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From
15th Jun to **20th Jun 2026**



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POLITY & GOVERNANCE

1.1. SUPREME COURT NOTICE ON APPOINTMENT OF BIHAR MINISTER UNDER ARTICLE 164(4)

Context

- Recently, the **Supreme Court of India** issued notice on a plea challenging the appointment of **Deepak Prakash**, a minister in the Bihar government, on the ground that he was appointed as a minister without being elected to either House of the State Legislature.
- The petition questions whether his appointment is constitutional under **Article 164(4)** of the Indian Constitution.



Article 164(4) of the Constitution

- Article 164(4)** permits a person who is **not a member of the State Legislature** to be appointed as a Minister.
- However, such a person must get elected or nominated to the State Legislature **within six consecutive months** from the date of appointment.
- If the person fails to become a member of the Legislature within six months, he/she **ceases to hold ministerial office**.

Supreme Court's Earlier Interpretation

- S.R. Chaudhuri Case (2001)**
 - The Supreme Court ruled that the **six-month period cannot be repeatedly used** to appoint a non-legislator as a minister without obtaining an electoral mandate.
 - Reappointment of a person as minister after the expiry of six months, without becoming a legislator, would be unconstitutional.

Council of Ministers in States: Relevant Constitutional Articles

- Article 163** – Council of Ministers to aid and advise the Governor.
- Article 164** – Appointment, tenure, and responsibilities of Ministers.
- Article 167** – Duties of the Chief Minister towards the Governor.

Appointment of Ministers

- Governor appoints the Chief Minister.
- Other Ministers are appointed by the Governor on the advice of the Chief Minister.
- Council of Ministers is collectively responsible to the **Legislative Assembly**.

Q. Consider the following statements regarding the Council of Ministers in a State:

- The Governor appoints the Chief Minister.
- Other Ministers are appointed by the Governor on the advice of the Chief Minister.
- The Council of Ministers is collectively responsible to the Legislative Council.

4. Article 164 of the Constitution deals with the appointment of Ministers in States.

Which of the statements given above are correct?

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

The correct answer is **(a) 1, 2 and 4 only**.

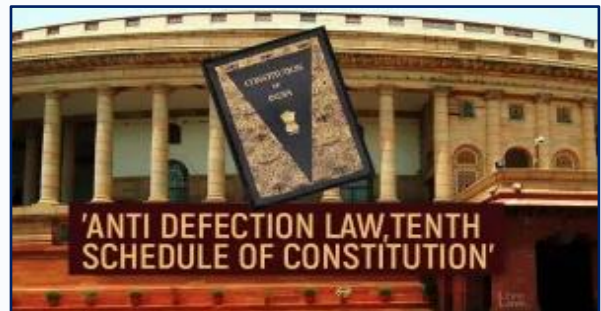
Detailed Explanation:

- **Statement 1 is correct:** According to **Article 164(1)** of the Indian Constitution, the Chief Minister is appointed by the Governor.
- **Statement 2 is correct:** The same Article specifies that the other Ministers are appointed by the Governor, but strictly on the **advice of the Chief Minister**.
- **Statement 3 is incorrect:** Under Article 164(2), the Council of Ministers is collectively responsible to the **Legislative Assembly** (*Vidhan Sabha*) of the State, not the Legislative Council (*Vidhan Parishad*). This mirrors the Union level, where the Union Council of Ministers is collectively responsible to the Lok Sabha (House of the People).
- **Statement 4 is correct:** **Article 164** comprehensively deals with provisions related to Ministers in a State, including their appointment, tenure, responsibility, qualifications, and oaths.

1.2. TENTH SCHEDULE AND PARTY MERGERS UNDER THE ANTI-DEFECTION LAW

Context:

- Recently, the merger of several MPs from the Trinamool Congress (TMC) with the Nationalist Congress Party (NCP) reignited debate over the interpretation of merger provisions under the Tenth Schedule of the Constitution. The issue has raised questions regarding the conditions under which elected representatives can avoid disqualification after switching political parties.



Tenth Schedule (Anti-Defection Law)

- Added by the **52nd Constitutional Amendment Act, 1985**.
- Intended to curb **political defections** and ensure stability of elected governments.
- Provides for **disqualification of legislators** who defect from their political party.

Grounds for Disqualification

A Member of Parliament (MP) or Member of Legislative Assembly/Council (MLA/MLC) can be disqualified if:

- They voluntarily give up membership of their political party.
- They vote or abstain from voting contrary to the party whip without prior permission.

Key Definitions

- **Political Party:** Refers to the entire political organization at the national or state level.
- **Legislature Party:** Consists of all elected members of a political party within a particular House (Lok Sabha, Rajya Sabha, Legislative Assembly, etc.).

Merger Provision under the Tenth Schedule

- **Original Law (1985):** Contained two primary exemptions protecting members from disqualification:
 - **Split (Paragraph 3):** If **one-third (1/3)** of the members of a legislature party split to form a separate group.
 - **Merger (Paragraph 4):** If a political party merges with another, provided it is approved by **two-thirds (2/3)** of the members of its legislature party.
- **91st Constitutional Amendment Act, 2003:**
 - **Deleted Paragraph 3 (Split Exception):** Recognizing that the 'split' provision was being misused for mass defections, the amendment completely removed it.
 - **Current Standing:** Only a **merger** involving at least **two-thirds (2/3)** of the legislature party is exempt from disqualification.

Recent Controversy: Why the Debate?

- The **Tenth Schedule permits the merger of an original political party with another political party.**
- Such a merger must be **supported by at least two-thirds of the members of its legislature party.**
- The Schedule does **not explicitly allow two-thirds of legislators alone to merge themselves with another political party.**
- Therefore, the **legislature party cannot independently initiate a merger** and claim protection from disqualification.
- The protection from defection is available only when the **original political party undergoes a valid merger.**
- The requirement of two-thirds support is meant to **approve a party merger**, not to authorize legislators to switch parties on their own.
- This issue remains a matter of constitutional interpretation and judicial scrutiny.

Role of the Presiding Officer

- The **Speaker of the Lok Sabha** or **Chairman of the Rajya Sabha/Legislative Council** decides questions of disqualification.
- Their decision is subject to **judicial review.**

Landmark Judgment: Kihoto Hollohan v. Zachillhu (1992)

- Supreme Court upheld the constitutional validity of the Tenth Schedule.
- Held that decisions of the Speaker are subject to judicial review.

Q. With reference to the Tenth Schedule of the Constitution of India, consider the following statements:

1. The Tenth Schedule was inserted by the 52nd Constitutional Amendment Act, 1985.
2. A legislator can be disqualified if he voluntarily gives up membership of his political party.
3. The 91st Constitutional Amendment Act, 2003 removed the provision relating to "split" as an exception to disqualification.
4. Under the Tenth Schedule, two-thirds of the members of a legislature party can independently merge with another political party and claim immunity from disqualification, even if the original political party has not merged.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

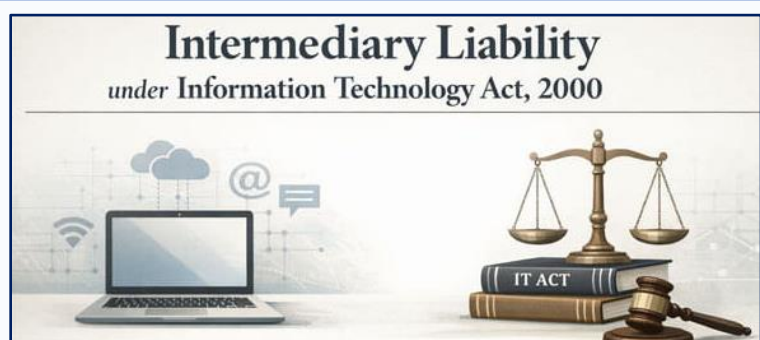
Explanation:

- **Statement 1 is correct:** The Tenth Schedule was introduced by the **52nd Constitutional Amendment Act, 1985**.
- **Statement 2 is correct:** Voluntarily giving up party membership is a ground for disqualification.
- **Statement 3 is correct:** The **91st Constitutional Amendment Act, 2003** deleted Paragraph 3 (Split Provision).
- **Statement 4 is incorrect:** A plain reading of the Tenth Schedule suggests that the **original political party must merge**, and two-thirds support of the legislature party is only a condition for recognizing such merger. Mere merger of legislators with another party does not automatically confer immunity from disqualification.

1.3. SECTION 69A OF THE IT ACT & INTERMEDIARY LIABILITY

Context

- Recently, the Union Government directed the blocking of access to Telegram under Section 69A of the Information Technology (IT) Act, 2000, citing concerns related to national security, public order, and misuse of the platform for unlawful activities.
- Telegram challenged the blocking order before the Delhi High Court, arguing that the restrictions violate the fundamental right to freedom of speech and expression under Article 19(1)(a) of the Constitution.
- The case has once again brought **Section 69A of the IT Act** and the scope of government powers over online content into focus.



About the Section 69A of the Information Technology (IT) Act, 2000

- **Power to Block:** It authorizes the Central Government to direct intermediaries or government agencies to block public access to any information generated, transmitted, received, stored, or hosted in any computer resource (including applications and websites).
- **Grounds for Blocking:** Blocking orders can only be issued if the government is satisfied that it is necessary or expedient in the interest of:
 - Sovereignty and integrity of India
 - Defence of India
 - Security of the State
 - Friendly relations with foreign States
 - Public order
 - Preventing incitement to the commission of any cognizable offence relating to the above.
- **Procedural Safeguards:** Orders must adhere to the *Information Technology (Procedure and Safeguards for Blocking Access to Information by the Public) Rules, 2009*.

