

# Solutions

DATE : 28<sup>th</sup> July- 3<sup>rd</sup> August

1) Answer:  (b) Proportional Representation by Single Transferable Vote (STV)

### Topic in Focus

- The **Vice President of India** is the **second-highest constitutional office**, presides over the **Rajya Sabha**, and can act as President in contingencies.
- Election ensures **representation, independence, and continuity** in governance.

### Key Aspects

- **Policy Framework:**
  - **Articles 66, 67, 68** of the Constitution.
  - **Presidential & Vice-Presidential Elections Act, 1952.**
- **Electoral College:**
  - **All members (elected + nominated)** of Lok Sabha & Rajya Sabha.
- **Voting Mechanism:**
  - **Proportional Representation by Single Transferable Vote (STV).**
  - **Secret ballot; no party whip** allowed.
- **Current Relevance:**
  - Maintains **parliamentary functioning** and **independence** of the Rajya Sabha.
- **Broader Impact:**
  - Minimizes **partisan influence**.
  - Reinforces **democratic integrity**.

### Analysis of Options:

- (a)  Incorrect – Election Commission supervises, but not the method asked.
- (b)  Correct – Uses **STV under Proportional Representation**.
- (c)  Incorrect – No party whip is allowed.
- (d)  Incorrect – Both Houses participate, not just Lok Sabha.

2) Answer:  (d) Traditional seed varieties evolved through natural adaptation and farmer selection

### Topic in Focus

- **Landraces** are **genetically diverse, locally adapted traditional crop varieties** that evolved through **natural selection and farmer practices**.

### Key Aspects

- **Policy Context:**
  - Promoted for **agro-biodiversity** and **climate-resilient farming**.
- **Key Features:**
  - **Locally adapted**, pest-resistant, and nutritionally rich.
  - Provide **resilience to climate change** and **sustainable yields**.
- **Challenges:**
  - Threatened by **modern hybrid adoption** and **genetic erosion**.
- **Current Relevance:**
  - Critical for **food security, seed sovereignty, and biodiversity conservation**.

### Analysis of Options:

- (a)  Modern hybrids → Not landraces.
- (b)  Patented corporate varieties → Not traditional.
- (c)  Lab-created GMOs → Opposite of landraces.
- (d)  Correct – **Traditionally evolved, locally adapted** seeds.

3) Answer:  (a) Ministry of Agriculture & Farmers Welfare

### Topic in Focus

- **PM-KISAN** is a **Central Sector Scheme** launched in **2019** to **provide direct income support** to all landholding farmers.

### Key Aspects

- **Policy Development:**
  - ₹6,000/year to farmers in **3 equal DBT installments**.
  - **Excludes institutional landholders and professionals.**
- **Nodal Ministry: Ministry of Agriculture & Farmers Welfare.**
- **Current Significance:**
  - Mitigates **farm distress** and **stabilizes rural incomes**.
  - Supports **inclusive agricultural growth**.

### Analysis of Options:

- (a)  Correct – Implemented by **Agriculture & Farmers Welfare Ministry**.
- (b)  Rural Development is not the nodal ministry.
- (c)  Finance Ministry only handles fund allocation.
- (d)  Corporate Affairs is unrelated.

4) Answer:  (b) II only

### Topic in Focus

- IEPFA safeguards **investor interests**, manages **unclaimed dividends and deposits**, and promotes **financial literacy**.

### Key Aspects

- **Policy Background:**
  - **Established: 2016 under Section 125(5) of Companies Act, 2013.**
- **Functioning:**
  - Administers **Investor Education and Protection Fund (IEPF)**.
  - Operates under **Ministry of Corporate Affairs**.
- **Current Significance:**
  - Ensures **transparency, investor confidence, and returns unclaimed funds**.

### Analysis of Statements:

- **Statement I:**  Incorrect – Functions under **Corporate Affairs**, not Finance Ministry.
- **Statement II:**  Correct – Established under **Companies Act, 2013**.

5) Answer:  (d) I and II only

### ◆ Topic in Focus

Endangered, solitary mammals found in **alpine regions of South & East Asia**, mainly threatened by **poaching for muskpods**.

### ◆ Key Aspects

#### Policy Background:

- Protected under **Schedule I of Wildlife Protection Act, 1972**
- Listed as **Endangered on IUCN Red List**

#### Implementation & Conservation:

- Habitat protection, conservation breeding, anti-poaching measures
- Monitored under **Wildlife Crime Control Bureau (WCCB)**

#### Current Significance:

- Poaching and habitat loss in Himalayan ecosystems
- Critical for maintaining **alpine biodiversity**

### ◆ Analysis of Statements

- **I**  **Correct** – Endangered on IUCN Red List
- **II**  **Correct** – Poached for muskpod (illegal trade)
- **III**  **Incorrect** – Musk deer lack antlers and gall bladders
- **IV**  **Incorrect** – Found in alpine meadows, not tropical forests

6) Answer:  (a) I only

### ◆ Topic in Focus

Central Sector Scheme launched in **2019** to provide **direct income support** to all landholding farmers.

