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JULY TO DECEMBER 2025



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ENVIRONMENT

1. New Ramsar sites

- Khichan in Phalodi and Menar in Udaipur added
- Gokul Jalashay:

2. *Allographa effusosoredica*

A team of Indian scientists has uncovered a previously unknown species of lichen, *Allographa effusosoredica*, from the richly biodiverse Western Ghats, carrying within it a tale of symbiosis, evolution and resilience.

Lichens are not just one organism but two (sometimes more) living in intimate symbiosis: a fungus that offers structure and protection, and a photobiont (usually a green alga or cyanobacterium) that captures sunlight and makes food. Despite their humble appearance, lichens play critical roles in ecosystems, building soil, feeding insects and serving as nature's bioindicators.

The newly identified species, a crustose lichen with striking effuse soredia and comparably rare chemical traits, (harbouring chemical called norstictic acid, considered rare in comparison to other morphologically similar species within the genus *Allographa*) was studied in detail using morphological, chemical and advanced molecular techniques. This integrative approach also unveiled its algal partner, a *Trentepohlia* species, adding to the sparse but growing understanding of photobiont diversity in tropical lichens.

Using DNA sequencing across multiple genetic markers (mtSSU, LSU, RPB2 for the fungal partner and ITS for the algal symbiont), the researchers placed *A. effusosoredica* phylogenetically close to *Allographa xanthospora*. Interestingly, the lichen's morphology mimics that of *Graphis glaucescens*, raising evolutionary questions about generic boundaries in the Graphidaceae family.

"This is the first Indian species of *Allographa* ever sequenced from India (This species, discovered in India, is the first *Allographa* from the country to be supported by molecular data.," says the study team, which includes researchers. "It also sheds light on lichen-algal symbiosis, reinforcing the concept of locally adapted photobionts."

3. Wildlife Conflicts

Incidences of human-wildlife conflict have been reported from various parts of the country. Such data are not collated at the level of Ministry. The important steps taken by the Government to manage and mitigate the human-wildlife conflicts are as follows:

- i. An advisory on dealing with human-wildlife conflict has been issued by the Ministry in

February 2021. The Advisory recommends coordinated interdepartmental action, identification of conflict hot spots, adherence to Standard Operating Procedures, establishment of rapid response teams, formation of State and District level committees to review the quantum of ex-gratia relief for its expeditious payments, issuing guidance and instructions for expedited relief payments, preferably within 24 hours to the affected persons, in the case of death and injury to persons.

- ii. The Ministry has also issued guidelines to States and UTs on 3rd June 2022 on managing human-wildlife conflicts including damage to crops. The guidelines advise States/UTs to utilize the Pradhan Mantri Fasal Bima Yojna (PMFBY). Under the revamped operational guidelines of PMFBY, States/UTs may provide add-on coverage for crop loss due to attack by wild animals. Further, it includes promotion of crops in forest fringe areas which are unpalatable to wild animals, agro forestry models which include cash crops like chillies, lemon grass, khus grass etc. suitably mixed with tree/shrub species. It also includes preparation and implementation of comprehensive long-term plan for alternate cropping by the State Agriculture/Horticulture Department under different schemes in vulnerable areas.

- iii. The Ministry has also issued species-specific guidelines to deal with human-wildlife conflict situations on 21.03.2023 for mitigation of Human Wildlife conflicts involving Elephant, Gaur, Leopard, Snake, Crocodile, Rhesus Macaque, Wild Pig, Bear, Blue Bull and Blackbuck.

- iv. The Central Government provides financial assistance to State/Union Territory Governments under the Centrally Sponsored Schemes, 'Development of Wildlife Habitats' and 'Project Tiger and Elephant' for management of wildlife and its habitat including support for broad activities like-compensation for depredation by wild animals and construction of physical barriers such as barbed wire fence, solar powered electric fence, bio-fencing using cactus, boundary wall etc to prevent the entry of wild animals into crop fields, capacity building and also provides ex gratia relief to the victims of human-wildlife conflicts. The States/Union Territories make ex-

gratia payments for loss of livestock, crops and human life including injuries due to human-wildlife conflicts as per the norms, which vary from State to State.

- v. A network of protected areas namely, National Parks, Sanctuaries, Conservation Reserves and Community Reserves covering important wildlife habitat have been created all over the country under the provisions of the Wild Life (Protection) Act, 1972 to conserve wild animals and their habitats.
- vi. The Section 11 (1) (a) of the Wild Life (Protection) Act, 1972, empowers the State Chief Wild Life Wardens to grant permits for hunting animals falling in Schedule I of the Act, which become dangerous to human life. Further, the Section 11 (1) (b) of the Act empowers State Chief Wild Life Warden or any authorized officer to grant permits for hunting of wild animals falling under Schedule-II of the Act, if such animals have become dangerous to human life or property.
- vii. In accordance with provisions contained under Section 33 of the Wild Life (Protection) Act, 1972, the Ministry has issued guidelines for the process of management planning for protected areas and other landscape elements.
- viii. The Ministry also provides capacity-building support to the officers and staff of State Forest Departments through institutions, e.g. Wildlife Institute of India-SACON for adoption of early-warning systems and modern technologies.
- ix. Periodic awareness campaigns to sensitize guide and advise the general public on human-wildlife conflict, including dissemination of information through various forms of media is carried out by the respective State Governments/Union Territory Administrations

4. Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI)

- As a part of Budget Announcement 2023-24, the Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI) has been launched on 5th June 2023 to restore and promote mangroves as unique, natural eco-system and for preserving and enhancing the sustainability of the coastal habitats.
- The objective of MISHTI is to restore mangrove forests by undertaking mangrove reforestation/afforestation measures along the coast of India.
- The Coastal Zone Regulation Notification of 2019 (CRZ) under The Environment (Protection) Act, 1986 classifies Mangroves as Ecologically Sensitive Areas (ESAs) permitting only very limited activities in these areas. Additionally, provision of a 50-meter buffer zone along mangroves is also specified as CRZ-IA in case

the mangrove cover is greater than 1,000 square meters. In such instances, if any mangroves are likely to be affected during the developmental process, three times the number of mangroves lost must be replanted as per the provisions of CRZ-2019 regulation. Further mangrove areas and mangrove ecosystems are also protected under the relevant provisions of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, The Wildlife (Protection) Act, 1972 and State specific laws

5. New Rules for identification and management of contaminated sites

The Ministry of Environment, Forest and Climate Change notified the Environment Protection (Management of Contaminated Sites) Rules, 2025 on 24.07.2025 for identification and management of contaminated sites in the country. The process of identification, determination and remediation of contaminated sites has been defined under the said Rules.

- Under the Rules, a contaminated site has been defined as an area or a site affected with contaminants and declared as a contaminated site by the State Pollution Control Board (SPCB) / Pollution Control Committee (PCC), if the contaminant is found to be above the prescribed threshold levels after completion of the detailed site assessment
- The local body or District Administration, on its own or on receipt of a complaint from public, has been mandated to identify an area affected with contaminants taking into account the information as prescribed in the Rules and list all such areas as suspected contaminated sites in its jurisdiction on centralised online portal.
- On receipt of the list of suspected contaminated sites, SPCB/ PCC, on its own or through a reference organisation, has been mandated to undertake the preliminary site assessment of the suspected contaminated site by sampling and analysis of the suspected contaminated site, within ninety days from the date of receipt of the list. SPCB/ PCC may list the suspected contaminated site as probable contaminated site if the contaminant is found to be above the prescribed screening levels.

Further, SPCB/ PCC, on its own or through a reference organisation, has been mandated to undertake a detailed site assessment of a probable contaminated site by detailed sampling and analysis, covering the entire geographical area of the probable contaminated site, within three months from the date of listing of such site. SPCB/ PCC, after completion of the detailed site assessment, may list the site as contaminated site if the contaminant is found to be above the prescribed response levels.

SPCB/PCC has been mandated to publish the list of contaminated sites on the centralised online portal inviting comments and suggestions from the stakeholders likely to be affected, within sixty days of such publication.

6. GLOBALLY IMPORTANT AGRICULTURAL HERITAGE SYSTEMS (GIAHS)

India currently hosts three Globally Important Agricultural Heritage Systems (GIAHS): the Koraput region in Odisha, the Kuttanad farming system in Kerala, and the Saffron Heritage of Kashmir. The Koraput region is renowned for its subsistence paddy cultivation, predominantly on highland slopes, and is home to a vast diversity of paddy landraces and farmer-developed varieties. It also harbors rich genetic resources of medicinal plants, deeply interwoven with the indigenous tribal communities and their traditional knowledge systems. The Kuttanad system in Kerala stands out as a unique below-sea-level farming landscape, comprising wetlands for paddy cultivation and fish catching, garden lands for coconut and food crops, and inland water bodies for fishing and shell collection. Meanwhile, the Saffron Park of Kashmir represents a rich agro-pastoral system characterized by traditional saffron cultivation, intercropping, and the use of organic farming practices, all of which contribute to maintaining local biodiversity and soil health.

GIAHS is an FAO programme. Schemes and policies of Government of India support these sites. As reported by the Government of Jammu and Kashmir, for economic revival of saffron cultivation in Jammu and Kashmir has been supported under the Rashtriya Krishi Vikas Yojana (RKVY) and Mission for Integrated Development of Horticulture (MIDH).

7. Environment Audit Rules, 2025

- Union Ministry of Environment, Forest and Climate Change (MoEFCC) has introduced a major reform through the *notification of the [Environment Audit Rules, 2025](#)* on 29th August 2025. Drawing upon international best practices, these rules have been conceptualized to address the existing gaps in environmental compliance monitoring.
- Compliance with statutes such as the Environment (Protection) Act, 1986, the Forest (Conservation) Act, 1980, the Wildlife Protection Act, 1972, Green Credit Rules, 2023 and other related regulations is essential to safeguard the environment from degradation while promoting sustainable development.
- The overall framework for monitoring and compliance within existing environmental framework is presently supported by the Central Pollution Control Board (CPCB), the Regional Offices of the Ministry, and the State PCBs/Pollution Control Committees, which are facing significant constraints in terms of

manpower, resources, capacity, and infrastructure. These limitations hamper their ability to comprehensively monitor and enforce environmental compliance across the vast number of projects and industries operating nationwide.

- This scheme aims to bridge the manpower and infrastructure deficits faced by regulatory authorities, thereby strengthening the effective implementation of environmental compliance mechanisms. Furthermore, the scheme is designed to ensure greater transparency, accountability, and credibility in the compliance monitoring process, fostering trust among stakeholders and promoting sustainable environmental governance.