Constitutional Provisions Involved

- **Article 19(1)(a):** Protects **freedom of speech and expression**. Restrictions or blocking orders under Section 69A directly interfere with this right.
- **Article 19(1)(g):** Guarantees the right to practice any profession or to carry on any occupation, trade, or business. Digital platform bans affect creators, educators, and entrepreneurs utilizing these platforms to maintain contact with subscribers and earn a livelihood.

Section 66A of the Information Technology Act, 2000

- Section 66A was introduced through the Information Technology (Amendment) Act, 2008.
- It **criminalized** the sending of certain types of messages through a computer resource or communication device.
- The provision came into force on 27 October 2009.

Section 79 of the IT Act: 'Safe Harbour' Provision

- **Definition:** Section 79 establishes an intermediary **safe harbour provision**, meaning online platforms are generally not held liable for third-party content or data hosted by them.
- **Conditions:** To qualify for immunity, intermediaries must:
 - Exercise due diligence.
 - Follow the *Information Technology Rules, 2021*.
 - Act quickly to remove or disable access to illegal content upon receiving actual knowledge of it.

Important Judicial Precedent

- **Anuradha Bhasin v. Union of India** In this landmark case, the Supreme Court examined indefinite blanket bans on internet services. The Court held that freedom of speech and expression (Article 19(1)(a)) and the freedom to practice any profession/trade over the internet (Article 19(1)(g)) are constitutionally protected.

- The Court concluded that internet restriction orders must meet the **proportionality test**:
 1. They must be strictly necessary.
 2. They must deploy the least restrictive measures available.
 3. They must be open to judicial review.
- In *Shreya Singhal vs Union of India* (2015), declared **Section 66A** unconstitutional (on the grounds of violating the freedom of speech guaranteed under Article 19(1)(a) of IC).

Q. With reference to Section 69A of the Information Technology Act, 2000, consider the following statements:

1. It empowers only the Supreme Court to order the blocking of online content.
2. It authorizes the Central Government to direct intermediaries to block public access to information.
3. Blocking orders may be issued in the interest of sovereignty and integrity of India.

Which of the statements given above is/are correct?

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

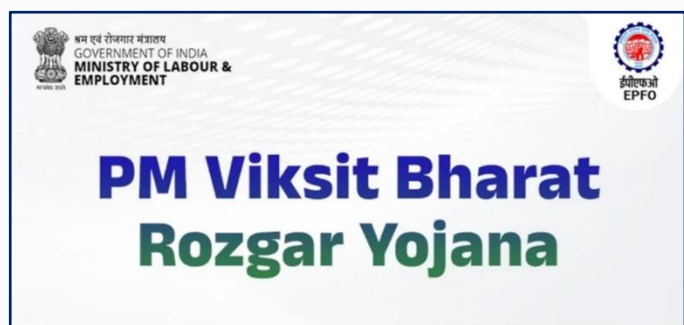
Answer: C

- **Statement 1 is incorrect:** Section 69A of the IT Act authorises the **Central/Union Government** (not exclusively the Supreme Court) to issue blocking orders.
- **Statement 2 is correct:** It gives the government the power to direct **intermediaries** to block public access to online information.
- **Statement 3 is correct:** Blocking orders can be issued if it is necessary in the interest of the **sovereignty and integrity of India** (among other specified grounds like the security of the state, public order, etc.).

1.4. PM VIKSIT BHARAT ROZGAR YOJANA (PM-VBRY): A PUSH FOR FORMAL EMPLOYMENT

Context:

- The Prime Minister recently initiated the disbursement of ₹2,400 crore in incentives to 15 lakh beneficiaries via Direct Benefit Transfer (DBT) under the newly approved Pradhan Mantri Viksit Bharat Rozgar Yojana (PM-VBRY).



About Pradhan Mantri Viksit Bharat Rozgar Yojana (PM-VBRY)

- **Nature of Scheme:** An **Employment Linked Incentive (ELI)** initiative designed to support the 'Viksit Bharat' vision through inclusive, formal job creation.
- **Financial Outlay:** ₹99,446 crore.

- **Operational Timeline:** August 1, 2025, to July 31, 2027.
- **Employment Target:** Generation of over **3.5 crore new formal jobs** within a two-year window.

Structural Components of the Scheme

Part A: Incentives for First-Time Employees

- **Target Beneficiary:** First-time formal workforce entrants registered with the **Employees' Provident Fund Organisation (EPFO)**.
- **Salary Cap:** Applicable strictly to individuals earning up to **₹1 lakh per month**.
- **Financial Support:** The government provides EPF wage support of up to **₹15,000**, disbursed in two instalments.
- **Transfer Mechanism:** Executed via Direct Benefit Transfer (DBT) using the Aadhaar-Based Payment System (ABPS).
- **Behavioral Nudge:** A designated portion of the incentive is retained in a savings or deposit account to inculcate long-term saving habits among new earners.

Part B: Incentives for Employers

- **Sectoral Applicability:** Available across all sectors, but specifically heavily incentivizes the **manufacturing sector**.
- **Eligibility Criteria:** Employers must hire additional staff drawing a monthly salary of up to ₹1 lakh.
- **Minimum Hiring Thresholds:**
 - Micro/Small Firms (< **50 employees**): Must hire at least **2 new employees**.
 - Medium/Large Firms (≥ **50 employees**): Must hire at least **5 new employees**.
- **Duration of Support:** Standard incentive support lasts for **2 years**. Crucially, for the manufacturing sector, this benefit is extended into the **3rd and 4th years**.
- **Transfer Mechanism:** Employer incentives (up to ₹3,000 per month per new employee) are credited directly into **PAN-linked** corporate bank accounts.

Q. With reference to the Pradhan Mantri Viksit Bharat Rozgar Yojana (PM-VBRY), consider the following statements:

- The scheme provides wage support strictly to first-time employees earning up to ₹1 lakh per month.
- The incentive duration for employers is universally restricted to two years across all sectors.
- Firms with a workforce of 50 or more employees must hire a minimum of two new personnel to qualify for the scheme.

Which of the statements given above is/are correct?

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

Answer: a

Explanation:

- **Statement I is correct:** The scheme targets first-time formal workforce entrants registered with the **Employees' Provident Fund Organisation (EPFO)** and provides EPF wage support of up to ₹15,000, which is applicable exclusively to individuals earning **up to ₹1 lakh per month**.
- **Statement II is incorrect:** The duration of employer support is not universally restricted to two years. While two years is the standard duration across most sectors, the incentive period is **extended into the 3rd and 4th years** specifically to boost formal employment in the **manufacturing sector**.
- **Statement III is incorrect:** The minimum hiring threshold is tiered based on the existing size of the firm. Companies with **50 or more employees must hire at least 5 new employees** to avail the benefits, whereas the requirement to hire at least 2 new employees applies strictly to micro and small firms with less than 50 employees.

1.5. SICKLE CELL ANAEMIA ELIMINATION

Context:

- President Droupadi Murmu, during a Madhya Pradesh Government event in Khandwa district (Omkareshwar), emphasized India's commitment to eliminating sickle cell-related diseases. She stated that with active participation from all States, India aims to achieve its national goal well before the government-set target of **2047**.



Key Highlights

- **Target Year for Eradication: 2047** is the official target year set by the Government of India to eradicate Sickle Cell Anaemia.
- **National Mission Launch:** The **National Sickle Cell Anaemia Elimination Mission** was launched in **2023**.
- **Key Milestones Achieved:** Ahead of schedule, the mission has screened **7 crore (70 million) people** in the age group of **0 to 40 years**.
- **Vulnerable Population:** Scientific studies highlight that the prevalence of sickle cell anaemia is significantly higher among **tribal communities** compared to the general population.

What is Sickle Cell Anaemia?

- **Nature of Disease:** It is an **inherited/genetic blood disorder** (passes from one generation to another).

- **Mechanism:** It affects the shape of red blood cells (RBCs), which carry oxygen to all parts of the body. Instead of being round and flexible, the RBCs become rigid, sticky, and shaped like a **sickle** or crescent moon.
- **It is** Non-communicable and non-contagious.
- **The most common causes** are iron deficiency, vitamin B12 or folate deficiency, chronic diseases, blood loss, and inherited disorders such as sickle cell anaemia and thalassaemia.
- **Impact:** These abnormally shaped cells can get stuck in small blood vessels, slowing or blocking blood flow and oxygen delivery, leading to severe pain, tissue damage, and anemia.

Symptoms

- Chronic anaemia
- Severe pain episodes (vaso-occlusive crises)
- Fatigue
- Swelling of hands and feet
- Frequent infections
- Delayed growth in children
- Stroke, kidney damage, lung complications (severe cases)

Treatment

- Pain management
- Blood transfusion
- Hydroxyurea therapy
- Folic acid supplementation
- Bone marrow (stem cell) transplantation (curative in selected patients)
- Gene therapy (emerging treatment)

Government Initiatives Against Anaemia

1. Anaemia Mukh Bharat (AMB)

- Launched in **2018**.
- Part of the **POSHAN Abhiyaan**.
- Focuses on reducing anaemia among:
 - Children
 - Adolescents
 - Women of reproductive age
 - Pregnant and lactating women

2. Weekly Iron and Folic Acid Supplementation (WIFS)

3. POSHAN Abhiyaan

4. National Iron Plus Initiative (NIPI)

Q. Consider the following statements regarding the National Mission to Eliminate Sickle Cell Anaemia:

1. It was launched in 2023.
2. Its target is to eliminate sickle cell disease by 2047.
3. It primarily targets individuals between 0 and 40 years of age.

