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CONSTITUTION, POLITY & GOVERNANCE

1. The Protection of Interests in Aircraft Objects Bill, 2025

Context: The Rajya Sabha has passed the Protection of Interests in Aircraft Objects Bill, 2025, a landmark step to integrate international aviation finance treaties into India's legal framework.

About the Cape Town Convention

- **Introduction:** Adopted in 2001, the Cape Town Convention on International Interests in Mobile Equipment and its Aircraft Protocol provide a unified framework to facilitate asset-based financing and leasing of high-value mobile assets like aircraft, helicopters, and engines.
- Objectives:



- ✓ Protect lessors' and creditors' rights.
- ✓ Offer legal remedies in cases of default.
- ✓ Simplify cross-border legal procedures.
- ✓ Enable swift repossession and deregistration of aircraft in case of payment defaults.
- **India's Ratification:** Ratified in 2007, the Convention lacked domestic legislation for implementation until now.

Provisions of the Bill

- Legal Recognition: Statutory enforcement of the Cape Town Convention and its Aircraft Protocol in India.
- Creditor Protections: Creditors or lessors can reclaim aircraft within two months of default or as agreed contractually.
- **Domestic Registry:** Designates the Directorate General of Civil Aviation (DGCA) as the domestic registry for managing international interests and related dues.
- Mandatory Reporting:

4

- ✓ Airlines must disclose dues per aircraft.
- ✓ Lessors must report their operational interests to the DGCA.
- **Bankruptcy Clarity:** Strengthens protections for lessors in cases of airline insolvency.

Impact and Benefits

- Economic Gains:
 - ✓ Reduction in leasing costs by 8–10%.
 - ✓ Attracts global leasing firms to operate from or collaborate with India.
- **Consumer Benefits:** Likely reduction in airfares due to lower financing costs for aircraft.
- **Boost to Aviation Sector:** Enhances India's position in global aviation finance and supports airline growth.

2. Fiscal Health Index (FHI) 2025

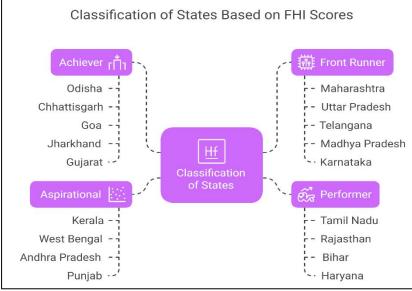
Context: NITI Aayog, in partnership with the Press Information Bureau, has released the Fiscal Health Index (FHI) 2025, providing a comprehensive analysis of the fiscal health of major Indian states.

About FHI 2025

• The Fiscal Health Index (FHI) evaluates the fiscal performance of 18 major Indian states, which collectively account for a significant portion of India's GDP, population, and public financial activities. The index uses data from the Comptroller and Auditor General (CAG) for the financial year 2022-23.

Components of the Index

- Sub-Indices:
 - ✓ Quality of Expenditure
 - ✓ Revenue Mobilisation
 - ✓ Fiscal Prudence
 - ✓ Debt Index
 - ✓ Debt Sustainability
- Classification:
 - ✓ Based on FHI scores, states are grouped into four categories:
 - Achiever (Score above 50)



- Front Runner (Scores between 40-50)
- Performer (Scores between 25-40)

Aspirational (Scores below 25)

Key Findings

- Top Performers:
 - ✓ Odisha ranks first, followed by Chhattisgarh, Goa, Jharkhand, and Gujarat in the "Achiever" category.
- Debt Concerns:
 - ✓ West Bengal and Punjab face significant challenges due to their growing debt burdens and increasing debt-to-GSDP ratios.

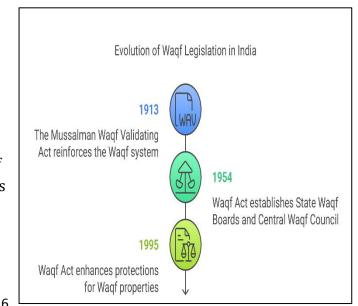
3. Waqf Amendment Act 2025 (UMEED Act): A Step Towards Modernizing Waqf Management

Context: The Waqf Amendment Act 2025, popularly referred to as the UMEED Act (Unified Management Empowerment Efficiency and Development), introduces a comprehensive set of reforms to enhance the governance, inclusivity, and efficiency of Waqf properties in India. Approved by Parliament in April 2025, this legislation seeks to address long-standing challenges and modernize Waqf administration. **What Are Waqf Properties?**

- **Definition:** A Waqf refers to property donated by Muslims for religious, charitable, or specific purposes. The ownership of such property is considered to be with God, and its benefits are directed toward fulfilling the intended purpose.
- **Irrevocable Nature:** Once declared as Waqf, the property cannot be reclaimed or repurposed.
- **Indian Context:** India has Waqf Boards that manage nearly 8.7 lakh properties, making them one of the largest urban landowners in the country, after the Armed Forces and Indian Railways.

Historical Development of Waqf Legislation

- Pre-Independence:
 - ✓ The Mussalman Waqf Validating Act (1913) reinforced the Waqf system in response to British skepticism.
- Post-Independence:
 - Waqf Act 1954: Established State Waqf Boards and the Central Waqf Council to oversee Waqf properties
- Waqf Act 1995: Enhanced protections for Waqf properties, prioritizing adherence to Islamic principles in their management.



Key Features of the Waqf Amendment Act 2025

• Inclusivity

✓ Non-Muslims can now serve on Central and State Waqf Boards to improve transparency and accountability in Waqf administration.

• Updated Property Regulations

- ✓ End of 'Waqf by User': Properties used for religious purposes without formal designation as Waqf will no longer qualify unless registered before the enactment of the Act.
- ✓ Exemption for Trusts: Muslim-owned trusts governed by other charitable laws are excluded from Waqf regulations.

• Eligibility for Declaring Waqf

 ✓ Only practicing Muslims with at least five years of practice can dedicate properties as Waqf.

• Rights Protection

- ✓ Women, widows, and orphans' inheritance rights must be safeguarded before a property is declared as Waqf.
- Prohibits the establishment of Waqf properties on tribal lands listed under Schedules V and VI of the Constitution.

• Administrative Improvements

- Centralized Registration: Mutawallis (Waqf caretakers) are required to register property details on a centralized digital portal within six months.
- ✓ Government Audits: Institutions with annual incomes exceeding ₹1 lakh will be subject to mandatory audits.

• Dispute Resolution

- ✓ Senior government officials must investigate disputes over properties claimed as Waqf.
- ✓ Appeals against decisions of Waqf Tribunals can now be taken to the High Court, addressing a significant gap in the previous legal framework.

Financial Reforms

✓ Reduces the mandatory contributions from Waqf institutions to Waqf Boards from 7% to 5%, enabling these institutions to allocate more resources to charitable and community welfare activities.

4. India Justice Report 2025

Context: The India Justice Report 2025 sheds light on critical structural inefficiencies within India's justice delivery system, encompassing police, judiciary, prisons, and legal aid. These gaps pose significant challenges to ensuring equitable access to justice and highlight the urgent need for systemic reforms.

Key Findings of the Report

• Police

✓ Understaffing:

- A 23% vacancy exists in police positions nationwide, with forensic staff vacancies exceeding 50%.
- ✓ Low Representation of Women:
 - Women occupy only 8% of senior police positions, far below the 33% benchmark set by the central government in 2009.
 - No state or Union Territory meets the reserved quotas for women in the police force.

• Judiciary

✓ Judge-to-Population Ratio:

 India has only 15 judges per 10 lakh people, falling significantly short of the recommended 50 judges (1987 Law Commission report).

✓ Lack of Diversity:

- Women constitute just 38% of judges in the lower judiciary and 14% in high courts.
- Among marginalized communities, only Karnataka fulfills SC, ST, and OBC quotas in judicial appointments.

• Prisons

✓ Staff Shortage:

• 30% of prison staff positions remain vacant.

✓ Overcrowding:

 National prison occupancy has reached 131%, with undertrials comprising 76% of the inmate population.

• Legal Aid

- ✓ Decline in Para Legal Volunteers:
 - Participation by Para Legal Volunteers has dropped by 38%, indicating a weakening of grassroots legal support systems.

5. Panchayat Advancement Index

Context: The Panchayat Advancement Index (PAI) is India's first framework to evaluate the performance of Gram Panchayats (GPs) on key development indicators. Launched by the Ministry of Panchayati Raj, this tool aligns with the localization of Sustainable Development Goals (SDGs) to promote evidence-based rural governance and policy interventions for over 2.5 lakh Gram Panchayats across the nation.

What is PAI?

• PAI is a composite performance assessment index designed to measure the effectiveness of Panchayati Raj Institutions (PRIs) in service delivery, governance, and sustainable rural development.

- ✓ Launch: The first PAI Baseline Report for FY 2022–23.
- ✓ Purpose: To assess panchayat performance across themes such as governance, transparency, service delivery, and financial management.

Themes of PAI

- The index tracks the progress of Panchayats based on nine Localized SDGs (LSDGs):
 - ✓ Poverty-Free and Improved Livelihoods
 - ✓ Healthy Panchayat
 - ✓ Child-Friendly Panchayat
 - ✓ Water-Abundant
 Panchayat
 - ✓ Clean and Green
 Panchayat
 - ✓ Self-Sufficient Infrastructure Panchayat
 - ✓ Socially Just and Socially Secured Panchayat
 - ✓ Good Governance
 Panchayat
 - ✓ Women-Friendly Panchayat
- These themes aim to bring global goals into rural realities, fostering

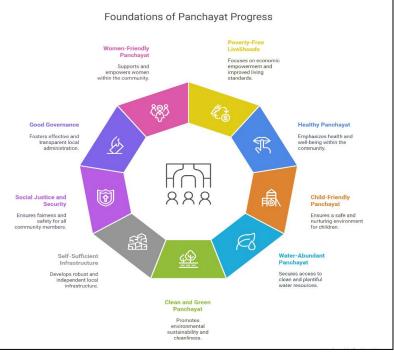
localized and inclusive development strategies.

Performance Categories:

- Achievers (90+): None
- Front Runners (75 to below 90): 699 (0.3%)
- Performers (60 to below 75): 77,298 (35.8%)
- Aspirants (40 to below 60): 1,32,392 (61.2%)
- Beginners (below 40): 5,896 (2.7%)

State-Wise Highlights

- Gujarat:
 - ✓ Front Runners: 346
 - ✓ Performers: 13,781 (highest in the country)
- Telangana:
 - ✓ Front Runners: 270
 - ✓ Performers: 10,099



• Other Leading States:

- ✓ Maharashtra: 12,242 Performers
- ✓ Madhya Pradesh: 7,912 Performers
- ✓ Uttar Pradesh: 6,593 Performers

• Aspirant-Level Panchayats:

✓ Bihar, Chhattisgarh, and Andhra Pradesh show a significant share of aspirantlevel Panchayats, requiring focused policy efforts.

Key Observations

- No Panchayat achieved the "Achiever" category in this cycle.
- A majority of Panchayats (61.2%) fall under the "Aspirants" category, indicating room for improvement.
- No inter-state rankings have been introduced yet, emphasizing the developmental focus rather than competition.

6. Urdu: An Integral Part of India's Linguistic Heritage

Context: The Supreme Court of India, in its judgment in Varshatai w/o Sanjay Bagade vs State Of Maharashtra, reaffirmed Urdu as an indigenous language, emphasizing its role in India's pluralistic society.

Supreme Court's Observations

- Urdu was recognized as an Indo-Aryan language with roots akin to Hindi and Marathi.
- The Court highlighted Urdu as integral to India's cultural and intellectual heritage, rejecting its characterization as foreign.
- It upheld the use of Urdu on municipal signboards, reinforcing India's commitment to linguistic diversity.

Identity and Marginalization

- Despite its origins in India, Urdu often faces exclusion and politicization:
 - ✓ In Uttar Pradesh, Urdu was removed from the list of languages for legislative translations, despite being widely spoken.
- Campaigns and products using Urdu phrases, like Fabindia's "Jashn-e-Riwaaz," have faced backlash, reflecting perceived cultural associations.

Historical and Cultural Importance

• Emerging from centuries of cultural interaction, Urdu embodies the Ganga-Jamuni Tehzeeb, symbolizing India's composite culture. Influenced by Persian, Arabic, and regional dialects, it has made significant contributions to Indian literature and art.

Demographics

- According to the 2011 Census, Urdu-speaking populations are spread across India:
- Maharashtra: 75.4 lakh speakers.
- Karnataka: 66.18 lakh speakers (10.83% of the state's population).

• Telangana and Andhra Pradesh: Substantial communities.

7. Supreme Court Mandates Timelines for Governors' Decisions

Context: In a landmark judgment in the State of Tamil Nadu vs Governor of Tamil Nadu case, the Supreme Court addressed delays by Governors in acting on bills under Article 200 of the Constitution. Invoking Article 142, the Court outlined clear timelines for Governors' decisions, promoting accountability and adherence to constitutional provisions.

Key Observations of the Supreme Court

- Urgency in Decision-Making:
 - ✓ The Court ruled that the phrase "as soon as possible" in Article 200 implies urgency.
 - ✓ It emphasized that Governors cannot exercise "absolute veto" (rejecting bills outright) or "pocket veto" (indefinitely delaying action).
- Mandatory Action on Re-Presented Bills:
 - ✓ Governors must grant assent to bills re-passed by the legislature unless the represented bill differs from the original.
 - ✓ Sending the same bill to the President after re-presentation is prohibited.

Aid and Advice of State Government:

- ✓ The Governor must act on the advice of the Council of Ministers.
- Exceptions arise only for bills affecting the judiciary's powers (e.g., High Courts or the Supreme Court).

Timelines for Governors' Actions

- The Court prescribed the following timelines for Governors under Article 200:
 - ✓ Withholding Assent or Reserving for the President: Within 1 month.
 - ✓ Returning Bills with Recommendations: Must be done within 3 months.
 - ✓ Reserving Bills for the President: Within 3 months, if contrary to State Council of Ministers' advice.
 - ✓ Granting Assent to Re-Presented Bills: Within 1 month.

Implications of Non-Compliance

• Failure to act within the prescribed timelines makes the Governor's inaction subject to judicial review.

Governor's Constitutional Role Under Article 200

- Options Available:
 - ✓ Grant assent.
 - ✓ Withhold assent.
 - $\checkmark~$ Reserve for Presidential consideration.
 - ✓ Return the bill for reconsideration (non-Money Bills only).
 - ✓ Reconsideration by Legislature: If re-passed, the Governor is obligated to assent.

11

8. Supreme Court Judges to Declare Assets

Context: In a landmark decision aimed at promoting judicial accountability, Supreme Court judges, including the Chief Justice of India (CJI), have resolved to declare their assets and liabilities to the CJI, with an option for voluntary public disclosure on the Supreme Court's website. This decision reflects the judiciary's commitment to transparency amid growing public demand for greater accountability.

Key Features of the Decision

- Mandatory Asset Declaration:
 - ✓ All Supreme Court judges, including the CJI, are required to declare their assets and liabilities to the CJI.
- Voluntary Public Disclosure:
 - ✓ Judges can choose to make their declarations publicly accessible on the Supreme Court's website.
- Substantial Acquisitions:
 - ✓ Judges must report any significant asset acquisitions during their tenure.
- Current Status:
 - ✓ As of now, 30 judges, including the CJI, have complied with this directive.

Historical Context: Evolution of Judicial Transparency

- Restatement of Values of Judicial Life (1997):
 - This resolution, adopted by the judiciary, emphasized voluntary asset declaration by judges to the Chief Justice. It aimed to uphold ethical standards but maintained confidentiality by restricting public access to these declarations.
- RTI Act (2005) and Judicial Exemption:
 - ✓ Section 8(1)(j) of the RTI Act protects personal information, including asset declarations, from disclosure unless public interest justifies it. The judiciary has consistently upheld the confidentiality of such declarations, citing privacy concerns.
- Judicial Stance on Mandatory Disclosure:
 - ✓ The judiciary has historically resisted mandatory public asset disclosure, arguing that such measures should only be implemented when a compelling public interest is demonstrated.
- Parliamentary Recommendations (2023):
 - ✓ The Parliamentary Standing Committee on Law and Justice advocated for mandatory asset disclosure by judges. However, this recommendation has yet to be translated into legislative action.

9. Doctrine of Prospective Overruling

Context: The Supreme Court recently reiterated that invoking the Doctrine of Prospective Overruling must be exercised with caution and only when circumstances justify its application. This doctrine plays a significant role in ensuring fairness during legal transitions, protecting past actions from new interpretations of the law. **Understanding the Doctrine of Prospective Overruling**

• Definition:

- ✓ The doctrine allows courts to apply legal decisions to future cases without impacting past actions or judgments made under the old law.
- Objective:
 - ✓ It ensures that individuals or entities relying on previous legal rules are not penalized when laws are reinterpreted or overruled.
- Contrasting Retrospective Rulings:
 - ✓ Unlike retrospective rulings, which apply the new interpretation to both past and future cases, prospective overruling affects only future cases.
- Origins:
 - ✓ Initially recognized in American jurisprudence, the doctrine has been adopted in India and the UK.
- Key Purpose:
 - ✓ It aims to balance legal evolution with fairness, avoiding chaos by maintaining stability in past legal transactions.

Indian Jurisprudence on Prospective Overruling

- Introduction in India:
 - ✓ Landmark Case:
 - The doctrine was introduced in I.C. Golaknath vs. State of Punjab (1967), marking a pivotal moment in Indian constitutional law.
 - ✓ Application:
 - The Supreme Court applied the doctrine to ensure settled issues were not reopened and to prevent unnecessary litigation.

Key Features in Indian Context:

- Limited to Future Cases:
 - ✓ Subordinate courts are bound to apply the doctrine prospectively, avoiding invalidation of prior actions.
- Specified Date of Effect:
 - ✓ The Supreme Court can set a specific date for the new law to come into effect, ensuring decisions made before that date remain undisturbed.
- Avoids Multiplicity of Proceedings:
 - ✓ By not reopening settled issues, the doctrine ensures legal stability.
- During Invalidation:
 - ✓ Often invoked when invalidating laws or overruling past decisions to maintain judicial fairness.

10. Tackling Deep fakes: Government of India's Efforts

Context: The Government of India has taken proactive steps to address deepfakes and misinformation, ensuring a secure cyberspace for citizens through regulatory frameworks, advisories, and awareness campaigns.

Key Regulatory Measures

- IT Act, 2000 & IT Rules, 2021:
 - Criminalizes cybercrimes like identity theft, privacy violations, and obscene content, covering AI-generated or user-generated illegal content.
 - ✓ Intermediaries must remove unlawful content and prevent the spread of misleading or violent material.
 - ✓ Grievance Appellate Committees (GACs) allow users to appeal against intermediary decisions.
- Addressing Deepfakes:
 - ✓ The Ministry of Electronics and Information Technology (MeitY) issues advisories on combating synthetic media and deepfakes.
 - ✓ Promotes ethical AI use through stakeholder consultations.