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### ◆ Key Aspects

#### Policy Development:

- ₹6,000/year to farmers in **3 equal DBT installments**
- **Excludes** institutional landholders & certain professional categories
- **Nodal Ministry:** Ministry of Agriculture & Farmers Welfare

#### Current Significance:

- Mitigates **farm distress** and stabilizes rural incomes
- Supports **inclusive agricultural growth** and input purchase

### ◆ Analysis of Statements

- **I**  **Correct** – ₹6,000/yr in 3 DBT installments
- **II**  **Incorrect** – Institutional landholders are excluded
- **III**  **Incorrect** – Covers only **landholding farmers**, not lessees

7) Answer:  (d) I and II only

### ◆ Topic in Focus

Recent studies reveal **cadmium & chromium** in **non-precipitating clouds** over Eastern Himalayas, exposing hidden environmental risks.

### ◆ Key Aspects

#### Policy Background:

- Supported by **Department of Science & Technology (DST)**
- Focus on **pollution monitoring & ecological risk assessment**

#### Current Significance:

- Clouds carry pollutants from **vehicular & industrial emissions**
- Threat to **biodiversity, water sources, and public health**

### ◆ Analysis of Statements

- **I**  **Correct** – Heavy metals detected in clouds
- **II**  **Correct** – Pollution linked to lowland industrial emissions
- **III**  **Incorrect** – Heavy metals also naturally occur in crust

8) Answer:  (a) II only

### ◆ Topic in Focus

Global plastic production surged from **2 MT (1950) → 436 MT (2022)**; **78% traded**, but recycling remains **~10%**.

### ◆ Key Aspects

#### Policy & Challenges:

- **No dedicated global convention** on plastics
- Bio-based & compostable plastics = **1.5% only**
- Plastic pollution drives **triple planetary crisis**

#### Current Significance:

- Major contributor to **ocean pollution & microplastics**
- Calls for **UN-led global plastic treaty**

### ◆ Analysis of Statements

- **I**  **Incorrect** – Bio-based plastics are negligible (1.5%)
- **II**  **Correct** – 78% of plastics traded globally
- **III**  **Incorrect** – Only ~10% recycled

9) Answer:  (b) II and III only

### ◆ Topic in Focus

Government-owned payments bank (2018) using **post office network** to provide **digital & doorstep banking** with **Aadhaar face-authentication**.

### ◆ Key Aspects

#### Policy & Features:

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- 100% Government-owned under **Department of Posts**
- **Doorstep & last-mile banking** using postal workforce
- **Face authentication** for secure, OTP-free transactions

### Current Significance:

- Boosts **financial inclusion**, especially in rural areas
- Supports **Digital India & JAM trinity** goals

### ◆ Analysis of Statements

- **I ❌ Incorrect** – Face-auth removes OTP/fingerprint need
- **II ✅ Correct** – Fully government-owned under Postal Dept
- **III ✅ Correct** – Uses postal network for doorstep banking

10) Answer: **✅ (a) Both Statement-I and II correct; II explains I**

### ◆ Topic in Focus

World's **first comprehensive AI legislation**, using a **risk-based approach** to ensure **safe & responsible AI**.

### ◆ Key Aspects

#### Policy Framework:

- Classifies AI into **Unacceptable, High, Limited, Minimal risk**
- Sets **global AI governance benchmark**, like GDPR for data
- **Penalties:** Up to **7% of global turnover**

### Current Significance:

- Shapes **AI ethics & regulation** globally
- Balances **innovation vs safety & accountability**

### ◆ Analysis of Statements

- **I ✅ Correct** – First global comprehensive AI law
- **II ✅ Correct** – Risk-based framework regulates AI use

11) Answer: **✅ (c) A wireless internet connection through communication satellites orbiting the Earth**

### ◆ Topic in Focus

Satellite internet services provide **wireless internet connectivity via communication satellites**, crucial for **remote, rural, and disaster-prone areas** where terrestrial broadband is infeasible.

### ◆ Key Aspects

- **Policy Development:** Initiatives like **Starlink, OneWeb** aim for global satellite constellations.
- **Key Features:**
  - Wireless connectivity
  - Geostationary & Low Earth Orbit (LEO) satellites
  - User terminals (dishes/modems)
- **Implementation Context:** Complements terrestrial broadband; ensures **last-mile access**.
- **Current Significance:** Enhances **digital inclusion**, disaster management, and IoT integration.

### ◆ Analysis of Options

- **(a) ❌** Coaxial cable is wired, urban-focused
- **(b) ❌** Cellular networks are ground-based
- **(c) ✅** Correct – Uses orbiting communication satellites
- **(d) ❌** Undersea cables are wired, not satellite

12) Answer: **✅ (b) To make India a global hub for the production, usage, and export of green hydrogen and its derivatives**

### ◆ Topic in Focus

A flagship initiative to **decarbonize India's economy** by producing **green hydrogen via renewable-powered electrolysis**.

