

# Solutions

DATE : (15<sup>th</sup> Sept – 21<sup>st</sup> Sept)

1) **Answer Option:** (a) It is a legally binding agreement under UNCLOS for the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction.

### Detailed Explanation:

- **Context:** Adopted in 2023 under **UNCLOS**, the **High Seas Treaty (BBNJ Agreement)** focuses on marine biodiversity in **areas beyond national jurisdiction (high seas)**, covering nearly **two-thirds of world's oceans**.
- **Significance:** Protects **global biodiversity, climate regulation, and sustainable development**.
- **Key Features:**
  - Legally binding treaty.
  - Covers **marine genetic resources, area-based management tools** (Marine Protected Areas), **Environmental Impact Assessments (EIA)**, and **capacity building**.
- **Implementation:** Comes into force after **60 ratifications**; India approved signing with **Ministry of Earth Sciences** as nodal agency.
- **Incorrect Options:**
  - (b) Wrong – Not a UNESCO voluntary agreement.
  - (c) Wrong – Not fisheries-specific; it is global.
  - (d) Wrong – Not under IMO; not about shipping lanes.

2) **Answer Option:** (d) Ministry of Textiles

### Detailed Explanation:

- **Context:** Launched in **2021**, the **PM Mega Integrated Textile Region and Apparel (MITRA) Scheme** aims to modernize India's textile sector.
- **Objective:** To create **world-class integrated textile parks** supporting the full **value chain (Farm → Fibre → Factory → Fashion → Foreign)**.
- **Key Features:**
  - Establishment of **7 PM MITRA Parks** across India.
  - **SPVs (Special Purpose Vehicles)** jointly owned by Centre and States for implementation.
  - Financial support and incentives to attract investment.
- **Significance:**
  - Expected to generate **20 lakh jobs**.
  - Boost **FDI inflow** and make India a **global textile hub**.
- **Incorrect Options:**
  - (a), (b), (c): Not the implementing authority.

3) **Answer Option:** (d) Indian Coast Guard

### Detailed Explanation:

- **Context:** The **National Oil Spill Disaster Contingency Plan (NOS-DCP)** was framed in **1996** to tackle oil pollution in marine environments.
- **Lead Agency:** The **Indian Coast Guard** is designated as the **central coordinating authority**.
- **Key Features:**
  - Ensures **preparedness, response, and coordination** during oil spills.
  - Conducts **periodic drills** and capacity building.
  - Works with multiple agencies and aligns with global conventions like **MARPOL** and **OPRC**.
- **Significance:** Protects **marine ecosystems, fisheries, and coastal livelihoods** from oil spill disasters.
- **Incorrect Options:**
  - (a), (b), (c): Not responsible agencies under NOS-DCP.

4) **Answer Option:** (a) Serving as a central counterparty in the settlement of money and government securities markets

### Detailed Explanation:

- **Context:** Established in **2001**, CCIL is a **systemically important financial market infrastructure** in India.
- **Function:** Acts as a **Central Counterparty (CCP)** for trades in the **money market and government securities**.
- **Key Features:**
  - Provides **trade confirmation, clearing, and guaranteed settlement**.
  - Reduces **counterparty and settlement risks**.
  - Declared a **Qualified Central Counterparty (QCCP)** by RBI.
- **Regulation:** Supervised by the **RBI** under the **Payment and Settlement Systems Act, 2007**.
- **Significance:** Enhances **market confidence, efficiency**, and supports **rupee internationalisation**.
- **Incorrect Options:**
  - (b) Not for insurance.
  - (c) Not a regulator for payment banks.

- (d) Not responsible for monetary policy.

5) **Answer Option:** (a) An ancient Chola port city at the mouth of the Kaveri River in Tamil Nadu

### Detailed Explanation:

- **Context: Poompuhar (Kaveripattinam)**, located at the **mouth of River Kaveri**, was a flourishing **port city** during the **Sangam period**.
- **Historical Significance:**
  - Served as a **major Chola port city** facilitating **maritime trade** with Southeast Asia.
  - Exported **pearls, spices, textiles**.
  - Cited in Tamil literary works like **Manimekalai**.
- **Archaeological Context:**
  - Believed to have been **submerged by the sea**.
  - Subject of **underwater archaeology** to reconstruct maritime history.
- **Significance Today:**
  - Helps in understanding **India's ancient urbanism, trade, and cultural exchanges**.
- **Incorrect Options:**
  - (b) No Buddhist monastery evidence.
  - (c) Not Chalukya capital.
  - (d) Not a Mughal-era inland hub.