8. Clean Planting Material

- The Clean Plant Programme (CPP) was launched as a major initiative to provide farmers with access to high-quality, virus-free planting material. The National Horticulture Board (NHB) serves as an implementing and executing agency in association with Indian Council of Agricultural Research (ICAR), which oversees technical progress and facilitates capacity building.
- *India's Clean Plant Program (CPP), conceptualized by the Ministry of Agriculture & Farmers Welfare in collaboration with the Asian Development Bank, is a novel initiative aimed at ensuring healthy, disease-free planting material of key fruit crops. The program seeks to enhance farmers' productivity and profitability, ultimately boosting India's global competitiveness.*

9. Multi-feed Compressed Biogas plant

- ARISE—Adaptive, Resilient, Innovative, Sustainable, and Equitable—is the flagship urban resilience forum of local governments, led by ICLEI South Asia. Under the theme “From Bharat to Belém: Ideas to Implementation,” ARISE Cities Forum 2025 will amplify voices from South Asia and the Global South, to shape a bold urban resilience agenda. Country's first cooperative multi-feed Compressed Biogas plant at Kopargaon in Ahilyanagar, Maharashtra
- For the first time in the history of India's cooperative sugar mills, the establishment of a Compressed Biogas (CBG) plant and a potash granule production unit is being initiated at the Maharshi Shankarrao Kolhe Sahakari Sakhar Karkhana

10. ARISE Cities Forum 2025

- ARISE—Adaptive, Resilient, Innovative, Sustainable, and Equitable—is the flagship urban resilience forum of local governments, led by ICLEI South Asia. Under the theme “**From Bharat to Belém: Ideas to Implementation,**” ARISE Cities Forum 2025 will amplify voices

from South Asia and the Global South, to shape a bold urban resilience agenda.

- Setting the stage for the upcoming UNFCCC Climate Conference, COP30, the **Delhi Declaration on Local Action for Global Climate Goals** emerged as the key outcome of the first ARISE Cities Forum 2025, held on October 8–9 in New Delhi.
- The Declaration unites voices from across the Global South in a shared call for stronger multilevel cooperation and accelerated urban climate action. The forum was co-hosted by ICLEI South Asia and the National Institute of Urban Affairs (NIUA).
- The Delhi Declaration represents a landmark affirmation of the role of cities and local governments as indispensable actors in global climate governance. It amplifies the collective voice of the Global South within the UNFCCC process, translating the Local Government and Municipal Administration (LGMA) constituencies vision for **multilevel collaboration and urbanisation in climate action** into a concrete, city-driven commitment.

The Declaration outlines **shared commitments** to guide local and subnational governments across the Global South:

- Advance local climate action through enhanced, measurable, and resourced multilevel NDCs;
- Drive inclusive urban resilience integrating adaptation, circularity, and nature-based solutions;
- Promote just and participatory green transitions toward net-zero pathways;
- Empower citizens, women, youth, and communities in climate governance;
- Strengthen multilevel governance and transparent data systems;
- Mobilise climate finance and expand direct access for cities; and,
- Champion Global South urban leadership through South–South and triangular cooperation.

11. Green Hydrogen Hubs

- The Ministry of New and Renewable Energy (MNRE) has formally recognised three major ports Deendayal Port Authority (Gujarat), V.O. Chidambaranar Port Authority (Tamil Nadu), and Paradip Port Authority (Odisha) as Green Hydrogen Hubs under the National Green Hydrogen Mission (NGHM).
- This recognition marks a significant step towards creating an integrated hydrogen ecosystem and advancing India's transition towards clean energy.
- The **National Green Hydrogen Mission**, launched by the Government of India, aims to

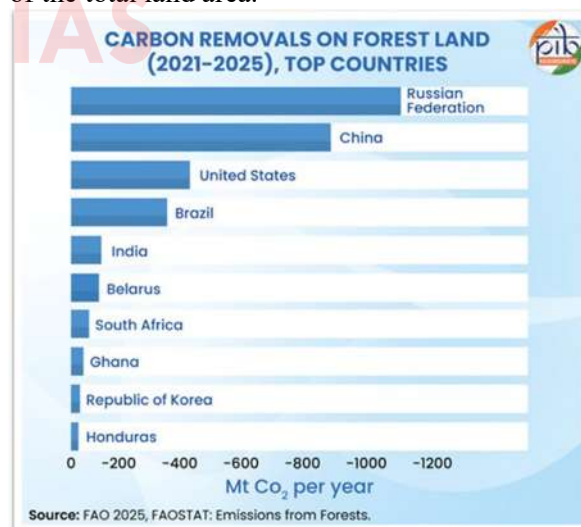
position the country as a global hub for the production, utilisation, and export of green hydrogen and its derivatives. The Mission promotes the development of large-scale hydrogen hubs to serve as focal points for production and consumption, thereby facilitating the establishment of a sustainable and competitive hydrogen economy.

12. #23for23 Initiative

- India Marks International Snow Leopard Day with Nationwide ‘#23for23 Initiative’
- A unique initiative titled ‘#23for23’, encouraging people across the country to engage in physical activities for 23 minutes to raise awareness about the conservation of snow leopards and their fragile habitats.

13. GFRA 2025

- India has achieved a significant milestone in global forest statistics by advancing to the 9th position worldwide in terms of total forest area, according to the Food and Agriculture Organization (FAO)'s Global Forest Resources Assessment (GFRA) 2025 released on 22 October 2025. In the previous assessment, India was ranked 10th. India has also maintained its 3rd position globally in the annual net gain of forest area.
- **Global Forest Cover:** According to the latest GFRA 2025 released by the Food and Agriculture Organization (FAO), the world's total forest area stands at approximately 4.14 billion hectares, accounting for about 32% of the total land area, which is roughly 0.5 hectares of forest per person.
- Globally India accounts for approximately 72,739 thousand hectares of forest area which is roughly 2 % of the world total.
- Europe has the largest forest area, accounting for 25 percent of the world's total. South America has the highest proportion of forest, at 49 percent of the total land area.



- More than half (54 percent) of the world's forests is in only five countries – the Russian Federation, Brazil, Canada, the United States of America and China
- **Bamboo Plantations:** The total bamboo resource globally is estimated at 30.1 million ha, of which 21.2 million ha (70 percent) is in Asia, with India accounting for 11.8 million hectares. The global area of bamboo forest increased by 8.05 million ha between 1990 and 2025, largely because of increases in China and India.
- **Rubber Plantations:** India ranks 5th globally with 831 thousand hectares of rubber plantations,
- **Agroforestry Area:** India, along with Indonesia, accounts for nearly 100% of Asia's agroforestry area, which totals approximately 39.3 million hectares.
- **Global Contribution:** India and Indonesia together contribute around 70% of the global agroforestry area, which is about 55.4 million hectares.
- India reported a net forest gain over 1990–2025, with expansion outweighing losses due to afforestation efforts. This was the result of reduced deforestation in some countries and the expansion of forest area in some others.
- India contributes 9% of global wood removals, ranking 2nd globally as of 2023.
- India ranked 5th among the top global carbon sinks, with its forests removing 150 Mt of CO₂ per year during 2021–2025.
- Asia, including India, saw forest carbon removals increase to 0.9 Gt CO₂ per year in 2021–2025, with deforestation emissions dropping significantly.

India's Forest Status & Changes

- **Total Forest Cover:** As per the **India State of Forest Report (ISFR) 2023**, India's total forest cover is 7,15,343sq km, which is **21.76%** of the country's geographical area.
- **Top States with largest forest cover:** Area wise top three states having largest forest cover are Madhya Pradesh (77,073 sq km) followed by Arunachal Pradesh (65,882 sq km) and Chhattisgarh (55,812 sq km).
- **Mangrove Cover:** India's mangrove cover stands at approximately **4,992 sq. km**, concentrated mostly in **Andaman & Nicobar Islands, Gujarat, Maharashtra, and West Bengal.**
- **Biodiversity & Protected Areas:** India has **106 national parks, 573 wildlife sanctuaries, 115 conservation reserves, and 220 community reserves**, protecting a diverse range of flora and fauna.

14. International Big Cat Alliance

India has elevated its global conservation leadership through the establishment of the **International Big Cat Alliance (IBCA)**, a **flagship initiative of the Prime Minister Narendra Modi, dedicated to safeguarding the future of the world's seven big cat species, including the cheetah. Headquartered in India with ₹150 crore budgetary support for five years till 2027–28**, it was formally launched by the Prime Minister on **9 April 2023 during the commemoration of 50 years of Project Tiger**. Designed to strengthen transnational cooperation, shared research, capacity building and technology transfer among range countries, the Alliance positions India as a global hub for big cat conservation and collaborative ecological stewardship. By embedding Project Cheetah within this broader international framework, India underscores its commitment to collaborative ecological stewardship and presents a unified global strategy for species revival, demonstrating how threatened predators can be restored through science-led, transnational partnerships.

15. Traditional Medicinal Knowledge

- The Traditional Knowledge Digital Library (TKDL) is a prior art database of Indian traditional knowledge established in 2001, jointly by the Council of Scientific and Industrial Research (CSIR) and the then Department of Indian Systems of Medicine and Homeopathy (now Ministry of Ayush).
- The TKDL currently contains information from ancient texts related to Indian Systems of Medicine such as Ayurveda, Unani, Siddha, Sowa Rigpa and Yoga.
- The information existing in local languages such as Sanskrit, Hindi, Tamil, Malayalam, Arabic, Persian, Urdu, Bhoti, etc., has been transcribed into five international languages, namely English, French, German, Spanish and Japanese in the TKDL database.
- The TKDL was established to prevent misappropriation of Indian traditional knowledge by way of intellectual property rights. The access to this prior art database is given to 18 patent offices worldwide that have signed non-disclosure Access Agreements with the CSIR, for the purposes of search and examination in the context of patent applications filed. In addition to the use of TKDL databases by patent offices for examination of patent applications, the CSIR-TKDL Unit also files third party observations and pre-grant oppositions on patent applications related to Indian traditional knowledge, based on the TKDL evidence. Since 2009, 375 patent applications have been either refused, withdrawn/deemed withdrawn or amended or set aside based on TKDL evidence, thus protecting Indian traditional knowledge.

16. Major Initiatives, Reforms and Achievements of MoEFCC

1. Forest Conservation, Afforestation and Green Cover Enhancement

1.1 Ek Ped Maa Ke Naam Campaign

Launched by the Hon'ble Prime Minister, the **Ek Ped Maa Ke Naam** campaign emerged as one of the largest people-centric environmental movements in the world. Implemented through a *Whole-of-Government* and *Whole-of-Society* approach:

- **262.4 crore saplings** were planted till December 24, 2025
- The campaign integrated emotional, cultural and ecological values
- Plantation activities were digitally tracked through the **Meri LiFE portal**.

1.2 Forest and Tree Cover Status

According to the India State of Forest Report (ISFR) 2023:

- The forest and tree cover of the country is 25.17% (21.76% forest cover and 3.41% tree cover) of the geographical area of the country.
- There has been a cumulative gain of 4.83% in forest and tree cover since 2013.
- As per FAO Global Forest Resources Assessment 2025:
 - India ranks 9th globally in forest area (up from 10th).
 - Retains 3rd position worldwide in annual net forest gain.

These achievements underscore India's long-term commitment to expanding green cover while improving forest quality.