### ◆ Key Aspects

- **Policy Development:** Led by **Ministry of New & Renewable Energy**
- **Key Features:**
  - Target: **5 MMT by 2030**

- Incentives for **electrolyser manufacturing & hydrogen hubs**
- Pilot projects in **steel, shipping, and transport**
- **Implementation Context:** Reduces **fossil fuel dependence** and boosts **clean energy exports**.
- **Current Significance:** Supports **energy transition, job creation, and export potential**.

### ◆ Analysis of Options

- (a) ✗ Not focused on hydrogen import
- (b) ✓ Correct – Establish India as global green hydrogen hub
- (c) ✗ Submarine tech is not a mission goal
- (d) ✗ Focus is on renewable (green) hydrogen only

13) Answer: ✓ (c) Project 17A (Nilgiri Class Frigates)

### ◆ Topic in Focus

'Himgiri' is an **indigenous guided-missile stealth frigate**, enhancing **India's maritime power and Atmanirbhar defense capability**.

### ◆ Key Aspects

- **Policy Development:** Part of **Project 17A**, an upgrade over Project 17 (Shivalik Class)
- **Key Features:**
  - 7 stealth frigates
  - Equipped with **BrahMos & Barak-8 missiles**
  - Built by **GRSE & Mazagon Dock Shipbuilders**
- **Implementation Context:** Strengthens **blue-water Navy** & counter-maritime threats.
- **Current Significance:** Advances **self-reliance** and **maritime deterrence**.

### ◆ Analysis of Options

- (a) ✗ Project 15A – Kolkata-class destroyers
- (b) ✗ Project 75 – Scorpene submarines
- (c) ✓ Correct – Part of Project 17A (Nilgiri class)
- (d) ✗ Project 28 – Kamorta-class corvettes

14) Answer: ✓ (b) It is a collection of red blood cell antigens carried on the decay-accelerating factor (DAF), also known as CD55

### ◆ Topic in Focus

A newly identified blood group system, crucial for **transfusion safety and rare blood typing**.

### ◆ Key Aspects

- **Policy/Scientific Context:** Expands beyond **ABO & Rh systems**
- **Key Features:**
  - 12 high-prevalence and 3 low-prevalence antigens
  - Located on **DAF (CD55)** on RBCs
- **Implementation Context:** Helps in **rare transfusion cases** and **hematology research**.
- **Current Significance:** Discovery in **Bengaluru**, enhances **India's contribution to global medical science**.

### ◆ Analysis of Options

- (a) ✗ Not Rh factor-based
- (b) ✓ Correct – Carried on DAF (CD55)
- (c) ✗ Not ethnicity-exclusive
- (d) ✗ D antigen is part of Rh group, not CRIB

15) Answer: ✓ (a) Voting in favor of the party's official candidate

### ◆ Topic in Focus

The **Tenth Schedule (1985)** curbs **political defection** to ensure **democratic stability and party discipline**.

### ◆ Key Aspects

- **Policy Background:**
  - Added by **52nd Constitutional Amendment (1985)**
  - Adjudicated by **Speaker/Chairman of House**
- **Grounds for Disqualification:**
  - Voluntarily **giving up party membership**
  - **Defying party whip** in legislative voting
  - **Independent** MLA joining a party after election
- **Current Significance:** Prevents **instability**, ensures **loyalty to voters' mandate**

### ◆ Analysis of Options

- (a)  **Correct** – Supporting party candidate is **not** a ground
- (b)  Voluntarily giving up membership leads to disqualification
- (c)  Defying party whip is a ground
- (d)  Independent joining party is a ground

### 16) Solution: d) – Pradhan Mantri Kisan Sampada Yojana (PMKSY)

#### Topic in Focus:

PMKSY is a **Central Sector Scheme** by the **Ministry of Food Processing Industries** aimed at **modernizing the food processing sector** and strengthening **farm-to-retail supply chains**.

#### Key Aspects:

- **Policy Development:** Launched in 2017-18 with ₹6,520 crore outlay for 2021-26.
- **Major Components:** Integrated Cold Chain, Agro-Processing Clusters, Food Safety Infrastructure, **Operation Greens**.
- **Significance:** Promotes **private investment**, reduces wastage, enhances **farmers' income**, and supports **Atmanirbhar Bharat** in agro-processing.

#### Analysis of Options:

- (a), (b), (c) – Wrong ministries.
- (d) – **Correct:** Nodal ministry is **MoFPI**.

### Correct Answer: d) Ministry of Food Processing Industries

### 17) Solution: d) – Additional Judges in High Courts

#### Topic in Focus:

Appointment of **Additional Judges** under **Article 224** of the Constitution to handle **temporary case backlogs**.

#### Key Aspects:

- **Tenure:** Maximum **2 years**, or until age 62.
- **Purpose:** To manage **temporary surge** in workload and pending cases.
- **Authority:** **President** appoints in consultation with the **CJI**.

