforcement of access rights.
- In **1937**, the Bombay High Court upheld that untouchables had the **legal right** to use the public tank.
- During the Satyagraha, Ambedkar also led the **burning of Manusmriti** as a symbolic rejection of caste discrimination.

PYQ REFERENCE: (2015)

Q. With reference to Rowlatt Satyagraha, which of the following statements is/are correct?

1. The Rowlatt Act was based on the recommendations of the 'Sedition Committee'.
2. In Rowlatt Satyagraha, Gandhiji tried to Utilize the Home Rule League.
3. Demonstrations against the arrival of Simon Commission coincided with Rowlatt Satyagraha.

Select the correct answer using the code given below.

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

Source: <https://www.thehindu.com/news/national/how-the-mahad-satyagrahas-shaped-constitutional-discourse/article70357466.ece>

151. Macaulay's educational reforms in India

151. Which one of the following statements is not correct with respect to Macaulay's educational reforms in India?

- (a) He strongly supported the Orientalist position in the Orientalist–Anglicist debate.
 (b) He argued that English was the best medium for introducing modern Western knowledge in India.
 (c) He dismissed Sanskrit and Arabic learning as inferior for modern scientific and philosophical education.
 (d) He advocated the “Downward Filtration Theory” through which educating a small elite who would then educate the masses.

Answer: (a) He strongly supported the Orientalist position in the Orientalist–Anglicist debate.

Explanation:

In NEWS: Best of Both Sides: Long live Mahatma Macaulay

Macaulay:

- Macaulay was a member of the **Governor-General's Council** from 1834–38.
- He authored the famous **Minute on Indian Education** in 1835.
- Macaulay strongly supported the **Anglicist position** in the Orientalist–Anglicist debate. **Hence option (a) is incorrect**
- He argued that English was the best medium for introducing modern Western knowledge in India.
- He dismissed Sanskrit and Arabic learning as inferior for modern scientific and philosophical education.

- He recommended that government funding for Oriental institutions (Sanskrit colleges, Madrasas) should be discontinued.
- Macaulay proposed creating a class of Indians “English in taste, in opinions, in morals, and in intellect.”
- He advocated the **“Downward Filtration Theory”** — educating a small elite who would then educate the masses.
- Lord William Bentinck accepted Macaulay's recommendations in the 1835 Educational Resolution.
- English was made the official medium for higher education through Bentinck's Resolution.
- Traditional Indian learning systems were pushed to the margins by the 1835 policy.
- Macaulay's ideas led to the rise of an English-educated middle class in India.
- This new educated class became the backbone of Indian nationalism and the freedom movement.
- Macaulay's policy neglected primary education and vernacular languages.
- His legacy influenced later policies, including **Wood's Despatch of 1854**.
- Macaulay is criticised for promoting cultural imperialism through language.
- He is also credited for introducing modern, secular, rational education in colonial India.
- His ideas continue to shape debates on language policy and decolonising Indian education.

PYQ REFERENCE: (2018)

Q. Which one of the following statements does not apply to the system of Subsidiary Alliance introduced by Lord Wellesley?

- (a) To maintain a large standing army at others expense
 (b) To keep India safe from Napoleonic danger
(c) To secure a fixed income for the Company
 (d) To establish British paramountcy over the Indian States

Source:

<https://indianexpress.com/article/opinion/columns/best-of-both-sides-long-live-mahatma-macaulay-10390231/>

152. Serendipity Arts Festival

152. The Serendipity Arts Festival' Which is recently seen in news is held annually in which among the following Indian states?

- (a) Goa
 (b) Rajasthan
 (c) Kerala
 (d) Karnataka

Answer: (a) Goa

Explanation:

In NEWS: A glimpse of Goa's layered history at Serendipity Arts Festival

Serendipity Arts Festival:

- The Serendipity Arts Festival is one of **South Asia's largest multidisciplinary arts festivals**.
- It is held annually in **Panaji, Goa**. **Hence option (a) is correct.**
- The festival is organised by the **Serendipity Arts Foundation**, a non-profit cultural institution.
- It covers diverse art forms including **visual arts, performing arts, crafts, music, theatre, dance, photography, film, and culinary arts**.
- The festival aims to promote **interdisciplinary arts**, cultural revival, and public participation in art.
- It provides a major platform for **emerging as well as established Indian artists**.
- The event supports the preservation and promotion of **Indian crafts and traditional knowledge systems**.
- It includes curated exhibitions, workshops, public art projects, and community-based programmes.
- The festival is known for using **heritage sites and public spaces** across Goa as venues.
- It seeks to make art **accessible, inclusive, and community-centred**.
- The festival contributes to Goa's economy through **art tourism and creative industries**.
- It is independent of the Ministry of Culture but often collaborates with **state bodies, art institutions, and cultural organisations**.



PYQ REFERENCE: (2014)

Q. Consider the following pairs:

1. Garba : Gujarat
2. Mohiniattam : Odisha
3. Yakshagana : Karnataka

Which of the pairs given above is / are correctly matched?

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

Source: <https://indianexpress.com/article/lifestyle/art-and-culture/a-glimpse-of-goas-layered-history-at-serendipity-arts-festival-10410067/>

153. Recent inclusion in UNESCO Intangible Heritage List

153. Which one of the following was the latest inclusion in the Intangible Cultural Heritage List of UNESCO?

- (a) Chhau dance
- (b) Deepavali
- (c) Garba dance
- (d) Kumbh mela

Answer: (b) Deepavali

Explanation:

In NEWS: Prime Minister welcomes inclusion of Deepavali in UNESCO Intangible Heritage List

- **Deepavali has been inscribed on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity** during the *20th Session of the UNESCO Intergovernmental Committee* held at the **Red Fort, New Delhi**.
- The nomination was **prepared by the Ministry of Culture** through the **Sangeet Natak Akademi**.
- The inscription recognizes Deepavali as a **living, people-centric tradition** celebrated across India and by the global Indian diaspora.
- Deepavali embodies the universal message of **“Tamso Ma Jyotirgamaya”** (from darkness to light).
- The festival involves diverse traditional practices such as **lighting diyas, rangoli-making, rituals, community gatherings**, and intergenerational transmission of cultural knowledge.
- The festival supports a **wide ecosystem of livelihoods**, including potters, artisans, rangoli artists, sweet makers, florists, farmers, and craftspeople.