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

Correct Answer: (d) 1, 2 and 3

Explanation:

All three statements are correct.

1. **It was launched in 2023.**

- The **National Mission to Eliminate Sickle Cell Anaemia (NMSCA)** was launched by the Government of India on **1 July 2023**.

2. **Its target is to eliminate sickle cell disease by 2047.**

- The mission aims to **eliminate Sickle Cell Disease as a public health problem by 2047**, coinciding with the centenary of India's independence.

3. **It primarily targets individuals between 0 and 40 years of age.**

- The mission aims to **screen approximately 7 crore people in the 0–40 years age group**, especially in tribal-dominated areas.

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INTERNATIONAL RELATIONS

2.1. INDIA-SLOVAKIA: HISTORIC MILESTONE

Context

- India and Slovakia elevated their ties to a '**Comprehensive Partnership**' by signing multiple MoUs across key sectors during Prime Minister **Narendra Modi's** historic visit to **Bratislava**. The visit was particularly significant as it marked the **first-ever visit by an Indian Prime Minister to Slovakia since its establishment in 1993**, opening a new chapter in bilateral relations



Key Pillars of India-Slovakia Comprehensive Partnership

1. Joint Action Against Terrorism and Global Security

- Joint Working Group (JWG):** Both nations agreed to formalize the formation of a Joint Working Group on Terrorism to institutionalize intelligence and security sharing.
- Condemnation of Terror Attacks:** Prime Minister Modi and his Slovak counterpart Robert Fico strongly condemned the April 2025 terror attacks in Pahalgam.
- Global Sanctions and Frameworks:** The leaders jointly called for action against entities listed in the UN Security Council 1267 Sanctions Committee, alongside the sponsors of terrorism. Furthermore, they agreed to actively work towards the swift adoption of the Comprehensive Convention on International Terrorism (CCIT) within the United Nations framework.

2. Economic Ties, Trade, and Industry

- Sectoral Focus:** The expanding trade map primarily targets critical industrial sectors including automobiles, railways, electronic goods, green technology, and advanced manufacturing.
- Trade Booster:** Prime Minister Modi underlined that the ongoing India-EU Free Trade Agreement negotiations will add significant momentum to this newly minted bilateral partnership.

3. Labour Mobility and Social Security

- Regulated Migration:** A major MoU on labor migration was signed to facilitate safer, regular mobility and structured information exchange between the designated authorities of both nations.
- Social Security Agreement:** The two administrations agreed to conclude a comprehensive social security agreement to protect the welfare of professionals moving across borders.

4. Education, Institutional Linkages, and Multilateralism

- STEM & Academic Exchange:** An MoU between the Higher Education Ministries was finalized to facilitate deeper academic linkages, prioritizing the mutual mobility of researchers and students in STEM fields and humanities.

- **UN Reform:** Reaffirming their commitment to a multipolar world order, both sides called for an expansion of permanent and non-permanent seats within a reformed United Nations Security Council (UNSC).

Mapping Dynamics for Prelims

Slovakia is a strategically significant landlocked nation in Central Europe. Candidates must retain a clear map memory of its immediate neighborhood:

- **Land Borders:** Slovakia is bordered by 5 countries:
 - **Poland** (North)
 - **Ukraine** (East)
 - **Hungary** (South)
 - **Austria** (Southwest)
 - **Czech Republic** (Northwest)
- **Geographical Trap:** It does *not* share a land border with Germany or Romania.
- **Capital City: Bratislava**, situated close to the borders with Austria and Hungary, sits on the banks of the famous **Danube River**.

Q. With reference to the bilateral relations between India and Slovakia, consider the following statements:

Statement I: India and Slovakia have officially elevated their relationship to a 'Comprehensive Partnership' during the historic 2026 bilateral visit by the Indian Prime Minister.

Statement II: Both nations have mutually agreed to form a Joint Working Group on Terrorism and called for the adoption of the Comprehensive Convention on International Terrorism (CCIT) within the United Nations framework.

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

Correct Answer: (b) Both Statement I and Statement II are correct and Statement II is not the correct explanation for Statement I

Detailed Solution:

- **STATEMENT I IS CORRECT:** The bilateral ties between India and Slovakia have been officially upgraded to a 'Comprehensive Partnership' during the historic visit to Bratislava. Thus, Statement I is factually correct.
- **STATEMENT II IS CORRECT:** The article clearly mentions that both leaders agreed to form a Joint Working Group on Terrorism and called for the adoption of the Comprehensive Convention on International Terrorism (CCIT) under the UN framework. Thus, Statement II is also factually correct.

- **EXPLANATION COHERENCE:** While both statements are independently true and accurate based on recent updates, Statement II outlines specific security understandings which do not serve as the direct cause or single explanation for the overarching upgrade of the entire diplomatic relationship to a Comprehensive Partnership (which spans labor migration, STEM education, trade, and automotive sectors).

Therefore, Statement II is not the correct explanation for Statement I.

2.2. EXERCISE PITCH BLACK 2026 & INDIA'S PARTICIPATION

Context

- Recently, the **Indian Air Force (IAF)** announced its participation in **Exercise Pitch Black 2026**, the premier multinational air combat exercise hosted by the **Royal Australian Air Force (RAAF)**. The exercise is scheduled to be held in **Northern Territory, Australia**, from **July 20 to August 7, 2026**.



What is Exercise Pitch Black?

- **Exercise Pitch Black** is the largest and most significant multinational air combat exercise conducted by the **Royal Australian Air Force (RAAF)**.
- Hosted in the **Northern Territory of Australia**.
- Designed to enhance:
 - **Air combat capabilities**
 - **Interoperability among participating air forces**
 - **Joint operational planning and execution**
 - **Multinational military cooperation**

Key Features

- One of the world's largest air warfare exercises.
- Involves **complex and realistic combat scenarios**.
- Provides training in:
 - Air-to-air combat
 - Air-to-ground operations
 - Coalition warfare
 - Strategic force integration

India's Participation in Pitch Black 2026

- The **Indian Air Force (IAF)** will participate as an official partner nation.

- India's participation reflects:
 - Growing defence cooperation with Australia.
 - Commitment to a **free, open and inclusive Indo-Pacific**.
 - Enhanced military interoperability with partner countries.
- s-based order.

About Northern Territory (Australia)

- Capital: **Darwin**
- Located in **northern Australia**.
- Strategic location facing the **Timor Sea** and Southeast Asia.
- Hosts major Australian military training facilities and air bases.
- **Uluru-Kata Tjuta National Park**: Located 450 km southwest of Alice Springs, it features the sacred giant red monolith (348m high) and the rust-colored domes of Kata Tjuta.
- **Kakadu National Park**: A massive UNESCO World Heritage-listed reserve 171 km east of Darwin, featuring wetlands, spectacular waterfalls, and ancient Aboriginal rock art galleries dating back tens of thousands of years

Q. With reference to Exercise Pitch Black, consider the following statements:

1. It is a multinational air combat exercise hosted by Australia.
2. It is conducted by the Royal Australian Air Force.
3. India participates in the exercise through the Indian Navy.

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:

Statement 1 is correct: Exercise Pitch Black is a **multinational air combat exercise** hosted by **Australia**.

Statement 2 is correct: It is conducted by the **Royal Australian Air Force (RAAF)** and is considered its premier international air warfare exercise.

Statement 3 is incorrect: India participates in Exercise Pitch Black through the **Indian Air Force (IAF)**, not the **Indian Navy**.

2.3. INDIAN OCEAN RIM ASSOCIATION (IORA)

Context

- Recently, Canada's formal application to become a dialogue partner of the Indian Ocean Rim Association (IORA) is being examined during the 28th meeting of the Committee of Senior Officials (CSO) held in New Delhi. IORA Secretary-General Sanjiv Ranjan highlighted that Canada's vast coastal zones and expertise in maritime safety, security, and connectivity could significantly benefit member states, while also addressing critical regional developments like a potential U.S.-Iran peace deal to end hostilities in the Strait of Hormuz and the disproportionate climate change challenges facing the Indian Ocean.



Core Institutional Framework of IORA

1. Genesis and Evolution

- Origin:** The organization was initially established as the Indian Ocean Rim Initiative in March 1995 and formally evolved into the Indian Ocean Rim Association for Regional Cooperation (IOR-ARC) during a ministerial meeting in March 1997. It was later rebranded simply as the Indian Ocean Rim Association (IORA).
- Founding Philosophy:** The framework was heavily inspired by an address delivered by former South African President Nelson Mandela in New Delhi in 1995, where he underscored the immense potential of a collaborative ocean-bound partnership.
- Secretariat:** The permanent secretariat and coordinating center of IORA is situated at **Ebene, Mauritius**.