#### Analysis of Options:

- (a) Art. 216 – Constitution of High Courts.
- (b) Art. 217 – Permanent Judges.
- (c) Art. 222 – Transfer of Judges.
- (d) – **Correct:** Article 224 for max 2 years.

### Correct Answer: d) Article 224, not exceeding two years

### 18) Solution: a) – Panel of Chairpersons (Lok Sabha)

#### Topic in Focus:

The **Panel of Chairpersons** ensures continuity in presiding over **Lok Sabha sessions** when Speaker/Deputy Speaker are absent.

#### Key Aspects:

- **Rules:** Speaker nominates up to **10 MPs** at the start of each session (Rule 9).
- **Limitations:** Cannot preside if **Speaker's/Deputy Speaker's offices are vacant**; President must then appoint a member.

#### Analysis:

- **Statement I – Correct:** Speaker nominates panel members.
- **Statement II – Incorrect:** Panel cannot preside if offices are vacant.

### Correct Answer: a) I only

### 19) Solution: d) – National Green Hydrogen Mission (NGHM)

#### Topic in Focus:

A flagship **clean energy initiative** to make India a **global hub** for **green hydrogen production, usage, and export**.

#### Key Aspects:

- **Launched by:** **Ministry of New & Renewable Energy**.

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- **Targets: 5 MMT by 2030**, via **SIGHT incentives** for electrolyzers and hydrogen production.
- **Significance:** Decarbonizes industry, boosts **energy security** and **exports**.

### Analysis:

- (I)  India as global hub.
- (II)  5 MMT target.
- (III)  Wrong ministry if said Petroleum & Natural Gas.
- (IV)  SIGHT incentives.

**Correct Answer: d) I, II, and IV only**

**20) Solution: b) – Blue Economy in India**

### Topic in Focus:

India's **Blue Economy** promotes **sustainable use of ocean resources** for **economic growth**, jobs, and **ecosystem health**.

### Key Aspects:

- **Scope:** Fisheries, shipping, offshore energy, tourism, marine biotechnology.
- **Challenges:** **Limited credit**, low private investment, **poor coordination** among ministries.
- **Relevance:** Core for **Viksit Bharat 2047**, food security, and **climate resilience**.

### Analysis:

- **Statement I – Correct:** Blue economy is vital for India's growth.
- **Statement II – Correct but does not explain I:** Mentions challenges without linking causality.

**Correct Answer: b) Both correct, but II does not explain I**

**21) Solution: d) Ministry of Food Processing Industries**

### Topic in Focus:

PMKSY is a **Central Sector Scheme** launched in 2017-18 to **modernize the food processing sector**, strengthen **agro-value chains**, and reduce **post-harvest losses**.

### Key Aspects:

- **Policy Development:** ₹6,520 crore allocated for 2021-26
- **Components:** Integrated Cold Chain, Food Safety Infrastructure, Agro-Processing Clusters, Operation Greens
- **Significance:** 1200+ projects approved; enhances food safety and private investment

### Analysis of Options:

- (a)  Ministry of Cooperation – not relevant
- (b)  Ministry of Rural Development – not nodal
- (c)  Ministry of Agriculture – only supportive role
- (d)  **Correct – Implemented by Ministry of Food Processing Industries**

**22) Solution: d) I, II and IV only**

### Topic in Focus:

India's flagship mission to make the country a **global hub for green hydrogen production** by **2030**.

### Key Aspects:

- **Nodal Ministry: Ministry of New & Renewable Energy (MNRE)**
- **Target:** 5 million metric tonnes by 2030
- **Component: SIGHT** – incentives for electrolyzers & green hydrogen

**Incorrect:** Statement III (Ministry of Petroleum)

**23) Solution: b) II and III only**

### Topic in Focus:

Oversees **sanctions against terrorists** under UN law.

### Key Aspects:

- **Mandate:** Freeze assets, travel bans, arms embargoes
- **Coverage:** Taliban, **ISIS**, **Al-Qaida**, **affiliates**

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- **Current Chair: Denmark (till Dec 2025)**

**24) Solution: b) Statement I correct, II incorrect**

**Topic in Focus:**

First **dual-frequency (L & S band) SAR satellite** for earth observation.

**Key Aspects:**

- **Use:** Maps ice sheets, glaciers, land, forests
- **Significance: Climate studies & disaster management**
- **Incorrect:** Claiming it was **not dual frequency**

**25) Solution: a) Minimum 35 years of service in police**

**Topic in Focus:**

Ensures **merit-based, transparent** DGP appointments.