UNESCO Representative List of the Intangible Cultural Heritage

- It is maintained by the **UNESCO Intergovernmental Committee for the Safeguarding of Intangible Cultural Heritage** (established under the *2003 Convention*)
- The list aims to **ensure visibility, awareness, and appreciation** of intangible cultural heritage (ICH) worldwide.
- It includes traditions, practices, expressions, knowledge, and skills that communities recognize as part of their **cultural heritage**.
- India is a **State Party** to the **2003 UNESCO Convention on ICH** since **2005**.
- As of 2025, India has multiple elements inscribed (e.g., Yoga, Kumbh Mela, Durga Puja, Navruz, Ramlila, Kalbelia dance, Mudiyyettu, Chhau dance, Garba, etc.).
- **Deepavali (2025)** is the latest Indian entry added to the Representative List. **Hence option (b) is correct.**
- Inscription does **not grant ownership**; it promotes **awareness and safeguarding**.

PYQ REFERENCE: (2024)

Q. Which one of the following was the latest inclusion in the Intangible Cultural Heritage List of UNESCO?

- (a) Chhau dance
- (b) Durga puja
- (c) Garba dance**
- (d) Kumbh mela

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2201320®=3&lang=1>

154. UNESCO Intangible Cultural Heritage (ICH)

154. Which of the following Indian elements are recognized by UNESCO as part of Intangible Cultural Heritage?

1. Yoga
2. Kumbh Mela
3. Chhau dance
4. Ramman of Garhwal
5. Sankirtana of Manipur

Select the correct answer using the code below:

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

Answer: (d) 1, 2, 3, 4 and 5

Explanation:

In NEWS: World becoming more multi-polar makes compelling case for deeper multilateralism: Jaishankar

- The 20th session of the Intergovernmental Committee for the Safeguarding of Intangible Cultural Heritage will take place at the Red Fort from December 8 to 13.
- This is the first time that India is hosting a session of the UNESCO panel.

UNESCO Intangible Cultural Heritage (ICH):

- Intangible Cultural Heritage (ICH) refers to **practices, representations, expressions, knowledge, skills**, as well as instruments, objects, and cultural spaces associated with communities, recognized as part of their cultural heritage.
- ICH includes **oral traditions, performing arts, social practices, rituals, festive events, traditional craftsmanship, and knowledge related to nature and the universe.**
- **Objective:** To **safeguard cultural diversity**, promote **respect for cultural identities**, and encourage **transmission of heritage** across generations.
- UNESCO launched the **Convention for the Safeguarding of the Intangible Cultural Heritage, 2003**, which India ratified in 2005.
- The convention establishes **international cooperation** to support preservation, documentation, and promotion of intangible cultural heritage.
- Countries **submit nominations** for inclusion in:

- **Representative List of the ICH of Humanity** highlights cultural practices to raise awareness.
- **List of Intangible Cultural Heritage in Need of Urgent Safeguarding** for elements at risk of disappearing.
- **Register of Good Safeguarding Practices** for initiatives that effectively protect ICH.
- **India's recognized ICH elements** include:
 - Yoga (2016)
 - Kumbh Mela (2017)
 - Chhau dance of Odisha, West Bengal and Jharkhand
 - Ramman of Garhwal
 - Sankirtana of Manipur. **Hence option (d) is correct.**
- **Significance for India:** ICH promotes **cultural identity, tourism, inter-community understanding**, and strengthens India's **soft power diplomacy.**
- UNESCO encourages **community involvement** in safeguarding, ensuring that cultural practices remain **living and evolving** rather than static museum exhibits.

PYQ REFERENCE: (2024)

Q. Which one of the following was the latest inclusion in the Intangible Cultural Heritage List of UNESCO?

- a) Chhau dance
- b) Durga puja.
- c) Garba dance**
- d) Kumbh mela

Source: <https://www.thehindu.com/news/national/world-becoming-more-multi-polar-makes-compelling-case-for-deeper-multilateralism-jaishankar/article70370004.ece>

155. Kashi Tamil Sangamam

155. Consider the following statements regarding the Kashi Tamil Sangamam:

1. It is organized under the "Ek Bharat Shreshtha Bharat" initiative of the Government of India.
2. It aims to promote cultural exchange between Tamil Nadu and Uttar Pradesh.
3. The event is held annually in Chennai.

Which of the statements given above is/are correct?

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

Answer: (a) 1 and 2 only

Explanation:

In NEWS: Modi urges people to take part in Kashi Tamil Sangamam

Kashi Tamil Sangamam:

- Kashi Tamil Sangamam is a cultural exchange programme aimed at celebrating the shared civilizational heritage between Varanasi (Kashi) in Uttar Pradesh and Tamil Nadu. **Hence statement 2 is correct.**

- The programme highlights the deep cultural, spiritual, and historical connections between the people of North and South India.
- It is organized under the Government of India's "Ek Bharat Shreshtha Bharat" initiative to promote national unity and cultural understanding. **Hence statement 1 is correct.**
- The event includes cultural performances, seminars, temple visits, exhibitions, and interactions between scholars, students, and artisans from both regions.
- Kashi Tamil Sangamam provides a platform for showcasing Tamil culture in Varanasi, including classical music, dance, literature, cuisine, and traditional crafts. **Hence statement 3 is incorrect.**
- The programme also emphasizes the ancient links between Kashi and Tamil traditions through Saiva philosophy, Bhakti literature, and pilgrimage routes.
- It aims to strengthen people-to-people contact and rediscover historical ties rooted in language, literature, spirituality, and trade.

PYQ REFERENCE: (2022)

Q. Which one of the following statements about Sangam literature in ancient South India is correct?

- (a) Sangam poems are devoid of any reference to material culture.
(b) The social classification of Varna was known to Sangam poets.
 (c) Sangam poems have no reference to warrior ethics.
 (d) Sangam literature refers to magical forces as irrational.

Source: <https://www.thehindu.com/news/national/mann-ki-baat-tamil-is-the-pride-of-india-says-pm-modi/article70342006.ece>

156. Hornbill Festival

156. Consider the following statements regarding the Hornbill Festival:

1. It is celebrated in Nagaland and showcases the cultural heritage of all major Naga tribes.
2. The Hornbill bird, after which the festival is named, is listed in Schedule I of the Wildlife Protection Act, 1972.
3. The festival is organised at the Naga Heritage Village located in Kisama.

Which of the statements given above is/are correct?