6) **Answer Option:** (c) Both I and II

### Detailed Explanation:

- **Context:** Estonia is a **Baltic country in Northern Europe** with strategic geopolitical significance.
- **Boundaries:**
  - **North:** Gulf of Finland
  - **West:** Baltic Sea
  - **East:** Russia
  - **South:** Latvia
- **Significance:** Borders influence **security posture, regional cooperation**, and foreign policy, especially in the context of **NATO and EU membership**.
- **Analysis of Statements:**
  - Statement I – Correct (Gulf of Finland north, Baltic Sea west).
  - Statement II – Correct (Borders Russia east, Latvia south).

### Conclusion:

Estonia's geographic location shapes its **security dynamics, regional diplomacy, and economic engagements**.

7) **Answer Option:** (d) I and II only

### Detailed Explanation:

- **Context:** The **BBNJ Agreement** under UNCLOS focuses on **marine biodiversity conservation** and **equitable use** in high seas.
- **Key Features in India:**
  - **Marine Protected Areas (I)** – Establishment addressed by the treaty.
  - **Benefit sharing** of marine genetic resources (II) – Promotes equity and technology transfer.
  - **Implementation nodal ministry** – Ministry of Earth Sciences, **not Environment, Forest and Climate Change** (III is incorrect).
- **Global Impact:** Ensures **sustainability, cooperation, and conservation** beyond national jurisdictions.

### Conclusion:

The treaty safeguards **marine biodiversity** and promotes **equitable benefit sharing**, implemented in India by the **Ministry of Earth Sciences**.

8) **Answer Option:** (c) II and III only

### Detailed Explanation:

- **Context:** Oil spills introduce **toxic substances** (hydrocarbons, heavy metals) affecting marine ecosystems.
- **Ecological Impact:**
  - **Statement I** – Incorrect (decay/mortality occurs, not growth).
  - **Statement II** – Correct (benthic organisms inhabit seafloor, impacted by spills).
  - **Statement III** – Correct (bioaccumulation of pollutants in organisms).
- **Policy Relevance:** Necessitates **monitoring, rapid response, and contingency planning** to protect fisheries and biodiversity.
- **Contemporary Significance:** Recent oil spills along Indian coasts highlight **vulnerability of marine species and ecosystems**.

### Conclusion:

Oil spills disrupt **benthic communities and bioaccumulate pollutants**, emphasizing the need for **robust marine response frameworks**.

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9) **Answer Option:** (b) I and III only

### Detailed Explanation:

- **Context: Foreign Contribution (Regulation) Act, 2010 (FCRA)** regulates foreign funds to prevent misuse against national interests.
- **Key Features:**
  - **Section 7** – Prohibits organizations receiving foreign contributions from **transferring funds to others**(Statement I).
  - **NRI remittances** from personal savings via normal banking channels are **not considered foreign contributions** (Statement III).
  - **Nodal Ministry:** Ministry of Home Affairs oversees compliance.
- **Significance:** Ensures **accountability and transparency** in NGO funding and foreign contributions.

### Conclusion:

FCRA Section 7 safeguards against **misuse of foreign contributions**, while allowing **personal NRI remittances** to flow freely.

10) **Answer Option:** (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I

### Detailed Explanation:

- **Context:** FCRA distinguishes between **foreign contributions** and **NRI personal remittances**.
- **Key Points:**
  - Statement I – Section 7 prohibits organizations from **transferring foreign contributions** to others.
  - Statement II – **Personal NRI savings remittances** are not considered foreign contributions.
  - Implementation: **Ministry of Home Affairs** regulates registration, renewal, and compliance.
- **Significance:** Ensures NGOs operate with **accountability** while **facilitating legitimate personal remittances**.

### Conclusion:

FCRA balances **control over foreign contributions** with **allowance for NRI personal remittances**, enhancing transparency and national security.

11) **Answer Option:** (a) II and III only

### Detailed Explanation:

- **Context:** AAS is part of **India's Foreign Trade Policy**, aimed at **boosting export competitiveness**.
- **Key Features:**
  - Allows **duty-free import** of inputs physically used in export goods, including **consumables** like fuel, oil, and catalysts.
  - Administered by the **Directorate General of Foreign Trade (DGFT)**.
  - Applicable across sectors like **textiles, engineering, and chemicals**.
- **Analysis of Statements:**
  - Statement I – Incorrect: Not limited to capital goods; includes consumables.
  - Statement II – Correct: DGFT administers the scheme.
  - Statement III – Correct: Consumables are included.