1.3 National Compensatory Afforestation Fund Management and Planning Authority (National CAMPA)

- National CAMPA Authority, through its policies and innovative digital reforms, has transformed the planning and management of Compensatory Afforestation and Restoration of Ecosystem Services activities in India.
- By combining robust financial mechanisms, large-scale ecological restoration, and new digital systems—such as the (1) rolling out the pan india Digital APO Portal, (2) Development of Monitoring & Evaluation tool jointly with BISAG-N-, and the (3) National CAMPA Dashboard—National CAMPA is ensuring transparency, accountability, and scientific oversight.
- National Authority CAMPA has approved the Annual plan of Operations of 32 States and Union Territories worth Rs,8561.34 crores during FY 2025-26 .

1.4 Aravalli Landscape Restoration (Green Wall Initiative)

- Aravalli Green Wall initiative proposes restoration of 6.31 million hectares, with priority intervention areas in Rajasthan, Gujarat, Haryana and Delhi.
- A phase-wise restoration plan (2025–2034) focuses on forest restoration, grassland rejuvenation, and mine reclamation through convergence with CAMPA, MGNREGS, Green India Mission, and other programmes.
- In 2025, about 36,025 Ha area have been restored.
- 435 nurseries falling under the Aravalli landscapes across four States, with a combined approximate production capacity of 393.24 lakh seedlings has been established.
- A Detailed Action Plan for Aravalli Landscape Restoration, a major initiative to restore the Aravalli Hill Range was unveiled on 21 May 2025. The Action Plan outlines a science-based, community-led, and policy-supported roadmap to restore the ecological integrity of the Aravallis.

2. Wildlife Conservation and Species Recovery

2.1 Project Tiger and Project Elephant

India continued to strengthen its flagship conservation programmes:

- **58 Tiger Reserves** now cover approximately 85,000 sq km as compared to 46 in 2014.
- New reserve: Madhav Tiger Reserve, MP.
- The **6th cycle of All India Tiger Estimation** was initiated (global first).
- Habitat improvement and corridor protection were prioritised.
- **Elephant Reserves increased to 33 in 2025 in comparison to 26 in 2014**; about 8,610 sq km additional area brought under protection.
- Major Interventions under Project Elephant are as under:
 - India–Bangladesh Transboundary Elephant Conservation Protocol
 - 150 elephant corridors identified across 15 States
 - Ex-gratia for human fatalities enhanced: ₹5 lakh → ₹10 lakh
 - Rail-track mitigation portal; 110 critical sites identified
 - DNA profiling of captive elephants via Gaj Soochna App

2.2 Protected Areas and Community Reserves

- Protected Areas increased to 1134 in 2025 as compared to 745 in 2014.
- Community Reserves under the Protected Area network has increased to 309 in 2025 as compared to 48 Protected Areas in 2014.

2.3 Project Cheetah

Project Cheetah entered an expansion phase in 2025:

- Cheetahs were introduced into **Gandhisagar Wildlife Sanctuary**; planned expansion to Noradehi & Banni Grasslands

- Total cheetah population reached **30**, including **19 cubs born in India**
- Successful reproduction marked a major conservation milestone
 - Next batch of 8 cheetahs from Botswana received (2025)

2.4 International Big Cat Alliance (IBCA)

India continued to lead the **International Big Cat Alliance** (IBCA launched in April 2023 to conserve 7 big cat species globally) with

- Framework Agreement entered into force on 23 January 2025.
- Membership has expanded to **18 countries**
- Strengthened cooperation on conservation, capacity building and research
- IBCA links biodiversity conservation with climate adaptation, ecosystem services, water security, and community livelihoods, reinforcing India's global leadership.

2.5 Launch of 05 National level Projects and 04 National-level Action Plans.

Five National Level Projects for Species Conservation and Conflict Management, which includes Project Dolphin Phase 11, Project Sloth Bear, Project Gharial, a Centre of Excellence for Human-Wildlife Conflict Management, and a Project on "Tigers Outside Tiger Reserve" as well as, four National-level Action Plans & Field Guides for Species Population Assessments and Monitoring Programmes covering River Dolphins, Tigers, Snow Leopard and Bustards were launched during the Wildlife Week 2025 (October 2-8).

2.6 National Board for Wildlife (NBWL):

The 7th NBWL Meeting under the chairmanship of Hon'ble Prime Minister, held at Sansan, Gir on 3rd March 2025, brought together key stakeholders to discuss wildlife conservation efforts, emphasizing collaboration and action points for enhancing biodiversity conservation in India.

3. Biodiversity Conservation and Community Participation

3.1 Biological Diversity Reforms

The **Biological Diversity (Amendment) Rules, 2025** were notified to:

- Simplify compliance
- Encourage research and innovation
- Strengthen benefit-sharing mechanisms

3.2 Access and Benefit Sharing (ABS)

- Reinforced the role of local communities as custodians of biodiversity.
- Launch of a **Certificate Programme in Business & Biodiversity Conservation**.
- Over **₹61 crore** released to local communities under ABS.

3.3 Global Engagement

India actively participated in **CBD COP-16 (Rome, 2025)**, advocating equity, finance, and technology transfer for biodiversity conservation.

4. Climate Change Action and Global Leadership

4.1 Achievements of India's Nationally Determined Contribution (NDC)

- Reduction in emission intensity of GDP by 36% from 2005 level achieved in 2020 - against the target of 45% by 2030
- Installed capacity of electric power from non-fossil fuel based energy sources increased to more than 50% in June 2025 - 5 years ahead of schedule
- Created 2.29 billion tonnes of additional carbon sink between 2005 and 2021 - against the target of creation of 2.5 - 3.0 billion tonnes of carbon sink by 2030

4.2 Indian Carbon Market

Operationalisation of the Carbon Credit Trading Scheme (CCTS) marked a major step in India's climate strategy:

- Compliance and offset mechanisms were established
- Domestic market aligned with international carbon frameworks

India also signed a bilateral mechanism with Japan, in August 2025, under Article 6.2 of the Paris Agreement.

5. Air Quality Improvement and Urban Environment

5.1 National Clean Air Programme (NCAP)

NCAP continued to deliver measurable outcomes:

- **130 cities** covered.
- **₹13,415 crore** provided as performance-linked funding till now.
- **Rs.792.72 crore** released to 82 cities in FY 2025-26 under CP Scheme
- **Recommendations sent to DoE based on air quality performance for release of Rs.2194.25 crore to 48 Million plus cities under XVth Finance Commission air quality grants**
- **103 cities** recorded reduction in PM10 levels in 2024-25 compared to 2017-18, out of which:
 - 64 cities have shown reduction by more than 20%
 - 25 of these cities have achieved a reduction of more than 40%.
- **22 cities** met National Ambient Air Quality Standards for PM10 levels.

Guidelines issued for conducting Ward level Swachh Vayu Sarvekshan in 130 cities.

5.2 Nagar Van Yojana (NVY)

Urban forestry gained momentum:

- Enhanced green spaces in cities and towns.
- **75 projects** sanctioned in 2025.
- A total of **620 Nagar Van projects** sanctioned.
- Total outlay of **₹654 crore**.

6. Waste Management and Circular Economy

6.1 Extended Producer Responsibility (EPR) and Circular Economy

EPR frameworks were implemented across **eight waste streams**:

- Strong foundation laid for a circular economy
- As on 03.12.2025, 71,401 **producers** and **4,447 recyclers** under various waste streams have been registered on the portals.
- Approximately **375.11 lakh tonnes** of waste (plastic packaging waste, battery waste, e-waste, waste tyres) has been recycled with corresponding **EPR certificates generation of 339.51 lakh tonnes**, out of which 237.85 tonnes has been transferred to producers.

7. Coastal, Wetlands, Mangrove Conservation and Eco-Sensitive Zones

7.1 MISHTI Programme

Mangrove restoration gained momentum:

- 4536 ha area brought under restoration in 2025.
- Rs. 46.48 crore released in 2025.
- Total **22,560 ha** of degraded mangroves restored.

7.2 Wetland Conservation

- In 2025, 11 Ramsar Sites were declared and added to the list.
- India now has **96 Ramsar Sites**, the highest in Asia
- **Udaipur and Indore** became India's first Ramsar-accredited Wetland Cities
- India now has the largest Ramsar network in Asia and the 3rd largest globally by number of sites.

7.3 National Coastal Mission

- Extended for 2025–31 with an allocation of **₹767 crore**, strengthening climate resilience of coastal ecosystems.
- As of the 2025-26 season, 18 beaches in India across 7 coastal States and 4 Union Territories have been accorded the Blue Flag Certification.

7.4 Eco-Sensitive Zones (ESZs)

- Conservation planning in India follows an ecosystem-based approach to protect representative habitats.
- Eco-Sensitive Zones (ESZs) regulate development around Protected Areas while supporting sustainable livelihoods of local communities.
- 353 final ESZ notifications covering 496 Protected Areas have been issued, compared to only 23 ESZs covering 25 Protected Areas till 2014.

8. Environmental Awareness, Education and Capacity Building

- **1.12 lakh Eco-Clubs** operational across the country
- **Mission LiFE** mobilised students and citizens towards sustainable lifestyles. As reported on Meri LiFE portal, more than six crore people participated in over 34 lakh LiFE events so far. 4.96 crore Mission Life pledges taken.
- EIACP strengthened digital outreach and knowledge dissemination

9. Activities under key Institutions:

- **National Mission on Himalayan Studies (NMHS):** During the current financial year (2025-

26), 17 new demand-driven projects have been approved to promote action-oriented research across different regions of the Indian Himalayan Region (IHR).

- **Govind Ballabh Pant 'National Institute of Himalayan Environment' (NIHE):** Geotagged 77 springs in Yachuli and Yazali, Keyi Panior district of Arunachal Pradesh. Developed a regional database of 1025 pteridophyte taxa in the Indian Himalayan Region, 6.3% rise in species richness, 13% vegetation cover increase, and the morphilization. Reported two orchids species New to Science; (i) *Phalaenopsis quadridentata* and (ii) *Gastrodia indica*.
- **Botanical Survey of India (BSI):** Published 'Plant Discoveries 2024'; undertook 88 floral surveys and local tours across diverse phyto geographical regions of the country; actively collected, multiplied, and introduced approximately 673 plant species into its network of botanic gardens; published 11 volumes of the Flora of India; 40,503 herbarium sheets digitized, and 88,056 associated metadata records prepared and integrated into the online archives.
- **Zoological Survey of India (ZSI):** 6,938 species were added to the National Zoological Collection; 117 new species were discovered across diverse faunal groups; three patents granted for automated surveillance systems targeting mosquitoes, coleopterans, and protozoans; Digital Sequence Information strengthened with 1,352 DNA barcodes of 567 species submitted to BOLD and GenBank, enhancing molecular reference resources; 128 new records added to the Indian fauna.
- **Indian Council of Forestry Research and Education (ICFRE):** Under Green Credit Programme 4391 ha under restoration across different states; a farmer's variety of *Melia dubia* GK 10 registered; a germplasm repository of 150 *Dalbergia sissoo* individuals from diverse agroclimatic zones of UP, MP, Haryana, Punjab, Rajasthan, HP and UK established at ICFRE-FRI Dehradun; VAN VISTARA - Database Management System for Forest Genetic Resources of India launched by ICFRE-IFGTB, Coimbatore; *Trichoderma frianum* sp. a new taxon within the Harzianum clade, discovered; developed Plywood passing MR grade as per IS: 848-2006 and particle board as per IS 3087 for Grade -2 with zero formaldehyde emission.
- **Indian Institute of Forest Management (IIFM):** Diversifying its academic offerings, the Institute has launched a Doctoral Programme in Management and two new MBA programmes in Sustainable Development, Development and

Sustainable Finance during the year 2025. The students' intake under various post graduate programmes have increased to **275** and the campus strength has grown beyond **500** in 2025. The institute has also expanded geographically, successfully conducting Management Development Programmes through its Kurseong Campus, West Bengal since 2024.