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

Answer: (d) 1, 2 and 3

Explanation:

In NEWS: 26th Hornbill Festival Begins

Hornbill Festival:

- The Hornbill Festival is an **annual cultural festival** celebrated in the **State of Nagaland**.
- It is organised every year in **December** (1st to 10th). The festival is held at the **Naga Heritage Village, Kisama**, near Kohima.
- It is named after the **Hornbill bird**, which is revered in Naga culture and folklore.
- The festival is organised by the **Government of Nagaland**, particularly the **Department of Tourism** and **Department of Art & Culture**. It aims to **promote tribal heritage, preserve traditional customs**, and boost **tourism** in Nagaland.
- All major **Naga tribes** (over 16) participate in the festival.
- Key events include **folk dances, traditional music, arts, crafts, handloom**, and **indigenous sports** such as Naga wrestling.
- The festival showcases **Morungs** (traditional youth dormitories), cuisine, and tribal attire.
- It is regarded as the "**Festival of Festivals**" in Nagaland.
- It is one of India's biggest tribal festivals and significantly contributes to **eco-tourism and cultural tourism** in the Northeast.
- The festival is supported under the **Union Ministry of Tourism** through various promotional schemes.
- The Hornbill bird is protected under the **Wildlife Protection Act, 1972** (Schedule I). Nagaland's **Apatani, Ao, and Sumi** tribes have cultural traditions linked to hornbill conservation. The festival has increasingly incorporated **sustainable and eco-friendly themes**.

Hence all the statements are correct

PYQ REFERENCE: (2016)

Q. In which of the following regions of India are you most likely to come across the 'Great Indian Hornbill' in its natural habitat?

- (a) Sand deserts of northwest India
 (b) Higher Himalayas of Jammu and Kashmir
 (c) Salt marshes of western Gujarat
(d) Western Ghats

Source: <https://www.newsonair.gov.in/26th-hornbill-festival-begins-tomorrow/>

157. Adichanallur historical site

157. Adichanallur, an important archaeological site associated with the Iron Age-Megalithic culture, is located on the banks of which of the following rivers?

- (a) Kaveri
 (b) Vaigai
 (c) Tamirabarani
 (d) Pennar

Answer: (c) Tamirabarani

Explanation:

In NEWS: Madras HC says no to sand mining anywhere near Adichanallur historical site

Adichanallur:

- Adichanallur is an important archaeological site located in the **Thoothukudi** district of **Tamil Nadu**.
- The site lies on the banks of the **Tamirabarani River**. **Hence option (c) is correct.**
- It is associated with the **Iron Age-Megalithic culture** of South India.
- Excavations revealed **urn burials** containing human skeletal remains.
- Iron tools, bronze objects, **pottery and gold ornaments** have been found at the site.
- The site provides evidence of advanced metallurgical practices in ancient South India.
- Adichanallur was first excavated in the early 20th century by **Alexander Rea**.
- The site is protected as a monument of national importance by the Archaeological Survey of India.

PYQ REFERENCE: (2024)

Q. Consider the following information:

Archaeological - Site - State Description

1. Chandraketugarh - Odisha - Trading Port town
2. Inamgaon - Maharashtra - Chalcolithic site
3. Mangadu - Kerala - Megalithic site
4. Salihundam - Andhra - Pradesh Rock-cut shrines

In which of the above rows is the given information correctly matched ?

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

Source:

<https://www.thehindu.com/news/cities/Madurai/hc-says-no-to-sand-mining-anywhere-near-adichanallur/article70385205.ece>

158. Perumbidugu Mutharaiyar II

158. Consider the following statements with respect to Perumbidugu Mutharaiyar II:

- I. Perumbidugu Mutharaiyar II was an early medieval Tamil ruler who lived during the 8th century CE.
- II. He was a feudatory of the Pallava dynasty, serving under Pallava rulers such as Nandivarman II.

Which of the statements given above is/are correct?

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

Answer: (c) Both I and II

Explanation:

In NEWS: Prime Minister Welcomes Release of Commemorative Stamp Honouring Emperor Perumbidugu Mutharaiyar II

Perumbidugu Mutharaiyar II

- Perumbidugu Mutharaiyar II, also known as Suvaran Maran, was an early medieval Tamil ruler who lived during the 8th century CE (c. 705–745 CE). **Hence statement I is correct**
- He belonged to the Mutharaiyar dynasty, a prominent line of chiefs in the Cauvery delta region.
- He was a feudatory of the Pallava dynasty, serving under Pallava rulers such as Nandivarman II. **Hence statement II is correct**
- Despite being a feudatory, he exercised substantial autonomy and controlled large tracts of central Tamil Nadu.

His rule extended over regions including:

- Thanjavur
- Tiruchirappalli
- Pudukkottai
- Perambalur
- Thiruvarur
- These regions later became the core area of the Chola heartland, making his rule historically significant.

Military and Administrative Role

- Known as a powerful warrior and administrator.
- Played a crucial role in defending Pallava territories and maintaining political stability in the region.
- His military support helped the Pallavas resist rival dynasties during a turbulent phase.

Cultural Contributions

- Associated with temple construction and patronage of Tamil culture.
- His reign reflects the transition phase between Pallava dominance and the later rise of the Cholas.

PYQ REFERENCE: (2023)

Q. Who among the following rulers of Vijayanagara Empire constructed a large dam across Tungabhadra River and canalcum-aqueduct several kilometres long from the river to the capital city?

- (a) Devaraya I
(b) Mallikarjuna
(c) Vira Vijaya
(d) Virupaksha

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2203810®=3&lang=1>

159. Sardar Vallabhbhai Patel

159. Consider the following statements:

Statement-I: Sardar Vallabhbhai Patel led the Bardoli Satyagraha in 1928.

Statement-II: The Bardoli Satyagraha was a tax revolt by farmers against unjust British revenue policies, which Patel successfully resolved.

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 is the correct explanation for Statement-I

- (b) Both Statement-I and Statement-II are correct, and Statement-II is not the correct explanation for Statement-I
 (c) Statement-I is correct but Statement-II is incorrect
 (d) Statement-I is incorrect but Statement-II is correct

Answer: (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

Explanation:

In NEWS: Prime Minister Pays Tribute to Iron Man Sardar Vallabhbhai Patel on His 75th Death Anniversary

Sardar Vallabhbhai Patel:

Full Name: Vallabhbhai Jhaverbhai Patel.

Born: 31 October 1875, in Nadiad, Gujarat.

Education: Studied law and became a prominent barrister.