Role of CERT-In in Cybersecurity

- Alerts & Advisories:
 - ✓ CERT-In regularly issues updates on cyber threats, including deepfakes and AIbased risks.
- Awareness Initiatives:
 - ✓ Public campaigns, advisories, and free tools for malware detection.

Indian Cybe<mark>r Crime</mark> Coordination Centre (I4C)

- National Cyber Crime Reporting Portal:
 - Citizens can report cybercrimes via cybercrime.gov.in or call the toll-free helpline, 1930.

11. Appointment of Chief Justice of India

Context: Chief Justice Sanjiv Khanna recommended Justice B.R. Gavai, the next in line by seniority, to the Union Law Ministry for the position of the 52nd Chief Justice of India. **Constitutional Provisions**

- Article 124(1): This article simply states, "there shall be a Supreme Court of India consisting of a Chief Justice of India," but it does not outline the procedure for selecting the CJI.
- Article 124(2): The President of India appoints judges to the Supreme Court, including the CJI, but no explicit procedure is given for the selection of the CJI.
- Thus, the appointment process is guided by convention rather than clear constitutional mandates.

Judicial Convention for CJI Appointment

• Since the Constitution lacks a detailed procedure, the appointment of the CJI follows a long-standing judicial convention:

- ✓ Seniority-based System: The outgoing CJI recommends the next senior-most judge for the position of CJI. This recommendation is typically based on the judge's seniority within the Supreme Court.
- ✓ Defining Seniority: Seniority at the Supreme Court is not determined by age but by the date a judge was appointed to the Supreme Court.
 - If two judges were appointed on the same day, the one sworn in first would have seniority.
 - If both judges were sworn in on the same day, the one with more years of experience in the High Court would be considered senior.
 - An appointment from the bench (a sitting judge) is given precedence over one from the bar (a lawyer).

INTERNATIONAL RELATIONS

1. The Arctic Council and Rising Geopolitical Importance

Context: The Arctic region has emerged as a focal point in global geopolitics due to the effects of climate change, economic interests, and strategic rivalries. The Arctic Council plays a significant role in managing this critical area, balancing development with sustainable practices.

About the Arctic Council

- Establishment: Created in 1996 under the Ottawa Declaration.
- **Membership:** Eight nations with territorial claims—Canada, Denmark (Greenland), Finland, Iceland, Norway, Russia, Sweden, and the United States (Alaska).
- **Permanent Participants:** Six Indigenous organizations representing local Arctic communities.
- Observers:
 - ✓ Includes 13 nations, such as India, China, Japan, and the United Kingdom.
 - ✓ Other participants include 13 intergovernmental and 12 non-governmental organizations.
- **Consensus-Based Decisions:** All decisions require agreement among the eight member states and consultation with Indigenous representatives.

Northeast Passage (Northern Sea Route)

- A shipping lane running along Russia's Arctic coastline that connects Europe and Asia.
- Advantages:
 - ✓ Reduces the distance between Asia and Europe by up to 8,000 km, lowering transit costs.
 - ✓ Less reliance on traditional shipping routes like the Suez Canal, which faces security vulnerabilities.

 \checkmark Boosts economic opportunities for Russia, which manages the route's access.

Why the Arctic Is Strategically Significant

- Natural Wealth:
 - ✓ Holds significant untapped resources, including 13% of global undiscovered oil reserves and 30% of natural gas.
 - \checkmark Rich in valuable minerals like rare earth elements and copper.
- New Shipping Lanes:
 - ✓ Melting ice has opened pathways such as the Northeast Passage and Canada's Northwest Passage, reducing global shipping distances.
- Geopolitical Rivalries:
 - ✓ Increased military activities by key players like Russia, the US, and China, coupled with growing interest from observer nations.
- Impact of Climate Change:
 - ✓ The rapid melting of Arctic ice has exposed areas previously unreachable, encouraging further exploration and economic activity.
- Legal and Governance Challenges:
 - Unlike Antarctica, the Arctic is not protected under comprehensive international treaties.
 - ✓ Governed primarily by the United Nations Convention on the Law of the Sea (UNCLOS), allowing territorial claims and military presence.

2. President of Chile's Visit to India

Context: The President of Chile is on a state visit to India, commemorating 76 years of diplomatic relations between the two nations.

Key Highlights of the Visit

- Strengthening Economic Ties:
 - Expansion of the India-Chile Preferential Trade Agreement (2017) was a major agenda.
 - ✓ Both countries initiated discussions for a Comprehensive Economic Partnership Agreement (CEPA) to enhance trade and investment ties.
- Cooperation in Mining and Critical Minerals:
 - A significant agreement was signed between CODELCO (Chile's National Copper Corporation) and Hindustan Copper Limited.



- ✓ Chile, the world's largest copper producer, aims to diversify its market by strengthening ties with India and reducing dependency on China.
- ✓ Cooperation in critical minerals, including lithium, was emphasized for advancing clean energy and emerging technologies.

• Antarctic Cooperation:

✓ A Letter of Intent was signed to promote scientific collaboration and strengthen research on Antarctic ecosystems.

About Chile

• Geography:

- ✓ Chile is a narrow country on the western edge of South America, spanning 6,437 km in length but only about 91 km in width.
- ✓ Known for its diverse geography, Chile encompasses the Atacama Desert, the driest place on Earth, and Cape Horn, famous for its harsh maritime conditions.

• Natural Resources:

- ✓ Chile is a leading global producer of copper, with the Escondida Mine contributing over 5% of global supplies.
- Rich in lithium, it plays a critical role in the global energy transition to electric vehicles and renewable energy storage.

• Seismic and Volcanic Activity:

 Situated along the Pacific Ring of Fire, Chile experiences frequent earthquakes and volcanic eruptions due to the subduction of the Nazca and Antarctic plates under the South American Plate.

3. US Reciprocal Tariffs

Context: The US announced reciprocal tariffs on April 2, 2025, disrupting global supply chains. Exporters, especially in India, face rising freight costs, while the shipping industry experiences volatility.

Immediate Effects

- **Freight Costs:** Rates from India to the US East Coast surged 10% to \$4,000 per container, with similar increases across major routes.
- **Market Volatility:** The Drewry World Container Index rose for the first time in months due to cancelled sailings.

Long-Term Implications

- Supply Chain Shifts: Exporters explore alternative routes, including Brazil, despite higher costs.
- China's Dominance Challenged: US tariffs of \$1.5 million per port call on Chinese vessels may shift maritime dynamics.

Opportunities for India

- **Export Potential:** US tariffs on Chinese goods create a \$10 billion annual revenue opportunity for India.
- **Growth in Logistics:** Cargo volumes could rise 20% by FY26, driven by infrastructure and IT investments.

4. 6th BIMSTEC Summit

Context: The 6th BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) Summit, chaired by Thailand, concluded in Bangkok with a focus on regional cooperation, connectivity, and human development.

About BIMSTEC

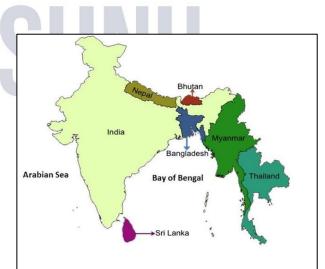
- **Establishment:** Formed in 1997 with the signing of the Bangkok Declaration.
- Members: Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand.
- Charter: Finalized during the 5th BIMSTEC Summit in Sri Lanka (2022).
- **Objective:** To promote economic cooperation and regional integration among South and Southeast Asian nations.

Key Outcomes of the 6th Summit

- BIMSTEC Bangkok Vision 2030:
 - ✓ Strategic framework to create a Prosperous, Resilient, and Open ("PRO BIMSTEC") region by 2030.
 - Focus areas: Economic integration, regional connectivity, and human security.
- Agreement on Maritime Transport Cooperation:
 - ✓ Aims to enhance maritime connectivity, improve logistical efficiency, and reduce trade costs.

India's Contributions and Leadership Initiatives

- BIMSTEC Centres of Excellence:
 - ✓ Proposed Centres in India for Disaster Management, Sustainable Maritime Transport, Traditional Medicine, and Agricultural Research.
- BODHI Programme:
 - ✓ BIMSTEC for Organized Development of Human Resource Infrastructure:
 - Focus on youth skilling through training, scholarships, and professional development for students and researchers.
- Digital Public Infrastructure:
 - ✓ India to conduct a pilot study on the need for digital infrastructure in the BIMSTEC region.



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- Strengthening People-to-People Linkages:
 - ✓ India to host the first-ever BIMSTEC Games in 2027, fostering cultural and sports connections.
- BIMSTEC Chamber of Commerce:
 - ✓ Annual BIMSTEC Business Summit to enhance trade and investment linkages.

5. UAE's Crown Prince Visit to India

Context: The UAE's Crown Prince recently undertook an official visit to India, marking another milestone in the deepening bilateral relations between the two nations. **Major Highlights of the Visit**

- Defence Cooperation
 - ✓ Emphasis on scaling defence partnerships to match the pace of trade and economic collaboration.
 - ✓ Key focus areas included training exchanges and formalising Coast Guard-to-Coast Guard cooperation through a Memorandum of Understanding (MoU).
 - ✓ Increased collaboration in defence manufacturing.
- Educational Initiatives
 - ✓ Agreement to establish the first overseas campus of IIM Ahmedabad in Dubai, with an MBA program commencing in 2025.
 - ✓ Inauguration of the Indian Institute of Foreign Trade (IIFT) campus at Expo City Dubai, enhancing India's educational footprint abroad.
- Infrastructure and Economic Projects
 - ✓ Launch of Bharat Mart, an infrastructure project aimed at boosting trade and showcasing Indian products in the UAE.
 - ✓ Allocation of land for the UAE-India Friendship Hospital in Dubai, fostering healthcare collaboration.
 - ✓ Development of ship-repair clusters at Kochi and Vadinar to enhance maritime cooperation.
 - ✓ Establishment of an India Office for the Dubai Chamber of Commerce to bolster economic ties.

6. India-Israel Comprehensive Agriculture Agreement

Context: India and Israel recently signed a Comprehensive Agriculture Agreement to deepen bilateral cooperation in agriculture, food security, and modernization of farming practices.

Key Focus Areas of the Agreement

- Soil and Water Management
 - ✓ Emphasis on efficient irrigation techniques and soil conservation.
 - ✓ Promotion of water-use efficiency through advanced Israeli technology.

• Horticultural and Agricultural Production

- ✓ Collaboration to enhance crop yield and diversify agricultural produce.
- ✓ Introduction of innovative farming practices to boost productivity.

• Post-Harvest and Processing Technology

- ✓ Sharing expertise in reducing post-harvest losses.
- ✓ Advancing food processing and value addition to support farmers.

• Agricultural Mechanisation and Animal Husbandry

- ✓ Joint efforts to promote the use of modern machinery in agriculture.
- ✓ Strengthening livestock management practices to enhance productivity.

Research and Development

✓ Collaborative R&D initiatives for developing climate-resilient crops and smart farming solutions.

Centres of Excellence (CoE)

- India recognized the success of 43 Centres of Excellence established under Indo-Israel cooperation.
- These CoEs play a pivotal role in providing training, technology transfer, and demonstrations for modern farming techniques.

Five-Year <mark>Seed Im</mark>provement Plan

- A significant development under the agreement is the formulation of a five-year seed improvement plan.
- Focus on improving seed quality to enhance yield, pest resistance, and climate adaptability.

Global Commitments and Future Prospects

- **Vasudhaiva Kutumbakam:** India reiterated its commitment to global agricultural partnerships and climate-smart solutions.
- Israeli delegation was invited to participate in World Food India 2025, showcasing India's role in promoting global food security.

7. India-Sri Lanka Relations: Strengthening Bilateral Ties

Context: India and Sri Lanka share a long history of cultural, economic, and strategic ties. The recent visit of the Indian Prime Minister to Sri Lanka has further reinforced these relations, addressing key areas such as defence, energy, and digitization while countering China's growing influence in the Indian Ocean region.

Recent Outcomes of the Bilateral Meet

- Defence Cooperation
 - ✓ Umbrella MoU Signed: Establishes structured military collaboration to enhance regional security, countering China's strategic presence at the Hambantota port.
 - ✓ Joint Military Exercises: Expansion of joint initiatives like SLINEX (Navy) and MITRA SHAKTI (Army) to strengthen interoperability.

- Energy and Infrastructure Development
 - ✓ Trincomalee Energy Hub: Development of this hub in collaboration with the UAE aims to boost energy security.
 - Renewable Energy Initiatives: A solar power plant in Trincomalee was inaugurated to promote clean energy.
 - ✓ Railway Projects: Infrastructure projects worth \$106 million were launched to modernize Sri Lanka's transportation network.
- Economic Support
 - ✓ Debt Relief Measures: \$100 million in Indian loans was converted into grants, and interest rates on existing debt were reduced to support Sri Lanka's recovery from its 2022 economic crisis.
 - ✓ Financial Aid: India extended a \$4 billion aid package during Sri Lanka's economic downturn.
- Cultural and Religious Ties
 - ✓ Buddhist Connect: Buddha relics from Gujarat will be displayed in Sri Lanka for Vesak 2025, strengthening cultural bonds.
 - Temple Renovation: India pledged to renovate the Thirukoneswaram Temple and Sita Eliya Temple, showcasing shared heritage.
- Digital and Health Collaboration
 - Digital Initiatives: MoUs were signed on e-governance and the development of Sri Lanka's Eastern Province.
 - ✓ Healthcare: Cooperation in healthcare aims to improve medical facilities and outreach programs.

8. India-Saudi Arabia Relations

Context: India and Saudi Arabia share a rich history of cooperation, rooted in strong cultural, economic, and historical ties. With evolving global scenarios and regional dynamics, the partnership between the two nations has grown stronger, further solidified by Prime Minister Narendra Modi's visit to Riyadh in April 2025. **Historical Context**

- The connection between India and Saudi Arabia spans centuries, influenced by trade and cultural exchanges.
- Formal diplomatic relations began in 1947, and the ties have strengthened through significant visits, such as King Abdullah's in 2006 and PM Modi's in 2016 and 2019.
- In 2019, the relationship advanced with the establishment of the Strategic Partnership Council, creating a framework for structured dialogue.

Economic and Trade Relations

• Bilateral trade in FY 2023-24 reached USD 42.98 billion, with Indian exports valued at USD 11.56 billion and imports at USD 31.42 billion.

- India imports 18% of its crude oil from Saudi Arabia, while key Indian exports include rice, textiles, machinery, and IT services.
- Saudi Arabia is India's 5th largest trading partner, and India ranks as the kingdom's 2nd largest trade partner.

Defence and Security Cooperation

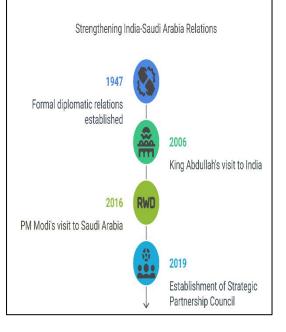
- Collaboration in defence has seen significant progress with initiatives like Al-Mohed Al-Hindi naval exercises, counter-terrorism partnerships, and intelligence sharing.
- Both nations prioritize stability in the Indian Ocean Region and West Asia.

Indian Diaspora

- Over 2.4 million Indians reside in Saudi Arabia, forming the largest expatriate community in the country and contributing substantially to its economy.
- India enjoys a substantial Hajj quota, with more than 1.75 lakh pilgrims participating annually.

Key Highligh<mark>ts of PM</mark> Modi's 2025 Visit

- Six MoUs and Agreements
 - Energy Cooperation: Collaborative efforts in oil exploration, refining, and renewable energy, including green hydrogen.
 - ✓ Digital Infrastructure: Joint initiatives to enhance digital public infrastructure and foster innovation.
 - ✓ Investment Initiatives: Saudi investments in Indian infrastructure, logistics, and energy corridors.
 - Pharmaceutical Sector: Enhanced trade facilitation and regulatory approvals for Indian pharmaceutical exports.
 - ✓ Fintech and Banking: Frameworks to strengthen fintech partnerships and streamline banking services for NRIs.
 - Cultural Collaborations: Initiatives in tourism, education, and film under Saudi Vision 2030.
- Discussions on Hajj and Labour Welfare
 - ✓ Advocated for an increase in the Hajj quota to reflect India's growing Muslim population.
 - ✓ Strengthened agreements to improve labour protections and create mechanisms for addressing disputes involving Indian workers.
- Expansion of the Strategic Partnership Council



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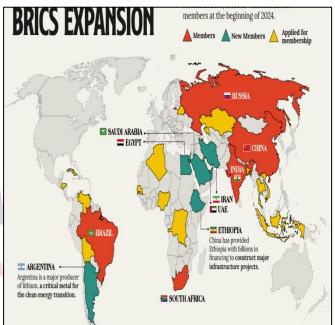
✓ Inclusion of new working groups focused on defence technology, space exploration, and semiconductor development to deepen cooperation.

9. 15th BRICS Agriculture Ministers' Meeting

Context: The BRICS Land Restoration Partnership was launched at the 15th BRICS Agriculture Meet held in Brazil. India, as a key participant, reaffirmed its commitment to fostering inclusive, equitable, and sustainable agricultural practices, aligning with global goals of addressing land degradation and promoting a resilient agri-food system. **About**

- The partnership aims to combat land degradation, desertification, and soil fertility loss while empowering vulnerable communities such as small farmers tribal populations, and local cultivators.
- Integration of Knowledge: Merges traditional agricultural practices with scientific innovation for holistic solutions.
- **Global Relevance:** Aligned with the increasing need for sustainable land use and agricultural practices amidst environmental challenges.

Need for the Partnership



- Land Degradation Crisis: Globally, land degradation is a pressing issue. In India, around 32% of the land is degraded, and 25% faces desertification (FAO data).
- **Food Security Concerns:** Deteriorating soil quality threatens agricultural productivity and food security for future generations.
- **Climate Change Impacts:** Degraded lands amplify vulnerability to climate extremes, requiring immediate intervention for restoration.

10. India's Extended Continental Shelf Claim in the Central Arabian Sea

Context: India has recently expanded its claim in the Central Arabian Sea by approximately 10,000 square kilometers as part of its extended continental shelf (ECS). However, India has also modified its earlier claim to avoid a long-standing maritime boundary dispute with Pakistan.

Maritime Boundary and Exclusive Economic Zone (EEZ)

- **Exclusive Economic Zone (EEZ):** Coastal nations have sovereign rights over the EEZ, extending up to 200 nautical miles from their coastline. This zone allows exclusive rights for resource exploration, mining, and fishing.
- **Extended Continental Shelf (ECS):** Beyond the EEZ, countries can claim additional areas on the seabed, provided they meet scientific and legal criteria under the United Nations Convention on the Law of the Sea (UNCLOS).