2. Membership Structure

- Member States:** The association currently comprises **23 Member States** that share a contiguous coastline with or are situated within the Indian Ocean.
- Geographical Distribution:** Membership spans multiple continents, including Africa (e.g., South Africa, Mauritius, Madagascar), Asia (e.g., India, Bangladesh, Indonesia, Iran, UAE), and Oceania (Australia).
- Dialogue Partners:** IORA maintains **12 Dialogue Partners** (including major global powers like the United States, China, Japan, the United Kingdom, France, and Germany) who support the association's wider geopolitical objectives but do not hold voting privileges.
- Notable Exclusion:** **Pakistan has never been granted membership** in the association. The country applied for membership in the early 2000s, but its application was blocked because it refused to extend Most Favoured Nation (MFN) trading status to India, thereby failing to satisfy the mandatory "sovereign equality and trade facilitation" prerequisites of the IORA Charter.

3. Key Organizational Organs

- **Council of Ministers (COM):** This is the apex, ultimate decision-making body of IORA. It meets annually to formulate broad policies, review structural progress, and direct the association's geopolitical roadmap.
- **Committee of Senior Officials (CSO):** Functioning as the second-highest decision-making organ, the CSO is composed of senior diplomats from member states. It reviews institutional projects, coordinates working groups, and sets the operational agenda for the COM.

Guiding Principles & Functional Priorities

1. Architectural Safeguards

- **Bilateral Exclusion:** The foundational IORA Charter explicitly bars members from introducing contentious bilateral disputes into formal multilateral deliberations to preserve a strictly cooperative environment.
- **Sovereign Equality:** Decisions across all structural levels of the association are reached exclusively through consensus, and cooperation is strictly voluntary.

2. Six Priority Areas & Two Cross-Cutting Focus Themes

The structural mandate of IORA is anchored upon eight pillars designed to maximize regional integration:

Priority Areas	Cross-Cutting Themes
1. Maritime Safety and Security	1. The Blue Economy
2. Trade and Investment Facilitation	2. Women's Economic Empowerment
3. Fisheries Management	
4. Disaster Risk Management	
5. Academic, Science and Technology Cooperation	
6. Tourism and Cultural Exchanges	

India and IORA: Strategic Synergy

- **Chairship Focus (2025–2027):** India is currently leading the association as its institutional Chair. New Delhi has leveraged this platform to advance maritime safety amidst growing global volatility and is actively drafting the next comprehensive **IORA Action Plan (2028–2032)**.
- **Strategic Alignments:** India integrates its domestic maritime doctrine, **SAGAR** (Security and Growth for All in the Region), and its **MAHASAGAR** framework directly with IORA priorities to act as a primary security provider and first responder to natural disasters across the Indian Ocean Region.

Q. Consider the following statements regarding the Indian Ocean Rim Association (IORA):

STATEMENT I: Pakistan is not a member state of the Indian Ocean Rim Association (IORA) due to its historical non-compliance with the trade obligations of the association's charter toward India.

STATEMENT II: The Committee of Senior Officials (CSO) serves as the apex, highest decision-making body within the institutional framework of IORA.

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

Solution & Explanation

Correct Answer: (c) Statement I is correct but Statement II is incorrect

- **STATEMENT I CORRECT:** Pakistan is explicitly excluded from the 23-member body. It applied for entry into IORA in the early 2000s but was denied membership because it failed to grant Most Favoured Nation (MFN) status to India, which violated the fundamental principles of sovereign equality and trade cooperation mandated by the IORA Charter.
- **STATEMENT II INCORRECT:** The Committee of Senior Officials (CSO) is the *second-highest* decision-making organ of the association. The apex, absolute decision-making body of IORA is the **Council of Ministers (COM)**, which comprises the Foreign Ministers of the respective member states and meets annually.

2.4. INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

Context

- Recently, the International Atomic Energy Agency (IAEA) chief Rafael Grossi announced that the agency is ready to define the "concrete steps" required to implement a new U.S.-Iran deal aimed at ending the war in West Asia. Under the explicit terms of this diplomatic agreement, the UN's nuclear watchdog will be directly responsible for overseeing and verifying the process as Iran dilutes its enriched uranium stockpiles.



Core Institutional Framework of the IAEA

- **Origin:** Established in 1957 as the world's "Atoms for Peace" organization, inspired by US President Dwight D. Eisenhower's 1953 address to the United Nations General Assembly.
- **UN Status:** The IAEA is **not a Specialized Agency of the United Nations**. It is an **autonomous international organization** established by its own founding treaty, the IAEA Statute.

- **Dual Reporting Mandate:** It reports independently to **both** the United Nations General Assembly (UNGA) and the United Nations Security Council (UNSC) whenever a state party is found to be in non-compliance with its non-proliferation obligations.
- **Headquarters:** Vienna, Austria.
- **Dual Mandate:**
 - **Promotional Pillar:** Promotes the safe, secure, and peaceful use of nuclear technologies in sectors like health, energy, and agriculture.
 - **Verification Pillar:** Implements robust inspection systems to ensure nuclear materials are not diverted for military purposes.

Governance and Structural Organs

- **The General Conference:** The highest plenary organ consisting of representatives from **all Member States**. It meets annually to approve the budget, program of work, and global nuclear resolutions.
- **The Board of Governors:** The executive arm consisting of **35 member states**. It holds the exclusive authority to approve Safeguards Agreements and publish global nuclear safety standards.
- **The Secretariat:** The permanent administrative and professional staff of the agency, headed by the **Director General** (currently Rafael Mariano Grossi), who serves a four-year term.

The Safeguards System: Mechanics of Verification

- **Comprehensive Safeguards Agreements (CSAs):** Mandated primarily under Article III of the Non-Proliferation Treaty (NPT) for non-nuclear-weapon states. It gives the IAEA the authority to verify that all declared peaceful nuclear material within a country is not diverted to nuclear weapons.
- **The Additional Protocol (AP):** An optional, legally binding document paired with a state's existing safeguards agreement. It expands the IAEA's verification rights significantly, granting inspectors **short-notice access to undeclared sites** to verify the absolute absence of undeclared nuclear materials.

India and the IAEA: Key Strategic Facts

- **Non-NPT Status:** India is a nuclear-armed state that is **not a signatory** to the Non-Proliferation Treaty (NPT).
- **India-Specific Safeguards Agreement (ISSA):** Following the 2008 civil nuclear milestone (Indo-US Civil Nuclear Deal), India signed a unique safeguards agreement (INFCIRC/754) with the IAEA.
- **The Separation Plan:** India operates a strict dual-track framework for its domestic nuclear infrastructure:
 - **Civilian Facilities:** Reactors that use imported uranium fuel or are declared for peaceful energy production are placed under permanent IAEA safeguards.
 - **Military Facilities:** Strategic facilities utilizing domestic uranium supplies are kept separate and are entirely exempt from IAEA inspection or safeguards oversight.

- **India's Additional Protocol:** Ratified by India in 2014, this protocol is highly customized and significantly more limited than the standard model. It primarily covers the monitoring of exported and imported nuclear materials, ensuring that India's defense-related installations remain entirely insulated from intrusive international scrutiny.

Q. Consider the following statements regarding the International Atomic Energy Agency (IAEA):

1. The IAEA was established as a specialized agency of the United Nations under the direct administrative control of the Economic and Social Council (ECOSOC).
2. Non-nuclear-weapon states party to the Non-Proliferation Treaty (NPT) are required to conclude Comprehensive Safeguards Agreements with the IAEA.
3. In India, all operational nuclear reactors are placed under permanent IAEA safeguards irrespective of whether they source fuel domestically or internationally.

Which of the statements given above is/are correct?

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

Solution & Explanation

Correct Answer: (b) 2 only

- **STATEMENT 1 IS INCORRECT:** The International Atomic Energy Agency (IAEA) is an autonomous international organization. It was not established as a specialized agency of the United Nations, and it does not operate under the administrative control of ECOSOC. Instead, it was established via its own independent treaty (the IAEA Statute) and maintains a direct, dual reporting mandate to both the United Nations General Assembly and the United Nations Security Council.
- **STATEMENT 2 IS CORRECT:** Under Article III of the Non-Proliferation Treaty (NPT), every non-nuclear-weapon state party to the treaty is legally obligated to conclude a Comprehensive Safeguards Agreement (CSA) with the IAEA to verify that its peaceful nuclear programs are not being diverted toward military weapon development.
- **STATEMENT 3 IS INCORRECT:** In accordance with India's 2008 civil nuclear separation plan and its India-Specific Safeguards Agreement with the IAEA, only designated civilian nuclear facilities that rely on imported uranium or are voluntarily declared as civilian are placed under IAEA safeguards. India's military and strategic nuclear installations, which utilize domestic uranium supplies, remain entirely outside the purview of IAEA inspection and oversight.

3.1. INDIA'S EXPORTS HIT RECORD HIGH

Context

- Recently, official data from the Ministry of Commerce and Industry revealed that India's merchandise exports reached a record high of \$45.2 billion in May 2026. However, the overall trade deficit widened to \$10.5 billion due to a sharper growth in the import of both goods and services.



1. Core Concepts

- Balance of Trade (BoT):** The net difference between the value of a country's exports and imports of visible merchandise over a specific timeline.
- Merchandise vs. Services Trade:** Merchandise trade involves tangible goods (e.g., engineering items, electronics). Services trade (invisibles) involves intangible sectors like software, tourism, and financial services.
- Trade Deficit:** An economic condition where the total monetary value of imports exceeds the total value of exports.
- Current Account Deficit (CAD):** A broader metric comprising the net trade in goods and services, net factor income, and net transfer payments (remittances).

2. Institutional Framework

- Data Release:** The trade data is compiled and released on a monthly basis by the Department of Commerce under the **Ministry of Commerce and Industry**.
- Statistical Agency:** The **Directorate General of Commercial Intelligence and Statistics (DGCI&S)**, based in Kolkata, acts as the premier government agency for tracking and processing foreign trade statistics.