Role in Freedom Struggle:

- Joined the **Indian National Congress** and became a close associate of **Mahatma Gandhi**.
- Led the **Bardoli Satyagraha (1928)**, earning the title "**Sardar**" (Leader).
- Bardoli Satyagraha is a farmers' protest in Bardoli, against the British-imposed land revenue hike, resulting in tax rollback and property restoration. **Hence Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I**

Contributions to Indian Politics:

- First **Deputy Prime Minister** and **Minister of Home Affairs** of independent India.
- Key architect of **political integration of India**, successfully merging over **500 princely states** into the Indian Union post-1947.

Policies and Leadership:

- Advocated **strong central governance** to maintain national unity.
- Opposed fragmentation based on regional or communal lines.

Nicknames & Honors:

- Known as "**Iron Man of India**" for his firm leadership.
- Commemorated by the **Statue of Unity (Gujarat)**, the tallest statue in the world, unveiled in 2018.

Death: 15 December 1950.

Legacy:

- Revered as a symbol of **national integration and political pragmatism**.
- His strategies in consolidating the Indian states remain a **model in nation-building studies**.



PYQ REFERENCE: (2025)

Q. Consider the following statements about Raja Ram Mohan Roy:

- He possessed great love and respect for the traditional philosophical systems of the East.
- He desired his countrymen to accept the rational and scientific approach and the principle of human dignity and social equality of all men and women.

Which of the statements given above is/are correct?

- I only
- II only
- Both 1 and II**
- Neither I nor II

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2203824®=3&lang=1>

160. Indi Lime

160. Indi Lime, which has been accorded a GI tag, is primarily cultivated in which of the following Indian states?

- Maharashtra
- Tamil Nadu
- Karnataka
- Gujarat

Answer: (c) Karnataka

Explanation:

In NEWS: GI-Tagged Indi Lime from Karnataka Enters Oman Market with First Export Shipment

About Indi Lime:

- **Indi Lime** is a variety of **Kagzi lime** grown in India that has been granted a **Geographical Indication (GI) tag**, recognising its unique regional characteristics.
- It is primarily **cultivated in the Vijayapura district of Karnataka**, where local agro-climatic conditions contribute to its distinctive qualities. **Hence option (c) is correct.**
- The lime is noted for its **superior quality, strong aroma, balanced acidity, and high juice yield**, making it valued for culinary uses and traditional medicine.
- **Indi Lime received a GI tag in 2023**, becoming one of India's recognised regional horticultural products with intellectual property protection.
- The GI-tag has helped promote **exports of Indi Lime**; it was part of India's **first air shipment of GI-tagged limes to the United Kingdom in October 2025**.
- The GI status helps protect the **authenticity and reputation** of Indi Lime, supports farmers' incomes, and enables **market access in premium global markets**.



Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2206803®=3&lang=1>

161. National Consumer Day

161. Consider the following statements:

Statement-I: 24th December is observed as National Consumer Day in India.

Statement-II: The day marks the date when the Consumer Protection Act, 1986, received the President's assent.

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 is the correct explanation for Statement-I.
 (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I.
 (c) Statement-I is correct but Statement-II is incorrect.
 (d) Statement-I is incorrect but Statement-II is correct.

Answer: (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I.

Explanation:

In NEWS: National Consumer Day - "Efficient and Speedy Disposal through Digital Justice"

National Consumer Day – 24 December:

● **Theme 2025:** "Efficient and Speedy Disposal through Digital Justice"

● Marks the day the **Consumer Protection Act, 1986** received presidential assent. **Hence, Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I.**

● Highlights **consumer rights:**

1. Right to be protected
2. Right to be informed
3. Right to be assured
4. Right to be heard
5. Right to seek redressal
6. Right to consumer awareness

● Promotes responsible practices among consumers, businesses, and government institutions.

Consumer Protection Act, 2019

● Enacted: **20 July 2020**, replacing the 1986 Act.

● Focus: Modern dispute resolution, marketplace accountability, consumer welfare, and fair trade.

● **Key Provisions:**

- Right to information on quality, quantity, potency, purity, and standards of goods/services.
- Three-tier adjudicatory structure:
 1. **District Forum:** Claims up to ₹50 lakh
 2. **State Commission:** Claims ₹50 lakh – ₹2 crore
 3. **National Commission:** Claims above ₹2 crore
- In July 2025, **10 States + NCDRC** recorded disposal rates >100% (more cases resolved than filed).

Central Consumer Protection Authority (CCPA)

● Established: **24 July 2020** under CPA, 2019.

● **Functions:**

1. Safeguard collective consumer interests
2. Prevent unfair trade practices
3. Ensure compliance with the Act
4. Monitor and regulate advertisements
5. Initiate recalls, penalties, prosecutions

Consumer Welfare Fund

● Supports consumer protection initiatives across India.

● **Funding ratios:**

- **75:25** (States/UTs)
- **90:10** (Special category States/UTs)
- **FY 2024–25 release:** ₹38.68 crore

Digital Grievance Redressal

e-Jagriti (from 1 Jan 2025)

● Integrates OCMS, e-Daakhil, NCDRC CMS, CONFONET.

● **Features:**

- Multilingual support, voice-to-text, secure digital access
- Virtual hearings, automated notifications, real-time case tracking

National Consumer Helpline 2.0

● AI-enabled, multilingual, chatbot support.

● Handles **12 lakh complaints annually**, with many resolved within 21 days.

● Refunds facilitated: ₹27.61 crore (Apr–Oct 2025)

Jago Grahak Jago & Jagriti App

● Monitor e-commerce dark patterns (misleading UX, drip pricing, false urgency)

● Offer real-time consumer alerts and complaint registration

PYQ REFERENCE: (2023)

Q. Consider the following statements:

Statement-I : 7th August is declared as the National Handloom Day.

Statement-II: It was in 1905 that the Swadeshi Movement was launched on the same day.

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 is the correct explanation for Statement-I.

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I.

(c) Statement-I is correct but Statement-II is incorrect.

(d) Statement-I is incorrect but Statement-II is correct.

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2207673®=3&lang=1>

162. Madan Mohan Malaviya

162. Consider the following statements:

Statement-I: Madan Mohan Malaviya founded Banaras Hindu University (BHU) to promote modern education infused with Indian cultural values.

Statement-II: He believed that India's progress depended on traditional Indian knowledge systems rather than western scientific education.