India's Claim and Modifications

- **Initial Claim (2009):** India submitted its claim for vast areas in the Arabian Sea to the Commission on the Limits of the Continental Shelf (CLCS).
- **Objections by Pakistan (2021):** Pakistan opposed India's claim, citing the unresolved maritime boundary in the Sir Creek region.
- **CLCS Decision (2023):** The CLCS rejected India's original claim but allowed the submission of modified claims.
- **Modified Claim (2025):** India reasserted its claim over an additional 10,000 sq. km in the Arabian Sea while avoiding contentious areas linked to Pakistan.

Sir Creek Dispute

- **Geography:** A 96-km-long tidal estuary dividing the Sindh province of Pakistan and the Kutch region of Gujarat in India, extending into the Arabian Sea.
- **India's Stand:** Advocates for the Thalweg Principle under international maritime law, which fixes the boundary in the middle of a navigable channel.
- Pakistan's Stand: Claims Sir Creek is non-navigable, rejecting the Thalweg Principle.

Role of the Commission on the Limits of the Continental Shelf (CLCS)

- **Establishment**: Functions under UNCLOS to delineate the outer limits of continental shelves beyond 200 nautical miles.
- Headquarters: UN Headquarters, New York.
- **Recommendations:** Binding and final for coastal states.
- **Objective:** Facilitate equitable claims over the continental shelf while avoiding overlaps or disputes.

11. Inter-Parliamentary Union (IPU): A Global Platform for Parliamentary Diplomacy

Context: Lok Sabha Speaker Om Birla addressed the 150th Assembly of the Inter-Parliamentary Union (IPU) held in Tashkent, Uzbekistan, highlighting India's commitment to parliamentary democracy, international cooperation, and sustainable development.

About

- The Inter-Parliamentary Union (IPU) is the world's first multilateral political organization, established to promote peace, democracy, and human rights through inter-parliamentary cooperation and dialogue.
 - ✓ Established: 1889 in Paris, France
 - ✓ **Headquarters:** Geneva, Switzerland
 - ✓ **Members:** 180 national parliaments and 15 associate members
 - ✓ **Motto:** "For democracy. For everyone."

Core Objectives

- **Promote Representative Democracy:** Strengthen parliamentary institutions and processes globally.
- **Facilitate Dialogue:** Encourage diplomacy among parliaments to address global challenges.
- Advance Gender Equality and Youth Empowerment: Promote inclusion in governance.
- **Support Sustainable Development:** Align parliamentary efforts with the UN's Sustainable Development Goals (SDGs).

• **Defend Human Rights:** Protect the rights of parliamentarians worldwide.

Structure and Features

- IPU Assembly:
 - ✓ Main decision-making forum addressing global political, social, and developmental issues.

✓ Issues recommendations for international parliamentary actions.

- Governing Council:
 - Policy-making body comprising three representatives from each member parliament.
 - ✓ Approves programmes, budgets, and elects the Executive Committee.
- Executive Committee:
 - ✓ 17-member body responsible for IPU's administration and operations.
- Standing Committees:
 - ✓ Focus on themes such as peace, democracy, development, and cooperation.
- Funding:
 - Primarily financed by public contributions from member parliaments.



ECONOMIC SCENARIO

1. Energy Statistics India 2025

Context: The Ministry of Statistics and Programme Implementation (MoSPI) has released the annual publication, Energy Statistics India 2025, highlighting key trends and projections for India's energy sector. With a growing demand driven by industrialization and urbanization, the report offers a comprehensive view of the country's energy landscape.

India's Energy Scenario in 2025

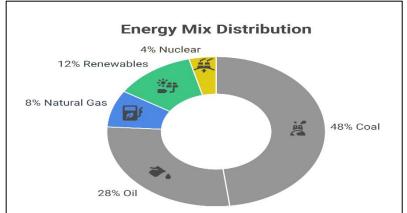
- Total Energy Supply and Demand:
 - ✓ Supply: 1,800 MToE (Million Tonnes of Oil Equivalent), growing at 4.5% annually.
 - ✓ Demand: Major contributors include industries (40%), transportation (25%), and households (20%).

• Energy Mix:

- ✓ Coal: 48%
- ✓ Oil: 28%
- ✓ Natural Gas: 8%
- ✓ Renewables: 12%
- ✓ Nuclear: 4%

Fossil Fuels: Reserves and Production

- Coal:
 - ✓ Total reserves: 320 billion tonnes.



- ✓ Major states: Odisha (25.47%), Jharkhand (23.58%), and Chhattisgarh (21.23%).
- ✓ Annual production: 950 million tonnes, meeting 85% of domestic demand.
- Crude Oil:
 - ✓ Largest reserves: Western Offshore (32%), Assam (22%).
- Natural Gas:

✓ Largest reserves: Western Offshore (31%), Eastern Offshore (24%).

Renewable Energy Growth

- Renewable Energy Potential:
 - ✓ Dominated by Wind Power (55%), followed by Solar and Hydropower.
 - ✓ Key states: Rajasthan (20.3%), Maharashtra (11.8%), Gujarat (10.5%), Karnataka (9.8%).
- Capacity Expansion:

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- ✓ **Solar Power:** 175 GW (up from 150 GW in 2024).
- ✓ **Wind Power:** 50 GW (up from 45 GW in 2024).
- ✓ **Hydropower:** 52 GW, contributing 12% to total electricity generation.

Electricity Generation and Trends

- Installed Capacity: 450 GW (an increase from 420 GW in 2024).
- Electricity Generation: 1,700 TWh (terawatt-hours).
- **Per Capita Consumption:** 1,500 kWh annually.
- **Transmission Loss Reduction:** From 23% (2014-15) to 17% (2023-24), aided by Smart Grid Initiatives.

Energy Efficiency and Sustainability

- Government Initiatives:
 - ✓ **National Hydrogen Mission:** Promoting Green Hydrogen.
 - ✓ **PAT Scheme:** Encouraging energy-efficient industrial practices.
 - ✓ **FAME-III:** Accelerating EV adoption and charging infrastructure development.
- Carbon Emissions:
 - ✓ 2025 projection: 2.9 billion tonnes of CO₂ (4% decline due to renewable adoption).
 - ✓ **Commitment:** Net-zero emissions by 2070.
- 2. Domestically Manufactured Iron & Steel Products Policy (DMISP) 2025

Context: The Government of India has unveiled the Domestically Manufactured Iron & Steel Products Policy (DMISP) – 2025 to boost self-reliance, domestic value addition, and competitiveness in the steel sector.

Objective and Significance

- **Self-Reliance:** Supports the "Atmanirbhar Bharat" vision by promoting the production and consumption of domestically manufactured iron and steel.
- **Curbing Imports:** Seeks to counter rising steel imports, ensuring the sustainability of the Indian steel sector.
- **Protecting Domestic Industry:** Shields Indian manufacturers from foreign competition, especially in government and infrastructure projects.
- **Enhancing Value Addition:** Encourages local sourcing of capital goods in steel production to maximize domestic value addition.

Key Features of DMISP Policy - 2025

- Preference for Domestic Steel:
 - ✓ Government ministries, PSUs, and statutory bodies are required to procure domestically produced steel.
 - ✓ Applicable to contracts exceeding ₹5 lakh, including those under central sector and centrally sponsored schemes.
- "Melt & Pour" Requirement:

- ✓ Core production, including melting and solidification, must take place in India.
- ✓ Covers products such as flat-rolled steel, bars, rods, and railway-grade steel.
- Ban on Global Tenders Below ₹200 Crore:
 - ✓ Global Tender Enquiries (GTE) are restricted for projects under ₹200 crore unless approved by the Department of Expenditure.

• Reciprocal Clause:

- ✓ Suppliers from countries restricting Indian participation in their procurement processes are barred from Indian government steel tenders unless permitted by the Ministry of Steel.
- ✓ Promotes fair competition in global trade, addressing imbalances with nations like China.

• Mandatory Domestic Value Addition:

- ✓ Capital goods used in steel manufacturing (e.g., furnaces, rolling mills) must have at least 50% domestic content.
- Bidders must provide self-certification, supported by auditor-verified reports, to confirm compliance.

3. India's 10-Year Bond Yields Decline

Context: India's benchmark 10-year bond yields experienced a significant drop of nine basis points (bps) to 6.49% year-on-year, following the Reserve Bank of India's (RBI) announcement to purchase bonds worth ₹80,000 crore in April.

Key Highlights

- Bond Yield Trends:
 - ✓ The Indian bond market has observed a 24 bps fall in yields since March.
 - ✓ The 10-year benchmark bond yield has declined by 62 bps in FY 2024-25, marking the largest drop in five years.

• Banking Sector Liquidity:

- ✓ Enhanced liquidity in the Indian banking system has led to falling bond yields.
- ✓ Treasury bill cut-offs are nearing 6.30%, and further reductions in yields are anticipated based on liquidity conditions.

What is Bond Yield?

- Bond yield refers to the return an investor expects to earn from a bond, expressed as an annual percentage. It is an essential indicator of investment returns and is influenced by interest rates and economic conditions.
- Types of Bond Yields:
 - ✓ Current Yield: Calculated as the annual coupon payment divided by the bond's current market price.
 - ✓ Yield to Maturity (YTM): The total return if the bond is held until maturity, including coupon payments and any capital gains or losses.

- ✓ Yield to Call (YTC): Assumes the bond is called (redeemed early) before maturity.
- ✓ Yield to Worst (YTW): Represents the lowest yield possible if the bond is called or matures early.
- Bond Price and Yield Relationship:

✓ Inverse Relationship: When bond prices increase, yields decline, and vice versa. Implications of Declining Bond Yields

- **Investor Returns:** Lower bond yields indicate reduced returns for investors, making equities and alternative investments more attractive.
- **Government Borrowing Costs:** Falling yields lower borrowing costs for the government, aiding fiscal management and infrastructure development.
- **Economic Growth:** Improved liquidity and reduced yields can promote lending and investment, bolstering economic growth.
- **Inflation and Monetary Policy:** Declining yields reflect market confidence in low inflation and accommodative monetary policy by the RBI.

4. Lok Sabha Passes the Coastal Shipping Bill, 2024

Context: The Lok Sabha has passed the Coastal Shipping Bill, 2024, establishing a dedicated legal framework for coastal trade and regulating all types of vessels, including ships, boats, sailing vessels, and mobile offshore drilling units.

Key Provisions

• Simplified Licensing for Coasting Trade:

- ✓ The Bill removes the licensing requirement for Indian vessels engaging in coastal trade.
- ✓ Foreign vessels, however, will require a license issued by the Director General of Shipping (DGS).
- ✓ Coasting trade is defined as the transportation of goods or passengers by sea between ports or locations within India.

• Strategic Planning and Database Creation:

- Mandates the development of a National Coastal and Inland Shipping Strategic Plan, to be revised every two years.
- ✓ Establishes a National Database for Coastal Shipping to streamline operations and improve regulatory oversight.
- Enhanced Powers for DGS:
 - ✓ The DGS is authorized to seek information, issue directives, and enforce compliance with regulations.
- Role of Central Government:
 - ✓ Empowers the Central Government to grant exemptions and exercise regulatory oversight for coastal shipping, ensuring efficiency and seamless operations.

5. 10 Years of Pradhan Mantri MUDRA Yojana (PMMY)

Context: The Pradhan Mantri MUDRA Yojana (PMMY), a flagship scheme of the Government of India aimed at fostering micro-entrepreneurship, marks its 10th anniversary in 2025.

About

- **Launch:** Initiated in 2015 to provide financial assistance to non-corporate, non-farm small and micro-enterprises.
- **Objective:** To offer collateral-free loans through Member Lending Institutions (MLIs), including Scheduled Commercial Banks, Regional Rural Banks, NBFCs, and Micro Finance Institutions.
- Loan Categories:
 - ✓ **Shishu:** Loans up to ₹50,000.
 - ✓ Kishor: Loans between
 ₹50,000 and ₹5 lakh.
 - ✓ Tarun: Loans between
 ₹5 lakh and ₹10 lakh.
 - ✓ Tarun Plus: Loans above ₹10 lakh and up to ₹20 lakh.

Key Achievements

- Entrepreneurship Revolution:
 - ✓ Over 52 crore loans worth ₹32.61 lakh crore sanctioned, fostering grassroots entrepreneurship.
- Boost to MSMEs:
 - ✓ MSME lending has

grown significantly, rising from 38.51 lakh crore in FY14 to 27.25 lakh crore in FY24, with projections to surpass 30 lakh crore by FY25.

- Women Empowerment:
 - ✓ Women constitute 68% of beneficiaries, showcasing the scheme's critical role in promoting women-led enterprises.
- Financial Inclusion:
 - ✓ 50% of accounts belong to SC, ST, and OBC entrepreneurs, while 11% of beneficiaries are from minority communities, reinforcing inclusive growth.

6. 4th Phase of Regional Rural Bank (RRB) Amalgamation

Context: The Department of Financial Services has announced the 4th phase of amalgamation of 26 Regional Rural Banks (RRBs) under the "One State, One RRB" principle to enhance operational efficiency and promote rural financial inclusion.

About RRBs Amalgamation

• Background:

- ✓ Initiated in 2004–05 based on Vyas Committee recommendations.
- ✓ Previous amalgamation phases reduced RRBs from 196 to 43 by 2021.

• Legal Framework:

✓ Conducted under the Regional Rural Banks (RRBs) Act, 1976.

• Principle:

- ✓ Consolidation ensures one RRB per state, sponsored by a major public sector bank.
- Example: Bihar Gramin Bank will be formed by merging Dakshin Bihar Gramin Bank and Uttar Bihar Gramin Bank, sponsored by Punjab National Bank.

About Regional Rural Banks (RRBs)

- Establishment:
 - ✓ Set up in 1975 under the RRB Act, 1976, at the request of sponsor banks.
- Ownership:
 - ✓ Central Government: 50%
 - ✓ State Government: 15%
 - ✓ Sponsor Bank: 35%
- Objective:
 - Provide affordable banking and credit services to small farmers, rural artisans, and entrepreneurs to support agriculture, trade, and rural industries.

Supervision and Regulation

- Regulator:
 - ✓ RBI regulates RRBs under the Banking Regulation Act, 1949.
 - ✓ NABARD oversees RRB operations.
- Tax Status:
 - ✓ Treated as cooperative societies under the Income Tax Act, 1961.

Key Requirements for RRBs

- Capital to Risk-Weighted Assets Ratio (CRAR):
 - ✓ Maintain a minimum CRAR of 9%, as per RBI norms.
- Priority Sector Lending (PSL):
 - ✓ Allocate at least 75% of Adjusted Net Bank Credit (ANBC) or Credit Equivalent of Off-Balance Sheet Exposure (CEOBE) to PSL.

7. NITI NCAER States Economic Forum

Context: The NITI Aayog, in collaboration with the National Council of Applied Economic Research (NCAER), has introduced the NITI NCAER States Economic Forum, a dedicated portal designed to consolidate and provide comprehensive data and analysis on state finances.

Key Features of the Portal

• Comprehensive State-Wise Data:

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- ✓ Includes reports on macroeconomic indicators such as tax and non-tax revenues.
- Tracks human development statistics like literacy levels, school dropout rates, and employment metrics.
- Historical Financial Trends:
 - ✓ Provides insights into trends in the devolution of central funds to States.
- Data Sources:
 - ✓ Draws from the 2011 Census, Periodic Labour Force Survey, and the Reserve Bank of India's State Finances Report.
- Comparative Format:
 - ✓ Offers a user-friendly comparison of fiscal realities across Indian States, fostering clarity and transparency.

Significance

- Timeliness:
 - ✓ The portal addresses renewed scrutiny of Centre-State relations, especially in southern States, amidst ongoing debates about resource allocation.
- Informed Policy Discussions:
 - Shifts fiscal debates to a factual basis, aiding discussions on revenue-sharing, parliamentary delimitation, and regional disparities.

Challenges and Importance

- Data Quality Concerns:
 - The reliability of economic data remains a challenge, impacting the effectiveness of the portal.
- Support for Decision-Making:
 - Despite limitations, the portal empowers policymakers by providing a factual framework for addressing fiscal and governance issues.

Implications for Federalism

- Strengthened Fiscal Federalism:
 - ✓ Facilitates informed discussions on Centre-State relations, revenue-sharing, and administrative responsibilities.

• Role of States and Institutions:

- ✓ Calls for continuous engagement from States and institutions like the Sixteenth Finance Commission to optimize data usage.
- Avoiding Parochialism:
 - ✓ Encourages evidence-based debates over polarized issues like the threelanguage policy to foster inclusive governance.

8. Vibrant Villages Programme-II (VVP-II)

Context: The Vibrant Villages Programme-II (VVP-II) has been introduced by the Government of India as a Central Sector Scheme designed to promote development and

reinforce security in key villages situated along international land borders (ILBs). This program is a critical part of India's vision for Viksit Bharat@2047, focusing on building secure, self-reliant, and thriving border communities.

Overview of VVP-II

• Scheme Type:

- ✓ A Central Sector Scheme, fully funded by the Government of India, distinguishing it from VVP-I, which was a Centrally Sponsored Scheme.
- Geographic Focus:
 - ✓ Targets strategic villages located along ILBs in 17 states and Union Territories, excluding the northern border regions already addressed in VVP-I (2023-24).

• Primary Objectives:

- ✓ Improve quality of life and create sustainable livelihood opportunities in border areas.
- ✓ Enhance national security by fostering local participation as key contributors to border surveillance.
- ✓ Address cross-border criminal activities and promote balanced development.

Key Features of VVP-II

- Infrastructure Development:
 - ✓ Comprehensive investments in critical infrastructure, including:
 - All-weather road connectivity under Pradhan Mantri Gram Sadak Yojana (PMGSY-IV).
 - Essential facilities such as housing, sanitation, drinking water, and SMART classrooms.
 - ✓ Focus on ensuring accessibility and connectivity in remote border areas.
- Livelihood and Value Chain Development:
 - ✓ Empowerment of self-help groups (SHGs) and cooperatives to foster economic sustainability.
 - ✓ Implementation of tailored outreach programs to create robust income opportunities for residents.

• Integration of Welfare Schemes:

- ✓ Full coverage of existing government welfare initiatives in selected villages through a convergence model to maximize benefits.
- Promotion of Culture and Tourism:
 - ✓ Organizing fairs, festivals, and national day events to highlight local heritage.
 - ✓ Conducting awareness programs to encourage a spirit of national unity and integration.
- Utilization of PM Gati Shakti:
 - ✓ Adoption of the PM Gati Shakti National Master Plan to streamline project execution and ensure coordinated implementation across sectors.

Importance of VVP-II

- Strengthened Border Security:
 - ✓ Involving local communities in border management enhances internal security in vulnerable regions.
- Empowering Border Communities:
 - ✓ Improved infrastructure and livelihood initiatives build resilience among border populations.
- Promoting National Unity:
 - ✓ Cultural and tourism activities strengthen ties between border communities and the rest of the nation.

• Long-term Strategic Vision:

✓ Aligns with India's objective of achieving holistic development and robust security as part of Viksit Bharat@2047.