- **Indira Gandhi National Forest Academy (IGNFA):** Total 207 IFS officers attended the MCT Mid-Career Training programme. IGNFA successfully organized several impactful Mid-Career Training Programs and two thematic trainings, which were conducted for the first time in a blended format through the IGOT platform of Mission Karmayogi. It included 426 participants from across the country. The Academy implemented the TARU Portal (Moodle Learning Management System) for the delivery of online and blended learning programmes.

10. International Cooperation and Multilateral Engagement

- India played a leadership role at COP-30 (Brazil), Ramsar COP-15, UNEA-7, BRICS Climate Forum, and Minamata COP-6, reinforcing equity, finance and technology transfer for developing countries.
- Indian delegation participated in the Contact Group on Climate Change & Sustainable Development (CGCCSD) Openended Plenary and the 3rd High Level BRICS Meeting on Climate Change & Sustainable Development held in Brasilia, Brazil, on May 27-28, 2025. The delegation played a key role in finalizing and adopting the 'BRICS Climate Leadership Agenda', reaffirming BRICS' commitment to collective climate action aligned with the Paris Agreement & UNFCCC goals. India's proactive engagement sets the stage for its leadership during India's BRICS Chairmanship in 2026.
- At the Ramsar 15th Conference of Parties (CoP) held at Victoria Falls, Zimbabwe, from 23-31 July 2025, India for the first (since 1982) introduced a Resolution on "Promoting Sustainable Lifestyles for the Wise Use of Wetlands". The resolution received overwhelming support from the 172 Ramsar Contracting Parties, Six International Organisation Partners, and other observers and was formally adopted at the plenary session on July 30, 2025. The resolution is closely aligned with the principles of Mission LIFE.
- The MoEFCC and the Ministry of the Environment of Japan signed a Memorandum of

Cooperation (MoC) related to implementation of Article 6.2 of the Paris Agreement in the Field of Environmental Cooperation during the visit of Hon'ble Prime Minister to Japan for the 15th India Japan Annual Summit held on 29-30th August 2025. The signed MoC will serve as an enabling framework for collaboration in areas pertaining to environmental preservation such as pollution control, climate change, waste management, sustainable use of biodiversity and environmental technologies.

- A delegation from MoEFCC led by Hon'ble Minister Environment, Forest & Climate Change participated in the G20 Environment Ministers' Meeting, in Cape Town, South Africa held from 10-12 September 2025. India supported Integrating Climate and Development, while upholding Equity and Common but Differentiated Responsibilities.
- A delegation participated in the Conference of the Parties to the Minamata Convention on Mercury (COP-6), held in Geneva, from 3rd to 7th November 2025. India successfully obtained the last exemption for another period of 5 years (from 2025 to 2030) to phase out mercury-added products.
- An inter-ministerial delegation led by the Hon'ble Minister Environment, Forest & Climate Change attended 30th session of Conference of Parties (CoP) to the United Nations Framework Convention on Climate Change (COP-30), held in Belém, Brazil from 10- 21 November 2025. India played a constructive and bridge-building role on behalf of developing countries. The participation yielded positive outcomes in the field of Adaptation indicators and finance, Climate Finance under Article 9, Just Transition Mechanism, Technology Implementation Programme and Mitigation Work Programme.
- A delegation led by Hon'ble Minister of State for Environment, Forest & Climate Change participated at UNEA-7 Conference held in Nairobi, Kenya, from December 8-12, 2025. India's resolution on "Strengthening the Global Management of Wildfires" was adopted. The resolution, moved by India, received wide support from Member States, reaffirming global recognition of the urgent need to address the rising threat of wildfires worldwide.
- Indian delegation led by the Director General of Forests & Special Secretary and CITES Management Authority of India participated in the 20th meeting of the Conference of Parties (CoP) to Convention on International Trade in Endangered Species of wild fauna and flora (CITES) held in Samarkand, Uzbekistan from 24th November to 5th December 2025. During

the CoP, several agenda items relating to conservation of wild species that are in trade were discussed and decisions and Resolutions were adopted.

11. Days/events celebrated:

- Celebrated World Wetlands Day 2025 at the Parvati Arga Ramsar Site, in February, 2025. The event highlighted the critical role of wetlands in environmental conservation, biodiversity, and sustainable livelihoods, aligning with this year's theme of 'Protecting Wetlands for our Common Future'.
- MoEFCC, in collaboration with two institutes at the Harvard University, USA, organised a Conference on 'India 2047: Building a Climate-Resilient Future', from 19th – 22nd March 2025, at Bharat Mandapam in New Delhi. The symposium served as a dynamic knowledge sharing platform for experts from diverse fields—including climate science, public health, labour, and urban planning—to deliberate on the urgent challenges posed by climate change and the pathways to a resilient future. The deliberations focused on four key themes: Climate Science of Heat and Water with its implications on Agriculture, Health, Work and the Built Environment.
- International Day for Biological Diversity (IDB) 2025 celebrated on May 22, 2025 with an Exhibition on Biodiversity and Bioresources, in Udaipur (Rajasthan). The theme for IDB 2025 was 'Harmony with Nature and Sustainable Development'.
- World Environment Day (WED) was organised on June 5, 2025. The WED event at Bharat Mandapam was celebrated under the theme 'One Nation, One Mission: End Plastic Pollution', featuring the release of two key publications - Government Initiatives on Ending Plastic Pollution and a Compendium on Eco-alternatives to Banned SUPs and launch of the National Plastic Waste Reporting Portal. The event marked the launch of National Plastic Pollution Reduction Campaign, covering Tiger Reserves, government offices, Swachhta Hi Sewa activities and a Hackathon on eco-alternatives to single-use plastics. A National Expo was also organised showcasing the innovations from 150 startups and recyclers.
- Celebrating 11th International Day of Yoga (IDY) on 21st June, 2025, the MoEFCC in collaboration with the Ministry of AYUSH observed 'Harit Yoga' wherein a Yoga session was followed by tree plantation under the campaign 'Ek Ped Maa Ke Naam'. More than 800 events were organized across 130 National Clean Air Programme (NCAP) cities, with the participation of over three lakh citizens.
- Celebrated Global Tiger Day 2025 on July 29, 2025. A nationwide tree plantation drive was launched. The Hon'ble Minister Environment, Forest & Climate Change unveiled four important publications, each highlighting a unique aspect of India's wildlife conservation.
- Celebrated World Lion Day – 2025 on August 10, 2025, at Barda Wildlife Sanctuary, Gujarat. The grand celebrations of 'World Lion Day' was also organized across 11 districts of Saurashtra, Gujarat, to promote awareness about the conservation and protection of the Asiatic Lion.
- Celebrated World Elephant Day 2025 on August 12, 2025. A nationwide awareness campaign was initiated, engaging approximately 12 lakh students from about 5,000 schools to spread awareness about elephant conservation and the importance of harmonious coexistence between people and wildlife.
- Swachh Vayu Sarvekshan Awards and Wetland Cities Recognition Ceremony 2025 was organized on 9th September 2025. The best-performing cities under Swachh Vayu Sarveshan 2025 conducted in 130 cities under National Clean air Programme (NCAP) were awarded. During the event the 'Ward-Level Swachh Vayu Sarvekshan Guidelines' were released. A 'Compendium of Best Practices under the National Clean Air Programme' was also released. Two cities namely Indore and Udaipur were issued certificates for being recognized as Wetland Cities under Ramsar Convention.
- 31st World Ozone Day on September 16, 2025 celebrated with the theme 'From science to global action', highlighting the success of the Montreal Protocol. Key publications and awareness materials were released, including studies on low-GWP technologies, district cooling systems, and cold chain best practices.
- 51st Foundation Day of Central Pollution Control Board (CPCB) on September 22, 2025. During the event, key initiatives included laying the foundation stone for CPCB's new headquarters, inaugurating regional laboratories in Pune and Shillong, launching SAMEER App 2.0. Technical publications released included "Classification of Polluted River Stretches, 2025" and a manual on identifying polluted water bodies using freshwater benthic macroinvertebrates.
- Wildlife Week 2025 celebrations were organized at FRI Campus, Dehradun on 6th October 2025. 5 National Level Projects for Species Conservation and Conflict Management, as well as, 4 National-level Action Plans & Field Guides for Species Population Assessments and Monitoring Programmes were launched during the event.
- International Snow Leopard Day was observed on October 23, 2025, with a unique initiative titled

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'#23for23', encouraging people across the country to engage in physical activities for 23 minutes to raise awareness about the conservation of snow leopards and their fragile habitats.

12. Major Reforms by MoEFCC in 2025

12.1 Green Credit Programme (GCP) – Revised Framework

- Expanded participation to public and private entities for restoring degraded forest land.
- Restoration to be carried out directly by user agencies.
- Green Credits issued after **5 years of restoration** on achieving **≥40% canopy density** (1 credit per tree older than 5 years).
- Credits may be used once for:
 - Compensatory Afforestation (CA),
 - CSR obligations, or
 - Statutory plantation requirements.

12.2 Van (Sanrakshan Evam Samvardhan) Amendment Rules, 2025

- Expanded **land bank creation** in degraded / government / recorded forest lands (≤ 0.4 canopy).
- Afforestation created under govt. schemes can be used for CA.
- Streamlined approvals for **critical, strategic, deep-seated and atomic mineral mining** with enhanced CA norms.
- Provision for extension of in-principle approval validity beyond 5 years.
- **No CA** for underground mining without surface rights.
- Offline proposal submission allowed for **defence / strategic / emergency projects**.

12.3 Second Amendment to Rules, 2023 (Nov 2025)

The Van (Sanrakshan Evam Samvardhan) Rules, 2023 were amended enabling the Nodal Officer' of the State to mandatorily assist and facilitate the user agency in the identification of degraded forest land for compensatory afforestation.

12.4. Involvement of local forest officer in cases of land acquisition

Directions dated 13.11.2025 issued enjoining the project proponent to share copy of the land acquisition notification with the local Forest Department official so as to clearly delineate forest land at the time of acquiring land for any infrastructure project.

12.5 Reforms under Air Acts and Water Acts

12.5.1 Uniform Consent Reforms

- **Nation-wide uniform guidelines** for Consent to Establish / Operate across SPCBs/PCCs.
- Industries with prior Environmental Clearance exempted from CTE.

12.5.2 Industrial Classification & Compliance

- Revised industry classification (Red / Orange / Green / Blue / White) to encourage better compliance.