### Conclusion:

AAS facilitates **duty-free import of inputs**, supporting export-oriented industries and **integration into global value chains**.

12) **Answer Option:** (b) I, II and III

### Detailed Explanation:

- **Context:** MASS represent a **technological leap** in maritime operations, enhancing safety and efficiency.
- **Key Features:**
  - **Degrees of Autonomy:** Automated processes, remote control (with/without crew), full autonomy.
  - **India's Project Swayat:** Developed by **IRS and Cochin Shipyard Ltd.**, moving toward indigenous MASS.
  - International guidelines are set by **IMO**.
- **Analysis of Statements:**
  - Statement I – Correct: Remote-controlled ships without seafarers are recognized autonomy level.
  - Statement II – Correct: Ships can operate independently to varying degrees.
  - Statement III – Correct: India actively developing indigenous MASS.

### Conclusion:

MASS, including India's **Project Swayat**, represent **autonomous maritime technology** advancing operational safety and efficiency.

13) **Answer Option:** (d) I and II only

### Detailed Explanation:

- **Context:** Maternal mortality is a **key public health indicator**, reflecting healthcare quality.
- **Definition:** Death due to pregnancy-related causes **within 42 days** of termination, excluding accidental/incidental causes.

- **Key Facts:**
  - Puducherry is the **first Union Territory** to achieve **zero maternal mortality**.
  - **SDG Target:** Maternal Mortality Ratio (MMR) of 70 per 100,000 live births.
- **Analysis of Statements:**
  - Statement I – Correct: Puducherry milestone.
  - Statement II – Correct: SDG target aligns with 70 per 100,000.
  - Statement III – Incorrect: Accidental/incidental deaths are excluded.

### Conclusion:

Puducherry's achievement reflects **improved maternal healthcare** and progress toward **SDG targets**.

14) **Answer Option:** (d) I and II only

### Detailed Explanation:

- **Context:** FAO Blue Ports Initiative promotes **sustainable, integrated fishing harbours**.
- **India's Engagement:** Pilot **Smart and Integrated Fishing Harbours** at Vanakbara, Karaikal, and Jakhau.
- **Key Features:**
  - Focus on **social, economic, and environmental sustainability**.
  - Enhances **fisheries infrastructure** and **community welfare**.
- **Analysis of Statements:**
  - Statement I – Correct: Ports as strategic growth platforms.
  - Statement II – Correct: India-FAO partnership on three harbours.
  - Statement III – Incorrect: Initiative is holistic, not just economic.

### Conclusion:

Blue Ports Initiative promotes **sustainable fisheries development** through **smart and integrated harbour infrastructure**.

15) **Answer Option:** (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I

### Detailed Explanation:

- **Context:** Rising global temperatures **intensify the hydrological cycle**, causing floods, droughts, and glacier melt.
- **Mechanism:**
  - Increased **evaporation** → more atmospheric moisture → extreme weather events.
  - **Glacier melt** contributes to **sea-level rise**, impacting coastal communities.
- **Policy Relevance:** Requires **early warning systems, water management, and adaptation strategies**.
- **Analysis of Statements:**
  - Statement I – Correct: Warming climate increases atmospheric water, fueling extremes.
  - Statement II – Correct: Heavier rainfall and droughts result from increased moisture, directly explaining Statement I.

### Conclusion:

Climate change **intensifies the global water cycle**, driving extreme weather events and **sea-level rise**, necessitating **integrated policy responses**.

16) **Answer Option:** (b) World Meteorological Organization (WMO)

### Detailed Explanation:

- **Context:** Annual report monitoring **global water cycles, droughts, floods, and glacier melt**.
- **Key Findings:**
  - All glacier regions lost ice for the **third consecutive year**.
  - **Peak Water Point** reached or nearing in several small-glacier regions.
  - Two-thirds of river catchment areas experienced **excess or deficit** of water.
  - Climate change intensifies **evaporation**, leading to **droughts, floods, hurricanes, and sea-level rise**.
- **Institutional Role:** Published by **WMO**, not UNEP, UNESCO, or FAO.

### Conclusion:

The **WMO report** underscores the **critical impacts of climate change on global hydrological extremes and water security**.