9. Rare Earth Elements (REEs): Strategic Significance and India's Path to Self-Reliance

Context: Rare Earth Elements (REEs) are critical to modern technologies, spanning sectors like defense, electronics, and renewable energy. China's dominance in the REE supply chain and its recent export restrictions are viewed as a strategic move to leverage trade as a geopolitical tool. This has prompted countries, including India, to reevaluate their reliance on Chinese REEs and take steps toward self-sufficiency.

What are Rare Earth Elements (REEs)?

- Definition:
 - ✓ REEs comprise 17 silvery-white, soft metals, such as Cerium (Ce), Yttrium (Y), and Europium (Eu), found abundantly in the Earth's crust but in dispersed and non-concentrated forms, making extraction challenging.

• Applications:

- ✓ **Defense:** Used in radars, missile systems, and drones.
- ✓ **Electronics:** Essential for computers, smartphones, and semiconductors.
- ✓ Energy Technologies: Integral to solar panels, wind turbines, and electric vehicle batteries.

✓ **Industrial Uses:** Act as catalysts in refining processes and as metal alloys.

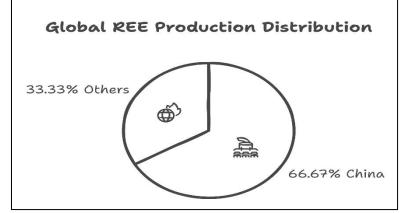
Global Distribution of REEs

- Major Reserves:
 - ✓ **China:** 44 million tonnes (MT).
 - ✓ Vietnam, Brazil, Russia, and India: Combined reserves of over 16 million tonnes.

- China's Dominance:
 - ✓ Accounts for more than 2/3rd of global REE production.
 - ✓ Controls over 85% of the supply chain due to advanced processing and extraction capabilities.

Consequences of China's Export Restrictions

- Disruption of Global Supply Chains:
 - ✓ Immediate shortages for industries dependent on REEs, such as electronics, electric vehicles (EVs), and renewable energy sectors.
- Impact on Defense
 Industries:



- Critical components like fighter jets, missiles, and radar systems rely on REEs like dysprosium and yttrium.
- Geopolitical Ramifications:
 - Intensifies the strategic competition over resources and prompts countries to diversify supply chains.

India's Steps to Reduce REE Dependence on China

- Exploitation of Domestic Reserves:
 - ✓ Indian Rare Earths Limited (IREL): Plans to increase REE production by 400% by 2032, utilizing India's 6.9 MT reserves.
- International Collaborations:
 - ✓ TRUST Initiative (2025): Signed with the U.S. to ensure a secure supply of REEs, building on the Minerals Security Partnership (MSP) of 2023.
- Policy Reforms:
 - ✓ Amendments to mining laws to encourage private sector participation and boost domestic REE production.
- Technological Advancements:
 - ✓ Focus on developing indigenous capabilities for REE processing and extraction.

10. Warangal Chapata Chilli

Context: The Warangal Chapata Chilli, also known as Tomato Chilli, from Telangana has received the prestigious Geographical Indication (GI) tag. This recognition highlights the unique characteristics of this chilli variety and its contribution to the agricultural and economic landscape of the region.

About

- Unique Characteristics:
 - ✓ **Appearance:** Distinguished by its flaming red color.
 - ✓ **Pungency:** Known for low pungency, making it suitable for diverse culinary uses.
 - ✓ Natural Coloring Agent: High demand for its natural coloring component, paprika oleoresin.
- Varieties:
 - ✓ The Warangal Chapata Chilli comprises three distinct types:
 - **Single Patti:** A common variant with a single-layered fruit structure.
 - Double Patti: Features a double-layered fruit structure, making it unique.
 - **Odalu:** Another variation native to the region.

11.GI Tag for Kannadippaya

Context: Kannadippaya, a traditional tribal handicraft from Kerala, has been granted the Geographical Indication (GI) tag, ensuring market protection and global recognition for this indigenous craft.

About

- Meaning and Craftsmanship:
 - ✓ The name Kannadippaya translates to "mirror mat."
 - ✓ It is crafted using the soft inner layers of reed bamboo (Teinostachyum wightii) and other bamboo species like Ochlandra sp.
 - The mats are known for their high-quality finish, resembling the smoothness of a mirror.
- Unique Properties:
 - ✓ Offers warmth during winters and a cooling effect in summers.
 - ✓ Lightweight, durable, and eco-friendly, making it a sustainable handicraft option.
- Cultural Significance:
 - ✓ Historically, Kannadippaya mats were presented to kings as a mark of honor by tribal communities.
 - ✓ They symbolize the cultural heritage and craftsmanship of Kerala's tribal artisans.

• Tribal Preservation:

- Primarily woven by tribal communities such as the Oorali, Mannan, Muthuva, Malayan, and Kadar.
- ✓ The craft is prevalent in Kerala's Idukki, Thrissur, Ernakulam, and Palakkad districts.

12. RBI Eases Liquidity Coverage Ratio Norms

Context: The Reserve Bank of India (RBI) has revised its proposed guidelines under the Liquidity Coverage Ratio (LCR) framework to strike a balance between enhancing

liquidity risk management and minimizing operational burdens on banks. The updated norms reduce the additional run-off factor for digital retail deposits and will be effective from April 1, 2026, applying to all commercial banks except payments banks, regional rural banks, and local area banks.

What is the Liquidity Coverage Ratio (LCR)?

- The LCR is a global regulatory standard introduced by the Basel Committee on Banking Supervision (BCBS) after the 2008 financial crisis to ensure financial institutions maintain adequate High-Quality Liquid Assets (HQLA). These assets are designed to withstand a 30-day period of financial stress.
- **Objective:** Prevent liquidity crises by requiring banks to maintain sufficient liquid reserves.
- **Implementation in India:** Fully operationalized in 2019, mandating a minimum 100% LCR primarily for large banks.

Key Updates in RBI's Revised LCR Norms

- Run-Off Factor for Digital Retail Deposits:
 - ✓ Revised Rate: Reduced from 5% (as per the draft proposal) to 2.5%.
 - ✓ Stable Deposits: Run-off factor increased to 7.5% (from 5%).
 - ✓ Less Stable Deposits: Run-off factor increased to 12.5% (from 10%).
- Funding from Non-Financial Entities:
 - ✓ Run-off rate lowered to 40% from the earlier proposed 100%.
 - ✓ Applies to trusts, partnerships, LLPs, and proprietorships.
- Unsecured Wholesale Funding from Small Business Customers:
 - ✓ Treated as retail deposits, attracting the same 2.5% additional run-off factor.
- Valuation of HQLA:
 - ✓ Level 1 HQLA, including government securities, to be valued at market price minus applicable haircuts, aligned with the Liquidity Adjustment Facility (LAF) and Marginal Standing Facility (MSF).

Understanding the Run-Off Factor

- **Definition:** The percentage of deposits expected to be withdrawn during financial stress.
- **Significance:** Recognizes liquidity risks associated with internet and mobile banking (IMB) and Unified Payments Interface (UPI) transactions, which enable rapid fund movements.

Implications of the Revised Guidelines

- For Banks:
 - ✓ Eases liquidity strain by reducing the regulatory burden.
 - ✓ Estimated release of ₹2.7–3 lakh crore in lendable resources, boosting credit growth by an additional 1.4–1.5%.
- For the Economy:

- ✓ Enhanced credit availability to support lending and economic activities.
- ✓ Strengthened financial stability through calibrated liquidity risk management.
- For Non-Financial Entities and Small Businesses:
 - ✓ Lower run-off rates acknowledge their moderate withdrawal risks, ensuring easier access to banking services.

13. India's Startup Ecosystem

Context: India's startup ecosystem is the third-largest globally, with over 1.57 lakh recognized startups. While the country has made strides, it faces several challenges compared to global leaders like China.

India's Startup Landscape

• Commerce Minister Piyush Goyal at Startup Mahakumbh criticized Indian startups for focusing on consumer-centric ventures, such as food delivery apps and influencer-driven content. In contrast, China focuses on high-tech sectors like electric vehicles (EVs), AI, and semiconductors, leading global innovation with over 6,000 deep-tech startups and \$100 billion in investment.

Key Challenges

- Innovation Deficit: India's innovation rate lags behind China, with India ranking 39th on the Global Innovation Index compared to China's 11th.
- **Funding Gap:** India's tech investments between 2014-2024 totaled \$160 billion, compared to China's \$845 billion, hindering deep-tech innovation.
- **Financial Constraints:** Limited financial flexibility among 90% of the population restricts consumer startup growth.
- Weak Research and Education: Indian universities lack global research recognition, and many graduates are unemployable.
- **Brain Drain:** Top talent often moves abroad for better opportunities, weakening domestic innovation.
- **Risk-Averse VC Culture:** Indian VCs favor low-risk consumer apps over long-term deep-tech investments.
- Limited Global Reach: Many Indian startups focus on domestic markets, reducing global competitiveness.

Opportunities

- **Growing Ecosystem:** India is home to 100+ unicorns, with major cities like Bengaluru and Hyderabad driving innovation. Tier II and III cities contribute to over 51% of startups.
- **Government Support:** Startup India initiatives have fostered growth through funding, tax benefits, and regulatory support.
- **Software & Digital Payments:** India excels in SaaS, with companies like Zoho and Freshworks, and has revolutionized digital payments with UPI.

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- **Emerging Sectors:** Startups in space tech, AI, and cybersecurity show promise, with deep-tech investment rising 78% in 2024.
- **Global Recognition:** India's expertise in digital payments and space tech offers opportunities for global partnerships.

SOCIAL ISSUES

1. Women and Men in India Report

Context: The Ministry of Statistics and Programme Implementation (MoSPI) has released the 26th edition of the "Women and Men in India 2024" report. This comprehensive publication presents critical gender-related data across various socio-economic domains, showcasing trends and achievements in gender equality. **Key Highlights**

• Education – Progress in Gender Parity

- ✓ Gender Parity Index (GPI) for 2022-23:
 - Primary Level: 1.03
 - Upper Primary Level: 1.02
 - Higher Secondary Level: 1.02
- ✓ GPI values exceeding 1.00 indicate higher female enrolment, reflecting substantial progress toward equitable access to education.

• Labour Force Participation

- ✓ Female Labour Force Participation Rate (LFPR) for individuals aged 15 years and above improved significantly:
 - From 49.8% in 2017-18 to 60.1% in 2023-24 (usual status).
- ✓ This reflects enhanced inclusion of women in the workforce, contributing to economic empowerment.

• Financial Inclusion

✓ Women's Banking Participation:

- Accounted for 39.2% of total accounts and 39.7% of aggregate deposits in 2023-24.
- Rural women held 42.2% of total accounts, demonstrating growing financial independence in rural areas.

• Stock Market Involvement

- ✓ DEMAT Accounts:
 - Total accounts increased from 33.26 million in 2021 to 143.02 million in 2024.
 - Female account holders surged from 6.67 million to 27.71 million, showcasing a 4.2-fold growth over three years.

• Women Entrepreneurs

- ✓ Female-led Enterprises:
 - A steady rise was observed in the share of female-headed proprietary establishments in manufacturing, trade, and services from 2021-22 to 2023-24.
- Political Participation

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✓ Voting Trends:

- Female voter turnout reached 65.8% in 2024, surpassing male turnout of 65.5%, reversing earlier gender gaps in electoral participation.
- Women-led Startups
 - ✓ Growth of Startups:
 - Startups with at least one-woman director, recognized by the Department for Promotion of Industry and Internal Trade (DPIIT), rose from 1,943 in 2017 to 17,405 in 2024, an eight-fold increase.
- Health and Fertility
 - ✓ Total Fertility Rate (TFR): Declined to 2.0 nationally in 2023, reflecting sustainable population growth trends.
 - ✓ Life Expectancy: Female life expectancy increased to 71.3 years, indicating significant improvements in health outcomes for women.

2. Corporate Social Responsibility (CSR) in India: Rise in Funding and Framework

Context: A recent report indicates a 16% increase in Corporate Social Responsibility (CSR) funding in India, reaching ₹17,967 crore in 2023-24 compared to ₹15,524 crore in 2022-23. This rise is attributed to increased corporate profits during the fiscal year.

 HDFC Bank led CSR spending with ₹945.31 crore, followed by Reliance Industries and Tata Consultancy Services (TCS).

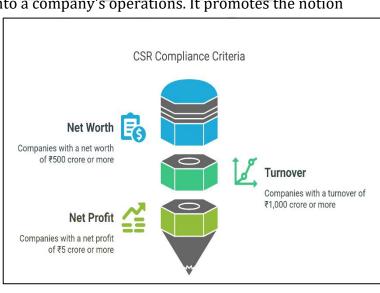
What is CSR?

• Corporate Social Responsibility (CSR) is a business model that integrates social and environmental considerations into a company's operations. It promotes the notion of businesses contributing to

of businesse<mark>s cont</mark>ributing to societal well-being beyond profit-making.

Framework for CSR in India

- India became the first country to mandate CSR activities through Section 135 of the Companies Act, 2013.
- Eligibility for CSR Compliance
 - A company falls under the CSR mandate if it meets any of the following criteria:
 - ✓ Net Worth: ₹500 crore or more.



- ✓ **Turnover:** ₹1,000 crore or more.
- ✓ **Net Profit:** ₹5 crore or more during the preceding financial year.
- Fund Allocation
 - ✓ Companies are required to allocate at least 2% of their average net profits from the preceding three financial years for CSR activities.

- ✓ Common areas of CSR spending include environmental conservation, education, healthcare, protection of national heritage, and promotion of gender equality.
- Registration and Compliance
 - ✓ Companies intending to undertake CSR activities must register with the Registrar of Companies.
 - ✓ In case of non-compliance:
 - Unspent Funds: The unspent amount must be transferred to a designated fund.
 - Penalties: Monetary penalties are imposed if funds are not spent or transferred as mandated.

CSR in Action

• CSR spending trends highlight the increasing role of businesses in contributing to societal development. Key sectors receiving CSR funds include education, healthcare, skill development, rural development, and sustainability initiatives.

3. Digital Child Abuse in the AI Era

Context: The advancement and widespread use of artificial intelligence (AI) have introduced significant challenges in addressing digital child abuse. AI-driven exploitation has become a critical global issue, necessitating immediate attention through regulatory, technological, and societal measures to ensure child safety. **What is Digital Child Abuse**?

- Digital child abuse refers to harm inflicted on children through online platforms, encompassing various forms of exploitation and abuse. Key manifestations include:
 - Cyberbullying: Online harassment, intimidation, and abuse via social media, messaging applications, or gaming platforms.
 - Exposure to Inappropriate Content: Access to harmful material, including explicit pornography and graphic violence.
 - ✓ Online Grooming: Manipulative tactics used by predators to exploit minors for personal gain.
 - Child Sexual Abuse Material (CSAM): The creation, sharing, or possession of explicit materials involving minors.
 - Identity Theft and Privacy Infringements: Misuse of children's data for fraudulent purposes or malicious activities.
 - ✓ Data Exploitation and Breaches: AI-driven algorithms analyze children's behavioral data from apps and platforms, potentially enabling manipulation, harassment, and identity theft.

Global Concerns About AI-Fueled Exploitation

- Several international reports have underscored the growing risks posed by AI in exacerbating digital child abuse:
 - ✓ AI Safety Report 2025: Highlights the potential of AI tools to create, distribute, and possess CSAM.
 - ✓ Internet Watch Foundation (2024): Identified the increasing prevalence of CSAM on accessible online platforms.
 - ✓ World Economic Forum (2023): Warned about the misuse of generative AI in producing realistic images of children, raising exploitation risks.

Current Scenario of Digital Child Abuse in India

Rising Incidents

- ✓ The National Crime Records Bureau (NCRB) Report 2022 revealed a sharp rise in cybercrimes targeting children.
- ✓ Under the Cyber Crime Prevention against Women and Children (CCPWC) scheme, the National Cyber Crime Reporting Portal (NCRP) reported 1.94 lakh incidents related to child pornography by April 2024.

Collaboration Against CSAM

- ✓ In 2019, the NCRB partnered with the National Centre for Missing and Exploited Children (NCMEC) in the United States to receive reports on CSAM.
- ✓ By March 2024, authorities had processed 69.05 lakh tip-line reports, facilitating action by states and union territories.

4. Registrar General of India (RGI)

Context: The Registrar General of India (RGI) has recently issued a warning to both public and private hospitals across the country for not meeting the legal requirements concerning the timely submission of birth and death data. This highlights the need for efficient and compliant data collection practices to aid in proper governance and planning.

About th<mark>e Regist</mark>rar General of India (RGI)

- **Formation:** The RGI was established in 1949 under the Ministry of Home Affairs, tasked with overseeing the organized collection of population-related data in India.
- **Leadership:** The office is led by the Registrar General, who also serves as the Ex-Officio Census Commissioner, typically holding the rank of Joint Secretary.
- **Legal Framework:** The RGI administers the Registration of Births and Deaths Act, 1969, ensuring that birth and death registrations are mandatory and accurate.

Primary Functions of the RGI

• Census of India

- ✓ The RGI is responsible for conducting the decennial Census of India, which collects comprehensive data on the country's demographic, socio-economic, and geographical characteristics.
- ✓ Historical Overview:
 - The first complete Census was conducted in 1881.
 - From 1951, the RGI took charge of conducting the Census after independence.
 - The most recent Census was conducted in 2011, marking the 15th edition.

• Linguistic Survey of India (LSI)

- ✓ This survey, conducted alongside the Census, tracks the linguistic diversity across India.
- The first Linguistic Survey, led by George Abraham Grierson, was completed in 1928.
- ✓ It plays a crucial role in educational and social policy planning at the state level.

• Civil Registration System (CRS)

✓ The CRS is a continuous system that mandates the registration of births and deaths.

- ✓ Hospitals, especially government-run ones, serve as key authorities for registration.
- Other Responsibilities
 - ✓ The RGI also conducts various demographic surveys and contributes to the development of policies related to population control and distribution.

Recent Concerns from the RGI

- ✓ The RGI has raised concerns over the delay in birth and death reporting by hospitals, which is required under the CRS.
- ✓ Timely reporting is vital for ensuring accurate population data, which is essential for policy-making, resource allocation, and planning.



ENVIRONMENT

1. Naini Lake:

Context: Naini Lake in Uttarakhand has recorded a water level of 4.7 feet, the lowest in five years. The lake has hit its zero level over 10 times since 2000, a stark contrast to just twice during the 20th century.

About

- **Type:** Natural freshwater lake, crescent-shaped and tectonic in origin, formed due to repeated landslides.
- Location: Lies in the Kumaon region of Uttarakhand.
- **Significance:** Third largest lake in Uttarakhand by surface area.

2. Draft Greenhouse Gases Emissions Intensity (GEI) Target Rules, 2025

Context: The Ministry of Environment, Forest and Climate Change has introduced the Draft Greenhouse Gases Emissions Intensity (GEI) Target Rules, 2025, as a step toward implementing India's Carbon Credit Trading Scheme (CCTS) and fulfilling global climate obligations.