- States empowered to classify new sectors under White category.
- **86 sectors notified as White category** — exempted from CTE/CTO.

12.6 Reforms on EPR and Circular Economy:

- As part of Circular Economy action plans, EPR regulations have been notified for eight waste categories, namely plastic packaging, e-waste, battery waste, used oil, waste tyres, end-of-life vehicles, construction & demolition waste, and scrap of non-ferrous metals.
- The following EPR regulations/ amendments in existing EPR regulations have been notified in 2025:
 - Environment Protection (End-of-Life Vehicles) Rules, 2025 notified on 06.01.2025 for environmentally sound management of end-of-life vehicles.
 - Environment (Construction and Demolition) Waste Management Rules, 2025 notified on 04.04.2025 for environmentally sound management of construction and demolition waste.
 - “Extended Producer Responsibility for Scrap of Non-Ferrous Metals” notified on 01.07.2025 through amendment of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for environmentally sound management of scrap of non-ferrous metals.
 - Battery Waste Management Amendment Rules, 2025 notified on 24.02.2025 with respect to labelling of EPR registration number on batteries.
 - Plastic Waste Management (Amendment) Rules, 2025 notified on 23.01.2025 with respect to labelling of EPR registration number.

12.7 Environment Protection (Management of Contaminated Sites) Rules, 2025:

Environment Protection (Management of Contaminated Sites) Rules, 2025, notified on 24.07.2025, provides a framework for identification, assessment and remediation of contaminated sites in the country.

12. 8 Major Reforms on Environmental Clearance Process for Ease of Doing Business

- Mining projects of minerals reclassified from ‘minor’ to ‘major’ by the Ministry of Mines, with lease area up to 5 hectares, shall be appraised as Category ‘B2’ under the EIA Notification, 2006.
- The EC framework for building construction projects has been rationalised by permitting changes in design and planning without requiring Environment clearance (EC) amendments.
- Airport expansion and modernisation projects with valid ECs and no additional land requirement are now appraised as Category B2 projects, exempt from EIA and public hearings.
- Green belt and green cover requirements for industrial estates/parks and individual industries

have been rationalized based on pollution potential.

- Delays arising from court or NCLT proceedings are excluded from EC validity period.
- **The Environment Audit Rules, 2025**, introduced a cadre of Certified Third-Party Environmental Auditors to conduct on-site verification and compliance audits under major environmental laws, reinforcing the government's **Trust Based Compliance – Ease of Doing Business**.
- **PARIVESH**: PARIVESH 2.0 achieved complete automation in clearance management, providing an integrated digital platform for Environment, Forest, Wildlife, CRZ clearances. It integrates Geographic Information System (GIS) for real-time decision support, improves transparency through online tracking, and facilitates Ease of Doing Business while ensuring accountability and environmental safeguards. By offering a single-window interface for project proponents, appraisal committees, and regulatory authorities, PARIVESH 2.0 strengthens the Government's commitment to "Minimum Government, Maximum Governance" and promotes sustainable development.
- Integrated with PM Gatishakti NMP, NSWS (National Single Window System), CAMPA's digital payment gateway, and QCI-NABET's accreditation portal, PARIVESH embodies the whole-of-government approach envisioned by the Hon'ble Prime Minister. The initiative not only improves **Ease of Doing Business** for industry but also advances India's environmental governance through sustainability, precision, and citizen-centric design.

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By: **Arvind Mishra Sir** (साधना IAS)

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SCIENCE TECH

1. Microgravity

Context: “Indian Astronaut Grp Capt. Shubanshu Shukla to Study physical, cognitive and physiological responses in Space, as also the Cognitive Impact of continuous Electronic Displays in Microgravity” says Union Minister Dr. Jitendra Singh

- ✓ Microgravity is the condition in which people or objects appear to be weightless. The effects of microgravity can be seen when astronauts and objects float in space. Microgravity can be experienced in other ways, as well. “Micro-” means “very small,” so microgravity refers to the condition where gravity seems to be very small. In microgravity, astronauts can float in their spacecraft – or outside, on a spacewalk. Heavy objects move around easily. For example, astronauts can move equipment weighing hundreds of pounds with their fingertips. Microgravity is sometimes called “zero gravity,” but this is misleading.

Microgravity consequences

- Fluids do not receive reaction from the recipient it is in. That is, liquids can be still without touching other things and without recipients pulling them up. Therefore, fluids are under the effects of less forces and can be studied in different conditions.
- Density differences do not create fluid flow. On Earth, denser fluids go under lighter ones (buoyancy). In microgravity there is no leaning making fluids or gases to order in such a way. This means that in such conditions fluids and gases are stiller in the presence of density and temperature differences. If the objective of a research needs the fluid to remain still for a long time period under controlled temperature circumstances, a micro-g environment is perfect.
- Support structures unload. Many things on Earth have internal or external structures that support everything not to let it fall. For example, human bodies have hard bones to let other parts of the body lean on them. In microgravity, bones do not support the weight of anything.
- Hanging Mass based mechanisms work in a different way. All the mechanisms based on pendulum do not work in the same way. A pendulum clock would not work in space, and there are many other mechanisms that would not work either.

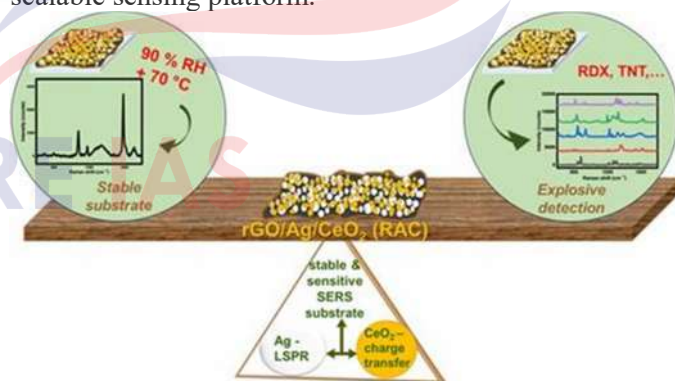
2. Smart Nano-Materials Could Help Detect Explosives With Layers Of Innovation

A novel sandwich of smart nano-materials could now help detect harmful chemicals including explosives like TNT and RDX even at trace levels. It holds promise in areas like airport security and environmental pollution monitoring.

In recent years, numerous methods have emerged to detect harmful chemicals that impact our daily lives. Among them, surface-enhanced Raman spectroscopy (SERS) has stood out for its exceptional sensitivity and reliability. SERS works by amplifying the molecular “fingerprint” signals of chemicals, allowing for precise identification even at extremely low concentrations.

Noble metals like gold and silver have traditionally been vital for signal enhancement. However, the high cost of gold and the poor long-term stability of silver and remain significant obstacles to their commercial viability.

Researchers from the Centre for Nano and Soft Matter Sciences (CeNS), Bengaluru, an autonomous institute under the Department of Science and Technology (DST), have developed an innovative multi-layer nanomaterial combining reduced graphene oxide (rGO), silver nanoparticles (Ag) and cerium oxide (CeO_2) on a glass substrate. Each layer contributes a specific function. The team fabricated the composite material using physical vapor deposition techniques, resulting in a uniform and scalable sensing platform.



While silver nanoparticles are excellent at amplifying Raman signals, they are highly prone to oxidation, especially in humid or warm conditions—reducing their effectiveness over time. The coating of a thin layer of cerium oxide brings two key advantages. It enhances charge transfer between the material and the analyte, further boosting the fingerprint Raman signal of the analyte molecule and also acts as a protective barrier,

shielding silver from humidity and temperature-induced degradation and ensuring long-term stability.

Environmental chamber tests revealed that the substrate maintained its high performance even under extreme conditions—90% humidity and 70 °C—proving its exceptional stability and reliability.

Meanwhile, the rGO layer plays a crucial role, effectively quenching the overwhelming fluorescence emitted by silver nanoparticles, which would otherwise drown out the distinct Raman fingerprints of the analyte. This clever suppression ensures that the true detection signals shine through with clarity and precision.

The researchers demonstrated the material's high performance using 4-mercaptobenzoic acid (MBA) as a model analyte, achieving a detection limit as low as 10 nM. More impressively, the substrate demonstrated the ability to detect a wide range of explosives, including TNT and RDX, at nanomolar concentrations, highlighting its broad potential for trace-level contaminant detection.

With its excellent sensitivity, durability, and simple fabrication process, this advanced SERS substrate holds strong promise for real-world applications such as airport security and environmental pollution monitoring where detecting chemicals quickly and accurately can make all the difference

3. Axiom-4

4. A New 'Clustered Regularly Interspaced Short Palindromic Repeats' (CRISPR) technology can help plants outsmart heat and disease

CRISPR tools usually work like scissors that cut DNA to create lasting changes. However, Prof. Pallob Kundu and his team used a modified version called dCas9. This version does not cut DNA. Instead, it acts like a switch that can turn genes on or off. The switch stays off until the plant experiences stress.

To develop the tool, the scientists borrowed a clever part from the tomato's own biology—a small piece of a natural protein called *NACMTF3*. This part, called the TM domain, works like a tether and keeps the dCas9 switch locked outside the control room (nucleus). But when under stress, for example, due to heat, the TM domain lets go off the tethering function. In a moment, the switch is released and moves into the control room, flipping on the genes that help the plant defend itself.

This research, published in the *International Journal of Biological Macromolecules*, can help solanaceous plants handle various stresses, such as fighting pathogens and beating the heat.

The team tested this smart system in tomatoes, potatoes and tobacco and found it working efficiently—especially in tomatoes under attack by the bacterial pathogen *Pseudomonas syringae*, which becomes even more dangerous during heat waves. Normally, heat weakens the plant's immune system, making it more susceptible to infection. To counter this, the scientists turned on two key defense genes, *CBP60g*, and *SARD1*,

exactly when the plant needed them. This helped the tomatoes fight back against the disease.

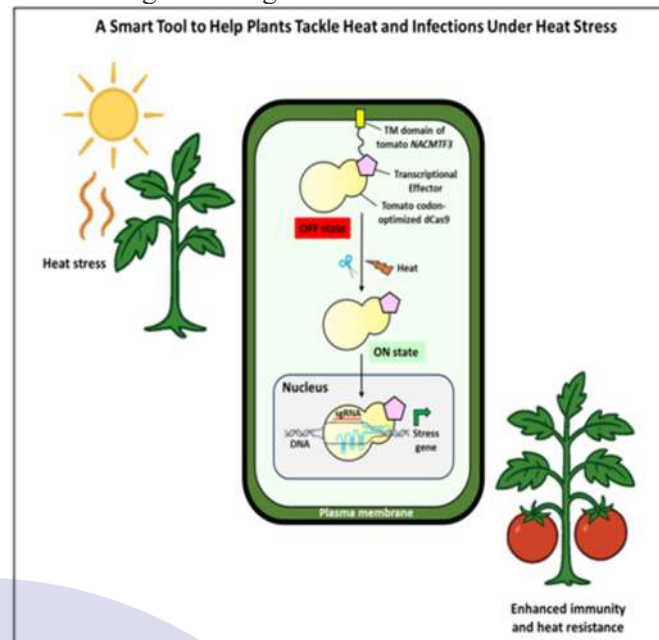


Fig: The diagram shows how the smart molecular tool helps tomato plants survive harsh conditions.