17) **Answer Option:** (b) 42 days

### Detailed Explanation:

- **Context:** Maternal mortality is a key **public health indicator**.
- **Definition:** Death of a woman during pregnancy or within **42 days of termination** due to causes related to pregnancy, excluding accidental/incidental causes.
- **Policy Relevance:**
  - Standardized by **WHO** for international comparability.

- **MMR** is a Sustainable Development Goal (SDG 3.1) indicator.
- **Incorrect Options:**
  - 30, 90, 180 days are **not globally accepted**.

### Conclusion:

Maternal mortality is globally defined as **death within 42 days**, providing a standardized measure for **policy and monitoring**.

**18) Answer Option:** (d) Streamlining operations and reaffirming the UN's relevance

### Detailed Explanation:

- **Context: UN80 Initiative** is a comprehensive reform plan for the UN.
- **Objectives:**
  - **Streamline operations** and reduce duplication.
  - Ensure **efficiency, accountability, and relevance** of the UN.
  - Reform **structural, programmatic, and operational frameworks**.
- **Implementation:** Three workstreams – efficiency, mandate review, structural realignment.
- **Incorrect Options:**
  - Not about increasing specialized agencies, staff, or reducing contributions.

### Conclusion:

UN80 aims to **modernize UN operations and reaffirm its global effectiveness** in peace, development, and human rights.

**19) Answer Option:** (c) Both I and II

### Detailed Explanation:

- **Context:** PWDVA, 2005, protects women in domestic relationships from **physical, emotional, economic, sexual, and verbal abuse**.
- **Institutional Mechanism:**
  - **Protection Officers** and **Service Providers** provide legal, medical, and shelter support (Statement I).
- **Rights Provided:**
  - Women have the **right to reside** in shared household (Statement II).
- **Current Relevance:** Cornerstone for **women's rights and institutional protection**, though implementation gaps exist.

### Conclusion:

PWDVA establishes a **holistic legal framework** ensuring protection and residence rights for women facing domestic violence.

**20) Answer Option:** (a) I and II only

### Detailed Explanation:

- **Context:** UAE is a **federation of seven emirates**, strategically located near **Strait of Hormuz**.
- **Political Features:**
  - Abu Dhabi is the **capital** (Statement I).
- **Geography:**
  - **Tropic of Cancer** passes through Abu Dhabi emirate (Statement II).
  - Borders **Saudi Arabia and Oman**, so Statement III is incorrect.
- **Significance:** Important for **India-UAE relations, trade, and energy security**.

### Conclusion:

UAE is a **seven-emirate federation**, with Abu Dhabi as capital, lying on the **Tropic of Cancer**, highlighting its strategic and climatic relevance.

**21) Answer Option:** (c) An entity facilitating the aggregation of payments made by customers to merchants through various channels

### Detailed Explanation:

- **Context:** PAs are a **key component of India's digital payments ecosystem**, ensuring secure, seamless transactions.
- **Key Features:**
  - Act as **intermediaries** between customers and merchants.
  - Aggregate payments from **credit/debit cards, UPI, wallets**, etc., and settle into merchant accounts.
  - Must be **companies incorporated under the Companies Act**, with RBI authorization for non-bank PAs.
- **Policy Significance:** Ensures **consumer protection, fraud prevention, and regulatory oversight**.
- **Analysis of Options:**
  - (a) Incorrect – PAs do **not issue digital currency**.
  - (b) Incorrect – PAs are **service providers**, not regulators.
  - (c) Correct – Accurately describes their role.
  - (d) Incorrect – PAs **do not set e-commerce pricing norms**.

### Conclusion:

PAs are **regulated entities aggregating customer payments** to merchants, strengthening India's digital economy.

22) **Answer Option:** (c) It can take place both in times of war and in times of peace

### Detailed Explanation:

- **Context:** The Genocide Convention forms the **cornerstone of international criminal law** for preventing and punishing genocide.
- **Key Features:**
  - Acts committed with **intent to destroy** national, ethnic, racial, or religious groups.
  - Applies in **wartime and peacetime**, by **state and non-state actors**.
  - Adjudicated by the **International Court of Justice (ICJ)**.
- **Analysis of Options:**
  - (a) Incorrect – Both state and non-state actors can commit genocide.
  - (b) Incorrect – Not limited to international armed conflicts.
  - (c) Correct – Can occur in war or peace.
  - (d) Incorrect – Not exclusive to religious groups.

### Conclusion:

Genocide under the Convention is **globally recognized**, occurring in both **war and peace**, emphasizing universal accountability.