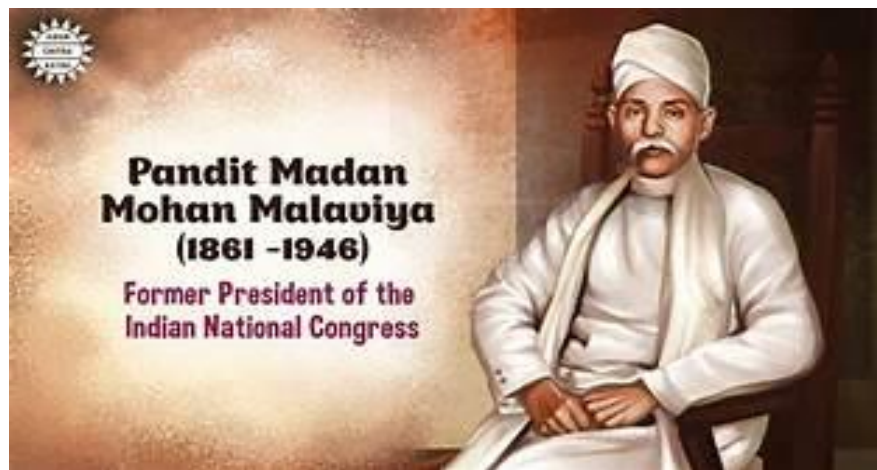
Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct, and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

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

Explanation:

In NEWS: Prime Minister pays homage to Bharat Ratna Mahamana Pandit Madan Mohan Malaviya Ji



Mahamana Pandit Madan Mohan Malaviya:

- **Full Name:** Madan Mohan Malaviya
- **Born:** 25 December 1861, Allahabad (now Prayagraj), Uttar Pradesh
- **Died:** 12 November 1946
- **Profession:** Lawyer, Educationist, Social Reformer, Freedom Fighter
- **Famous as:** "Mahamana"

Contributions

1. Education

- Founder of **Banaras Hindu University (BHU)** in 1916, one of Asia's largest residential universities.
- Advocated **modern education with Indian cultural values.**
 - BHU remains a symbol of his vision for **modern education rooted in Indian culture.**
 - Known for blending **nationalism, social reform, and education** into one mission.

Hence, Statement-I is correct but Statement-II is incorrect

2. Freedom Movement

- Active in the **Indian National Congress**, elected president four times (1909, 1918, 1932, 1933).
- Participated in campaigns against **Partition of Bengal (1905).**
- Advocated **Hindu-Muslim unity** and promoted nationalistic causes.

3. Social and Religious Reform

- Promoted **cow protection** and **temperance (anti-alcohol)** movements.
- Worked to **eradicate untouchability** and supported education for women and marginalized communities.

4. Journalism

- Founder and editor of newspapers like "**Hindustan**" and "**Indian Opinion**" to spread nationalist ideas.

Awards & Recognition

- Posthumously awarded **Bharat Ratna in 2015.**
- Remembered as a **visionary educationist and nationalist leader.**

PYQ REFERENCE: (2025)

Q. Who provided legal defence to the people arrested in the aftermath of Chauri Chaura incident?

- (a) C. R. Das
- (b) Madan Mohan Malaviya and Krishna Kant**
- (c) Dr. Saifuddin Kitchlew and Khwaja Hasan Nizami
- (d) M. A. Jinnah

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=2208346®=3&lang=1>

163. Dhanu Yatra

163. With reference to Dhanu Yatra, consider the following statements:

- 1. Dhanu Yatra is an annual open-air theatre festival held in Bargarh district of Odisha.
- 2. It is recognised as the world's largest open-air theatre festival.
- 3. The festival reenacts Ravana's rule and culminates in his defeat by Lord Rama.

Which of the statements given above is/are correct?

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

Answer: (b) 1 and 2 only

Explanation:

In NEWS: World-Famous Dhanu Yatra Begins at Bargarh in Odisha

Dhanu Yatra:



- Dhanu Yatra is an **annual open-air theatre festival** held in **Bargarh district of Odisha**. **Hence statement 1 is correct.**
- It is recognised as the **world's largest open-air theatre festival**. **Hence statement 2 is correct.**
- The festival depicts episodes from the **Krishna-Kansa mythology**.
- Dhanu Yatra typically spans **11 days**.
- During the festival, the town of **Bargarh is transformed into the mythological city of Mathura**.
- The festival reenacts **Kansa's rule** and culminates in his **defeat by Lord Krishna**. **Hence statement 3 is incorrect.**
- Streets, courtyards, palaces and public spaces are used as **live performance stages**.
- Prominent performance spaces include the **Rangamahala** and **Nanda Raja's court**.
- Dhanu Yatra **eliminates the conventional boundary between performers and spectators**.
- The character of **Maharaja Kansa** plays a central role throughout the festival.
- The festival combines **mythology, folk tradition and theatre performance**.
- It attracts **thousands of visitors** from across Odisha and other parts of India.
- Dhanu Yatra is an example of **community-based participatory theatre**.
- The performances are conducted across the **entire town rather than a single enclosed venue**.
- Dhanu Yatra represents Odisha's **intangible cultural heritage**.

PYQ REFERENCE: (2017)

Q. Consider the following pairs:

Traditions	Communities
1. Chaliha Sahib Festival	Sindhis
2. Nanda Raj Jaat Yatra	Gonds
3. Wari-Warkari	Santhals

Which of the pairs given above is/are correctly matched?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) None of the above

Source: <https://www.newsonair.gov.in/world-famous-dhanu-yatra-begins-at-bargarh-in-odisha-this-evening/>

164. Shaheed Udham Singh

164. With reference to Shaheed Udham Singh, consider the following statements:

1. He was an Indian revolutionary associated with the Ghadar Party.
2. He assassinated Michael O'Dwyer, the former Lieutenant Governor of Punjab during the Jallianwala Bagh massacre.

Which of the statements given above is/are correct?