Overview of the GEI Target Rules, 2025

- The Draft GEI Target Rules establish obligatory emissions intensity reduction benchmarks for high-energy industries, supporting India's agenda for sustainable and low-carbon industrial development.
- Issued By: Ministry of Environment, Forest and Climate Change, Government of India.

Objectives

- Lower greenhouse gas emissions intensity in vital industrial sectors.
- Facilitate the implementation of the Carbon Credit Trading Scheme (CCTS), 2023.
- Fulfill India's Paris Agreement goal of a 45% reduction in GDP emissions intensity by 2030 compared to 2005 levels.

Salient Features

- Baseline Year:
 - ✓ Emissions intensity targets are determined using 2023–24 data.

• Implementation Timeline:

 ✓ The reduction targets are applicable for the financial years 2025–26 and 2026– 27.

• Sectoral Focus:

- ✓ Key energy-intensive industries covered include:
 - Aluminium
 - Cement
 - Chlor-Alkali

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- Pulp & Paper
- Industrial Coverage:
 - ✓ A total of 282 units:
 - 13 Aluminium Plants
 - 186 Cement Plants
 - 53 Pulp & Paper Units
 - 30 Chlor-Alkali Units
- Mechanisms for Compliance:
 - ✓ **Carbon Credits**: Rewards for exceeding emission reduction targets.
 - ✓ Penalties: Enforced for non-compliance under the oversight of the Central Pollution Control Board (CPCB).
- Carbon Trading Platform:
 - ✓ Carbon credits will be traded on the Indian Carbon Market, managed by the Bureau of Energy Efficiency (BEE).

3. Baku to Belém Roadmap

Context: India has called on BRICS nations to rally behind the "Baku to Belém Roadmap," a strategic framework aimed at mobilizing USD 1.3 trillion annually by 2035 to support Nationally Determined Contributions (NDCs) under the Paris Agreement. **About the Baku to Belém Roadmap**

• The Baku to Belém Roadmap was conceived during the UNFCCC COP29 in Baku, Azerbaijan, and will continue to be a focus at COP30 in Belém, Brazil. It represents a collective commitment to scaling up climate finance to developing countries to facilitate sustainable development and meet global climate targets.

Key Objectives

- Scaling Up Climate Finance:
 - ✓ Mobilize USD 1.3 trillion annually by 2035 to support low greenhouse gas (GHG) emissions and climate-resilient development pathways.
- Supporting NDC Implementation:
 - ✓ Assist developing nations in achieving their NDC targets through enhanced financial resources.
- Ambition Framework:
 - ✓ Establish a global financial framework to ensure ambitious and predictable climate finance commitments.
- Capacity Building:
 - ✓ Strengthen technical and institutional capacities in developing countries to utilize climate finance effectively.

4. NEERI to Study Industrial Impact on Taj Mahal

Context: The Supreme Court of India has directed the National Environmental Engineering Research Institute (NEERI) to conduct a detailed study on the impact of glass industries on the Taj Mahal, a UNESCO World Heritage Site located in Agra, Uttar Pradesh. The study is part of ongoing efforts to safeguard the monument from environmental degradation.

About NEERI

• The National Environmental Engineering Research Institute (NEERI) is a leading institution in environmental science and engineering, with a focus on addressing challenges related to pollution and sustainable development.

Key Facts about NEERI

- Establishment
 - ✓ Founded in 1958 in Nagpur, Maharashtra.
 - ✓ Originally known as the Central Public Health Engineering Research Institute (CPHERI).
- Renaming
 - Renamed as NEERI in 1974 under the guidance of then-Prime Minister Indira Gandhi.
- Affiliation
 - ✓ Operates under the Council of Scientific and Industrial Research (CSIR), which falls under the Ministry of Science and Technology.
- Mission
 - Provide innovative and effective solutions for environmentally sustainable development.
 - ✓ Assist the government, industry, and society with a special focus on the underprivileged.
- Expertise
 - ✓ NEERI is recognized for its expertise in air and water quality management, waste treatment, and environmental monitoring and assessment.

5. AIM4NatuRe Initiative: Enhancing Ecosystem Restoration Monitoring

Context: The Food and Agriculture Organization (FAO) of the United Nations, with support from the United Kingdom, has launched the AIM4NatuRe initiative to enhance global monitoring of ecosystem restoration efforts. The initiative aligns with the objectives of the Kunming-Montreal Global Biodiversity Framework, specifically Target 2, which aims to restore at least 30% of degraded ecosystems by 2030. **What is AIM4NatuRe?**

- The AIM4NatuRe (Accelerating Innovative Monitoring for Nature Restoration) initiative is a global effort to improve the monitoring and reporting of ecosystem restoration projects worldwide.
- Key Details
 - ✓ Launched By: Food and Agriculture Organization (FAO) of the United Nations.
 - ✓ **Funding Partner:** United Kingdom, contributing GBP 7 million.

Objectives of AIM4NatuRe

- ✓ Strengthen Monitoring Capacity: Enhance the ability of countries to monitor and report progress in ecosystem restoration.
- ✓ Support Kunming-Montreal Framework: Assist in achieving Target 2, which seeks to restore 30% of degraded ecosystems by 2030.

Features of AIM4NatuRe

- Technology-Driven Monitoring
 - ✓ Utilizes advanced satellite technologies and data analysis tools for accurate restoration tracking.
- Global Dataset Creation
 - Develops a harmonized global dataset to document restoration progress comprehensively.
- Capacity Development
 - Provides training to nations on adopting data-driven methods for monitoring and reporting.
- Data Interoperability
 - Establishes standardized data formats to ensure seamless integration across countries and regions.
- Inclusivity Focus
 - ✓ Actively involves Indigenous Peoples in monitoring efforts through pilot projects in Brazil and Peru.
- Expansion Beyond Forests
 - ✓ Builds on the success of FAO's AIM4Forests programme, extending monitoring to all ecosystems, including wetlands, grasslands, and marine areas.

6. Surat Emission Trading Scheme (ETS)

Context: A recent study has revealed that the Surat Emission Trading Scheme (ETS), launched in 2019, has successfully reduced particulate matter (PM) emissions. The scheme has also achieved a 10% reduction in pollution abatement costs while increasing compliance with environmental laws among participating industries. **About the Surat ETS**

• Overview

- ✓ The Surat ETS is the world's first market-based trading scheme for particulate matter emissions.
- ✓ It is also India's first pollution trading scheme, setting a global precedent for controlling air pollution.
- ✓ The concept of Emission Trading Schemes (ETS) originated in the United States to address sulfur dioxide (SO₂) pollution and has since been adapted for other pollutants, including greenhouse gases in Europe and carbon emissions in China.

Objective

- To curb air pollution in Surat's industrial area.
- To implement the polluter pays principle, where industries are held accountable for their emissions.

How Surat ETS Works

- Market-Linked 'Cap and Trade' Mechanism
 - ✓ A cap is set on total allowable particulate matter emissions from participating industries.
 - ✓ Industries are allocated permits for emissions within the cap.
 - ✓ Surplus permits can be traded among industries via a designated platform.
- Monitoring
 - ✓ The scheme uses Continuous Emissions Monitoring Systems (CEMS) devices to track real-time emissions from industrial units.

• Trading Platform

- Permits are traded on a platform developed by NeML (National Commodities and Derivatives Exchange e-Markets).
- ✓ Industries exceeding their emission limits can buy additional permits from those that underuse their allowance.

• Environmental Damage Compensation

- ✓ Participating units must submit an Environmental Damage Compensation amount.
- ✓ The rate of compensation varies based on the size and emission levels of the industry.

Key Achievements of Surat ETS

- Reduction in Emissions
 - ✓ Successfully controlled particulate matter emissions, demonstrating its effectiveness in improving air quality.
- Cost-Effectiveness
 - ✓ Pollution abatement costs dropped by over 10%, benefiting industries economically while achieving environmental compliance.
- Enhanced Compliance

- ✓ Increased adherence to environmental regulations among participating industries.
- Scalability Potential
 - ✓ Provides a replicable model for other regions in India and globally to address industrial pollution.

7. Cheetahs Relocated to Gandhi Sagar Sanctuary Under Project Cheetah

Context: Cheetahs originally brought to Kuno National Park from South Africa in February 2023 under Project Cheetah have now been relocated to the Gandhi Sagar Sanctuary in Madhya Pradesh's Mandsaur district. This marks another step in India's ambitious plan to reintroduce the species after their extinction in the country.

- **About Project Cheetah**
- Overview
 - ✓ Launch Year: 2022.
 - ✓ **Objective:** Reintroduce cheetahs in India and restore their historical range.
 - ✓ Implementing Agency: National Tiger Conservation Authority (NTCA).
 - ✓ **Technical Assistance:** Provided by the Wildlife Institute of India (WII).
- Key Features
 - ✓ Cheetah Project
 Steering
 Committee
 - Established in 2023 by NTCA to oversee and evaluate the project.
 - ✓ Prime Objectives
 - Establish breeding populations of

Gandhi Sagar Sanctuary Ind Home for Cheetans in India

- cheetahs in secure habitats.
- Utilize cheetahs as flagship and umbrella species to restore open forest and savanna ecosystems.
- Promote eco-development and ecotourism to support local community livelihoods.

About Cheetahs

- World's Fastest Mammal
 - ✓ Cheetahs are renowned for their speed, capable of reaching up to 120 km/h in short bursts.

✓ They are unique among big cats for their inability to roar.

• Conservation Status

- ✓ Protected under Appendix I of CITES.
- ✓ Two recognized species:
 - African Cheetah: Listed as Vulnerable by the IUCN.
 - Asiatic Cheetah: Listed as Critically Endangered by the IUCN and found only in Iran.

Historical Significance in India

- Cheetahs became extinct in India in 1952 due to hunting, habitat loss, and decline in prey populations.
- The ongoing reintroduction under Project Cheetah marks a historic wildlife conservation initiative.

Geographical Range

- Asia
 - ✓ Found only in eastern Iran and now in India following reintroduction efforts.
- Africa
 - ✓ Found in grasslands, scrublands, and open forests, primarily in Botswana, Namibia, and South Africa.

Relocation <mark>to Gand</mark>hi Sagar Sanctuary

- The decision to move cheetahs from Kuno National Park to Gandhi Sagar Sanctuary is part of efforts to expand their habitat and improve conservation success.
 - ✓ Gandhi Sagar Sanctuary
 - Located in the Mandsaur district of Madhya Pradesh.
 - Offers a suitable habitat for cheetahs with its mix of grasslands and open forests.

8. Vulture Conservation Efforts in India

Context: On April 22, 2025, coinciding with Earth Day, India marked a significant milestone in vulture conservation by relocating 34 critically endangered vultures from the Jatayu Conservation Breeding Centre (JCBC) in Pinjore, Haryana, to three tiger reserves in Maharashtra. This initiative is a part of India's broader efforts to protect vulture populations and restore their presence in the wild.

Key Highlights

- Species Involved
 - ✓ Long-billed Vultures (Gyps indicus)
 - ✓ White-rumped Vultures (Gyps bengalensis)
 - Both species are classified as Critically Endangered on the IUCN Red List, underlining their precarious status and the urgency of conservation efforts.
- Destination Sites

- ✓ The vultures were released into the wild across three tiger reserves in Maharashtra:
 - Melghat Tiger Reserve
 - Pench Tiger Reserve
 - Tadoba-Andhari Tiger Reserve

Conservation Efforts

- The initiative was spearheaded by the Bombay Natural History Society (BNHS), ensuring the safe transfer and well-being of the birds.
- The vultures, aged between two to six years, were subjected to rigorous health assessments before their release to enhance survival and successful breeding in the wild.
- The allocation of vultures across multiple reserves is aimed at maintaining ecological balance and promoting population recovery.

DEFENSE & INTERNAL SECURITY

1. Digital Threat Report

Context: The Computer Emergency Response Team (CERT-In), in collaboration with SISA, launched the Digital Threat Report 2024 to bolster cybersecurity in the Banking, Financial Services, and Insurance (BFSI) sector. This initiative addresses the growing sophistication of cyberattacks and provides actionable insights to strengthen the resilience of BFSI institutions against evolving threats.

Key Features of the Report

• Holistic Cybersecurity Insights

- ✓ The report provides a comprehensive analysis of:
 - Current and emerging cyber threats.
 - Sectoral vulnerabilities and adversarial tactics.
 - Strategies for proactive threat detection and response.

• Collaborative Initiative

✓ The partnership between CERT-In and SISA reflects a commitment to leveraging forensic intelligence and advanced technology to mitigate risks in the BFSI sector.

Major Highlights

- Sophistication of Cyberattacks
 - ✓ Cyberattacks have grown more advanced, utilizing persistent and innovative techniques that challenge traditional defense mechanisms.
- Rise in Social Engineering
 - ✓ Business Email Compromise (BEC) and sophisticated phishing campaigns have surged.

✓ Many attacks are fueled by stolen data available on the dark web.

• Bypassing Traditional Defenses

- ✓ Attackers are successfully neutralizing multifactor authentication (MFA) by exploiting stolen credentials and session cookies.
- \checkmark This highlights the need for more robust and dynamic authentication methods.

• Supply Chain Breaches

- ✓ Trust in third-party vendors and open-source repositories has exposed organizations to vulnerabilities at scale.
- $\checkmark~$ Breaches in supply chains can have cascading effects across the BFSI sector.

• AI-Driven Threats

- ✓ Artificial intelligence is a double-edged sword in cybersecurity. While it enables innovative defenses, it also empowers attackers with tools for:
 - Highly personalized attacks.
 - Large-scale evasion tactics.
 - Enhanced sophistication in exploiting vulnerabilities.

About SISA

- SISA is a global leader in forensics-driven cybersecurity solutions, catering to the digital payments industry.
- Trusted by over 2,000 organizations across 40+ countries, SISA combines forensic intelligence with cutting-edge technology to secure businesses.

2. Trends in World Military Expenditure, 2024

Context: The Stockholm International Peace Research Institute (SIPRI) has published its latest findings on global military spending for 2024, highlighting significant trends and regional variations in defense expenditure worldwide.

Key Highlights:

• Global Military Spending:

- ✓ Total global military expenditure reached \$2718 billion in 2024, marking a 9.4% increase compared to the previous year.
- ✓ This surge represents the steepest rise in military spending since the Cold War era.
- ✓ Military spending accounted for 2.5% of the global gross domestic product (GDP) in 2024.

• Major Contributors:

- ✓ The top five military spenders were the United States, China, Russia, Germany, and India, collectively contributing 60% of the total global defense budget.
- ✓ These countries' investments reflect ongoing geopolitical tensions and priorities in defense modernization.
- Regional Trends:

- ✓ Europe: Military spending increased by 17%, largely driven by the conflict in Ukraine.
 - Germany reported a 28% rise, while Poland's defense expenditure grew by 31%.
- ✓ Middle East: Defense budgets in the region grew by 15%, with Israel seeing a 65% increase and Lebanon recording a 58% rise.
- India's Defense Spending:
 - ✓ India allocated \$86.1 billion to defense in 2024, representing 2.3% of its GDP.
 - ✓ This reinforces India's position among the top global military spenders, reflecting its focus on strengthening national security and defense capabilities.

3. India's Military Space Doctrine

Context: India is actively formulating its first-ever "military space doctrine," which is expected to be unveiled within the next two to three months. The announcement, made by Chief of Defence Staff General Anil Chauhan on April 7, 2025, underscores the nation's growing emphasis on space as a critical domain for modern warfare.

Key Developments in India's Space Sector:

- Focus on Military Space Doctrine:
 - ✓ The Defence Space Agency (DSA) is leading the charge in drafting India's military space doctrine.
 - Aimed at defining the strategic role of space in national security, this doctrine is a step toward establishing a comprehensive national military space policy.

• Reforms in the Space Sector:

- ✓ India has initiated wide-ranging reforms in its space sector to bolster defense preparedness.
- ✓ These efforts include fostering collaboration between government and private stakeholders to enhance technological capabilities in space.
- Emergence of Space as a Warfare Domain:
 - ✓ Space is being recognized globally as a new domain of warfare.
 - ✓ General Chauhan emphasized the need for a "space culture," encompassing the development of doctrines, conducting specialized research, and creating dedicated warfare schools to address emerging challenges.

• Satellite Infrastructure for Defence:

- ✓ Satellite Constellation for Defence:
 - A 52-satellite constellation has been approved by the government for defense applications.
 - Of these, 31 satellites will be constructed by private entities in collaboration with the Indian Space Research Organisation (ISRO).

- These satellites are designed to strengthen India's intelligence, surveillance, and reconnaissance (ISR) capabilities.
- ✓ Integrated Satellite Communication Grid:
 - The Defence Space Agency is working on an integrated satellite communication grid.
 - This initiative seeks to overcome current limitations and enhance preparedness for future space operations.
 - The grid aims to detect and address potential threats to national security posed by state and non-state actors, extending beyond conventional spacebased systems.

4. Operation Chakra-V

Context: The Central Bureau of Investigation (CBI) has launched Operation Chakra-V, a strategic initiative to counter transnational organized cyber-enabled financial crimes in India. This operation highlights the agency's growing focus on addressing sophisticated digital threats affecting citizens and financial systems.

About Operation Chakra-V:

- Objective:
 - Operation Chakra-V aims to combat transnational organized cybercrimes, particularly those targeting financial systems in India.
- Launch by:
 - ✓ The initiative is spearheaded by the Central Bureau of Investigation (CBI).
- Focus Areas:
 - ✓ The operation adopts a multi-pronged strategy, which includes:
 - Identifying and dismantling the infrastructure enabling cybercrimes.
 - Targeting the networks behind digital fraud and other cyber-enabled offenses.

5. AIKEYME Maritime Exercise

Context: The first edition of the Africa-India Key Maritime Engagement (AIKEYME) commenced on April 13, 2025, in Dar-es-Salaam, Tanzania, strengthening maritime ties between India and African nations.

About AIKEYME:

- Objective:
 - ✓ To promote maritime cooperation and collective security among participating nations.
 - ✓ To enhance mutual trust, capacity-building, and collaboration in the maritime domain.
- Inspiration:

- ✓ The exercise aligns with Prime Minister Narendra Modi's vision of MAHASAGAR (Mutual and Holistic Advancement for Security and Growth Across Regions), emphasizing inclusive growth and regional security.
- Participating Nations:
 - ✓ Hosts: India and Tanzania.
 - ✓ Participants: Comoros, Djibouti, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, and South Africa.

SCIENCE & TECHNOLOGY

1. SpaceX Fram2 Mission

Context: SpaceX launched the Fram2 mission, sending the first private astronaut crew on a historic journey around Earth in a polar orbit.