3. Key Trade Basket Trends

- Top Merchandise Exports:** Engineering goods (typically the largest segment), petroleum products, gems and jewellery, electronic goods, and organic/inorganic chemicals.
- Top Merchandise Imports:** Crude petroleum/oil (the primary driver of India's import bill), electronic goods, gold, machinery, and coal.
- Structural Dynamic:** India consistently runs a structural deficit in merchandise trade, which is partially mitigated by a structural surplus in services exports.

4. Macroeconomic Implications

- Currency Depreciation:** A widening trade deficit increases demand for foreign currency (like the US Dollar), putting downward pressure on the value of the Indian Rupee (INR).
- CAD Expansion:** A widening merchandise deficit directly strains the Current Account Balance, requiring higher capital inflows (FDI/FPI) to maintain macroeconomic stability.

Q. Consider the following statements regarding India's external trade sector:

1. The data concerning India's monthly merchandise exports and imports is officially compiled and released by the Ministry of Finance.
2. India historically maintains a structural trade surplus in its overall merchandise trade sector.
3. An increase in the value of engineering goods and electronic goods exports always guarantees a shrinking of the overall trade deficit.

How many of the statements given above are correct?

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

Solution and Explanation

Correct Answer: (d) None

- **STATEMENT 1 IS INCORRECT:** The monthly trade data is compiled and released by the Ministry of Commerce and Industry, not the Ministry of Finance.
- **STATEMENT 2 IS INCORRECT:** India historically runs a structural trade *deficit* in its merchandise trade sector because the value of its imports regularly exceeds its merchandise exports. India generally enjoys a surplus in its services trade, not merchandise trade.
- **STATEMENT 3 IS INCORRECT:** An increase in specific export categories like engineering or electronics does not guarantee a shrinking of the overall trade deficit if imports grow at a faster rate during the same period, as demonstrated by recent economic indicators where exports hit record highs but the deficit still widened due to surging imports.

3.2. INDIA ACHIEVES RECORD DEFENCE PRODUCTION OF ₹1.78 LAKH CRORE (FY 2025–26)

Context

- Recently, the **Ministry of Defence (MoD)** announced that **India's annual defence production reached an all-time high of ₹1.78 lakh crore in FY 2025–26**, registering a **15.6% increase** over the previous financial year.
- The milestone reflects the success of the Government's **Aatmanirbhar Bharat** initiative, defence indigenisation policies, and growing participation of the private sector in defence manufacturing.



Key Highlights

I. Defence Production

- **Record Production:** ₹1.78 lakh crore in **FY 2025–26**.
- **Growth:** **15.6%** over FY 2024–25.

- **Production has more than doubled** since FY 2013–14 (₹43,746 crore).

II. Contribution

- **Defence Public Sector Undertakings (DPSUs): ~76%** of total production.
- **Private Sector: ~24%** of total production, with increasing participation in indigenous manufacturing.

Government Initiatives Driving Defence Indigenisation

I. Aatmanirbhar Bharat in Defence

- Promotes **indigenous design, development, and manufacturing** of defence equipment.
- Reduces dependence on imports and strengthens strategic autonomy.

II. Defence Acquisition Procedure (DAP), 2020

- Gives preference to **Buy (Indian–IDDM)** (Indigenously Designed, Developed and Manufactured).
- Encourages procurement from domestic industries.

III. Positive Indigenisation Lists

- Ministry of Defence has notified multiple **Positive Indigenisation Lists** banning the import of specified defence items within stipulated timelines.
- Separate lists have also been issued by **DPSUs** for indigenous procurement of components and sub-systems.

IV. Innovations for Defence Excellence (iDEX)

- Launched in **2018**.
- Supports **start-ups, MSMEs, innovators, and academia** in developing indigenous defence technologies.

V. SRIJAN Portal

- Online portal launched by the Ministry of Defence.
- Facilitates **indigenisation of imported defence items** by connecting DPSUs, armed forces, and domestic industries.

VI. Defence Industrial Corridors

- **Uttar Pradesh Defence Industrial Corridor.**
- **Tamil Nadu Defence Industrial Corridor.**
- Aim to develop defence manufacturing clusters and attract investment.

VII. FDI in Defence Sector

- Foreign Direct Investment (FDI) limit in defence sector was enhanced in 2020 up to 74% through the Automatic Route for companies seeking new defence industrial license, and up to 100% through the Government Route wherever it is likely to result in access to modern technology

Defence Exports (Important for Prelims)

- India has witnessed a **record increase in defence exports** in recent years.
- Major export destinations include **Armenia, the Philippines, the United States, France, and several countries in Southeast Asia and Africa.**
- Key exported items include:
 - BrahMos missile components
 - Dornier aircraft
 - Offshore patrol vessels
 - Artillery systems
 - Radars
 - Bulletproof jackets
 - Ammunition
 - Electronic warfare systems

Major Indigenous Defence Platforms

- **LCA Tejas** – Indigenous light combat aircraft.
- **Arjun Main Battle Tank.**
- **Akash Surface-to-Air Missile.**
- **Pinaka Multi-Barrel Rocket Launcher.**
- **Advanced Towed Artillery Gun System (ATAGS).**
- **Dhanush Artillery Gun.**
- **Light Combat Helicopter (Prachand).**
- **Light Utility Helicopter (LUH).**
- **INS Vikrant** – India's first indigenously built aircraft carrier.

Q. Which of the following initiatives is specifically designed to support start-ups, MSMEs, innovators, and academia **in developing indigenous defence technologies?**

- (a) Defence Industrial Corridors
- (b) SRIJAN Portal
- (c) Innovations for Defence Excellence (iDEX)
- (d) Defence Testing Infrastructure Scheme

Answer: (c)

Explanation:

- **iDEX (Innovations for Defence Excellence)** was **launched in 2018** by the **Ministry of Defence** to foster innovation and technology development in the defence and aerospace sectors.
- It supports **start-ups, MSMEs, individual innovators, R&D institutes, and academia** by providing grants, funding, mentorship, and opportunities to develop indigenous defence technologies for the Armed Forces.

3.3. WORLD BANK APPROVES \$1.5 BILLION SUPPORT FOR INDIA'S REFORM PLAN

Context

- Recently, the **World Bank** approved **US\$1.5 billion** for India under its **Development Policy Financing (DPF)** programme. The financial assistance aims to support structural reforms that promote **private sector-led job creation, economic growth, tax simplification, trade integration, and improvements in the business environment.**
- According to the World Bank, these reforms could create employment opportunities for nearly **11 million young people entering India's labour market annually over the next two decades.**



Development Policy Financing (DPF)

- Development Policy Financing (DPF) is a **policy-based lending instrument** of the World Bank that provides **quick-disbursing financial assistance** directly to a country's government.
- Unlike project loans, DPF does not finance a specific infrastructure project; instead, it supports governments undertaking **policy and institutional reforms.** The funds are released after agreed reform measures have been implemented.
- Key Features**
 - Budget support to governments.
 - Linked with policy reforms.
 - Quick-disbursing financial assistance.
 - Promotes macroeconomic and structural reforms.

About the World Bank: Important Facts

- The **World Bank** was established in **1944** at the **Bretton Woods Conference** and began operations in **1946.**
- Its headquarters is located in **Washington, D.C., USA.**
- The institution works to reduce poverty and promote sustainable economic development by providing financial and technical assistance to developing countries.
- Only countries that are members of the **International Monetary Fund (IMF)** can become members of the World Bank.

World Bank Group

The World Bank Group consists of **five institutions**, each performing a distinct role in development financing.

Institution	Full Form	Main Function
IBRD	International Bank for Reconstruction and Development	Loans to middle-income and creditworthy low-income countries
IDA	International Development Association	Concessional loans and grants to the poorest countries
IFC	International Finance Corporation	Supports private sector investment
MIGA	Multilateral Investment Guarantee Agency	Political risk insurance for investors
ICSID	International Centre for Settlement of Investment Disputes	Resolves investment disputes. India is not a member of the ICSID.

India and the World Bank

- India is a **founding member** of the World Bank and has remained one of its largest borrowers.
- World Bank assistance extends across sectors such as **infrastructure, agriculture, health, education, urban development, renewable energy, climate resilience, and governance reforms**.
- The recent DPF operation reflects the Bank's increasing focus on supporting **policy reforms** alongside development financing.

Difference Between World Bank and IMF

- Although both institutions emerged from the Bretton Woods Conference, their objectives differ.
- The **World Bank** primarily finances **long-term development projects and structural reforms**, whereas the **IMF** focuses on **macroeconomic stability, exchange rate management, and balance of payments support**.

Q. With reference to the **World Bank and its Development Policy Financing (DPF)**, consider the following statements:

- Development Policy Financing (DPF) provides quick-disbursing budget support linked to policy and institutional reforms.
- DPF primarily finances infrastructure projects such as highways, railways, and dams.
- Only countries that are members of the International Monetary Fund (IMF) can become members of the World Bank.
- The International Development Association (IDA) provides concessional loans and grants to the poorest countries.

Which of the statements given above are correct?

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

The correct answer is **(b) 1, 3 and 4 only**.