Using this tool, the team also turned on two “heat helper” genes—*NAC2* and *HSFA6b*—only during high temperatures. These genes helped the tomato plants remain green, retain more water and stay healthy despite the heat.

With rising temperatures and unpredictable weather, farmers around the world are struggling to grow healthy crops. This smart gene switch gives plants an edge. It saves energy by acting only during danger and boosts the plant's natural defense mechanism just in time.

In the future, this technology could benefit not just tomatoes and potatoes but also eggplants, chilies and other foods crops that we rely on, paving the way toward smart agriculture.

5. Biostimulants

In News: Union Agriculture Minister Shri Shivraj Singh Chouhan holds key meeting on biostimulant sales

What are they:

Plant biostimulant means a substance, micro-organism, or mixture thereof, that, when applied to seeds, plants, the rhizosphere, soil, or other growth media, act to support a plant's natural processes independently of the biostimulant's nutrient content, including by improving nutrient availability, uptake or use efficiency, tolerance to abiotic stress, and consequent growth, development, quality, or yield

Biostimulants are vital to meeting growing agricultural demand in a more sustainable manner. The focus of our industry is to develop and commercialize biostimulant products that are highly compatible with the most advanced farming techniques used in Integrated Crop

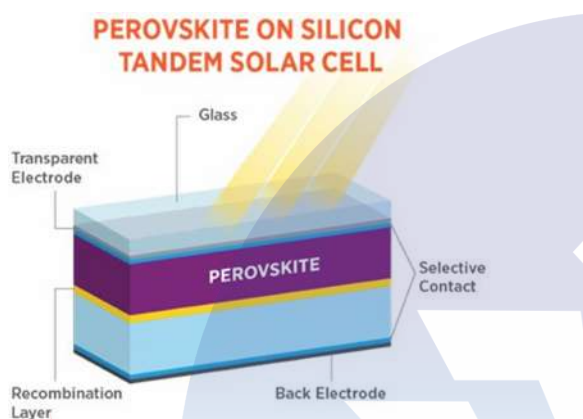
Management (ICM), the cornerstone of sustainable agriculture.

Biostimulants contribute to sustainable agriculture by:

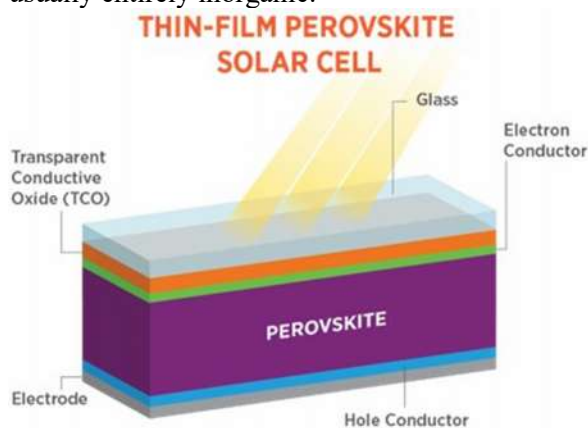
- Improving plant tolerance to abiotic stress on plants, including drought, extreme temperatures (cold, frost, and heat), and salinity
- Enhancing uptake and efficient use of nutrients, both applied and existing
- Improving soil health by enhancing beneficial soil microorganisms
- Enhancing crop quality through plant health and vigor
- Increasing harvestable yields

6. Perovskite Solar Cells

In news: NCPRE's pioneering work in high-efficiency, low-cost Silicon-Perovskite Tandem Solar Cells is a game-changer for India's solar energy future: Union Minister Shri Pralhad Joshi



- Perovskites are a family of materials that have shown potential for high performance and low production costs in solar cells. The name "perovskite" comes from their crystal structure. These materials are utilized in other energy technologies, such as fuel cells and catalysts. Perovskites commonly used in photovoltaic (PV) solar cells are more specifically called "metal-halide perovskites" since they are made of a combination of organic ions, metals, and halogens; perovskites in other applications may be made of oxygen instead of halogens and are usually entirely inorganic.



- Metal-halide perovskites are the main absorbing material, or "active layer," in a perovskite solar cell. In this potentially inexpensive technology, a thin layer of perovskite absorbs light, which excites charged particles called electrons; when these excited electrons are extracted, they generate electric power. Perovskite cells are referred to as thin-film because they require much thinner active layers relative to crystalline silicon PV.

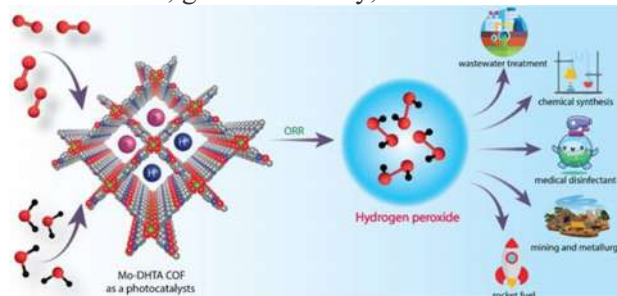
7. Photocatalytic : hydrogen peroxide

Sunlight and water could now be turned into a powerful disinfectant - Hydrogen peroxide (H_2O_2) - using a photocatalyst. The new method of synthesis of this chemical, with uses ranging from cleaning wounds, purifying water, powering fuel cells and driving industrial chemistry, could open up new avenues for green chemistry.

Hydrogen peroxide (H_2O_2) is a vital oxidizing agent with broad applications in chemical synthesis, sterilization, wastewater treatment, and fuel cells. Known for its eco-friendly nature of degrading or breaking down into only water and oxygen - H_2O_2 is a key component in sustainable chemical processes. However, its conventional production methods are energy-intensive, environmentally hazardous, and costly.

Traditional photocatalysts like metal oxides, graphitic carbon nitride ($g-C_3N_4$), polymers and metal organic frameworks (MOFs) face limitations due to wide band gaps and limited stability. In contrast, Covalent Organic Frameworks (COFs) provide advantages like high surface area, tunable porosity, narrow band gaps, and photostability. Still, they often lack active sites and efficient electron mobility. Embedding metal centres into COFs (forming M-COFs) addresses these issues, enhancing catalytic activity, charge separation, and overall photocatalytic performance.

In a significant scientific breakthrough, researchers from S. N. Bose Centre for Basic Sciences (SNBCBS), an autonomous institute of the Department of Science and Technology (DST), have developed a novel approach for using a cutting-edge material called Mo-DHTA COF, short for *dimolybdenum paddlewheel-embedded covalent organic framework* for synthesizing H_2O_2 directly from water and sunlight. This innovation offers a cleaner, more efficient, and recyclable route for hydrogen peroxide production, potentially transforming industries such as pharmaceuticals, green chemistry, and materials science.



The Mo-DHTA COF integrates dimolybdenum paddlewheel units with α -hydroquinone linkers, which are aromatic organic derivatives of benzene with hydroxyl groups at a para position, forming a robust framework capable of binding oxygen and facilitating its reduction under visible light. Upon light irradiation, the material, which acts like a highly organized molecular scaffold, studded with metal atoms that act like mini solar-powered factories, generates excitons, which drive the photocatalytic reactions. Electrons reduce oxygen to superoxide radicals, which then react with protons and additional electrons to produce H_2O_2 .

Remarkably, this material demonstrates outstanding photocatalytic efficiency in different media, generating substantial amounts of hydrogen peroxide in ethanol and benzyl alcohol and even functioning effectively in pure water. Furthermore, the Mo-DHTA COF exhibits excellent structural stability and recyclability, making it a durable catalyst for long-term use. The study by the team consisting of Bidhan Kumbhakar, Avanti Chakraborty, Uttam Pal, Gaurav Jhaa, Sukanta Mondal, Abhik Banerjee, Tanusri Saha-Dasgupta and Pradip Pachfule was published in the journal – ‘Small’.

This innovation opens up new avenues in the Pharmaceutical and healthcare sectors, by enabling more cost-effective and sustainable H_2O_2 production, Environmental remediation, through green methods of sterilization and pollutant treatment and Materials and energy science, with potential applications in water splitting, CO_2 reduction, and the generation of value-added chemicals. Future research will likely focus on optimizing the structure and composition of M-COFs for even greater performance and scaling the technology for industrial use. Exploring other metal-embedded frameworks may also yield further improvements in efficiency and sustainability.

The development of Mo-DHTA COF represents a major leap forward in photocatalytic technology. By harnessing sunlight and water under eco-friendly conditions, it provides a promising alternative to traditional methods, marking a pivotal step toward cleaner, low-cost, greener chemical synthesis with wide-reaching industrial impact. Scaling this technology could change how we make not just hydrogen peroxide, but a whole array of green chemicals.

8. APPLICATION OF ATOMIC ENERGY IN VARIOUS SECTORS

Atomic energy has been considered beneficial in the sectors of Agriculture, Food Preservation, Defence & Security, Healthcare, Water Treatment etc., besides meeting the energy demand of the nation. Major contributions of atomic energy in various fields are mentioned below:

Nuclear Agriculture:

Radiation induced mutagenesis and cross breeding have enabled development of 71 new crop varieties including

rice, pulses, oilseeds, jute, sorghum, wheat etc. for commercial cultivation. These varieties developed by Bhabha Atomic Research Centre (BARC) a constituent Unit of Department of Atomic Energy (DAE) have attributes like high-yield, early maturity, biotic & abiotic stress-tolerant, climate resilience etc. These varieties are being cultivated across the country, providing economic benefits to the farmer community.

The Board of Radiation and Isotope Technology (BRIT), an industrial unit of DAE produces and supplies Co-60 based sealed radiation sources for radiation processing of food and agricultural products.

Food Preservation:

Radiation processing has been effectively used to extend the shelf life of agricultural produce, fish and spices. The shelf-life extension of mangoes up to 35 days has enabled cost effective export of mangoes by sea route. The shelf-life extension of onion & potatoes up to 7.5 months and 8 months respectively reduces the spoilage and economically beneficial to the farmers. The radiation processing of various food items is also approved by the Food Safety and Standards Authority of India (FSSAI).

Raja Ramanna Centre for Advanced Technology (RRCAT) a constituent Unit of DAE has also developed 10 MeV, 10 kW food irradiation linac useful for setting up food irradiation facilities within the country. Technology of the food irradiation linac is available to the Indian industries and institutes.

Sheetal Vahak Yantra-“SHIVAY” Technology” has been developed for transportation of fruits and vegetables under combination of controlled Temperature, Humidity and inert atmosphere to maintain freshness during transportation. The technology is patented in India and China. The technology uses liquid nitrogen for refrigeration source. Therefore, it is economic, 100% eco-friendly with no consumption of diesel or electricity for cooling. The technology has been transferred to M/s Tata Motors, Pune under incubation mode and to M/s Furmech, Indore for development of standalone liquid nitrogen based refrigerated containers.