Historical Linkages

- The mission is named after the Norwegian ship Fram, which was pivotal in early 20th-century polar explorations.
- Fram played a crucial role in expeditions to the Arctic and Antarctic, symbolizing human resilience and exploration.
- The Fram<mark>2 mission honors this legacy by pioneering new frontiers in space travel.</mark>

About Fram2 Mission

- Launch Vehicle: Falcon 9 rocket, launched from NASA's Kennedy Space Center, Florida.
- **Capsule:** Crew Dragon "Resilience" entered a polar orbit.
- **Mission Duration:** 3 to 5 days.
- Scientific Goals:
 - ✓ Conduct the first x-ray in space to study the effects of microgravity on bone and muscle density.
 - ✓ Explore sustainable food production by cultivating mushrooms in space.
 - ✓ Study the impact of weightlessness and motion sickness on astronauts.

Post-Mission Objectives

• The crew will exit the Dragon spacecraft unassisted, contributing to research on astronauts' post-flight operational capabilities without external support.

Polar Orbits

- **Definition:** A satellite travels over or near Earth's poles, covering nearly all latitudes.
- Altitude: Typically between 200 and 1,000 km above Earth's surface, classified under Low Earth Orbit (LEO).
- Significance:
 - ✓ Enables full planetary coverage as Earth rotates beneath the satellite.

- ✓ Useful for earth mapping, environmental monitoring, remote sensing, and reconnaissance.
- **Challenges:** Requires more fuel than equatorial launches, as it cannot leverage Earth's rotational velocity

2. Axiom-4 Mission (Ax-4)

Context: Indian astronaut Group Captain Shubhanshu Shukla has been selected to pilot the Axiom-4 (Ax-4) mission to the International Space Station (ISS), showcasing India's growing role in space exploration.

About Axiom Missions

- Axiom Mission 1: The first all-private mission to the ISS.
- Axiom Mission 2: Featured the first Saudi female astronaut.
- Axiom Mission 3: Included the first Turkish astronaut and the first ESA astronaut on a commercial mission.
- Axiom Mission 4 (Ax-4): Scheduled for 2024, it involves collaboration between India (ISRO), Poland (with ESA support), and Hungary.

Details of Ax-4 Mission

- Crew Composition:
 - ✓ Shubhanshu Shukla (India, pilot).
 - ✓ Peggy Whitson (former NASA astronaut, mission commander).
 - ✓ Sławosz Uznański-Wiśniewski (Poland).
 - ✓ Tibor Kapu (Hungary).
- Mission Objectives:
 - ✓ **Duration:** 14 days aboard the ISS.
 - ✓ Scientific Experiments: Approximately 60 experiments focusing on microgravity studies.

ISRO's Contribution

- Research Areas:
 - ✓ Effects of microgravity on human health, including skeletal muscle dysfunction and cognitive impacts.
 - ✓ Plant growth and seed germination in space, crucial for future deep-space missions and sustainable food production.
- **Collaboration:** ISRO, in partnership with NASA and the European Space Agency (ESA), plays a pivotal role in advancing microgravity research.

3. ESA's Biomass Mission

Context: The European Space Agency (ESA) is set to launch its Biomass mission in April 2025, aiming to enhance global understanding of forest biomass and carbon storage. **About Biomass Mission**

• Launching Agency:

✓ The Biomass mission will be launched by ESA aboard the Vega C rocket from Europe's spaceport in French Guiana.

• Objective:

- ✓ Part of ESA's Earth Explorer Programme, the mission is designed to provide accurate mapping and monitoring of global forest biomass, contributing to climate change research and forest conservation.
- Orbit:
 - ✓ The satellite will operate in a sun-synchronous orbit (SSO) at an altitude of 666 km, ensuring consistent data collection.

• Key Instrument:

- ✓ The mission features the P-band Synthetic Aperture Radar (SAR), capable of:
 - Interferometric and tomographic imaging.
 - Measuring forest biomass and carbon storage.
 - Penetrating through clouds, offering uninterrupted data collection.

Significance of the Biomass Mission

- Accurate Data:
 - ✓ First satellite mission to deploy P-band SAR, enabling detailed global forest monitoring.
 - ✓ Enhances understanding of the role forests play in the global carbon cycle.
- Climate Change Mitigation:
 - Assists in tracking deforestation and estimating carbon emissions, crucial for combating climate change.
- Biodiversity Conservation:
 - \checkmark Provides insights into the health and extent of forest ecosystems.

About ESA's Earth Explorer Programme

- Overview:
 - ✓ A research-oriented satellite initiative to study earth's dynamic systems and processes.
- Key Missions:
 - ✓ GOCE (2009-2013): Studied earth's gravity field and ocean circulation.
 - ✓ **EarthCARE (2024):** Focused on understanding cloud and aerosol interactions.
 - ✓ Biomass (2025): Dedicated to forest biomass mapping and monitoring.

4. Real-Time LAMP (rt-LAMP)

Context: Researchers have tested real-time LAMP (Loop-Mediated Isothermal Amplification) for the early and accurate detection of tuberculosis (TB), marking a significant advancement in disease diagnosis.

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What is rt-LAMP?

- Definition:
 - ✓ Real-time LAMP (rt-LAMP) is an open-platform diagnostic method designed for quick and efficient TB detection.
- Technology:
 - ✓ The method repurposes existing RT-PCR (Reverse Transcription Polymerase Chain Reaction) machines, making it cost-effective and adaptable.
- Key Features:
 - ✓ Primer Use: Utilizes six primers for amplification, compared to two primers in conventional RT-PCR, ensuring higher specificity and sensitivity.
 - ✓ **Rapid Results:** Provides positive results within 10–20 minutes, significantly faster than RT-PCR.

Advantages of rt-LAMP in TB Diagnosis

- Speed and Efficiency:
 - ✓ Enables faster detection, aiding in early treatment and containment of TB.
- Open-Platform Design:
 - Reduces dependency on specialized equipment, making it more accessible in resource-limited settings.
- Cost-Effectiveness:
 - Repurposing RT-PCR machines reduces costs associated with diagnostic infrastructure.
- Enhanced Sensitivity:
 - ✓ Use of six primers ensures greater accuracy in detecting the TB pathogen.

5. Vehicle-to-Grid (V2G) Technology

Context: The Kerala State Electricity Board (KSEB), in collaboration with IIT Bombay, has launched a pilot project to explore Vehicle-to-Grid (V2G) technology. This initiative aims to integrate Electric Vehicles (EVs) into the State's power grid to enhance the use of renewable energy and support grid stability.

What is Vehicle-to-Grid (V2G) Technology?

- Definition:
 - ✓ V2G is a system where EVs interact with the power grid to facilitate two-way electricity flow. EVs can either charge from the grid or discharge stored energy back to it.
- Development:
 - ✓ The concept was introduced in the late 1990s by Dr. Willett Kempton and his team at the University of Delaware.

How V2G Technology Works

• Grid to Vehicle (G2V):

- ✓ EVs charge from the grid during off-peak hours or periods of high renewable energy production.
- Vehicle to Grid (V2G):
 - ✓ During peak demand, parked and connected EVs supply stored electricity back to the grid using bi-directional chargers.
- Smart Charging:
 - ✓ The system employs Time-of-Use (ToU) pricing to optimize charging during times of surplus renewable energy and discharging during grid shortages.

Significance of V2G Technology

- Grid Stability:
 - ✓ V2G acts as a distributed energy storage system, helping stabilize the grid during fluctuations in renewable energy output.
- Enhanced Renewable Energy Use:
 - ✓ Surplus energy from solar or wind can be stored in EV batteries and utilized during periods of low renewable energy availability.
- Energy Resilience:
 - ✓ EVs can function as emergency power sources during grid outages or disasters.
- Economic Benefits:
 - EV owners can earn revenue by supplying excess electricity back to the grid, as demonstrated in various global models.
- Decarbonization:
 - ✓ By reducing dependence on fossil fuels, V2G aligns with India's target of achieving net-zero carbon emissions by 2070.

6. Type 5 Diabetes Recognized as a Distinct Form of Disease

Context: The International Diabetes Federation (IDF) has recognized Type 5 diabetes, predominantly affecting undernourished young adults in low- and middle-income countries, as a distinct form of diabetes. This acknowledgment addresses long-standing challenges of misdiagnosis and neglect in global diabetes research and healthcare.

About Type 5 Diabetes

- Unique Characteristics:
 - ✓ Primarily affects lean and malnourished teenagers and young adults.
 - ✓ Linked to abnormal functioning of pancreatic beta cells, leading to insufficient insulin production.
 - ✓ Distinct from Type 2 diabetes, as it does not involve insulin resistance.
- Historical Context:
 - ✓ First identified in Jamaica in 1955, termed J-type diabetes.
 - ✓ Classified as malnutrition-related diabetes mellitus by the WHO in 1985, but declassified in 1999 due to inadequate evidence.

✓ Affects approximately 25 million people globally, with a high prevalence in countries such as India, Sri Lanka, and Uganda.

Causes and Risk Factors

- Nutritional Deficiencies:
 - ✓ Rooted in malnutrition during fetal development, often exacerbated by postnatal nutritional deficiencies.
 - ✓ Associated with low intake of proteins, fiber, and micronutrients.

• Biological Markers:

- ✓ Lower body-mass index (BMI) (<18.5 kg/m²).
- ✓ Reduced insulin secretion and body fat percentage compared to individuals with Type 2 diabetes.
- ✓ No clear autoimmune or genetic causes identified.

Significance of Recognition

• Public Health Importance:

- Highlights a form of diabetes affecting vulnerable populations in low-resource settings.
- ✓ Ensures targeted research and funding to address unique challenges faced by affected individuals.

• Policy and Healthcare Implications:

- ✓ Promotes the development of specific diagnostic and therapeutic guidelines.
- Encourages healthcare systems to adopt nutrition-focused interventions and tailored diabetes management strategies.

Treatment Considerations

• Nutritional Interventions:

✓ A high-protein diet is crucial, supplemented with carbohydrates and fats to support weight gain and improve overall health.

• Medical Management:

✓ Anti-diabetic medication or insulin therapy may be required, depending on glucose levels and individual response to treatment.

7. Kavach 5.0: Advancing Train Safety in Indian Railways

Context: The Union Minister for Railways has announced the implementation of Kavach 5.0, aimed at enhancing train safety and building upon the success of Kavach 4.0, which is currently being deployed across Indian Railways.

About Kavach System

- Indigenous Automatic Train Protection (ATP) System:
 - ✓ Developed in India to prevent train collisions by automatically activating the braking system if the loco pilot fails to act in time.
- Key Technologies:

- ✓ Radio Frequency Identification (RFID) Tags:
- ✓ Placed along the track length to enable accurate tracking of train positions.
- Optical Fibre Cable:
 - ✓ Laid along railway tracks to ensure fast and reliable data transmission.

Significance for Indian Railways

- Global Fourth-Largest Network:
 - ✓ Indian Railways operates over 65,000 km of track, making it the fourth-largest railway network globally.
 - ✓ By 2050, India is projected to account for 40% of global rail activity, emphasizing the critical need for safety and efficiency.
- Sustainable Transportation:
 - ✓ With its vast network, Indian Railways plays a pivotal role in promoting sustainable mobility, reducing carbon emissions, and supporting economic growth.

Global Best Practices in Rail Safety

- United Kingdom:
 - Train Protection and Warning System (TPWS): Ensures signal compliance to prevent accidents.
 - European Train Control System (ETCS): Enables real-time train control and safety monitoring.
 - Rail Accident Investigation Branch (RAIB): Conducts independent investigations to improve safety standards.
- Japan:
 - ✓ Automatic Train Control (ATC): Maintains safe train intervals.
 - ✓ Comprehensive ATC Information System (CATIS): Detects and addresses train faults.
 - ✓ Earthquake Early Warning System (EEWS): Halts trains automatically during seismic activity to prevent derailments.

8. Genome India Project

Context: The Genome India Project (GIP) is a landmark initiative aimed at cataloguing the genetic diversity of India's population. In its first phase, the project successfully mapped the complete genome sequences of 10,000 individuals from 83 population groups, creating a robust database for health, medicine, and evolutionary studies. **Key Objectives and Applications**

- Personalised Medicine:
 - ✓ Facilitates development of customised treatment plans based on an individual's genetic makeup.
- Health Advancements:

- ✓ Enables identification of genetic predispositions to diseases, aiding early diagnosis and prevention.
- Evolutionary Insights:
 - Provides data on migration patterns, ancestry, and population history of Indian groups.

Understanding Genetic Diversity

- Commonality and Uniqueness:
 - ✓ While humans share over 99.9% of their genetic code, the 0.1% variations account for individual traits and health risks.
- Critical Variations:
 - ✓ Around 1-2% of variations significantly influence health and physical traits.
- Population-Specific Drugs:
 - ✓ Genetic data can aid in developing drugs tailored to population-specific genetic profiles.

Evolutionary and Historical Significance

- Tracing Ancestry:
 - ✓ Genome data provides insights into ancestral linkages and parentage.
- Migration Patterns:
 - Analysis of genetic variations uncovers past migrations, social interactions, and adaptations.

Significance of the Genome India Project

- Representation of Indian Diversity:
 - ✓ Unlike the Human Genome Project, which lacked representation of Indian demographics, GIP focuses on India's rich genetic diversity.
- Future Roadmap:
 - ✓ Plans to expand the database, creating a comprehensive genetic repository for Indian populations.

9. Space Tourism

Context: Pop star Katy Perry recently participated in a sub-orbital spaceflight with an all-female crew via Blue Origin, sparking renewed discussions on the costs and environmental implications of space tourism.

What is Space Tourism?

• Space tourism refers to non-governmental travel beyond Earth's atmosphere for leisure, recreation, or business purposes. It is primarily offered by private companies such as Blue Origin, Virgin Galactic, and SpaceX. Unlike traditional space exploration, space tourism is accessible to civilians, albeit at significant financial costs.

Types of Space Tourism:

- Sub-Orbital Tourism:
 - ✓ Features brief flights that cross the Kármán line (100 km above Earth), offering a few minutes of weightlessness.
 - ✓ **Example:** Blue Origin's New Shepard (Katy Perry's flight lasted 11 minutes).

• Orbital Tourism:

- ✓ Involves extended stays in orbit, with tourists often docking at the International Space Station (ISS) or private space stations.
- ✓ **Example:** SpaceX's Crew Dragon missions, offering multi-day trips in orbit.
- Lunar Tourism:
 - ✓ Proposed future missions that involve orbiting or landing on the Moon.
 - ✓ **Example:** SpaceX's DearMoon project, scheduled for 2025.

Significance of Space Tourism:

- **Technological Advancements:** Drives innovation in spacecraft design and reusability.
- **Economic Potential:** Opens new markets in the space industry, creating opportunities for private players.
- **Inspiring Exploration:** Promotes public interest in space science and exploration. **Challenges:**
- **Cost Barrier:** Space tourism remains prohibitively expensive, limiting access to a privileged few.
- Environmental Impact: Concerns over emissions and resource use in a sector striving for sustainability.
- **Safety Risks:** Space travel involves inherent dangers, requiring stringent measures to ensure passenger safety.

CULTURE

1. Sarhul Festival

Context: Adivasis in Jharkhand and Chhotanagpur celebrate Sarhul to mark the new year and spring, reflecting their deep connection with nature.

About Sarhul

- **Meaning**: Worship of the Sal tree (Shorea robusta), symbolizing the union of Sun and Earth.
- **Significance:** Marks the start of agricultural activities and reveres Sarna Maa, the village-protecting deity.
- **Duration:** Three days, with rituals on the second day at Sarna Sthals (sacred groves).

Cultural Significance

• Celebrated by tribes like Oraon, Munda, Santal, and Ho.

- Transitioned from hunting to agriculture-focused rituals.
- Reflects the harmony between humans and nature.

Spread of Sarhul

• The festival, originating in Chhotanagpur, spread to Assam, Andaman and Nicobar Islands, Nepal, and Bangladesh due to tribal migrations.

2. Kodungalloor Bharani Festival

Context: The Kodungalloor Bharani, one of Kerala's most vibrant and intense festivals, is celebrated annually during the Malayalam month of Meenam (March-April). **About**

- **Significance:** The Kodungalloor Bharani is dedicated to Sree Kurumba Bhagavathy, a form of Goddess Bhadrakali, at the Kodungalloor Bhagavathy Temple in Thrissur, Kerala.
- **Legend:** It commemorates the birth of Bhadrakali, believed to have emerged from Lord Shiva's third eye to destroy the demon Darika.
- Celebrations:
 - ✓ The festival features Oracles (known as Komaram or Velichappadu) who participate in the rituals, dressed in red attire.
 - These rituals provide a mystical and spiritual experience, attracting devotees from across the region.

3. Guru Tegh Bahadur

Context: On 18th April 2025, the Prime Minister paid tributes to Guru Tegh Bahadur on his birth anniversary (Prakash Purab), honoring his unparalleled sacrifice and teachings.

- Prakash Purab
 - ✓ In Sikhism, Prakash Purab commemorates the birth anniversaries of Sikh Gurus, symbolizing spiritual enlightenment and knowledge.
- Guru Tegh Bahadur: Life and Contributions
 - ✓ Born on 21st April 1621 in Amritsar to Guru Hargobind (6th Sikh Guru) and Mata Nanki, he was originally named Tyag Mal for his ascetic nature. Trained in scriptures and martial arts, he displayed valor at 13 and later added 116 hymns to the Guru Granth Sahib. He also founded Chak-Nanki, now part of Anandpur Sahib.

• Martyrdom and Legacy

✓ In 1675, Guru Tegh Bahadur was executed in Delhi on Mughal Emperor Aurangzeb's orders for resisting forced conversions, earning him the title "Hind di Chadar" (Protector of Hind). His sacrifice epitomizes the defense of religious freedom and justice.

MISCELLANEOUS

1. Dr. K. Kasturirangan

Context: Dr. K. Kasturirangan, the former Chairman of the Indian Space Research Organisation (ISRO) from 1994 to 2003, passed away in Bengaluru.

• Contributions of Dr. K. Kasturirangan

✓ Leadership in ISRO

- Spearheaded the development of Chandrayaan-1 (2008), India's first lunar mission, marking the nation's entry into deep space exploration.
- Oversaw the operationalization of key satellite series, including the IRS (Indian Remote Sensing), INSAT (Indian National Satellite), and the successful launches of PSLV and GSLV vehicles.
- Served as the Project Director for India's first experimental earth observation satellites, BHASKARA-I and II.

✓ Advances in Remote Sensing and Development

 Played a pivotal role in the National Natural Resource Management System (NNRMS), enabling satellite technology for critical areas like agriculture, water management, forestry, and healthcare.

• Thematic Space Missions

- ✓ Pioneered satellite-based applications through thematic missions such as:
 - EDUSAT for tele-education.
 - INSAT/GSAT for telemedicine and communication.
 - OCEANSAT for oceanographic studies.
 - CARTOSAT for cartography.

• Policy Contributions Beyond Science

- ✓ Served as a Rajya Sabha member and a member of the Planning Commission (now NITI Aayog).
- ✓ Chaired the committee that drafted the National Education Policy (NEP) 2020, emphasizing educational reforms.
- ✓ Led the review of the Western Ghats Ecology report, recommending that 37% of the area be designated as an Ecologically Sensitive Area (ESA).
- Recognition and Awards
 - ✓ Honored with prestigious awards, including the Padma Shri, Padma Bhushan, and Padma Vibhushan, for his contributions to space science and national development.
 - ✓ Internationally recognized for his groundbreaking work in space science and technology.