Explanation:

- **Statement 1 is correct:** Development Policy Financing (DPF) is designed to provide rapid, non-earmarked budget support directly to a country's treasury to help implement macro-critical policy and institutional reforms.
- **Statement 2 is incorrect:** DPF does **not** finance physical infrastructure like highways or dams. Physical infrastructure projects are financed through **Investment Project Financing (IPF)**. As highlighted by the World Bank, DPF focuses entirely on policy reforms (like tax simplification or trade integration) rather than capital assets.
- **Statement 3 is correct:** According to the World Bank's rules, a country must first become a member of the **International Monetary Fund (IMF)** before it is eligible to join the International Bank for Reconstruction and Development (IBRD), which is the core arm of the World Bank.
- **Statement 4 is correct:** The **International Development Association (IDA)** is the arm of the World Bank Group that provides interest-free loans (called credits) and grants to the world's poorest and least-developed countries to boost economic growth and reduce inequalities.

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ENVIRONMENT & GEOGRAPHY

4.1. DECODING THE INDIAN MONSOON: FROM THERMAL CONTRASTS TO ITCZ SHIFTS

Context

- India is currently facing a 35% nationwide monsoon rainfall deficit, largely due to stalled cloud progression over central and western regions. Consequently, the India Meteorological Department (IMD) has lowered its seasonal forecast to 90% of the Long-Period Average (LPA), signaling the potential impact of a 'Super El Niño'. This delay has prompted the Union government to initiate crop contingency plans, as agricultural disruptions risk driving up retail food inflation.



Understanding the Monsoon

Basics and Origin

- Etymology:** Derived from the Arabic word *mausin* or the Malayan word *monsín*, meaning 'season'.
- Definition:** Monsoons are rhythmic, periodic secondary winds characterized by a complete seasonal reversal in direction.
- Mechanism:** They function as massive, large-scale convection cells, acting similarly to land and sea breezes. While peculiar to the Indian Subcontinent, they also affect South East Asia and parts of Central Western Africa.

The Dual Monsoon System

Feature	South-West (SW) Monsoon (Summer)	North-East (NE) Monsoon (Winter)
Origin point	Intense low-pressure system over the Tibetan plateau.	High-pressure cells over the Tibetan and Siberian plateaus.
Wind Direction	Sea to Land.	Land to Sea.
Key Beneficiaries	Most of India, Indonesia, Myanmar, and Bangladesh.	South-eastern Indian coast (Tamil Nadu, South Seemandhra), SE China, Japan.

Factors Influencing the SW Monsoon

1. Factors Governing Onset:

- Intense summer heating of the Tibetan plateau.
- Presence of a permanent high-pressure cell in the South Indian Ocean (east to north-east of Madagascar).
- Movement of the **Subtropical Jet Stream (STJ)** and the **Tropical Easterly Jet (TEJ)**.

- Northward migration of the **Inter-Tropical Convergence Zone (ITCZ)**.

2. Factors Governing Intensity:

- Pressure gradients between the Tibetan Low and the South Indian Ocean High.
- **Somali Jet** (Findlater Jet) and the **Somali Current**.
- Indian Ocean branch of the Walker Cell and the **Indian Ocean Dipole (IOD)**.

The Role of ITCZ & Coriolis Force

- **What is the ITCZ?** A low-pressure zone near the equator where South-East (SE) and North-East (NE) trade winds converge, characterized by ascending air and heavy clouds.
- **The Summer Shift:** As the Sun moves vertically over the Tropic of Cancer, the ITCZ shifts northwards (20° - 25° N) over the Indo-Gangetic Plain, becoming the **Monsoon Trough**.
- **The Coriolis Deflection:** The SE trade winds from the southern hemisphere cross the equator. Under the influence of the Coriolis force, they are deflected right, blowing from a south-west to north-east direction, effectively becoming the SW Monsoon.

Core Meteorological Terminologies

- **El Niño:** A climate pattern characterized by the unusual warming of surface waters in the eastern tropical Pacific Ocean, which disrupts the global Walker Cell circulation and historically suppresses the intensity of the Indian South-West monsoon.
- **Somali Jet:** A low-level, high-velocity cross-equatorial atmospheric wind current (also called the Findlater Jet) that flows along the coast of East Africa and directly modulates the moisture transport and baseline intensity of the incoming summer monsoon winds over the Arabian Sea.
- **Indian Ocean Dipole (IOD):** An ocean-atmosphere phenomenon in the Indian Ocean defined by the temperature differential between its western basin (near Africa) and eastern basin (near Indonesia), where a positive phase enhances Indian monsoon rainfall and a negative phase suppresses it

Q. With respect to the Indian Monsoon system, consider the following statements:

- During the summer season, the Inter-Tropical Convergence Zone (ITCZ) shifts northwards to position itself over the Indo-Gangetic Plain, functioning as the Monsoon Trough.
- Historical data from previous El Niño years demonstrates a consistent, predictable pattern of severe rainfall deficits specifically during the month of June.

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

Explanation:

Statement I is correct: In the summer season, the Inter-Tropical Convergence Zone (ITCZ) shifts northwards to 20°–25° N latitude over the Indo-Gangetic Plain. In this position, it is often called the Monsoon Trough and serves as the zone of maximum rainfall.

Statement II is incorrect: An analysis of June rainfall departures for El Niño years shows no consistent early-season signal. For example, during the strong El Niño of 2015, June rainfall was 14% above normal, whereas severe drought years like 2002 and 2004 recorded near-normal June rainfall, with deficits arriving only in July and later.

4.2. COMPRESSED BIOGAS BLENDING GOALS & CLEAN ENERGY TRANSITION

Context:

- India is on track to meet its statutory target of blending 3% compressed biogas (CBG) with Compressed Natural Gas (CNG) and domestic Piped Natural Gas (PNG) for FY27. Fueled by a robust rollout of processing infrastructure under the GOBARdhan scheme, India's baseline commercial blending rate has effectively doubled to reach approximately 2% at present.



India's Gas Sector Baseline

1. Consumption and Blending Milestones

- Daily Gas Profile:** India's baseline structural consumption of natural gas for the vehicle transport sector (CNG) and household distribution networks (PNG) combined is **34–35 million metric standard cubic metre per day (MMSCMD)**.
- Commercial Payout:** Recent performance parameters show commercial CBG supply hitting **0.66 MMSCMD in April** and **0.63 MMSCMD in May**, satisfying the current ~2% blending baseline.

2. Infrastructural Pipeline Under GOBARdhan

- Active Execution:** Data fetched from the Ministry of Petroleum and Natural Gas's dedicated **GOBARdhan portal** notes that construction of **324 CBG/bio-CNG plants** is actively underway.
- Future Capacity Expansion:** Preliminary pre-development work and administrative approvals have been mapped for an additional **1,261 upcoming facilities**.

3. Macro-Strategic Implications for India

- Energy Security Buffer:** Scaling up domestic alternative bio-fuels isolates the domestic market from erratic geopolitical shifts and external energy supply constraints.
- Import Substitution:** Mandated infrastructure-level integration helps curb deep structural dependencies on imported Liquefied Natural Gas (LNG), helping save valuable foreign exchange reserves.

Essential Climate Modulators & Project Concepts

- **Compressed Biogas (CBG):** An energy-rich fuel produced via the anaerobic decomposition of organic materials (like cattle dung, agricultural residue, and municipal solid waste). It undergoes advanced purification to remove impurities (carbon dioxide and hydrogen sulfide), resulting in a refined gas containing **over 90% methane**, which is chemically identical to conventional natural gas.
- **GOBARdhan (Galvanizing Organic Bio-Agro Resources Dhan):** An inter-ministerial umbrella initiative focused on converting biodegradable waste into wealth. It aims to support the rural economy, promote clean energy, and drive circular economic parameters toward achieving India's net-zero emission targets.
- **SATAT (Sustainable Alternative Towards Affordable Transportation):** Launched by the Ministry of Petroleum and Natural Gas to promote the establishment of commercial CBG production plants by private entrepreneurs, ensuring efficient production and integration into existing city gas distribution networks.
- **Compulsory Blending Obligation (CBO) Trajectory:** Announced by the National Biofuels Coordination Committee (NBCC), the blending framework transitions from voluntary stages into a strictly mandatory regime with specified legal targets:
 - **FY26:** 1% of total CNG and domestic PNG consumption.
 - **FY27:** 3% mandatory target.
 - **FY28:** 4% mandatory target.
 - **FY29 onwards:** 5% mandatory target floor.

Q. With respect to the Compressed Biogas (CBG) Blending Obligations in India, consider the following statements:

- I. The Compulsory Blending Obligation (CBO) mandates a uniform 3% blending target across both total CNG and domestic PNG consumption for FY27.
- II. Purified Compressed Biogas (CBG) contains less than 50% methane, making it structurally incompatible with conventional gas networks and requiring entirely separate pipelines.

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

Explanation:

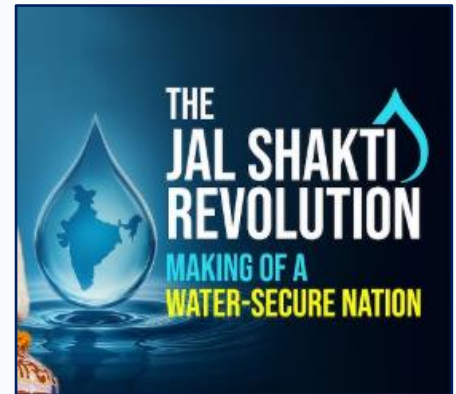
- **Statement I is correct:** As per the mandatory roadmap set by the central government, the Compulsory Blending Obligation is targeted at 1% for FY26, 3% for FY27, and rises progressively to 5% by FY29 across municipal CNG and domestic PNG streams.