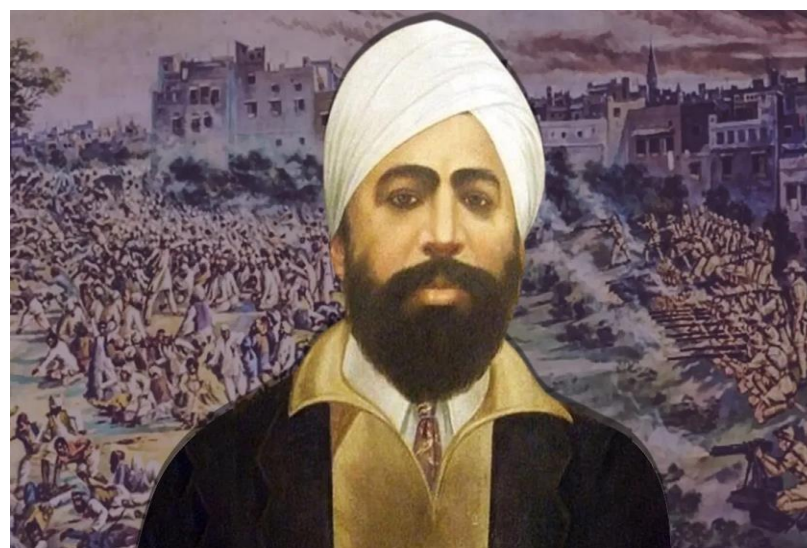
- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (c) Both 1 and 2

Explanation:

In NEWS: Union Home Minister pays tribute to the freedom fighter, Shaheed Udham Singh, on his birth anniversary

Shaheed Udham Singh:



- Shaheed Udham Singh was an Indian revolutionary associated with the **Ghadar Party**. **Hence statement 1 is correct.**
- He was a witness to the **Jallianwala Bagh massacre of 1919**, which deeply influenced his revolutionary activities.
- Udham Singh assassinated **Michael O'Dwyer**, the former Lieutenant Governor of Punjab, in **London**.
 - Michael O'Dwyer had endorsed General Dyer's actions during the Jallianwala Bagh massacre. **Hence statement 2 is correct.**
- Udham Singh carried out the assassination at **Caxton Hall, London**, in 1940.
- At the time of his execution, Udham Singh used the name **Ram Mohammad Singh Azad**.
- He was arrested immediately after the assassination and later tried in a British court.
- Shaheed Udham Singh was executed by hanging in **Pentonville Prison, London**.
- He was executed on **31 July 1940**.
- Udham Singh's actions were motivated by the goal of avenging the **Jallianwala Bagh massacre**.
- His remains were brought back to India in **1974**.
- Shaheed Udham Singh's samadhi is located in **Sunam**, in present-day Punjab.

- He is regarded as a symbol of **revolutionary nationalism** in India's freedom struggle.
- Udham Singh was not directly involved in the planning or execution of the Jallianwala Bagh massacre but targeted a British official responsible for Punjab's administration at that time.
- Shaheed Udham Singh is also remembered for emphasizing **unity among religions**, as reflected in the name he adopted.

PYQ REFERENCE: (2022)

Q. Consider the following freedom fighters:

1. Barindra Kumar Ghosh
2. Jogesh Chandra Chatterjee
3. Rash Behari Bose

Who of the above was/were actively associated with the Ghadar Party?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2208717®=3&lang=1>

165. Netaji Subash Chandra Bose

165. With reference to Netaji Subhas Chandra Bose, consider the following statements:

1. He was elected President of the Indian National Congress twice.
2. He defeated Mahatma Gandhi in the presidential election of the Congress.
3. He founded the Forward Bloc in 1939 and Azad Hind in 1943.

Which of the statements given above is/are correct?

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

Answer: (a) 1 and 3 only

Explanation:

In NEWS: Prime Minister Shri Narendra Modi today paid tribute to Netaji Subhas Chandra Bose on the historic occasion of December 30, 1943, when Netaji unfurled the tricolor at **Port Blair** with unmatched courage and valor.

- The Prime Minister emphasized that this moment in history reminds the nation that freedom is not achieved merely through aspiration, but is forged through strength, hard work, justice, and collective resolve.



Netaji Subhas Chandra Bose:

- Subhas Chandra Bose was born on **23 January 1897** in **Cuttack (Odisha)**.
- He is popularly known as **Netaji**.
- He secured **4th rank** in the **Indian Civil Services Examination (1920)**.
- He **resigned from the ICS** in 1921 in protest against British rule.
- Bose was a **radical nationalist leader** of the Indian freedom struggle.
- He became **President of the Indian National Congress** in **1938 and 1939**. **Hence statement 1 is correct.**
- He defeated **Pattabhi Sitaramayya** in the 1939 Congress presidential election. **Hence statement 2 is incorrect.**
- He resigned from the Congress presidency after the **Tripuri Crisis (1939)**.
- Bose founded the **Forward Bloc** in 1939. **Hence statement 3 is correct.**
- He advocated **complete independence (Purna Swaraj)** at an early stage.
- Bose escaped from India in **1941** while under British surveillance.
- He travelled to **Germany and later to Japan** during World War II.
- He reorganized the **Indian National Army (INA)** in Southeast Asia.
- The INA was originally formed by **Mohan Singh**.
- The **Rani of Jhansi Regiment** was the women's wing of the INA.
- Bose formed the **Provisional Government of Free India (Azad Hind)** in 1943. **Hence statement 3 is correct.**
- The Azad Hind Government was recognized by **Japan, Germany, and Italy**.
- The **Andaman and Nicobar Islands** were renamed **Shaheed and Swaraj**.
- Bose gave the slogan "**Give me blood, and I shall give you freedom.**"
- He popularized the greeting "**Jai Hind.**"
- Bose believed in **armed struggle** alongside mass support.
- He differed with **Gandhian non-violent methods**.
- Bose is believed to have died in a **plane crash in 1945** (official version).
- **23 January** is observed as **Parakram Diwas** in India.

PYQ REFERENCE:

Q. Which one of the following Indian leaders was dismissed by the British from the Indian Civil Service? [1999]

- (a) Satyendranath Tagore
- (b) Surendranath Banerji
- (c) R.C. Dutt
- (d) Subhash Chandra Bose**

Q. Which party was founded by Subhash Chandra Bose in the year 1939 after he broke away from the Congress ? [2005]

- (a) Indian Freedom Party
- (b) Azad Hind Fauj
- (c) Revolutionary Front
- (d) Forward Bloc**

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=2209645®=3&lang=1>

166. Sri Guru Gobind Singh

166. Consider the following statements about Sri Guru Gobind Singh Ji:

1. He was the tenth and last human Guru of Sikhism.
2. He opposed the caste system and social discrimination.
3. He emphasized equality of men and women within the Sikh community.

Which of the statements given above is/are correct?

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

Answer: (d) 1, 2 and 3

Explanation:

In NEWS: Prime Minister pays homage to Sri Guru Gobind Singh Ji on sacred Parkash Utsav

Sri Guru Gobind Singh:

- Sri Guru Gobind Singh Ji was the **tenth and last human Guru of Sikhism. Hence statement 1 is correct.**
- He was born in **1666 at Patna Sahib**, in present-day Bihar.
- His original name was **Gobind Rai**.
- He became the Sikh Guru at the age of **nine years**.
- His father, **Guru Tegh Bahadur Ji**, was martyred for defending religious freedom.