**Key Aspects:**

- **Framework:** SC's **Prakash Singh case (2006)** & UPSC guidelines (2009)
- **Eligibility: 30+ years of service**, not retiring in 6 months
- **Impact:** Reduces political interference

**26) Solution: a)**

**Topic in Focus and Key Aspects:**

The Supreme Court in **UPP Tollways v. MP Road Development Corp.** affirmed that **safe and motorable roads** are a **fundamental right** under:

- **Article 21** – Right to life
- **Article 19(1)(g)** – Freedom of movement

**Key Aspects:**

- **Policy Development:** Expands the scope of Article 21 to include civic infrastructure and safety.
- **State Accountability:** The **State** is responsible for road safety; private contractors cannot dilute this duty.
- **Contemporary Relevance:** Empowers citizens to seek **legal remedies** for poor roads and accidents.

**Analysis of Options:**

- (a)  **Correct** – Linked to Article 21 & 19(1)(g)
- (b)  Article 300A – Property rights
- (c)  Article 23 – Forced labour
- (d)  Article 21A – Education

**Answer: (a)**

**27) Solution: c)**

**Topic in Focus and Key Aspects:**

**Banking Laws (Amendment) Act, 2025** modernizes banking governance and strengthens regulatory oversight.

**Key Aspects:**

- **Policy Development:** Updates 5 major banking statutes, enhances governance in **cooperative banks**, and aligns with **global standards**.
- **Key Feature:** Allows **Public Sector Banks** to **transfer unclaimed shares/funds to IEPF** for investor protection.
- **Contemporary Relevance:** Promotes **financial transparency** and safeguards **dormant investor assets**.

**Analysis of Options:**

- (a)  PSBs can now pay statutory auditors
- (b)  Tenure for cooperative bank directors was **increased**, not decreased
- (c)  **Correct** – Transfer of unclaimed shares/funds to **IEPF**
- (d)  Limit for unsecured loans **raised** to ₹2 crore

**Answer: (c)**

**28) Solution: d)**

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### Topic in Focus and Key Aspects:

**Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM)** empowers rural women via **Self-Help Groups (SHGs)** and sustainable livelihood promotion.

### Key Aspects:

- **Policy Context:** Implemented by **Ministry of Rural Development**.
- **Core Features:**
  - SHG formation and credit linkage
  - **Women Enterprise Acceleration Fund (WEAF)**
  - **Banking Correspondent Sakhis** for financial inclusion
- **Significance:** ₹11 lakh+ crore loans disbursed; strong role in **poverty alleviation & women empowerment**.

### Analysis of Options:

- (a) ❌ Ministry of Finance – **Incorrect**
- (b) ❌ Ministry of Social Justice – **Incorrect**
- (c) ❌ Ministry of Women & Child Development – **Incorrect**
- (d) ✅ **Correct – Ministry of Rural Development**

**Answer: (d)**

**29) Solution: a)**

### Topic in Focus and Key Aspects:

The **Ramsar Convention (1971)** is a **binding intergovernmental treaty** for the **conservation and wise use of wetlands**.

### Key Aspects:

- **Policy Development:** Adopted in **Iran (1971)**, effective 1975; India has **91 Ramsar sites**.
- **Core Objective:** Promote **wise use, designate Ramsar sites, integrate wetland management with SDGs**.
- **Current Significance:** Supports **biodiversity, climate adaptation, water security, and Mission LiFE** principles.

### Analysis of Options:

- (a) ✅ **Correct** – Conservation & wise use of wetlands
- (b) ❌ Not about marine pollution
- (c) ❌ Not about fisheries
- (d) ❌ Not desertification protocol

**Answer: (a)**

**30) Solution: b)**

### Topic in Focus and Key Aspects:

**Piprahwa Relics (1898)** are **mortal remains of Lord Buddha** found in **Uttar Pradesh** (ancient Kapilavastu).

### Key Aspects:

- **Archaeological Significance:** Contain **bone fragments, caskets, gold ornaments**, with **Brahmi inscriptions** of the **Sakya clan**.
- **Policy Context:** Classified as **AA antiquities**; protected under Indian heritage laws.
- **Current Significance:** Strengthens **Buddhist heritage & cultural diplomacy**.

### Analysis of Options:

- (a) ❌ Not Kushan sculptures
- (b) ✅ **Correct** – Mortal remains of Buddha, enshrined by Sakya clan
- (c) ❌ Not manuscripts
- (d) ❌ Not Ashokan inscriptions

**Answer: (b)**

**31) Solution: c) Controller General of Patents, Designs and Trade Marks (CGPDTM)**

### Topic in Focus:

CGPDTM administers **patents, designs, trademarks, and GIs**, fostering innovation and IP protection in India.

### Key Aspects:

- **Policy Background:** Functions under **DPIIT, Ministry of Commerce and Industry**.
- **Functions:** Supervises IP registries, advises government, updates IP examination guidelines.
- **Current Relevance:** Supports **faster IP processing**, global ranking in innovation.
- **Broader Impact:** Strengthens **entrepreneurship, FDI, and IP protection**.

### Analysis of Statements:

- (I) ✓ Advises government on IPR matters.
- (II) ✓ Under DPIIT, Ministry of Commerce & Industry.
- (III) ✓ HQ in Mumbai.