2. Khelo India Games: Reviving India's Sports Culture

Context: Bihar is set to host the Khelo India Youth Games and Khelo India Para Games in May 2025, marking a significant step in promoting sports across the nation.

About Khelo India

• Launched in 2018, the Khelo India initiative seeks to revitalize India's sports culture by encouraging youth participation and identifying potential Olympic talents.

Key Components of Khelo India

- Sports Competitions and Talent Development
 - ✓ Annual events such as the Khelo India Youth Games, University Games, and Winter Games aim to discover and nurture young athletes.
- Creation and Upgradation of Sports Infrastructure
 - ✓ The initiative develops and modernizes sports facilities nationwide, providing athletes with world-class training environments.
- Khelo India Centres and Sports Academies
 - ✓ Specialized coaching centers and academies are established across the country to train athletes in various sports disciplines.
- Fit India Movement
 - Promotes physical fitness and healthy lifestyles among citizens through nationwide programs and initiatives.
- Promotion of Inclusiveness through Sports
 - ✓ Focuses on gender equality, disability inclusion, and the promotion of indigenous sports, ensuring participation from diverse groups.

3. MacGregor Memorial Medal

Context: Five military personnel were recently honored with the MacGregor Memorial Medal by the Chief of Defence Staff for their remarkable contributions to military reconnaissance, exploration, and adventure for the years 2023 and 2024.

About the MacGregor Memorial Medal

- **Established:** Instituted on 03 July 1888 in memory of Maj. Gen. Sir Charles Metcalfe MacGregor, founder of the United Service Institution of India (USI).
- **Original Purpose:** Initially awarded for military reconnaissance and exploratory expeditions, including British Army missions in Central Asia, Afghanistan, Tibet, and Burma.
- **Post-Independence:** Expanded to recognize achievements in adventure activities alongside reconnaissance and exploration.
- **Eligibility:** Open to all ranks, serving and retired, from the Indian Armed Forces, Territorial Army, and Assam Rifles.

Notable Past Recipients

- Capt. F. E. Younghusband (1890) and Maj. Gen. Orde Charles Wingate (1943) for their military explorations.
- Maj. ZC Bakshi, VrC (1949) for distinguished contributions in military reconnaissance.
- Col. Narinder Kumar (1978–81) for his pioneering exploration of the Siachen Glacier.
- Cdr. Dilip Donde and Lt. Cdr. Abhilash Tomy for their solo global circumnavigations, showcasing exceptional adventure and endurance.

VISHNU × I A S *

Telangana Current Affairs

1. 500-Year-Old Telugu Rock Inscription Discovered in Telangana

Context: A 500-year-old Telugu rock inscription dating back to 1517 CE has been discovered at Narasimhulagutta in Telangana's Rajanna Sircilla district, providing insights into the region's historical and religious heritage.

Details of the Discovery

- **Location:** The inscription was found at Narasimhulagutta, a hilltop site in Anantagiri, Rajanna Sircilla district, Telangana.
- Content:
 - ✓ Written in Telugu, the inscription praises various Hindu deities and records the construction of a Vishnu temple on the hill.
 - ✓ It highlights the prominence of Hinduism and reflects the linguistic and cultural evolution of the region during the 16th century.
 - ✓ Uncovered by: The discovery was made by a team from the Archaeological Survey of India (ASI).

2. Tribal Museum Inaugurated in Bhadrachalam

Context: Governor Jishnu Dev Varma inaugurated a Tribal Museum on the premises of the Integrated Tribal Development Agency (ITDA) in Bhadrachalam, Telangana. The museum aims to preserve tribal heritage and promote sustainable livelihoods.

Significance of the Museum

• Cultural Repository:

- The museum showcases tribal heritage, customs, rituals, and traditional structures, providing a platform to educate future generations.
- ✓ It emphasizes the need for preservation of tribal culture, particularly among vulnerable and marginalized communities.
- Symbol of Tribal Identity:
 - ✓ The Governor's traditional tribal welcome highlighted the rich cultural identity of the tribal population.

• Educational and Cultural Impact:

✓ Plans for modernization were suggested to enhance the museum's impact as a center for learning and cultural exchange.

3. Telangana's T-Fiber Project

Context: The T-Fiber project, a flagship initiative by the Telangana government, aims to provide high-speed broadband connectivity across the state. By targeting households, government institutions, and private enterprises, the project is set to transform Telangana into a digitally empowered society.

Key Features of T-Fiber

• Broadband Connectivity to Gram Panchayats (GPs):

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- ✓ Over 8,891 gram panchayats (GPs) and 424 mandals are connected under T-Fiber.
- ✓ As of now, 7,187 GPs in 336 mandals are service-ready, providing broadband connectivity and digital services.
- Scalability and Targets:
 - ✓ T-Fiber aims to connect 30,000 government institutions by 2025 and expand to 60,000 institutions by 2027.
 - ✓ The project focuses on ensuring that both rural and urban regions benefit equally from advanced digital infrastructure.
- Next-Generation Services (T-NxT):
 - ✓ IT and Industries Minister D. Sridhar Babu launched T-NxT, a suite of digital services, including:
 - Virtual Desktop Infrastructure (VDI)
 - AI Application Development and Consulting
 - Security Operations Center (SoC)
 - Vulnerability Assessment and Penetration Testing (VAPT)
 - These services aim to boost cybersecurity, innovation, and digital transformation for both government and private enterprises.

• Introduction of Sovereign Cloud and AI Chatbot:

- Sovereign Cloud: A state-owned platform for secure data hosting by the Telangana government.
- TeRA AI Chatbot: Designed to improve user engagement and facilitate easy access to services.
- Mobile Tower Fiberisation:
 - ✓ T-Fiber is focused on enhancing mobile broadband services by fiberizing mobile towers, improving network efficiency and internet speed.

4. Key Appointments in Telangana: Strengthening Statutory Institutions

Context: The Telangana government has recently made significant appointments to key statutory institutions—the State Human Rights Commission (SHRC) and the Lok Ayukta—to bolster governance, transparency, and the protection of human rights in the state.

Highlights of Appointments

- Appointment of SHRC Chairperson
 - ✓ Justice Dr. Shameem Akther, retired judge of the High Court, has been appointed as the Chairperson of the Telangana State Human Rights Commission (SHRC).
 - ✓ Tenure: Three years or until the age of 70, whichever is earlier.
 - ✓ Legal Basis: Appointed under Section 22(1) of the Protection of Human Rights Act, 1993.
 - ✓ SHRC Members
 - Sivadi Praveena: Retired Selection Grade District Judge appointed as a Member (Judicial).

B. Kishore: Retired IAS officer appointed as a Member (Non-Judicial).

• Appointment of Lok Ayukta

- ✓ Justice A. Rajasekher Reddy, former High Court judge, appointed as the Lok Ayukta of Telangana.
- ✓ Tenure: Five years.
- ✓ Status: Equivalent to the Chief Justice of a High Court during the tenure.
- Appointment of Upa Lok Ayukta
 - ✓ B.S. Jag Jeevan Kumar, former District and Sessions Judge, appointed as the Upa Lok Ayukta for five years.
 - ✓ Status: Holds the rank of a High Court Judge.

5. Telangana Declares Heatwaves as 'State-Specific Disaster'

Context: In a proactive measure addressing the increasing intensity of climate-induced disasters, the Telangana government has declared heatwaves, sunstrokes, and sunburns as a 'State-Specific Disaster.' This decision comes with enhanced financial relief for victims' families, aiming to mitigate the socio-economic impact of extreme heat events.

Why in News

• Telangana's declaration of heatwaves as a 'State-Specific Disaster' is part of its broader climate change response strategy. Announced on April 15, 2025, the move acknowledges the growing frequency and severity of heatwave events in the state.

Key Features of the Initiative

- Financial Relief and Ex-Gratia Compensation
 - ✓ Enhanced Relief: Compensation for heatwave-related deaths has been increased from ₹50,000 to ₹4 lakh per deceased individual.
 - ✓ Source of Funds: The financial relief will be drawn from the State Disaster Response Fund (SDRF).
 - ✓ Rythu Bima Provision: Farmers registered under the Rythu Bima Scheme can claim the higher of the two compensations—either SDRF relief or Rythu Bima insurance.

• Heatwave Criteria

- ✓ Heatwaves are defined by the Indian Meteorological Department (IMD) as:
 - Temperatures reaching at least 40°C with a deviation of 5-6°C from normal.
 - Extended periods of temperatures above 45°C.
- ✓ Only deaths meeting these criteria are eligible for compensation.

6. Telangana Gig Workers Welfare Act

Context: Telangana is set to implement India's first dedicated welfare law for gig and platform workers. The Gig and Platform Workers Welfare Act will come into force on May 1, 2025, aligning with International Workers' Day, marking a significant step toward social security and labour welfare in the gig economy.

Why in News?

Telangana's new law aims to safeguard the rights and wellbeing of gig workers engaged in sectors like food delivery, ride-hailing, and courier services. This initiative addresses the growing need for regulation in the informal digital economy, where workers often lack job security, formal contracts, and welfare benefits.

Key Features of the Act

- Coverage
 - ✓ Targets nearly 4 lakh gig and platform workers in Telangana.
 - ✓ Includes individuals working with platforms like Zomato, Swiggy, Uber, Ola, and Urban Company.
- Welfare Provisions
 - ✓ Job Security: Ensures workers' rights are protected.
 - ✓ Insurance:
 - Accident insurance of ₹5 lakh in case of death.
 - Introduced via government orders in December 2023, making Telangana the first state to implement such coverage.
 - Social Protections: Addresses the lack of benefits such as pensions, paid leave, and healthcare for gig workers.
- Public Consultation
 - ✓ The draft bill was placed in the public domain for feedback, ensuring inclusivity and participation in policymaking.
 - ✓ Deadline for suggestions: April 25, 2025.
- Implementation Timeline
 - The Act will be officially enforced on May 1, 2025, reflecting Telangana's commitment to worker welfare.

Who Are Gig Workers?

- Gig workers are individuals engaged in temporary, flexible jobs facilitated through digital platforms. They typically work on a task-based model and lack long-term contracts or traditional employment benefits.
- Key Characteristics:
 - ✓ **Flexibility**: Workers choose assignments and hours.
 - ✓ **Digital Mediation:** Work facilitated by apps like Zomato, Uber, Ola, etc.
 - ✓ **Task-based Payment:** Paid per task or service completed.
 - ✓ **Lack of Benefits:** No job security, paid leave, or pensions.

7. Telangana Bhu Bharati Act, 2025

Context: The Telangana Bhu Bharati Act, 2025 is a landmark reform aimed at ensuring transparent, efficient, and accountable land administration in the state. It mandates the preparation, updation, and digital maintenance of Records of Rights (RoR). To operationalize the Act, the state government issued comprehensive rules under GO Ms No. 39, streamlining land record management processes. **Why in News?**

The Telangana government has taken a proactive approach by notifying rules for the effective implementation of the Bhu Bharati Act. This reform seeks to address past shortcomings and establish a robust framework for land governance.

Key Features of the Telangana Bhu Bharati Rules, 2025

- Legal Framework for Land Governance
 - ✓ Defines procedures for preparation, updation, and rectification of Records of Rights (RoR).
 - ✓ Includes detailed processes for handling transactions like sale, gift, mortgage, exchange, partition, will, and succession.
- Regulation of Land Transactions
 - ✓ Provides procedures for regularizing unregistered transactions.
 - ✓ Introduces rules for issuing Pattadar Passbook-cum-Title Deeds, ensuring ownership clarity and security.

• Jurisdiction and Role of Authorities

- ✓ Defines the roles of competent and appellate authorities based on land value.
- ✓ Prescribes timeframes for appeals to prevent delays.
- Empowers the Chief Commissioner of Land Administration (CCLA) to oversee the Bhu Bharati portal and issue implementation guidelines.

Village-Level Land Records Management

- Ensures digital maintenance of village records like:
 - Pahani (land record document)
 - Government Land Register
 - Transfer Register
 - Irrigation Source Register
- ✓ Mandates annual submission of updated records to competent authorities.
- Digital Governance and Bhudhaar Integration
 - ✓ Bhu Bharati portal serves as a single interface for managing land records.
 - ✓ Integrates with Bhudhaar, ensuring uniformity, accessibility, and transparency.
- Legal Redressal and Public Services
 - ✓ Provides mechanisms for individuals affected by RoR entries to seek redressal through competent authorities.
 - ✓ Includes provisions for legal aid to marginalized sections.
 - ✓ Prescribes structured fees for services like registration, mutation, succession, and RoR corrections.

8. Mall Gram Panchayat Wins Atma Nirbhar Panchayat Special Award

Context: Mall Gram Panchayat in Yacharam Mandal, Ranga Reddy District, Telangana, has won the Atma Nirbhar Panchayat Special Award (ANPSA) for its exemplary efforts in revenue generation and self-reliant governance.

Why in News?

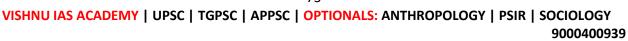
The Atma Nirbhar Panchayat Special Award (ANPSA) recognizes Panchayats for best practices in promoting financial self-reliance and effective local governance. Mall Gram

Panchayat received the first prize under this initiative, earning ₹1 crore as financial assistance.

About the Atma Nirbhar Panchayat Special Award (ANPSA)

- **Objective:** To incentivize Panchayati Raj Institutions (PRIs) for innovative practices in governance and self-reliance.
- Awards Structure:
 - ✓ ₹1 crore for 1st position
 - ✓ ₹75 lakh for 2nd position
 - ✓ ₹50 lakh for 3rd position
- **Annual Presentation:** Awards are distributed on National Panchayati Raj Day (NPRD), celebrated on April 24 every year.
- Other Winners:
 - ✓ **Second Place:** Hatbadra Gram Panchayat, Mayurbhanj District, Odisha.
 - ✓ **Third Place:** Gollapudi Gram Panchayat, Krishna District, Andhra Pradesh.

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ANDHRA PRADESH CURRENT AFFAIRS

> Matsyakara Sevalo Scheme:

- The Andhra Pradesh government has introduced a new welfare initiative, MATSYAKARA SEVALO (in the service of fishers).
- This scheme, aimed at supporting fishing communities is launched by Chief Minister N Chandrababu Naidu at Budagatlapalem village of srikakulam district on April 26, 2025.
- Under this initiative, each beneficiary family will receive Rs 20,000 as livelihood support.
- The scheme is designed to provide financial assistance to families dependent on marine fishing, particularly during the annual fishing ban period from April 15 to June 14.
- Previously the financial assistance stood at Rs 10,000 which is now revised to Rs. 20,000 .
- Under this scheme a total of 1, 29,178 fisheries families are expected to get benefitted.
- AP government has allocated Rs. 258 crore for this scheme.

> Andhra Pradesh Minor Mineral Policy - 2025:

To revive the mining sector and provide support to micro small and medium enterprises AP cabinet approved Minor Mineral Policy on April 15, 2025.

The main aim of this scheme is to uplift the sector which has seen a decline in its contribution to the state GDP from 3.53% in 2018-19 to 2.71% in 2023-24 through reforms to ease the operational obstacles and ensure transparency in Micro, Small and Medium Enterprises.

Key Reforms:

- Revival of over 6000 pending lease applications that are previously declared ineligible under the 2022 auction only rule.
- These lease applications will now be processed on a first come, first-served basis with a one-year window for letter intent issuance.
- It adopts a dual grant mechanism i.e., application- based leases for building materials and granite.
- Lease premiums are rationalised decreasing financial burden on leaseholders as the premiums are now at five times the dead rent which are down from ten and for lime were reduced to thrice the price.
- There is also an extension of lease duration for granite and industrial minerals from 20 to 30 years and road metal from 15 to 30 years thereby bringing stability to investors.
- Digital transformation including end -to-end lease lifecycle, drone surveillance and CCTV monitoring is also set up to enhance transparency.

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Poshan Awareness Week:

A 15-day poshan awareness week has been launched in the Prakasham district of AP from April 8th to 22nd. It is a part of 7th edition of central scheme of Poshan pakhwada organised by the industry of women and child development.

This scheme aims to promote a healthy and nutritious diet among children and women with a blend of technology and tradition.

Key focus areas:

- Emphasis on the first 1000 days of life i.e., maternal and childcare from pregnancy to a child's second birthday.
- Awareness on providing nutritious food to anaemic patients, adolescent girls, highrisk pregnant women and underweight children.
- Promotion of hygiene practices and regularly updating to the poshan tracker for monitoring mother's health.
- Campaigns are conducted involving public awareness programmes in collaboration with the departments of education, medical and health along with self-help groups.
- Implementation of Community- based Management of Acute Malnutrition to reduce malnutrition among children.

> Whats App Governance Model In Andhra Pradesh:

16th Finance Commission team appreciates what's app governance model in AP.

For the first time in the whole country the AP government has launched what's app governance named MANA MITRA.

Highlights of what's app governance:

- In order to make the government services available to the citizens just by typing in their phones without the need for knocking the doors of the government departments, AP government has come up with a unique what's app service 'MANA MITRA'.
- The main goal of this scheme id to provide 1000 services to the citizens through what's app.
- For this the government allotted an official what's app number- 9552300009 for availing the services
- In the first phase the government made available 161 public services through what's app and in the second phase another 360 services would be enabled.
- The government provides certificates in real time with a unique QR code which will take the link directly to the related government website leaving no scope to fakes.

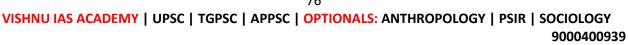
> NTR Vaidya Seva Trust:

CM Chandra babu Naidu auctioned Rs 500 crore for NTR Vaidya Seva scheme.

It is health care initiative aimed at providing free medical treatment to economically disadvantaged families.

Key features:

- This scheme covers the treatment of over 1900 high-end surgical and medical procedures.
- Families with a white ration card in AP are eligible for this scheme.
- Beneficiaries receive the entire treatment free of cost with all the expenses borne by the government itself.
- Funding for the treatment expenses are managed by Dr. NTR Vaidya seva Trust which is a government- established body which will directly reimburse the amount directly to hospitals.



Practice MCQs

1. With reference to the Fiscal Health Index (FHI) 2025, consider the following statements:

- 1. The Fiscal Health Index evaluates the fiscal performance of states using data from the Comptroller and Auditor General (CAG).
- 2. Odisha is ranked first in the "Achiever" category.
- 3. West Bengal and Puniab are noted for their strong fiscal prudence in the index. Which of the statements given above is/are
- correct? (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2, and 3

Correct Answer: (b) 1 and 2 only **Explanation**:

- Statement 1 is correct: The FHI uses CAG data for analysis.
- Statement 2 is correct: Odisha ranks first in the "Achiever" category.
- Statement 3 is incorrect: West Bengal • and Punjab are highlighted for debt challenges, not fiscal prudence.