23) **Answer Option:** (a) A firm rendering multiple services like accounting, auditing, and management under one umbrella

### Detailed Explanation:

- **Context:** MDPs are **proposed innovations** by the Ministry of Corporate Affairs to allow **professionals from multiple fields to collaborate**.
- **Key Features:**
  - Deliver **accounting, auditing, assurance, management**, and allied services together.
  - Breaks **regulatory silos**, enabling competitive positioning in **global markets**.
  - Supports sectors like **ESG advisory, tech-driven services**.
- **Analysis of Options:**
  - (a) Correct – Describes MDP firms accurately.
  - (b) Incorrect – Not limited to one field.
  - (c) Incorrect – Not a cooperative society.
  - (d) Incorrect – Not a cross-border merger.

### Conclusion:

MDPs **modernize professional services** in India, enabling **multi-disciplinary collaboration under one entity**.

24) **Answer Option:** (c) Both I and II

### Detailed Explanation:

- **Context:** National initiative by **Ministry of Tribal Affairs** to empower **tribal communities** through decentralized leadership.
- **Key Features:**
  - Integrates **technology** (Adi Vaani App), leadership development, and scheme convergence.
  - Covers **11 crore tribal citizens** across **1 lakh villages**.
  - Participants: **Adi Karmayogis, Sahyogis, Saathis** at grassroots.
- **Analysis of Statements:**
  - Statement I – Correct: Adi Vaani App bridges language and communication gaps.
  - Statement II – Correct: Flagship Ministry of Tribal Affairs initiative.

### Conclusion:

Adi Karmayogi Abhiyan fosters **decentralized tribal leadership** and **inclusive governance** using **technology and community participation**.

25) **Answer Option:** (d) II only

### Detailed Explanation:

- **Context:** Government initiative for **women's health improvement** through **screening and interventions**.
- **Key Features:**
  - Multi-ministerial (Health & Family Welfare; Women & Child Development).
  - Covers **anaemia, hypertension, diabetes, cancer, immunization, nutrition**.
  - Monitored via **SASHAKT portal** in real time.
- **Analysis of Statements:**
  - Statement I – Incorrect: Not solely Ministry of Women & Child Development.
  - Statement II – Correct: SASHAKT portal tracks progress.
  - Statement III – Incorrect: Scheme covers multiple health issues, not only one.

### Conclusion:

The Abhiyan strengthens **women's health monitoring and accountability** through **real-time tracking** via the SASHAKT portal.

26) **Answer Option:** (c) II and III only

### Detailed Explanation:

- **Context:** EAEU is a **regional economic union** aimed at fostering economic integration, competitiveness, and cooperation. India is negotiating an **Early Harvest FTA** as a precursor to a comprehensive FTA.
- **Key Features:**
  - Member states: **Armenia, Belarus, Kazakhstan, Kyrgyz Republic, Russia.**
  - Focus on **economic cooperation and competitiveness.**
  - Early Harvest FTA allows **partial liberalization of select goods/services.**
- **Analysis of Statements:**
  - Statement I – Incorrect: It is **preliminary**, not a final FTA.
  - Statement II – Correct: Enhancing competitiveness is a core goal.
  - Statement III – Correct: Russia and Kazakhstan are members.

### Conclusion:

EAEU engagement reflects India's strategy for **regional economic integration and trade liberalization** through phased agreements.

27) **Answer Option:** (a) I only

### Detailed Explanation:

- **Context:** HAM is a **PPP model** for road infrastructure, balancing **financial risk between government and private players.**
- **Key Features:**
  - **Government funds 40%** during construction; private partner funds 60%.
  - Ensures **private investment**, reduces government fiscal burden, and encourages timely project completion.
- **Analysis of Statements:**
  - Statement I – Correct: Used mainly for road construction.
  - Statement II – Incorrect: Revenue risk is **borne by private party**, not government.
  - Statement III – Incorrect: Government funds **only 40%**, not entire project.

### Conclusion:

HAM is a **strategic PPP model** for road projects, incentivizing **private participation and risk-sharing.**

28) **Answer Option:** (d) I only

### Detailed Explanation:

- **Context:** MDPs allow **cross-disciplinary professional collaboration**, potentially transforming India's professional services sector.
- **Key Features:**
  - Could deliver **accounting, auditing, management, ESG, tech services** under one firm.
  - Regulatory reforms needed to **enable cross-disciplinary partnerships.**
  - Enhances India's **global competitiveness in advisory markets.**
- **Analysis of Statements:**
  - Statement I – Correct: Boosts ESG and tech advisory self-reliance.
  - Statement II – Incorrect: MDPs are not yet allowed to provide multiple services.
  - Statement III – Incorrect: Current regulations prevent cross-disciplinary partnerships.