- **Statement II is incorrect:** Purified and upgraded Compressed Biogas (CBG) contains **over 90% methane**. Because its composition, calorific value, and clean-burning characteristics are practically identical to conventional fossil-based natural gas, it can be seamlessly blended into existing commercial gas supply lines without creating distinct transport networks.

4.3. WATER SECURITY & MAJOR JAL SHAKTI INITIATIVES IN INDIA

Context

- Recently, Union Minister of Jal Shakti highlighted that water security is fundamental to achieving the vision of Viksit Bharat (Developed India). He emphasized that flagship initiatives such as the **Jal Jeevan Mission (JJM)**, **Swachh Bharat Mission (SBM)**, **Namami Gange Programme (NGP)**, and **Atal Bhujal Yojana (ABHY)** have significantly improved access to safe drinking water, sanitation, groundwater management, and river conservation, thereby strengthening India's water security.
- India is rapidly transitioning toward an integrated water management ecosystem to address a fundamental geographical disparity: India sustains nearly **18% of the world's population** but possesses only about **4% of global freshwater resources**.



Some Important Flagship Initiatives

1. Jal Jeevan Mission (JJM)

- Launched in 2019
- **Scale:** It is classified as the world's largest rural drinking water supply programme.
- **Coverage Status:** Rural household tap water coverage has increased from approximately 17% (3.23 crore households) at the time of launch to over **81% (15.8 crore households)**.
- **Target:** The government aims to achieve **100% coverage by 2028**.
- **Socio-Economic Impact:** The expansion of tap water saves an estimated 5.5 crore person-hours daily, primarily reducing the water-fetching burden historically placed on rural women.

2. Swachh Bharat Mission-Grameen (SBM-G)

- Launched in 2014
- **Health Impact:** According to a World Health Organisation (WHO) assessment, SBM-Grameen averted more than 3 lakh diarrhoea-related deaths between 2014 and October 2019.
- **SBM-Grameen 2.0:** The mission has evolved beyond achieving Open Defecation Free (ODF) status. The defining characteristic of Phase 2.0 is the transition toward **sustainable solid and liquid waste management**.

3. Groundwater Conservation

- **Initiative:** Jal Sanchay Jan Bhagidari.

- **Infrastructure:** Over 1.55 crore rainwater harvesting and groundwater recharge structures have been established across the country (as of May 2026).
- **Outcome:** These conservation efforts have led to a measurable improvement in groundwater recharge, specifically resulting in a **reduction in the number of "over-exploited assessment units"** in various parts of the country.

4. River Interlinking Projects

- **Project: Ken-Betwa River Linking Project.**
- **Significance:** It is India's *first* major river interlinking initiative.
- **Beneficiary Region:** Primarily designed to transfer water to the arid **Bundelkhand region**.

5. Namami Gange Programme (Environmental Indicators)

- Launched in 2014.
- **Infrastructure:** Added 4,260 million litres per day (MLD) of sewage treatment capacity over the past decade.
- **Biochemical Oxygen Demand (BOD):** The project has successfully reduced BOD from 26 tonnes per day (TPD) in 2017 to 10.75 TPD in 2024. *(PYQ Focus: UPSC frequently tests BOD as an indicator of water pollution; a reduction in BOD signifies lower organic pollution and improved water health).*
- **Water Quality:** Monitoring indicates that **pH and dissolved oxygen** levels in the Ganga currently meet standard "bathing criteria" at all monitored locations.

6. Atal Bhujal Yojana (Atal Jal)

- **Atal Bhujal Yojana (Atal Jal):** A **Central Sector Scheme** launched on **25 December 2019** to promote **community-led sustainable groundwater management** in water-stressed areas of **7 States—Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh**.
- **Significance:** The scheme supports **water source sustainability for the Jal Jeevan Mission (JJM)** through participatory groundwater management, water budgeting, and aquifer recharge.

7. Mission Amrit Sarovar

- Launched in April 2022, Mission Amrit Sarovar is a flagship Government of India initiative to develop and rejuvenate at least 75 water bodies in every district across the country.
- Each pond is planned to have a minimum area of one acre (0.4 hectare) and a water storage capacity of about 10,000 cubic metres.

- **Central Ground Water Board:** The CGWB, established under the Ministry of Water Resources, (now Ministry of Jal Shakti), is the apex body for managing, exploring, monitoring, assessing, and regulating groundwater resources in India. **Headquarter at Faridabad.**
- **Central Ground Water Authority (CGWA):** Central Ground Water Authority (CGWA) was constituted under sub-section (3) of Section 3 of the Environment

(Protection) Act, 1986 for the purposes of regulation and control of ground water development and management in the country.

- **Country's Groundwater Resources:** India extracts over 245 billion cubic meters of groundwater (25%) annually, fulfilling roughly 85% of rural drinking water and 62% of irrigation needs.

The percentage of Over Exploited Assessment units have declined from 17.24 % in 2017 to 11.13 % in 2024.

Q. The Central Ground Water Authority (CGWA) has been constituted under which of the following Acts?

- (a) Water (Prevention and Control of Pollution) Act, 1974
- (b) Environment (Protection) Act, 1986
- (c) National Water Policy, 2012
- (d) River Boards Act, 1956

Correct Answer: (b) Environment (Protection) Act, 1986

Explanation:

The **Central Ground Water Authority (CGWA)** was constituted by the **Central Government** under **Section 3(3) of the Environment (Protection) Act, 1986** for the purpose of regulating and controlling groundwater development and management across the country.

Why the other options are incorrect:

- (a) Water (Prevention and Control of Pollution) Act, 1974** – Establishes the Central and State Pollution Control Boards for water pollution control; it does **not** constitute the CGWA.
- (c) National Water Policy, 2012** – A policy document providing guidelines for water resource management, **not** a statutory Act.
- (d) River Boards Act, 1956** – Provides for the establishment of River Boards for inter-state river basin development; it is unrelated to the constitution of the CGWA.

5.1. JIO EYES SATELLITE COMMUNICATIONS

Context

- **Jio Platforms Ltd.**, a subsidiary of Reliance Industries, is preparing to enter India's **satellite communication (SatCom)** sector.
- The company has announced agreements with **SpaceX's Starlink** and **SES** to provide satellite broadband services in India, subject to regulatory approvals.
- Jio is also partnering with **Luxembourg-based SES** to use its **O3b mPOWER medium Earth orbit (MEO)** satellite constellation.



Why is Jio Entering Satellite Communications?

- Satellite communication is expected to complement terrestrial telecom networks by providing internet connectivity in **remote, rural, mountainous, island, and disaster-prone areas** where laying fibre-optic cables or mobile towers is difficult.
- It is also essential for sectors such as defence, maritime, aviation, disaster management, and digital inclusion.

What is Satellite Communication (SatCom)?

- **Satellite communication** is a technology that transmits voice, data, and multimedia signals between ground stations through artificial satellites orbiting the Earth. It enables communication over large geographical areas without relying entirely on terrestrial infrastructure.

Major Advantages

- Connectivity in inaccessible and remote regions.
- Supports disaster recovery when terrestrial networks fail.
- Enables broadband services in maritime and aviation sectors.
- Bridges the digital divide through universal internet access.

O3b mPOWER Satellite Constellation

- **O3b** stands for "**Other 3 Billion**," referring to people without reliable internet access.
- It is a **Medium Earth Orbit (MEO)** satellite constellation developed by **SES**.
- Operates at an altitude of around **8,000 km**, offering **lower latency than geostationary satellites** while covering larger areas than low Earth orbit satellites.
- Designed to deliver **high-speed, low-latency broadband connectivity**.

Types of Satellite Orbits

Orbit	Approximate Altitude	Key Features	Examples
LEO (Low Earth Orbit)	160–2,000 km	Low latency, high speed, requires many satellites	Starlink, OneWeb
MEO (Medium Earth Orbit)	2,000–35,786 km	Moderate latency and wider coverage	O3b mPOWER
GEO (Geostationary Orbit)	35,786 km	Appears stationary, ideal for broadcasting and weather monitoring	INSAT, GSAT

Key Satellite Internet Projects

SpaceX Starlink

- Satellite internet service operated by **SpaceX**.
- Uses a **Low Earth Orbit (LEO)** satellite constellation.
- Aims to provide global high-speed broadband connectivity.

Project Kuiper

- A satellite-based broadband initiative by Amazon to provide high-speed internet globally via Low Earth Orbit (LEO) satellites.
- It aims to deploy over 3,200 satellites operating at altitudes between 590 km and 630 km.

Related Government Initiatives

- **Digital India Programme** – Expanding digital infrastructure and internet access.
- **BharatNet** – Broadband connectivity to Gram Panchayats through optical fibre.
- **Indian Space Policy, 2023** – Encourages greater private sector participation in the space sector.
- **IN-SPACe (Indian National Space Promotion and Authorization Centre)** – Facilitates and regulates private sector activities in India's space ecosystem.

NVIDIA GPUs and AI Infrastructure

- As part of its AI expansion strategy, **Jio Platforms** announced that it will operationalise an initial fleet of **NVIDIA GB300 GPUs (Graphics Processing Units)** to build large-scale AI computing infrastructure in India.
- The **GB300-based computing capacity** is equivalent to **over 75,000 NVIDIA H100 GPUs** for AI inference.
- Once the first **120 MW AI data centre** becomes fully operational, the capacity can be scaled to **more than 2 lakh H100-equivalent GPUs**.
- This would make Reliance one of the **largest AI infrastructure platforms** globally.