“MATSYA” system, which is derived from “SHIVAY” technology, is developed for transportation of fisheries. The system is installed on Sagar Harita, fishing vessel of Central Institute of Fisheries Technology (CIFT), Kochi for trials of storage of fresh catch of fish in controlled temperature, controlled humidity and inert atmosphere for freshness.

Defence & Security:

BARC has indigenously developed a spin-off technology of lightweight and cost effective Bhabha Kavach, a bullet-proof jacket qualified for threat level III+ [Bureau of Indian Standards (BIS) Level 5 protection], now in use by Border Security Force (BSF), Central Reserve Police Force (CRPF), Central Industrial Security Force (CISF), Indo-Tibetan Border Police (ITBP), and Indian Army. The technology has been successfully

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transferred to Indian companies for commercialisation. Indigenous Cargo Container Scanner system has been successfully designed, developed & demonstrated. This import substitute technology is available for field trials and subsequent deployment.

Healthcare:

In BARC Radio isotopes for health care are produced either through research reactors or separation of useful isotopes from processing of spent nuclear fuel. BARC has indigenously developed import substitute & cost-effective Ruthenium-106 (Ru-106) eye plaques for treatment of eye cancer. These plaques are produced from Ru-106 extracted from nuclear waste. Other useful radio-isotopes extracted from the nuclear waste is Strontium-90 (Sr-90) and Caesium-137 (Cs-137) for production of Yttrium 90 (Y-90) for cancer treatment and Cs glass pencil for blood irradiator. BARC also produces several radioisotopes like Iodine-125 (I-125), Iodine-131 (I-131), Lutetium 177 (Lu-177), and Samarium (Sm-153), for radio-pharmaceuticals and supplies to various hospitals through BRIT for cancer diagnostic and therapeutic applications.

Radio-isotope Production: The indigenous production of Strontium-89 (Sr-89) is an important societal need and a valuable import substitution; it is a pure beta emitter with a half-life of 50.5 days and used for palliative care of bone metastatic cancer. Production of Sr-89 with high specific activity at Fast Breeder Test Reactor (FBTR), Kalpakkam was successfully demonstrated. The product satisfied all the Quality Control Parameters as per the US, European and International Pharmacopeia. Bio distribution study has been completed. This technology ensures increased availability and complete import substitution.

The radioisotopes produced at Medical Cyclotron Facility (MCF) are used for cancer diagnostics and therapy. The radioisotopes/radiopharmaceuticals, produced in collaboration with BRIT, are supplied to various hospitals/Nuclear Medicine Centres, on regular basis, which have reduced the cost of treatment of common man.

Linac for irradiation: RRCAT has indigenously developed 10 MeV industrial electron linacs, process technology and electron beam radiation processing facility for terminal sterilization of medical device. First of its kind facility in the country, this is operating in commercial mode at Indore with Atomic Energy Regulatory Board (AERB) and Food and Drug Administration (FDA) licenses and is regularly providing electron beam processing services for terminal sterilization of regulated medical devices. Since starting operations in year 2021, the facility has provided electron beam services for sterilization of more than 1 Crore medical devices for various medical devices industries.

BRIT remains the major producer and supplier of diagnostic and therapeutic radiopharmaceuticals for early diagnosis of diseases and for cancer treatment.

Water Treatment:

Another spin-off technology of radiation-grafted cotton cloth-based matrix has been developed for effective treatment of textile/ dye effluents for removal of dye. The filtered water can be re-used for industrial purposes. This innovation offers a low cost, efficient solution for environmental protection. The technology is transferred to private entrepreneur for commercialisation.

Nuclear Power:

Nuclear Power Plants (NPPs) generated about 56681 Million Units (MUs) of clean electricity, contributing to about 3% of the total electricity generated in the country and saved about 49 Million Tons of CO₂(e) emissions into the environment. The average tariff of electricity from nuclear power plants during the year 2024-25 was Rs 3.83 per unit.

Other such significant contributions in various fields: U-233 fuelled Kalpakkam Mini Reactor (KAMINI) is continuing its successful operation for neutron radiography of critical components for the nuclear and strategic sectors, neutron shielding and neutron activation of materials. This facility is also utilized for conducting neutron beam experiments. The pyro devices used in the space programme were routinely tested in KAMINI. BRIT manufactures and supplies Iridium-192 (Ir-192) radiography exposure devices to industry and provides isotope application services to the petrochemical and other industries for troubleshooting the issues encountered.

Nuclear radiation is used to develop improved crop varieties suitable for different agro-ecologies of the country. These varieties exhibit higher yield compared to existing check varieties. These varieties also have better nutritional quality or resistance to biotic and abiotic stresses. Farmers in several states have experienced enhanced crop productivity by cultivating these improved varieties which in turn is helpful for improving farm income. Crop losses due to soil borne diseases can be minimised by using gamma ray-induced Trichoderma mutant strain.

The radiation technology for food preservation is being commercially used across the country. Today there are 28 food irradiation facilities operational in the country, out of which 22 are owned by the private players.

In Uttar Pradesh, a radiation facility, M/s. Solas Industries Private Limited, Kosi Kalan, Mathura is operational for food preservation since 2021. One more irradiation facility is under construction in Lucknow by M/s. Q-Line Health Care Private Limited.

BRIT helps Private/State Government Sectors in setting up gamma radiation processing facilities for food irradiation & medical devices sterilization by providing necessary technical inputs & supplying Co-60 sources. Till date, 39 such facilities have been commissioned in the country. Two such facilities have been commissioned in private sector in the state of Uttar

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Pradesh and they are providing radiation processing services on demand basis.

9. **BioE3 (Biotechnology for Economy, Environment & Employment) policy**

- The Union Cabinet has approved BioE3 (Biotechnology for Economy, Environment & Employment) policy in August, 2024 to augment innovation-driven support to R&D and entrepreneurship in 6 thematic sectors and accelerate technology development & commercialization by establishing Biomanufacturing & Bio-AI hubs and Biofoundry.
- The policy is enabling industrialization of biology to promote sustainable and circular practices to address some of the critical societal issues-such as climate change mitigation, food security and human health. The policy is also building a resilient biomanufacturing ecosystem in our nation to accelerate cutting-edge innovations for developing bio-based products.
- Three indigenous robust microalgal species namely,

Chlorella sorokiniana I, Parachlorellakessleri-I and

Dysmorphococcus globosus-HI, were experimented on the International Space Station (ISS) to study the impact of microgravity, CO₂ and O₂ levels simultaneously in space and on the Earth (indoor lab). In the second experiment, two cyanobacteria strains i.e., an Indian isolate of Spirulina, and a very fast-growing Synechococcus strain were also experimented for their growth on two different nitrogen sources nitrate and urea in the microgravity conditions provided by the ISS.

- These microalgae have the potential to function effectively in microgravity environments and grow fast on Earth to produce value-added products of industrial importance, while in space, capturing excess CO₂ from the ISS cabin and making vital nutrients and food supplements to support the astronauts' lives in space. On the other hand, the cyanobacteria experiment is expected to demonstrate the ability of cyanobacteria to recycle both C and N and will be an important progress towards developing cyanobacteria-based biological life support systems for futuristic space missions.
- The Department of Biotechnology-supported Biofoundry for microbial biomanufacturing will serve as a hub for interdisciplinary collaborations,

research, and development in the fields of microbial synthetic biology, metabolic engineering, genetic engineering, and biomanufacturing. The ICGEB Biofoundry will catalyse scientific breakthroughs, drive economic growth, and address key healthcare, agriculture, and environmental sustainability challenges by providing access to cutting-edge technology, expertise, and resources for microbial biomanufacturing. Biofoundry will operate on the principle of Design, Build, Test and Learn (DBTL) model.

- The Design component of Biofoundry includes the use of AI, big data, computational biology, and bioinformatics, as well as specific domain knowledge for the DNA sequence, pathway analysis, host selection, and experimental design. The Build component of the Biofoundry includes DNA assembly, combinatorial assembly, and organism transformation. This would be followed by the Test component, which would include screening of the transformants, analysis of the products and optimization of the pathways. Finally, the Learn component of Biofoundry would analyse the outcomes of the experiment and use machine learning for further optimization of the pathway.

10. **Closed Nuclear Fuel Cycle**

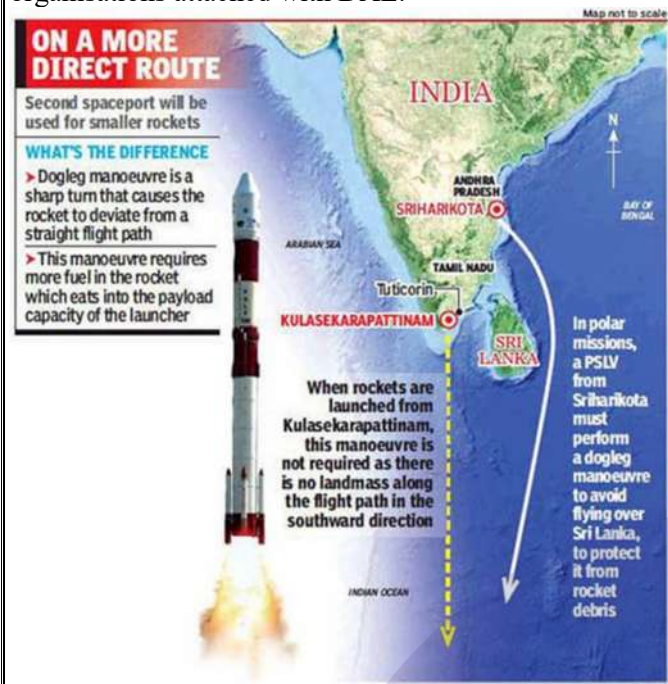
India follows a Closed Nuclear Fuel Cycle, aligned with its three-stage nuclear power programme in order to optimally utilize India's limited uranium resources and to exploit its large thorium reserves for long term energy security.

- It involves the recovery and recycling of fissile and fertile material from spent nuclear fuel (SNF), rather than disposing of it as waste.
- This approach enables enhanced utilization of nuclear material resources, improves energy security, and minimizes high-level radioactive waste volumes.
- The programme aims to use domestic uranium in the Pressurised Heavy Water Reactors (PHWRs) and use plutonium obtained from the reprocessing of spent fuel of PHWRs in Fast Breeder Reactors. Large scale use of thorium will subsequently follow, first to breed Uranium-233 from Th-232 and then utilize U-233 as fuel.

Reprocessing facilities are operationalized for reprocessing domestic nuclear spent fuel from PHWRs. For realization of the second stage of the nuclear power programme, Fast Breeder Test Reactor and other facilities were established for material research and proof of design concepts. Prototype Fast Breeder Reactor (PFBR) & integrated nuclear reprocessing plant for fast reactor fuel is under construction at Kalpakkam.

Research on thorium utilization for the third stage of the closed fuel cycle continues to be a high priority R&D

area of the Department of Atomic Energy (DAE). In this regard, necessary R&D is being carried out in Bhabha Atomic Research Centre (BARC) and other research organisations attached with DAE.