### Conclusion:

MDPs, once approved, could **integrate professional services** to strengthen India's **global advisory footprint.**

29) **Answer Option:** (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I

### Detailed Explanation:

- **Context:** AI is a **general-purpose technology** reshaping global labor markets, impacting the **skill premium.**
- **Key Features:**
  - AI **automates medium- and high-skilled tasks**, reducing wage advantage over low-skilled workers.
  - **Skill premium** = wage ratio of high-skilled to low-skilled workers; projected to decline 3–4% globally.
- **Analysis of Statements:**
  - Statement I – Correct: AI reduces demand for skilled labor, diminishing the skill premium.
  - Statement II – Correct: Defines skill premium and projects decline, explaining Statement I.

### Conclusion:

AI adoption is expected to **reduce the skill premium**, affecting income distribution and requiring **policy interventions in skills and social protection**.

**30) Answer Option:** (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I

### Detailed Explanation:

- **Context:** IHR is highly disaster-prone due to **young fold mountains, tectonics, and climatic factors**.
- **Key Features:**
  - Vulnerabilities include **earthquakes, landslides, floods**.
  - NDMA's **Aapda Mitra initiative** strengthens **community-based disaster preparedness**.
- **Analysis of Statements:**
  - Statement I – Correct: Geological and tectonic activity increases disaster vulnerability.
  - Statement II – Correct: Community initiatives enhance disaster resilience.
  - Statement-II does **not directly explain Statement-I**.

### Conclusion:

Disaster management in IHR requires **technical, community-based, and policy interventions** to reduce risk and enhance resilience.

**31) Answer Option:** (a) Greenland

### Explanation:

- **Context:** Denmark's overseas territories, particularly Greenland, are strategically and ecologically important in the Arctic region.
- **Key Features:**
  - Greenland is the world's largest island under Danish sovereignty.
  - Enjoys **home rule**, politically linked to Denmark, geographically part of North America.
  - Strategic importance in **security, natural resources, and climate research**.
- **Other Options:**
  - Svalbard → Norway
  - Iceland → Independent country
  - Gotland → Sweden

### Conclusion:

Greenland is Denmark's key **overseas territory** with significant **Arctic strategic and resource relevance**.

**32) Answer Option:** (b) Ministry of Home Affairs

### Explanation:

- **Context:** NCB is India's **nodal agency** for drug law enforcement under NDPS Act, 1985.
- **Key Features:**
  - Established in 1986; headquartered in New Delhi.
  - Coordinates with state police, customs, and international agencies.
  - Functions under **MHA** for alignment with national security.
- **Other Ministries:**
  - Health, Social Justice, Law → Not responsible for NCB administration.

### Conclusion:

NCB's **placement under MHA** ensures centralized oversight and inter-agency coordination for combating **drug trafficking**.

**33) Answer Option:** (b) II only

### Explanation:

- **Context:** Vienna Convention (1985) and Montreal Protocol are cornerstone **global environmental treaties**.
- **Key Features:**
  - Vienna Convention recognized ozone depletion as a global issue.
  - Montreal Protocol phased out ODS; Kigali Amendment targets HFCs (do **not** deplete ozone).
- **Analysis:**
  - Statement I – Incorrect (HFCs ≠ ODS)
  - Statement II – Correct (first recognition of ozone depletion)

### Conclusion:

Vienna Convention is the **first multilateral treaty** addressing ozone depletion, forming the basis for subsequent international efforts.

**34) Answer Option:** (b) II and III only

### Explanation:

- **Context:** GII measures national **innovation ecosystems**, published by **WIPO**.
- **Key Features:**
  - India ranks **38th in 2025**, leading in **ICT Services Exports**.
  - Not published by IMF.
- **Analysis:**
  - Statement I – Incorrect (WIPO, not IMF)
  - Statement II – Correct (India leads in ICT exports)
  - Statement III – Correct (rank improved from 81st to 38th)

### Conclusion:

India's performance in GII highlights **growth in innovation, ICT services, and policy effectiveness** in technology-driven sectors.