What are GPUs?

- A **Graphics Processing Unit (GPU)** is a specialised processor designed to perform **massive parallel computations**. While originally developed for graphics rendering, GPUs are now the

backbone of **Artificial Intelligence (AI), Machine Learning (ML), High-Performance Computing (HPC), scientific simulations, and data analytics.**

- Compared to CPUs, GPUs can process thousands of operations simultaneously, making them ideal for training and deploying large AI models.

Q. With reference to satellite communication and Artificial Intelligence infrastructure, consider the following statements:

1. O3b mPOWER is a Medium Earth Orbit (MEO) satellite constellation developed by SES.
2. Starlink and Project Kuiper provide broadband services through Low Earth Orbit (LEO) satellites.
3. Graphics Processing Units (GPUs) are specifically designed for parallel processing and are widely used in Artificial Intelligence applications.

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: D

Detailed Explanation:

- **Statement 1 is correct:** **O3b mPOWER** is a high-throughput **Medium Earth Orbit (MEO)** satellite constellation owned and operated by SES. It is the successor to the original O3b ("Other 3 Billion") system, providing low-latency, high-bandwidth data connectivity globally.
- **Statement 2 is correct:** Both **Starlink** (developed by SpaceX) and **Project Kuiper** (developed by Amazon) are designed to deliver global, high-speed, low-latency broadband internet using thousands of small satellites deployed in **Low Earth Orbit (LEO)**.
- **Statement 3 is correct:** Unlike Central Processing Units (CPUs) which excel at sequential processing, **Graphics Processing Units (GPUs)** are engineered with thousands of smaller cores designed for **parallel processing**. This architectural design makes them highly efficient at handling the vast, simultaneous mathematical calculations required for training and running Deep Learning and Artificial Intelligence models.

5.2. VITILIGO: UNDERSTANDING THE CONDITION AND ADDRESSING SOCIAL STIGMA

Context

- Recently, experts highlighted the psychological and social challenges faced by children living with **vitiligo**, emphasizing the need to eliminate stigma and promote awareness in schools and communities.
- Although vitiligo is **medically harmless and non-contagious**, misconceptions continue to expose affected children to bullying, social exclusion, and emotional distress.



What is Vitiligo?

- **Vitiligo** is a **chronic autoimmune skin disorder** characterized by the loss of **melanocytes** (pigment-producing cells), resulting in **depigmented white patches** on the skin.
- It can affect individuals of **all ages, genders, and ethnicities**.
- The condition is **non-infectious, non-contagious**, and is **not caused by poor hygiene**.

Causes of Vitiligo

The exact cause remains unknown, but the condition is associated with:

- **Autoimmune response**, where the immune system mistakenly destroys melanocytes.
- **Genetic predisposition**.
- **Environmental triggers**, such as stress, skin injury, or sunburn in genetically susceptible individuals.

Key Clinical Features

- Well-defined **white patches** on the skin.
- May affect the **face, hands, feet, lips, scalp, and genital region**.
- Hair growing in affected areas may also turn **white (leukotrichia)**.
- Usually painless and does not affect physical health.

Types of Vitiligo

- **Non-segmental Vitiligo (NSV)**: Most common type; symmetrical distribution of patches.
- **Segmental Vitiligo (SV)**: Affects one side of the body and usually appears at an earlier age.
- **Universal Vitiligo**: Extensive depigmentation covering most of the body.

Psychological and Social Impact

Children with vitiligo often experience:

- Low self-esteem and poor body image.
- Bullying, teasing, and social exclusion.
- Anxiety, chronic stress, and depression.
- Reluctance to participate in school activities.
- Emotional distress, particularly during adolescence due to concerns about appearance and peer acceptance.

Why Does Stigma Persist?

Common misconceptions include:

- Vitiligo is contagious.
- It results from poor hygiene.
- It is a communicable skin disease.

Fact: None of these beliefs are scientifically correct.

Diagnosis

Diagnosis is generally based on:

- Clinical examination.
- **Wood's lamp** examination to highlight depigmented patches.
- Skin biopsy (rarely required).
- Screening for associated autoimmune disorders such as:
 - Thyroid disorders
 - Type 1 Diabetes
 - Pernicious anemia

Treatment Options

- Although there is **no permanent cure**, treatment aims to restore pigmentation and prevent progression.

Medical Management

- Topical corticosteroids.
- Calcineurin inhibitors.
- Phototherapy (Narrowband UV-B).
- Excimer laser therapy.
- Oral immunomodulatory therapy in selected cases.

Surgical Options

- Skin grafting.
- Melanocyte transplantation (for stable vitiligo).

Supportive Care

- Sunscreen to protect depigmented skin.
- Cosmetic camouflage.
- Psychological counselling.

Q. With reference to Vitiligo, consider the following statements:

1. It is a chronic autoimmune disorder resulting from the destruction of melanocytes.
2. It is a contagious disease transmitted through direct skin contact.
3. Narrowband UV-B phototherapy is one of the treatment options for vitiligo.

Which of the statements given above is/are correct?

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

Answer: C

Explanation:

Statement 1 is correct: Vitiligo is a chronic, long-term skin condition. It is widely recognized as an autoimmune disorder where the body's immune system mistakenly attacks and destroys **melanocytes**—the cells responsible for producing skin pigment (melanin).

Statement 2 is incorrect: Vitiligo is **not contagious** or infectious. It cannot be transmitted from one person to another through direct skin contact, sharing personal items, or any other physical interaction.

Statement 3 is correct: **Narrowband UV-B (NB-UVB) phototherapy** is a highly common and effective clinical treatment option for vitiligo. It uses specific wavelengths of ultraviolet light to help stimulate melanocytes and encourage the repigmentation of affected skin patches.

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HISTORY & CULTURE

6.1. DANCING GIRL OF MOHENJO-DARO: NCERT RESTORES ORIGINAL IMAGE

Context

- Recently, the **National Council of Educational Research and Training (NCERT)** announced that it will restore the **original image of the "Dancing Girl" figurine of Mohenjo-daro** in its Class 9 Arts textbook *Madhurima*.
- The decision came after criticism over a modified version of the image in which shading was added to cover the figurine's bare torso, resulting in a "clothed" appearance.



About the Dancing Girl Figurine

- One of the most iconic artefacts of the **Indus Valley Civilization (IVC)**.
- Discovered from **Mohenjo-daro** (present-day Sindh, Pakistan).
- Belongs to the **Harappan Civilization**.
- Estimated age: Around **2500 BCE**.
- Material: **Bronze**.
- Height: Approximately **10.5 cm**.
- Prepared using the **Lost-Wax Casting Technique**.
- Represents the advanced metallurgical skills and artistic excellence of the Harappans.

Distinctive Features

- Depicts a young female figure in a confident posture.
- Left hand placed on the hip.
- Right arm hanging freely.
- Adorned with numerous bangles.
- Considered evidence of developed craftsmanship and cultural sophistication.

Mohenjo-daro: Key Facts

- Meaning:** Mohenjo-daro means "**Mound of the Dead**".
- Location:** Situated on the banks of the **Indus River** in present-day **Sindh Province, Pakistan**.
- Discovery:** Discovered in **1922** by **R. D. Banerji (Rakhal Das Banerji)**.

Important Structures

- Great Bath, Granary, Assembly Hall, Advanced drainage system, Citadel and Lower Town

UNESCO Status

- Declared a **UNESCO World Heritage Site** in **1980**.

MCQ

Q. With reference to the “Dancing Girl” figurine of the Indus Valley Civilization, consider the following statements:

1. It was discovered from Mohenjo-daro in present-day Pakistan.
2. The figurine is made of bronze using the Lost-Wax Casting Technique.
3. It belongs to the Mature Harappan period and is dated to around 2500 BCE.
4. It was discovered by Sir John Marshall in 1922.

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:

- **Statement 1 is correct:** The Dancing Girl was discovered at **Mohenjo-daro** (Sindh, Pakistan).
- **Statement 2 is correct:** It is a **bronze sculpture** made using the **Lost-Wax Casting Technique**.
- **Statement 3 is correct:** It belongs to the **Harappan Civilization** and is dated to around **2500 BCE**.
- **Statement 4 is incorrect:** Mohenjo-daro was discovered in **1922 by R. D. Banerji (Rakhal Das Banerji)**, not Sir John Marshall.

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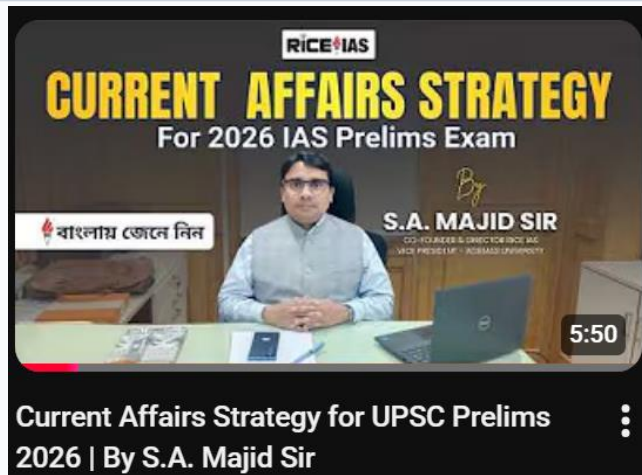
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