✓ **Correct Answer: (c) I, II and III**

### 32) Solution: b) Compensatory Afforestation Fund Act, 2016

#### Topic in Focus:

Ensures **afforestation of diverted forest land**, with funds created under **CAMPA**.

#### Key Aspects:

- **Policy Background:** Originates from **SC directives in TN Godavarman case (1995)**.
- **Implementation:** Central & State **CA Funds**; oversight by **National & State CAMPA**.
- **Significance:** Promotes **ecological restoration, carbon sequestration**, and **SDG alignment**.

### Analysis of Statements:

- (I) ✓ CA Funds in Public Accounts of India & States.
- (II) ✗ Geo-tagging is advisory, not statutory.
- (III) ✗ CAMPA exists at **both** levels.
- (IV) ✓ Based on SC directives in **Godavarman case**.

✓ **Correct Answer: (b) I and IV only**

### 33) Solution: c) Glacial Lake Outburst Floods (GLOFs)

#### Topic in Focus:

GLOFs are **sudden floods** from glacial lakes, triggered by **climate change, avalanches, or seismic events**.

#### Key Aspects:

- **Policy Context:** Managed under **NDMA** with early warning and SAR monitoring.
- **Triggers:** **Meltwater pressure, avalanches, landslides, earthquakes**.
- **Current Relevance:** Himalayan GLOFs increasing due to **rapid glacial melt**.

### Analysis of Statements:

- Statement I ✓ Rising temperatures increase glacial lakes & GLOF risk.
- Statement II ✗ GLOFs can be triggered by multiple factors, not just meltwater.

✓ **Correct Answer: (c) Statement-I is correct, Statement-II is incorrect**

### 34) Solution: b) Jungle Cat & Small Cat Vocalization

#### Topic in Focus:

Jungle cat is **India's most widespread small cat**; vocalization differences stem from **hyoid bone structure**.

#### Key Aspects:

- **Small Cats (Felinae):** **Rigid hyoid bone**, can **purr continuously**, cannot roar.
- **Big Cats (Pantherinae):** **Flexible hyoid bone**, can roar, limited purring.
- **Significance:** Aids in **species-specific conservation** and **ecological planning**.

### Analysis of Statements:

- Statement I ✓ Jungle cat widely distributed.
- Statement II ✓ Small cats can purr due to **rigid hyoid**.
- Relation ✗ Statement II does **not explain** wide distribution.

✓ **Correct Answer: (b) Both correct, but II does not explain I**

### 35) Solution: a) SEBI and Alternative Investment Funds (AIFs)

**Topic in Focus:**

AIFs are privately pooled funds regulated under **SEBI (AIF) Regulations, 2012**, crucial for startup and infra funding.

**Key Aspects:**

- **Categories:** Venture Capital, Private Equity, Hedge, Infrastructure, SME Funds.
- **Implementation:** SEBI ensures **transparency, risk management, and investor protection**.
- **Significance:** Expands **capital access beyond traditional markets**, boosts **economic growth**.

**Analysis of Options:**

- (a) ✓ AIFs regulated by SEBI under 2012 rules.
- (b) ✗ Mutual Funds – different SEBI regulation.
- (c) ✗ PPF – Ministry of Finance.
- (d) ✗ NPS – PFRDA.

✓ **Correct Answer: (a) Alternative Investment Funds**

**36) Solution: d) Ministry of Commerce and Industry**

**Topic in Focus:**

CGPDTM is the apex body administering patents, designs, trademarks, and geographical indications in India, critical for fostering **innovation and IP protection**.

**Key Aspects:**

- **Policy Development:** Operates under **Ministry of Commerce & Industry (DPIIT)**.
- **Functions:** Supervises IPR implementation, advises government, manages IPR registries.
- **Significance:** Supports **start-ups, innovation ecosystem, and foreign investment**.
- **Current Relevance:** Vital for India's **knowledge economy** and global IP rankings.

**Analysis of Options:**

- (a) ✗ MeitY deals with IT & Digital India, not IPR.
- (b) ✗ Ministry of S&T handles R&D, not CGPDTM.
- (c) ✗ Corporate Affairs manages companies & LLPs.
- (d) ✓ Correct – CGPDTM is under **Ministry of Commerce & Industry (DPIIT)**.

**37) Solution: a) Surface-to-surface short range solid propellant quasi-ballistic missile**

**Topic in Focus:**

Pralay enhances India's **tactical strike capabilities**, reflecting DRDO's **indigenous missile program**.

**Key Aspects:**

- **Policy Development:** DRDO's Research Centre Imarat; part of India's **self-reliance in defense**.
- **Features:** Range **150–500 km**, **hypersonic speeds**, quasi-ballistic with **trajectory maneuverability**.
- **Current Significance:** Strengthens **regional deterrence** and **counter-force operations**.

**Analysis of Options:**

- (a) ✓ Correct – Matches Pralay's description.
- (b) ✗ Not an air-to-air or glide vehicle.
- (c) ✗ Not a cruise missile.
- (d) ✗ Not an anti-ship subsonic missile.