35) **Answer Option:** (b) II only

### Explanation:

- **Context:** ED enforces laws on **money laundering and foreign exchange violations**.
- **Key Features:**
  - Established 1956, under **Department of Revenue, Ministry of Finance**.
  - Implements **PMLA (2002), FEMA (1999), FEOA (2018)**.
- **Analysis:**
  - Statement I – Incorrect (ED ≠ Home Affairs)
  - Statement II – Correct (enforces PMLA and FEMA)

### Conclusion:

ED's mandate under **Ministry of Finance** ensures integrity in the **financial system** and effective **economic crime enforcement**.

36) **Answer Option:** (d) Neither I nor II

### Explanation:

- **Context:** ODS deplete the ozone layer through chlorine or bromine release. Monitoring their effects is critical for environmental governance.
- **Key Features:**
  - Stratospheric ozone depletion is **more pronounced over Antarctica** (Southern Hemisphere).
  - Halons and methyl bromide release **bromine**, not chlorine.
- **Analysis:**
  - Statement I → Incorrect (Southern Hemisphere effect stronger)
  - Statement II → Incorrect (chemicals release bromine, not chlorine)

### Conclusion:

Neither statement is correct; global policies must consider **regional ozone vulnerability and chemical specificity**.

37) **Answer Option:** (a) II, III and IV only

### Explanation:

- **Context:** The Moran community is an indigenous tribe of Assam with rich cultural and historical heritage.
- **Key Features:**
  - Language closely related to **Dimasa**
  - Concentrated in **Upper Assam**
  - Recognized as an **indigenous tribe**
- **Analysis:**
  - Statement I → Incorrect (Moamoria Rebellion was against Ahom monarchy, not British)
  - Statements II, III, IV → Correct

### Conclusion:

Moran community highlights **ethnic identity, linguistic heritage, and tribal integration**.

38) **Answer Option:** (a) I, II and III

### Explanation:

- **Context:** ILO promotes labor rights and social justice globally.
- **Key Features:**
  - Established in **1919** under Treaty of Versailles
  - Headquarters in **Geneva, Switzerland**
  - Received **Nobel Peace Prize in 1969**
- **Analysis:** All statements are correct.

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### Conclusion:

ILO remains a **pillar of international labor standards** and global peace through fair work practices.

39) **Answer Option:** (d) II and III only

### Explanation:

- **Context:** SPIN90 regulates actin cytoskeleton for cellular protrusions, immunity, and tissue repair.
- **Key Features:**
  - Controls **actin mesh formation**
  - Enables **cell movement, immune defense, and wound healing**
- **Analysis:**
  - Statement I → Incorrect (actin network is general, not specific to SPIN90)
  - Statements II, III → Correct

### Conclusion:

SPIN90 plays a **critical role in cellular dynamics**, immunity, and regenerative biology.

40) **Answer Option:** (a) I, II and III

### Explanation:

- **Context:** Historic achievement for India in international skating competitions.
- **Key Features:**
  - **Anandkumar Velkumar** → India's first world champion in skating
  - **Krish Sharma** → Gold in Junior Men's 1000m sprint
  - Event hosted in **Beidaihe, China**
- **Analysis:** All statements are correct.

### Conclusion:

The championship underscores India's **emerging global sports presence** and the importance of **talent development**.

41) **Answer Option:** (b) Cryptocurrencies whose value is pegged to another asset, such as fiat currency or gold

### Explanation:

- **Context:** Stablecoins address **price volatility** in traditional cryptocurrencies like Bitcoin.
- **Key Features:**
  - Pegged to **fiat currency, gold, or other cryptos**
  - Types include **fiat-collateralized, crypto-collateralized, and algorithmic**
  - Used for **cross-border payments, medium of exchange, store of value, and DeFi integration**

### Conclusion:

Stablecoins combine **digital efficiency** with **asset-backed stability**, making them critical in financial policy and regulatory discussions.

42) **Answer Option:** (c) Odisha

### Explanation:

- **Context:** Simlipal is a key wildlife sanctuary in India, part of **Project Tiger** and a **UNESCO Biosphere Reserve**.
- **Key Features:**
  - Located in **Mayurbhanj district, Odisha**
  - Rivers: Burhabalanga, Palpala, Bandan, Salandi, Kahairi, Deo
  - Waterfalls: Joranda, Barehipani
  - Tribal communities: Kolha, Santhala, Bhumija
  - Tiger Reserve since **1956**, included in Project Tiger in **1973**

### Conclusion:

Simlipal is a **biodiversity hotspot** and a hub for **tribal livelihoods** in Odisha.