2. With reference to the Waqf Amendment Act 2025 (UMEED Act), consider the following statements:

- 1. Non-Muslims can now serve on Central and State Waqf Boards under the Act.
- 2. Properties used for religious purposes without formal designation as Waqf can still qualify as Waqf after the enactment of the Act.
- 3. Appeals against decisions of Waqf Tribunals can now be taken to the High Court.
- 4. The mandatory contribution from Waqf institutions to Waqf Boards has been increased from 5% to 7%.

Which of the statements given above is/are correct?

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

(d) 1, 3, and 4 only Correct Answer: (a) 1 and 3 only **Explanation**:

- Statement 1: Correct. The Act allows non-Muslims to serve on Waqf Boards to improve transparency.
- **Statement 2: Incorrect. Properties** used for religious purposes without formal designation as Waqf will no longer qualify unless registered before the enactment of the Act.
- Statement 3: Correct. Appeals against Waqf Tribunal decisions can now be taken to the High Court, addressing a previous legal gap.
- Statement 4: Incorrect. The mandatory contribution has been reduced from 7% to 5%, allowing institutions to use more resources for charitable activities.

3. With reference to the Panchayat Advancement Index (PAI), consider the following statements:

- 1. PAI measures the performance of Panchayati Raj Institutions (PRIs) based on nine Localized Sustainable Development Goals (LSDGs).
- 2. Gujarat has the highest number of Panchayats in the "Front Runners" category.
- 3. No Panchayat achieved the "Achiever" category in the first PAI Baseline Report.
- 4. The PAI ranks states to encourage inter-state competition among Panchayats.

Which of the statements given above is/are correct?

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

Correct Answer: (a) 1 and 3 only Explanation:

Statement 1: Correct. PAI evaluates • PRIs on nine LSDGs, such as

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governance, transparency, and service delivery.

- Statement 2: Incorrect. Gujarat has the highest number of "Performers," not "Front Runners."
- Statement 3: Correct. No Panchayat achieved the "Achiever" category in the first PAI report.
- Statement 4: Incorrect. The PAI does not rank states, as its focus is developmental rather than competitive.

4. With reference to the appointment of the Chief Justice of India (CJI), consider the following statements:

- 1. The procedure for appointing the CJI is explicitly mentioned in Article 124(1) of the Constitution.
- 2. Seniority for the CJI position is determined by the date a judge was appointed to the Supreme Court.
- 3. If two judges are appointed to the Supreme Court on the same day, the one with more years of High Court experience is considered senior.
- 4. A judge elevated directly from the bar is considered senior to a judge elevated from the bench of a High Court.

Which of the statements given above is/are correct?

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

Correct Answer: (a) 2 and 3 only Explanation:

- Statement 1: Incorrect. Article 124(1) mentions the existence of the Supreme Court and the CJI but does not prescribe the procedure for the appointment of the CJI.
- Statement 2: Correct. Seniority for the CJI position is based on the date of a judge's appointment to the Supreme Court.
- Statement 3: Correct. If two judges are appointed on the same day, the one with more years of High Court experience is considered senior.

• Statement 4: Incorrect. A judge elevated from the bench (High Court) is considered senior to one elevated directly from the bar (lawyer).

5. The "BIMSTEC Bangkok Vision 2030," adopted during the 6th BIMSTEC Summit, primarily focuses on:

(a) Maritime security in the Indo-Pacific region.(b) Regional economic integration and human security.

(c) Establishment of a unified currency for the region.

(d) Expansion of BIMSTEC membership to other ASEAN countries.

Correct Answer: (b) Regional economic integration and human security. Explanation:

- The "BIMSTEC Bangkok Vision 2030," adopted at the 6th BIMSTEC Summit, focuses on regional economic integration and human security.
- Key areas include enhancing trade, connectivity, disaster management, and skill development. It envisions a Prosperous, Resilient, and Open (PRO BIMSTEC) region by 2030, fostering sustainable growth and regional cooperation.

6. Consider the following statements regarding the BRICS Land Restoration Partnership:

- 1. The partnership aims to combat land degradation, desertification, and soil fertility loss, focusing primarily on the empowerment of large-scale commercial farmers.
- 2. The initiative aligns with global goals of promoting a resilient agri-food system, with a focus on integrating traditional agricultural practices and scientific innovation.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

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Answer: (b) 2 only Explanation:

- Statement 1 is incorrect because the BRICS Land Restoration Partnership focuses on empowering vulnerable communities, such as small farmers and tribal populations, rather than large-scale commercial farmers.
- Statement 2 is correct as the partnership emphasizes integrating traditional agricultural practices with scientific innovations to promote a resilient agri-food system. This holistic approach addresses land degradation and soil fertility loss, aligning with global sustainability goals.

7. Consider the following statements regarding the Inter-Parliamentary Union (IPU):

- 1. The IPU was established in 1889 in Paris, France, and its headquarters is located in Geneva, Switzerland.
- 2. The primary objective of the IPU is to advance global trade and economic cooperation among member countries.
- 3. The IPU supports the inclusion of gender equality and youth empowerment in governance.
- 4. The IPU Assembly is the main decisionmaking body that addresses global political, social, and developmental issues.

Which of the above statements are correct?

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

Answer: (a) 1, 3, and 4 only Explanation:

- Statement 1 is correct as the IPU was established in 1889 in Paris, France, and its headquarters are in Geneva, Switzerland.
- Statement 2 is incorrect because the IPU's primary focus is on promoting peace, democracy, human rights, and inter-parliamentary cooperation, not global trade or economic cooperation.

- Statement 3 is correct; the IPU advocates for gender equality and youth empowerment in governance.
- Statement 4 is also correct; the IPU Assembly is indeed the main decisionmaking body, addressing global political, social, and developmental issues.

8. Which of the following factors contribute significantly to India's energy demand according to the "Energy Statistics India 2025" report?

- 1. Industrial growth and urbanization
- 2. Increased demand from transportation and households
- 3. Expansion of renewable energy sources like wind and solar power

4. Development of new crude oil reserves Select the correct answer from the options below:

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

Answer: (c) 1, 2, and 3 only Explanation:

- The "Energy Statistics India 2025" report highlights the following factors contributing significantly to India's energy demand:
- Industrial growth and urbanization: These are major drivers of energy demand, as industrialization and urbanization lead to increased energy consumption.
- Transportation and households: These sectors together account for a large portion of the energy demand, with transportation contributing 25% and households 20%.
- Renewable energy sources: Growth in renewable energy (especially wind and solar power) plays a crucial role in shaping India's energy future, though it is not the primary contributor to demand.

• Crude oil reserves development, while important, does not directly contribute to the demand in this context.

9. Which of the following is/are key features of the Domestically Manufactured Iron & Steel Products Policy (DMISP) – 2025?

- The policy mandates government ministries and PSUs to procure domestically produced steel for contracts exceeding ₹5 lakh.
- 2. The "Melt & Pour" requirement in the policy ensures that the core production processes, including melting and solidification, are carried out in India.
- 3. The policy imposes a ban on global tenders for projects exceeding ₹200 crore unless approved by the Ministry of Steel.
- 4. The policy includes a reciprocal clause that restricts suppliers from countries that limit Indian participation in their procurement processes.

Select the correct answer from the options below:

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

Answer: (a) 1, 2, and 4 only Explanation:

- Statement 1 is correct: The DMISP-2025 policy mandates that government ministries, PSUs, and statutory bodies must procure domestically produced steel for contracts exceeding ₹5 lakh, promoting domestic production.
- Statement 2 is correct: The "Melt & Pour" requirement ensures that core production activities such as melting and solidification are carried out within India, covering products like flat-rolled steel, bars, rods, and railway-grade steel.
- Statement 3 is incorrect: The policy does not impose a ban on global tenders for projects exceeding ₹200 crore. Instead, it restricts Global

Tender Enquiries (GTE) for projects under ₹200 crore unless approved by the Department of Expenditure.

• Statement 4 is correct: The reciprocal clause in the policy restricts suppliers from countries that limit Indian participation in their procurement processes, ensuring fair competition.

10. Consider the following statements regarding the decline in India's 10-year bond yields:

- 1. India's 10-year bond yield has declined by 62 basis points (bps) in FY 2024-25, marking the largest drop in five years.
- The Reserve Bank of India's purchase of ₹80,000 crore worth of bonds in April caused a rise in bond yields.
- The inverse relationship between bond prices and yields means that when bond prices rise, bond yields decrease.
 Which of the above statements is/are correct?
- (a) 1 and 3 only
- (b) 2 and 3 only
- (c) 1 and 2 only
- (d) 1, 2, and 3

Answer: (a) 1 and 3 only Explanation:

- Statement 1 is correct: The 10-year bond yield in India declined by 62 basis points (bps) in FY 2024-25, which is the largest drop in five years. This highlights a significant fall in bond yields during the fiscal year.
- Statement 2 is incorrect: The Reserve Bank of India's purchase of ₹80,000 crore worth of bonds in April led to a drop in bond yields, not an increase. This action provided liquidity to the banking system, which in turn lowered bond yields.
- Statement 3 is correct: Bond yields and bond prices have an inverse relationship: when bond prices rise, the yield declines, and vice versa. This is a fundamental principle in the bond market.

11. Which of the following are true regarding the Pradhan Mantri MUDRA Yojana (PMMY) as it marks its 10th anniversary in 2025?

- 1. The scheme provides collateral-free loans through Member Lending Institutions (MLIs) such as Scheduled Commercial Banks, NBFCs, and Micro Finance Institutions.
- The loan categories under PMMY include Shishu (up to ₹50,000), Kishor (₹50,000 to ₹5 lakh), Tarun (₹5 lakh to ₹10 lakh), and Tarun Plus (above ₹10 lakh and up to ₹20 lakh).
- 3. Women beneficiaries constitute 50% of the total loans sanctioned under the scheme.
- The total MSME lending has grown from ₹8.51 lakh crore in FY14 to ₹30 lakh crore by FY25.

Select the correct answer using the code below:

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

Answer: (a) 1, 2, and 4 only Explanation:

- Statement 1 is correct: The Pradhan Mantri MUDRA Yojana (PMMY) provides collateral-free loans through Member Lending Institutions (MLIs) like Scheduled Commercial Banks, NBFCs, and Micro Finance Institutions, enabling financial support to micro and small enterprises.
- Statement 2 is correct: The loan categories under PMMY are:
 - 1. Shishu: Loans up to ₹50,000
 - Kishor: Loans between ₹50,000 and ₹5 lakh
 - Tarun: Loans between ₹5 lakh and ₹10 lakh
 - 4. Tarun Plus: Loans above ₹10 lakh and up to ₹20 lakh
- Statement 3 is incorrect: Women beneficiaries constitute 68% of the total loans sanctioned under the scheme, not 50%, highlighting the

scheme's role in promoting women-led enterprises.

• Statement 4 is correct: MSME lending has grown from ₹8.51 lakh crore in FY14 to ₹27.25 lakh crore in FY24, and it is projected to surpass ₹30 lakh crore by FY25.

12. Which of the following statements are correct regarding the 4th phase of the amalgamation of Regional Rural Banks (RRBs) under the "One State, One RRB" principle?

- 1. The amalgamation of RRBs began in 2004-05 based on the recommendations of the Vyas Committee.
- 2. The aim of the amalgamation is to ensure that one RRB is set up per state, each sponsored by a major public sector bank.
- 3. The capital structure of RRBs is 50% owned by the central government, 15% by the state government, and 35% by the sponsor bank.
- 4. RRBs are regulated by the Securities and Exchange Board of India (SEBI).

Select the correct answer using the code below:

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

Answer: (a) 1, 2, and 3 only Explanation:

- Statement 1 is correct: The amalgamation of Regional Rural Banks (RRBs) began in 2004-05, following the recommendations of the Vyas Committee. The aim was to streamline and improve the operational efficiency of RRBs.
- Statement 2 is correct: The "One State, One RRB" principle ensures that each state will have only one RRB, which will be sponsored by a major public sector bank. For example, Bihar Gramin Bank will be formed by merging Dakshin Bihar Gramin Bank

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and Uttar Bihar Gramin Bank, sponsored by Punjab National Bank.

- Statement 3 is correct: The ownership structure of RRBs is as follows:
 - 1. Central Government: 50%
 - 2. State Government: 15%
 - 3. Sponsor Bank: 35%
- Statement 4 is incorrect: RRBs are regulated by the RBI under the Banking Regulation Act, 1949, and their operations are overseen by NABARD, not SEBI.

13. Which of the following statements are correct regarding the "Women and Men in India 2024" report released by the Ministry of Statistics and Programme Implementation (MoSPI)?

- 1. The Gender Parity Index (GPI) for higher secondary education in 2022-23 is 1.02, indicating higher female enrolment.
- 2. The Female Labour Force Participation Rate (LFPR) for women aged 15 years and above increased from 49.8% in 2017-18 to 60.1% in 2023-24.
- 3. Women's banking participation accounted for 39.7% of total accounts and 42.2% of aggregate deposits in 2023-24.
- 4. The female voter turnout in the 2024 elections was higher than the male voter turnout, at 65.8% compared to 65.5%.

Select the correct answer using the code below:

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

Answer: (a) 1, 2, 3, and 4 Explanation:

• Statement 1 is correct: The Gender Parity Index (GPI) for higher secondary education in 2022-23 is 1.02, indicating that there is higher female enrolment compared to male students, which demonstrates progress towards gender parity in education.

- Statement 2 is correct: The Female Labour Force Participation Rate (LFPR) for women aged 15 years and above has improved significantly, from 49.8% in 2017-18 to 60.1% in 2023-24, indicating greater inclusion of women in the workforce.
- Statement 3 is correct: Women's banking participation accounted for 39.2% of total accounts and 39.7% of total deposits in 2023-24. Additionally, rural women held 42.2% of the total accounts, reflecting financial independence in rural areas.
- Statement 4 is correct: In the 2024 elections, female voter turnout was 65.8%, surpassing the male turnout of 65.5%, reversing previous gender gaps in electoral participation.

14. With reference to vulture conservation efforts in India, consider the following statements:

- 1. The Jatayu Conservation Breeding Centre (JCBC) is located in Maharashtra.
- 2. Long-billed Vultures and Whiterumped Vultures are listed as Critically Endangered on the IUCN Red List.
- 3. The recent relocation of vultures in India was undertaken in collaboration with the Bombay Natural History Society (BNHS).

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: (b) 2 and 3 only Explanation:

- Statement 1 is incorrect: The Jatayu Conservation Breeding Centre (JCBC) is located in Pinjore, Haryana, not Maharashtra.
- Statement 2 is correct: Both Longbilled Vultures and White-rumped

Vultures are classified as Critically Endangered on the IUCN Red List.

• Statement 3 is correct: The relocation of vultures was spearheaded by the Bombay Natural History Society (BNHS).

15. With reference to the Surat Emission Trading Scheme (ETS), consider the following statements:

- 1. The Surat ETS is the world's first market-based trading scheme for greenhouse gas emissions.
- 2. The scheme uses a 'cap and trade' mechanism to regulate particulate matter emissions.
- 3. Continuous Emissions Monitoring Systems (CEMS) devices are used to track real-time emissions under this scheme.

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: (b) 2 and 3 only Explanation:

- Statement 1 is incorrect: The Surat ETS is the world's first market-based trading scheme for particulate matter emissions, not greenhouse gas emissions.
- Statement 2 is correct: The scheme employs a 'cap and trade' mechanism to regulate particulate matter emissions from industries.
- Statement 3 is correct: Continuous Emissions Monitoring Systems (CEMS) devices are used to monitor real-time emissions from participating industries.

16. With reference to the Draft Greenhouse Gases Emissions Intensity (GEI) Target Rules, 2025, consider the following statements:

- 1. The reduction targets under the GEI Target Rules will be applicable for the financial years 2025–26 and 2026–27.
- The Indian Carbon Market, managed by the Bureau of Energy Efficiency (BEE), will facilitate the trading of carbon credits generated under this scheme.
 Which of the statements given above is/are

correct?

- (a) 1 only
- (b) only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (c) Both 1 and 2 Explanation:

- Statement 1 is correct: The reduction targets under the GEI Target Rules are applicable for the financial years 2025–26 and 2026–27.
- Statement 2 is correct: The Indian Carbon Market, managed by the Bureau of Energy Efficiency (BEE), will indeed facilitate the trading of carbon credits under this scheme.

17. With reference to Naini Lake in Uttarakhand, consider the following statements:

- 1. Naini Lake is a crescent-shaped natural freshwater lake, tectonic in origin.
- It is the largest lake by surface area in the Kumaon region of Uttarakhand.
 Which of the statements given above is/are correct?
- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2

(d) Neither 1 nor 2

Answer: (a) 1 only

Explanation:

- Statement 1 is correct: Naini Lake is a crescent-shaped natural freshwater lake, tectonic in origin.
- Statement 2 is incorrect: While Naini Lake is significant, it is the third largest lake in Uttarakhand by surface area, not the largest.

18. Arrange the following countries in descending order of their military

expenditure in 2024, based on the SIPRI report:

- 3. China
- 4. India
- 5. Russia
- 6. United States

Select the correct answer using the codes given below:

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

Answer: (a) 4 - 1 - 3 - 2 Explanation:

- The United States had the highest defense expenditure globally.
- China ranked second, followed by Russia and then India.
- This reflects the respective prioritization of defense budgets based on geopolitical dynamics and national security objectives.

19. Consider the following statements about the AIKEYME Maritime Exercise:

- 1. The first edition of the AIKEYME Maritime Exercise was held in Mombasa, Kenya.
- 2. The exercise promotes maritime cooperation and security between India and African nations.
- 3. It aligns with the vision of MAHASAGAR (Mutual and Holistic Advancement for Security and Growth Across Regions).

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: (b) 2 and 3 only Explanation:

- Statement 1 is incorrect: The first AIKEYME Maritime Exercise was held in Dar-es-Salaam, Tanzania, not Mombasa, Kenya.
- Statement 2 is correct: The exercise aims to promote maritime cooperation and collective security.
- Statement 3 is correct: It aligns with Prime Minister Modi's vision of MAHASAGAR for regional security and growth.

20. Consider the following statements about the Axiom-4 (Ax-4) Mission:

- 1. Axiom Mission 4 includes collaboration between India, Poland, and Hungary, with support from ESA.
- Shubhanshu Shukla, an Indian astronaut, is the mission commander of Ax-4.
- 3. The mission focuses on microgravity research, including experiments on plant growth and human health in space.

Which of the statements given above is/are correct?

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

Answer: (c) 1 and 3 only Explanation:

- Statement 1 is correct: Ax-4 involves collaboration between India, Poland, and Hungary, with ESA's support.
- Statement 2 is incorrect: Shubhanshu Shukla is the pilot of the mission, not the mission commander. Peggy Whitson is the mission commander.
- Statement 3 is correct: The mission focuses on microgravity research, including human health and plant growth studies.

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