Khalsa and Religious Reforms

- The **Khalsa Panth** was founded by Guru Gobind Singh Ji in **1699**.
- The creation of the Khalsa took place at **Anandpur Sahib** on **Baisakhi**.
- He introduced the **Khande di Pahul (Amrit Sanskar)** ceremony.

- The **Five Ks** were prescribed as mandatory symbols for the Khalsa.
- He gave the common surnames "**Singh**" to men and "**Kaur**" to women.

Philosophy and Ideals

- Guru Gobind Singh Ji advocated the ideal of **Sant-Sipahi (Saint-Soldier)**.
- He opposed the **caste system and social discrimination**.
- He emphasized **equality of men and women** within the Sikh community. **Hence statements 2 and 3 are correct.**
- He upheld the right to resist **religious oppression and tyranny**.

Literary Contributions

- Guru Gobind Singh Ji was a **scholar of Persian, Sanskrit, Braj, and Punjabi**.
- His compositions are compiled in the **Dasam Granth**.
- *Jaap Sahib* and *Akal Ustat* are attributed to Guru Gobind Singh Ji.
- *Zafarnama* was written as a letter to **Mughal Emperor Aurangzeb**.

Military and Historical Aspects

- He fought several battles against the **Mughal forces and hill chiefs**.
- All four of his sons, known as the **Sahibzadas**, were martyred.
- The younger Sahibzadas were executed at **Sirhind**.

Guru Granth Sahib and Legacy

- Guru Gobind Singh Ji declared the **Guru Granth Sahib as the eternal Guru**.
- The declaration "**Guru Maneyo Granth**" was made in **1708**.
- He ended the tradition of **human Gurus** in Sikhism.
- Guru Gobind Singh Ji passed away at **Nanded (Maharashtra)**.

PYQ REFERENCE: (2013)

Q. Consider the following Bhakti Saints:

1. Dadu Dayal
2. Guru Nanak
3. Tyagaraja

Who among the above was/were preaching when the Lodi dynasty fell and Babur took over?

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

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2209040®=3&lang=1>

167. Zehanpora & Kashmir's Buddhist Heritage

167. Consider the following statements:

- Statement-I:** Mahayana ideas spread to Qandhar, Kabul, and Bactria from Kashmir.
- Statement-II:** Gilgit Manuscripts reveal Kashmir as a custodian of early Buddhist texts in Sanskrit and Prakrit.

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 is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct, and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

Answer: (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

Explanation:

In NEWS: Archaeologists have been excavating a 2,000-year-old Buddhist site at **Zehanpora** village in **Baramulla** district, **Jammu & Kashmir**.

● This site has unearthed remains such as stupas, structural foundations, pottery and artefacts dating back to the **Kushan period (1st–3rd century CE)**, drawing attention to Kashmir's ancient Buddhist past.

Zehanpora & Kashmir's Buddhist Heritage:

Location: Zehanpora, Baramulla district, Jammu & Kashmir.

Period: Kushan period, ~2,000 years old (1st–3rd century CE).

Archaeological Finds: Stupas, structural foundations, pottery, and other artefacts.

Discovery Clue: Archival photograph in a French museum showing three ancient stupas in Baramulla.

Historical Significance

● **Ancient Buddhist Patronage:**

- Emperor Ashoka (Mauryan dynasty) established monasteries and stupas in Kashmir.
- Kushan emperor Kanishka gave Buddhism unprecedented royal support.

● **Crossroads of Cultures:**

- Kashmir was at the **Indus-Gandhara region and Himalayan corridor**, serving as a conduit between the Indian heartland and wider Asia.

● **Centre of Learning:**

- Known as **Sharada Pitha**, a major seat of learning in ancient and early medieval periods.
- Important in **preservation and elaboration of Nagarjuna's Madhyamaka philosophy**.

● **Buddhist Councils:**

- **Fourth Buddhist Council** held in Kashmir under Kanishka.
- Presided by scholar **Vasumitra**; luminaries like **Ashvaghosha** participated.
- Formalised Mahayana Buddhism emphasizing **Bodhisattva ideal and universal compassion**.

Spread of Buddhism

● From Kashmir, Mahayana ideas spread to **Qandhar, Kabul, and Bactria**, making Kashmir a crucial launchpad for global Buddhism.

● **Gilgit Manuscripts** reveal Kashmir as a custodian of early Buddhist texts in **Sanskrit and Prakrit**.

Hence, Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

PYQ REFERENCE: [2001]

Q. Assertion (A): Harshavardhana convened the Prayag Assembly.

Reason (R): He wanted to popularize only the Mahayana form of Buddhism.

- (a) Both A and R are true but R is the correct explanation of A
- (b) Both A and R are true but R is not a correct explanation of A**
- (c) A is true but R is false
- (d) A is false but R is true

Source: <https://indianexpress.com/article/upsc-current-affairs/upsc-essentials/knowledge-nugget-zehanpora-baramulla-kashmirs-buddhist-upsc-10448120/>

168. Piprahwa Relics

168. With reference to ancient India, consider the following statements :

- I. The early stupas were primarily constructed to enshrine sacred relics, especially of the Buddha.
- II. The Piprahwa relics in Uttar Pradesh were discovered by British archaeologist Alexander Cunningham in 1898.

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: (a) I only

Explanation:

In NEWS: PM Modi to inaugurate exposition of Sacred Piprahwa Relics at Rai Pithora Cultural Complex in New Delhi

Piprahwa Relics:

● The Piprahwa relics are among the most important archaeological discoveries related to the historical Buddha (Gautama Buddha) and his relics.

● Piprahwa is a village in **Siddharthnagar district, Uttar Pradesh, India**.

● It is near the India-Nepal border, close to Lumbini, the birthplace of Buddha.

● In 1898, British archaeologist **William Claxton Peppé** excavated a stupa mound in Piprahwa. **Hence statement II is incorrect.**

● Inside, he found a stone coffer (relic casket) containing:

- **Ashes and bone fragments**
- **Jewels and gold**
- **A Brahmi inscription** dating to the 3rd century BCE
- Stupas were originally built to enshrine the sacred relics of the Buddha after his **Mahaparinirvana** (death).
- The central purpose of early stupas was to serve as a reliquary, housing the bodily remains or belongings of revered figures, especially the Buddha. **Hence statement I is correct.**



Source: <https://www.newsonair.gov.in/pm-modi-to-inaugurate-exposition-of-sacred-piprahwa-relics-at-rai-pithora-cultural-complex-in-new-delhi/>

PLACES IN INEWS

169. Lake Biwa

169. Why has Lake Biwa in Japan been in the news recently?

- (a) Discovery of one of the world's oldest pottery artifacts, over 10,000 years old.
- (b) Lake Biwa was declared a UNESCO World Heritage site for the first time.
- (c) It is the site of a newly constructed hydroelectric power project.
- (d) Discovery of dinosaur fossils along its banks.