43) **Answer Option:** (a) Ministry of Fisheries, Animal Husbandry and Dairying

### Explanation:

- **Context:** RGM focuses on **conservation of indigenous bovine breeds** and **milk productivity**.
- **Key Features:**
  - Launched in **2014**

- Promotes **breed conservation, genetic upgradation, and technology interventions**
- Administered by the **Ministry of Fisheries, Animal Husbandry and Dairying**

### Conclusion:

RGM strengthens **food security, rural livelihoods, and dairy sector development** in India.

44) **Answer Option:** (b) Prevent evergreening of drug patents without substantial therapeutic improvement

### Explanation:

- **Context:** Balances **pharmaceutical innovation** and **public health access**.
- **Key Features:**
  - Prevents **evergreening** of existing drug patents
  - Minor modifications allowed only if they show **enhanced efficacy**
  - Ensures **affordable medicines**, supporting India as the “**pharmacy of the world**”

### Conclusion:

Section 3(d) is crucial for **IP policy** and **health equity**.

45) **Answer Option:** (c) Political parties

### Explanation:

- **Context:** Ensures **prevention and redressal of sexual harassment** at workplaces.
- **Key Features:**
  - Derived from **Vishaka Guidelines (1997)**
  - Covers **government offices, private sector, NGOs, educational institutions, sports facilities, hospitals, domestic workers**
  - Political parties are **excluded**, as per Supreme Court ruling
  - Mandates **Internal Complaints Committee (ICC)** for establishments  $\geq 10$  employees, **Local Complaints Committee (LCC)** for smaller workplaces

### Conclusion:

Political parties fall **outside POSH Act's ambit**, highlighting **scope and limits of workplace protections**.

46) **Answer Option:** (c) Assam – Golaghat

### Explanation:

- **Context:** India's move towards **second-generation (2G) bioethanol** emphasizes **non-food biomass** for sustainable fuels.
- **Key Features:**
  - Bamboo used as feedstock → **high lignocellulose content**, ideal for 2G bioethanol
  - Joint venture: **NRL, Fortum, Chempolis OY**
  - Location: **Golaghat, Assam**, due to bamboo availability
- **Broader Impact:** Supports **energy security, climate goals, and rural livelihoods**

### Conclusion:

India's first bamboo-based 2G bioethanol plant demonstrates **renewable energy innovation and sustainable rural development**.

47) **Answer Option:** (c) Offshore centers by multinationals for technology, R&D, and service delivery

### Explanation:

- **Context:** GCCs reflect India's role as a **global IT, R&D, and service hub**.
- **Key Features:**
  - Offshore centers by **multinational corporations**
  - Deliver **technology, R&D, and global services**
  - India hosts **~50% of global GCCs**, employing millions
- **Economic Significance:** Boosts **GDP, innovation, and employment**, and strengthens India's **digital economy**

### Conclusion:

GCCs exemplify India's **strategic advantage in the global services and innovation ecosystem**.

48) **Answer Option:** (d) A highly probable, high-impact disruption with clear warnings, yet neglected

### Explanation:

- **Context:** Grey Rhino events are **foreseeable risks** ignored until they cause crises.

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- **Examples:** Wayanad landslides, climate-related disasters.
- **Key Features:**
  - High probability, high impact
  - Clear warning signs, accumulating evidence
  - Neglected due to inaction or policy gaps
- **Policy Relevance:** Highlights **need for proactive disaster management** and **risk mitigation planning**

### Conclusion:

Grey Rhino Events contrast with **Black Swan events** (rare, unpredictable) and emphasize **anticipatory governance**.

49) **Answer Option:** (b) II only

### Explanation:

- **Context:** Second-generation bioethanol addresses **food security concerns** by using **non-food biomass**.
- **Key Features:**
  - Bamboo's **high lignocellulose content** makes it ideal for 2G ethanol
  - 1G ethanol uses **food crops**, which may conflict with food security
- **Policy Alignment:** National Policy on Biofuels (2018) promotes **non-food feedstocks**

### Conclusion:

Bamboo-based 2G bioethanol supports **sustainable energy, rural livelihoods, and climate goals**.

50) **Answer Option:** (c) Both I and II

### Explanation:

- **Statement I:** Correct – GCCs deliver **services, R&D, and innovation** for parent firms.
- **Statement II:** Correct – India hosts **~50% of global GCCs**, contributing **~1.8% to GDP**.
- **Significance:** GCCs enhance India's **knowledge-driven economy** and **global innovation standing**

### Conclusion:

GCCs consolidate India's **position as a major global hub for technology and business services**.