**38) Solution: d) First known Indus Valley settlement in Rajasthan's arid zone**

**Topic in Focus:**

Ratadiya Ri Dheri expands the known geography of the **Indus Valley Civilization (IVC)**.

**Key Aspects:**

- **Location & Period:** Rajasthan; Mature Harappan Phase (2600–1900 BCE).
- **Significance:** Links **northern Rajasthan sites** to **Gujarat Harappan settlements**.
- **Broader Impact:** Strengthens **archaeological mapping** and **heritage studies**.

**Analysis of Options:**

- (a) ✗ Gujarat sites are already known.
- (b) ✗ Not a Buddhist monastery.

- (c) ❌ Not rock art in the Deccan.
- (d) ✅ Correct – First IVC site in **Rajasthan's arid region**.

### 39) Solution: c) Delivering measurable social impact through skills training and job placement

#### Topic in Focus:

SIB is India's **first development impact bond** for **employment and skilling outcomes**.

#### Key Aspects:

- **Launch:** 2021, by **MSDE & NSDC**.
- **Features:** Outcome-based funding; aims to train **50,000 youth (60% women)**.
- **Significance:** Aligns **private capital** with **public social goals**.

#### Analysis of Options:

- (a) ❌ Not for overseas education scholarships.
- (b) ❌ Not MSME rural funding.
- (c) ✅ Focused on **skilling and job placement**.
- (d) ❌ Not DBT for farmers.

### 40) Solution: a) Saudi Arabia

#### Topic in Focus:

Syria is strategically located in the **Levant region** of West Asia.

#### Key Aspects:

- **Borders:** **Turkey (N), Iraq (E), Jordan (S), Israel & Lebanon (W)**.
- **Strategic Importance:** Affects **conflict zones, refugee flows, and geopolitics**.
- **Contemporary Relevance:** Civil war & regional instability.

#### Analysis of Options:

- (a) ✅ Correct – **Saudi Arabia does not share a border with Syria**.
- (b) ❌ Israel shares border via **Golan Heights**.
- (c) ❌ Turkey shares border to the **north**.
- (d) ❌ Lebanon shares border to the **west**.

### 41) Solution: a) I, II and IV only

#### Topic in Focus:

NDMA (N-Nitrosodimethylamine) – a **probable human carcinogen** – recently drew attention due to contamination in pharmaceuticals like **ranitidine**, prompting regulatory and public health measures.

#### Key Aspects:

- **Nature:** Yellow, odorless liquid; persistent in the environment.
- **Uses:** Earlier in rocket fuel; traces in plastics, lubricants, and cosmetics.
- **Health Impact:** Carcinogenic; unintentional presence in foods and drugs is a concern.
- **Regulation:** CDSCO and global agencies monitor NDMA contamination and restrict industrial use.

#### Analysis of Statements:

- (I) ✅ Used in lubricants, plastics, and cosmetics.
- (II) ✅ Previously used in rocket fuel.
- (III) ❌ Not intentionally added to food.
- (IV) ✅ Correct physical description.

### 42) Solution: b) I and II only

#### Topic in Focus:

**Environment Protection (Management of Contaminated Sites) Rules, 2025** – a new framework for **identifying, cleaning, and monitoring legacy contaminated sites** caused by hazardous waste.

#### Key Aspects:

- **Legal Basis:** Notified under Environment (Protection) Act, 1986.
- **Process:** Local bodies report → SPCBs inspect → Polluter pays or SPCB cleans if unidentified.
- **Scope:** Excludes radioactive waste, oil spills, and municipal dumps.
- **Significance:** Addresses legacy pollution and enhances environmental justice.

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### Analysis of Statements:

- (I)  SPCB executes cleanup if polluter is unknown.
- (II)  State Boards can impose penalties for non-compliance.
- (III)  Radioactive waste is excluded.

### 43) Solution: a) To preserve and promote folk, tribal, and vanishing art forms

#### Topic in Focus:

**Zonal Cultural Centres (ZCCs)** are autonomous institutions under the **Ministry of Culture** for **revival and promotion of India's traditional and vanishing art forms**.

#### Key Aspects:

- **Establishment:** 7 ZCCs across India for regional representation.
- **Focus Areas:** Folk, tribal, and vanishing arts; cultural exchanges; youth participation.
- **Significance:** Protects intangible heritage and fosters national unity through cultural pluralism.

### Analysis of Options:

- (a)  Core mandate is to preserve and promote folk & tribal art.
- (b)  Not involved in monetary or economic policies.
- (c)  Not focused on scientific research.
- (d)  No industrial regulation role.

### 44) Solution: d) It provides a decent standard of living for workers and their families

#### Topic in Focus:

**Living Wage** – A wage level that ensures **a worker and their family can maintain a decent standard of living**, beyond mere subsistence.