Answer: (a) Discovery of one of the world's oldest pottery artifacts, over 10,000 years old.

Explanation:

In NEWS: One of the World's Oldest Relics Discovered in Lake Biwa, Japan, Stuns Scientists

- Researchers recently recovered a nearly intact pottery vessel from the bottom of Lake Biwa.
- It dates back over 10,000 years, making it one of the oldest pottery artifacts discovered at this site. **Hence option (a) is correct.**
- The vessel was found near the underwater archaeological site known as Tsuzuraozaki, at a depth of about 64 metres under the water surface.
- The find significantly deepens our understanding of human prehistory in Japan, showing that ceramic technology was in use more than 10,000 years ago.
- It suggests that early human communities around Lake Biwa had developed a degree of sophistication — both in crafting pottery and possibly in social or ritual practices.



PYQ REFERENCE: (2022)

Q. Which one of the following lakes of West Africa has become dry and turned into a desert?

- (a) Lake Victoria
- (b) Lake Faguibine**
- (c) Lake Oguta
- (d) Lake Volta

Source: <https://www.gktoday.in/ancient-10000-year-old-pottery-unearthed-in-japans-lake-biwa/>

MISCELLANEOUS

179. FIH Men's Junior Hockey World Cup 2025

170. Consider the following statements in respect of the FIH Men's Junior Hockey World Cup 2025:

1. It was the first time that the FIH Men's Junior Hockey World Cup 2025 was held in India.
2. The official mascot was named 'Kangeyan'.
3. The event is a biennial under 18 world hockey tournament.
4. India won the 2025 title, defeating Germany in the final.

How many of the statements given above are correct?

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

Answer: (a) Only one

Explanation:

In NEWS: India win first bronze at 2025 Junior Men's Hockey World Cup

2025 FIH Men's Junior Hockey World Cup:

- The **2025 Junior World Cup** was **hosted by India**. India has hosted the tournament on several previous occasions, including in **2013, 2016, and 2021**. **Hence statement 1 is incorrect.**

- The event is a **biennial under-21** world hockey tournament. **Hence statement 3 is incorrect.**
- Matches were played in **Chennai** (Mayor Radhakrishnan Stadium) and **Madurai**.
- The **official mascot** of the **FIH Hockey Men's Junior World Cup 2025** is named **Kangeyan**, inspired by the **Kangeyam bull**, symbolising strength, pride, and Tamil identity. **Hence statement 2 is correct.**
- **Germany** won the **2025 title**, defeating **Spain** in the final. This was Germany's **record-extending 8th title**. **Hence statement 4 is incorrect.**

India's Performance

- India won the **bronze medal** at the **2025 FIH Men's Junior Hockey World Cup**.
- This is India's **first-ever bronze** in the Junior Men's Hockey World Cup.
- India defeated **Argentina 4-2** in the bronze medal match.
- India made a comeback after trailing by two goals, scoring four goals in the final quarter.
- India last won a medal in **2016 (Gold)** and missed podiums in 2021 and 2023.
- The tournament is organised by the **International Hockey Federation (FIH)**.

PYQ REFERENCE:

Q. Consider the following statements in respect of the 44th Chess Olympiad, 2022:

1. It was the first time that Chess Olympiad was held in India.
2. The official mascot was named thambi'.
3. The trophy for the winning team in the open section is the Vera Menchik Cup.
4. The trophy for the winning team in the women's section is the Hamilton-Russell Cup.

How many of the statements given above are correct?

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

Source: <https://www.newsonair.gov.in/india-win-first-bronze-at-2025-junior-mens-hockey-world-cup/>

171. Param Vir Chakra

171. Q. Consider the following statements:

- I. It is India's highest military decoration awarded for displaying distinguished acts of valor during wartime.
- II. It was instituted on 15th August 1950.
- III. All ranks of the Indian Armed Forces, including those of allies in operational areas, are eligible for the award.
- IV. As of November 2025, a total of 21 individuals have received this honor.

Which of the statements given above are correct?

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

Answer: (c) I, III and IV

Explanation:

In NEWS: Rashtrapati Bhavan displays portraits of all 21 Param Vir Chakra awardees

- The **Param Vir Chakra (PVC)** is India's highest military decoration awarded for **displaying distinguished acts of valor during wartime**. **Hence statement I is correct.**
- It was instituted on **26 January 1950**, the day India became a republic. **Hence statement II is incorrect.**
- **Eligibility:** All ranks of the Indian Armed Forces, including those of **allies in operational areas**, are eligible for the award. **Hence statement III is correct.**
- **Criteria:** Awarded for **most conspicuous bravery, daring or pre-eminent act of valor, or self-sacrifice in the presence of the enemy**.
- **Design:** Circular bronze medal with a **national emblem in the center**, surrounded by a wreath, and a **chakra (wheel) symbol** at the core.
- **Ribbon:** Purple in color, symbolizing **courage and sacrifice**.
- **Notable Recipients:** Heroes of the **Indo-Pak wars (1947-48, 1965, 1971), Kargil War (1999)**, and various counter-insurgency operations.
- **First Awarded:** 3 November 1947, posthumously to Major Somnath Sharma during the first Indo-Pakistan War.
- Since 1947: 21 awards have been conferred (as of now), of which 14 were posthumous. **Hence statement IV is correct.**
- **Significance:** It represents the **highest recognition of valor and supreme courage in the Indian Armed Forces**.

PYQ REFERENCE: (2021)

Q. Consider the following statements in respect of Bharat Ratna and Padma Awards:

1. Bharat Ratna and Padma Awards are titles under the Article 18(1) of the Constitution of India.
2. Padma Awards, which were instituted in the year 1954, were suspended only once.
3. The number of Bharat Ratna Awards is restricted to a maximum of five in a particular year.

Which of the above statements are not correct?

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

Source:

<https://www.thehindu.com/news/national/portraits-of-param-vir-chakra-awardees-replace-british-adcs-at-rashtrapati-bhavan/article70403423.ece>