#### Key Aspects:

- **Definition:** Covers food, housing, healthcare, clothing, transport, and education.
- **ILO Perspective:** Recognized globally as a social justice and SDG target.
- **India Context:** Discussed in policy; higher than statutory minimum wage.
- **Relevance:** Supports productivity, gender equity, and poverty reduction.

### Analysis of Options:

- (a)  Not limited to public sector employees.
- (b)  Must reflect regional cost-of-living variations.
- (c)  Higher than minimum wage, not equal.
- (d)  Ensures a decent living standard for workers and families.

### 45) Solution: c) Statement-I is correct, but Statement-II is incorrect

#### Topic in Focus:

**True Polar Wander (TPW)** – Shifts in the Earth's rotational axis due to **mass redistribution** in the crust and mantle, now linked to **human activities like large dam construction**.

#### Key Aspects:

- **Drivers:** Glacial melt, tectonic movement, and large reservoir storage.
- **Impact:** Alters Earth's axis, relevant to satellite navigation and geodesy.
- **Significance:** Shows anthropogenic effects on global geophysical processes.

### Analysis of Statements:

- (I)  Large-scale dams can shift Earth's axis.
- (II)  TPW is not caused **solely** by glacial and tectonic factors.

### 46) Solution: c) – Flame Retardants

#### Topic in Focus and Key Aspects:

- **Flame retardants** are chemicals added to materials to **prevent or slow fire spread**.
- Widely used in **textiles, electronics, furniture, and construction** but under review for **environmental persistence and health risks**.

#### Key Aspects:

- **Policy Development:** Developed for consumer and industrial fire safety.

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- **Key Features:** Chemicals like **TCIPP, TDCIPP, TCEP**; resistant to environmental degradation.
- **Current Significance:** Monitored for **carcinogenic potential** and global safety compliance.

### Analysis of Statements:

- (I) **Correct** – TCIPP, TDCIPP, and TCEP are common flame retardants.
- (II) **Correct** – Their purpose is to slow fire spread.

✔ Answer: (c) Both I and II

47) Solution: b) – National Programme for Organic Production (NPOP)

### Topic in Focus and Key Aspects:

- NPOP is India's **organic certification framework**, implemented by **APEDA under the Ministry of Commerce & Industry**, crucial for **organic exports**.

### Key Aspects:

- **Policy Background:** Supports organic production and global market access.
- **Implementation:** Accredits certification bodies; aligns with **EU and Swiss standards**.
- **Broader Impact:** Facilitates **organic trade** and **international recognition**.

### Analysis of Statements:

- (I) **Incorrect** – Not under Ministry of Agriculture; implemented by **APEDA**.
- (II) **Correct** – Recognized by **European Commission & Switzerland** for unprocessed plant products.

✔ Answer: (b) II only

48) Solution: c) – Global Zoonotic Disease Risk

### Topic in Focus and Key Aspects:

- **Zoonotic diseases** are rising due to **land-use change, urbanization, livestock density, and water stress**.
- **One Health approach** is essential for mitigation.

### Key Aspects:

- **Policy Background:** WHO priority; aligns with **global health surveillance**.
- **Drivers:** High **population density** and **livestock concentration** increase spillover risks.
- **Notable Finding:** **Water deficit** increases outbreaks by forcing **human-animal contact**.

### Analysis of Statements:

- (I) **Incorrect** – Water deficit **increases**, not decreases, disease risk.
- (II) **Correct** – High livestock density raises spillover risk.
- (III) **Correct** – Population density is the strongest factor.

✔ Answer: (c) II and III only

49) Solution: a) – Integrated Battle Groups (IBGs)

### Topic in Focus and Key Aspects:

- IBGs are **agile, brigade-sized combat formations** for **rapid offensive actions**, aligned with **Cold Start Doctrine**.

### Key Aspects:

- **Features:** Mechanized units, infantry, artillery, UAVs, and special forces (~5,000 troops).
- **Significance:** Boosts **border readiness** against China and Pakistan with **technology-enabled rapid deployment**.

### Analysis of Options:

- (a) **Correct** – Designed for **pre-emption, dislocation, and disintegration** of enemy forces.
- (b), (c), (d) **Incorrect** – IBGs are not limited to cyber, logistics, or static defense.

✔ Answer: (a)

50) Solution: c) – India-Nepal Mutual Legal Assistance (MLA) Agreement

### Topic in Focus and Key Aspects:

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- MLA agreements enable **cross-border criminal investigations, evidence sharing, and extradition support**.
- The **Ministry of Home Affairs** is the central authority in India.

### Key Aspects:

- **Policy Context:** Addresses open-border security challenges with Nepal.
- **Impact:** Strengthens **bilateral law enforcement** and prevents **safe havens for criminals**.

### Analysis of Statements:

- Statement-I: **Correct** – Formalizes evidence sharing and investigation cooperation.
- Statement-II: **Incorrect** – **MHA**, not Defence, is the central authority.

✔ **Answer: (c) Statement-I correct, Statement-II incorrect**



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