11. KULASEKARAPATTINAM SPACEPORT

ISRO's new spaceport in Kulasekarapattinam, Tamil Nadu, is a dedicated facility for Small Satellite Launch Vehicles (SSLVs) designed to bolster India's commercial launch capabilities. Located on the southern coast, it allows direct southward launches for polar orbits, enhancing payload capacity to 300 kg

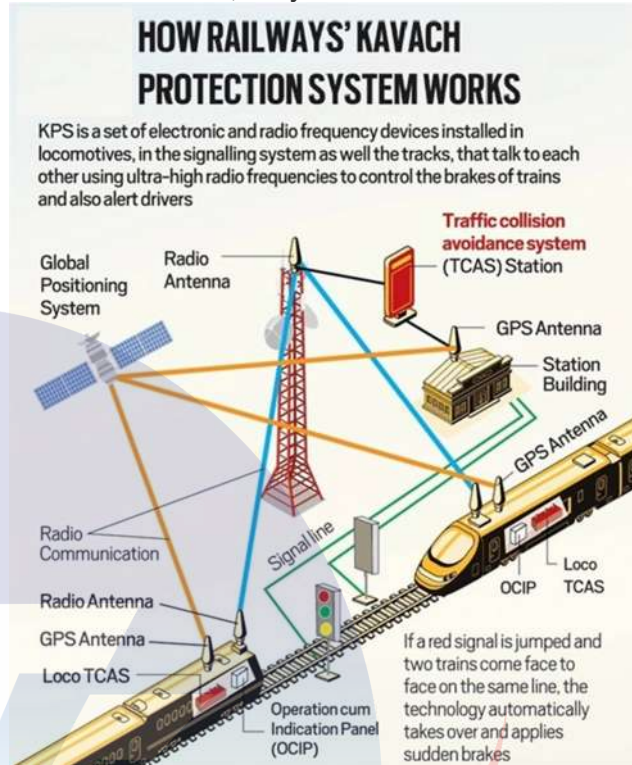
- Location: Situated in the Thoothukudi district of Tamil Nadu, which is 88 km from ISRO's propulsion research complex in Mahendragiri.
- Advantages: Provides direct access to southward trajectories, avoiding the need for complex, fuel-consuming maneuvers around Sri Lanka required from Sriharikota

12. Kavach

Kavach is an indigenously developed Automatic Train Protection (ATP) system. Kavach is a highly technology intensive system, which requires safety certification of highest order (SIL-4).

- The KAVACH is an indigenously developed Automatic Train Protection (ATP) system by the Research Design and Standards Organisation (RDSO) in collaboration with the Indian industry.
- The trials were facilitated by the South Central Railway to achieve safety in train operations across Indian Railways. It is a state-of-the-art electronic system with Safety Integrity Level-4 (SIL-4) standards.
- It is meant to provide protection by preventing trains to pass the signal at Red (which marks danger) and avoid collision. It activates the train's braking system automatically if the driver fails to

control the train as per speed restrictions. In addition, it prevents the collision between two locomotives equipped with functional Kavach systems. The system also relays SoS messages during emergency situations. An added feature is the centralised live monitoring of train movements through the Network Monitor System. 'Kavach' is one of the cheapest, SIL-4 certified technologies where the probability of error is 1 in 10,000 years.



- Kavach assists Loco Pilots by automatically applying brakes in situations where speed limits are exceeded or when safety is compromised, thereby preventing accidents and enhancing safe train operations, including during adverse weather conditions

13. Blockchain

In news: Recognizing its vast potential, the Ministry of Electronics and Information Technology (MeitY) has developed the National Blockchain Framework (NBF) to provide a unified architecture for deploying blockchain solutions across various sectors. The NBF aims to guide the integration of blockchain into public service delivery, ensuring greater transparency, accountability, and efficiency.

Blockchain is a distributed, transparent, secure, and immutable database that functions like a ledger of records or transactions, resistant to tampering and accessible across a network of computers.

Understanding Types of Blockchain

- Public Blockchain: In this network, all nodes can access records, verify transactions, perform proof-of-work, and add new blocks.

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- **Private Blockchain:** It is a permissioned blockchain, restricted to selected participants within an organization. The controlling entity determines the levels of security, authorization, and access, making it ideal for government applications. By design, it enhances trust among participants while ensuring data confidentiality and operational efficiency.
- **Consortium Blockchain:** In this network, the blockchain is semi-decentralized, governed jointly by multiple organizations for shared data management and validation.
- **Hybrid Blockchain:** It is a blend of public and private blockchains allowing selective data access.

National Blockchain Framework: The National Blockchain Framework (NBF), initiated in March 2021 with a budget outlay of ₹64.76 crore, reached a significant milestone with its official launch on 4 September 2024. NBF is designed to accelerate the development and deployment of permissioned blockchain-based applications, marking a strategic step towards building a secure, transparent, and scalable digital infrastructure for India.

14.6G

In news : The Government of India is steering the nation's transition towards next-generation connectivity through a series of strategic initiatives aimed at advancing 6G technologies.

- 6G, or sixth-generation wireless technology, will succeed 5G and make internet connections significantly faster and smoother. It will use higher radio frequencies than 5G, letting it handle vast data at once with almost no delay.
- 6G aims to send and receive information in just *one microsecond*, that's 1,000 times faster than the response time of 5G. This means instant connections with almost zero lag, which will be useful for things like remote medical surgeries, smart robotics, and real-time gaming.
- The 6G network will also improve features like advanced imaging, precise location tracking, and creating lifelike virtual experiences. When combined with artificial intelligence (AI), it will be smart enough to decide automatically where to store, process, and share data, making technology more efficient and responsive everywhere.

Bharat's 6G Mission

- India's pursuit of 6G began with an ambitious vision to become a global leader in next-generation wireless communications. This vision has driven the emergence of a dynamic ecosystem of innovators, researchers, startups, and policymakers, all dedicated to advancing

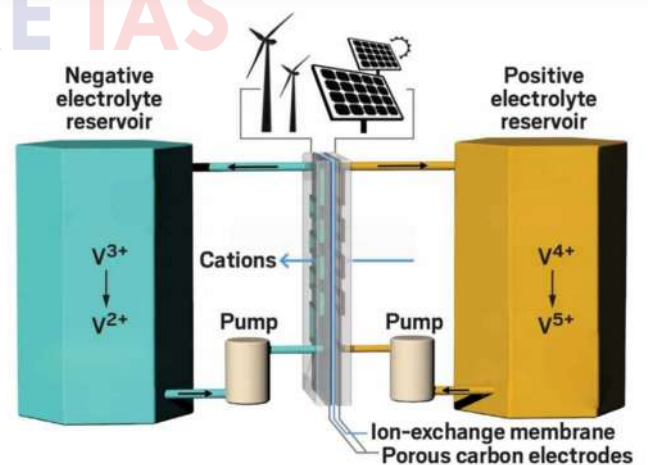
connectivity. As the mission progresses into its next phase, the focus is on scaling past achievements, deepening technological innovation, and ensuring that 6G not only benefits India but originates here. Through collaboration and shared purpose, India is paving the way for leadership in the global digital future.



15. Vanadium Flow Battery

Context: India's First MWh-Scale Vanadium Flow Battery at NTPC NETRA

What are they: Vanadium Flow Batteries Revolutionise Energy Storage in ...A Vanadium Redox Flow Battery (VRFB) is a type of rechargeable battery that stores energy in liquid, water-based vanadium electrolytes held in external tanks. Ideal for long-duration, grid-scale energy storage, they offer 20,000+ cycles, 20+ year lifespans, and high safety due to being non-flammable.



Flow batteries aren't price competitive at small scale, but their per-unit cost of electricity drops as they increase in

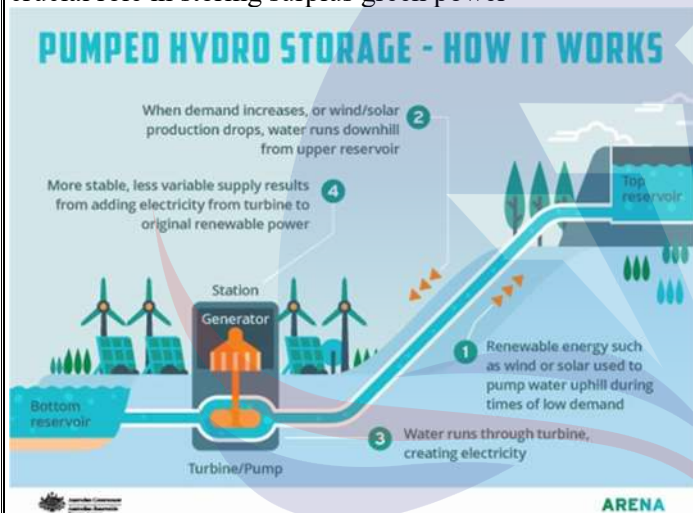
size. This is because flow batteries can be made larger simply by adding bigger electrolyte tanks and increasing the volume of the electrolyte, which is relatively cheap. Lithium-ion batteries do not scale this way. They become steadily pricier as they get bigger because they need more cathode material, which is expensive.

Similarly, flow batteries don't measure up for applications with short discharge times. Makers of vanadium flow batteries typically expect their products to compete with lithium-ion batteries once they are delivering electricity over more than 4 h. The longer the discharge, the more cost competitive flow batteries are, Toshikazu Shibata, manager of Sumitomo Electric's energy system division, said during a panel discussion at the forum.

A positive attribute of flow batteries is their stability. Vanadium flow batteries "have by far the longest lifetimes" of all batteries and are able to perform over 20,000 charge-and-discharge cycles—equivalent to operating for 15–25 years—with minimal performance decline

16. Pumped Storage Projects

Context: Pumped Storage Projects (PSPs) can play crucial role in storing surplus green power



What is this technology: Pumped storage hydropower (PSH) is a type of hydroelectric energy storage. It is a configuration of two water reservoirs at different elevations that can generate power as water moves down from one to the other (discharge), passing through a turbine. The system also requires power as it pumps water back into the upper reservoir (recharge). PSH acts similarly to a giant battery, because it can store power and then release it when needed. The Department of Energy's "Pumped Storage Hydropower" video explains how pumped storage works.

Major Projects & Developments in India:

- **Sharavathy Project (Karnataka):** A planned 2,000 MW project using the Talakal and Gerusoppa reservoirs, though currently facing legal challenges regarding environmental impact.

- **Existing Projects:** Key operational plants include Nagarjuna Sagar (Telangana), Kadamparai (Tamil Nadu), Bhira/Ghatgar (Maharashtra), and Purulia (West Bengal).
- **Future Pipeline:** Several PSUs like SJVN (12.8 GW), THDC (12.6 GW), and NEEPCO (14.9 GW) are developing massive capacities to meet energy needs.

17. BIRSA 101

Context: India's first indigenous "CRISPR" based gene therapy for Sickle Cell Disease, which particularly affects India's tribal population

- The therapy, named "BIRSA 101" is dedicated to Bhagwan Birsa Munda, whose 150th anniversary was observed few days back and who is remembered as a great tribal freedom fighter.

18. Rare Earth Permanent Magnet

Context: The Union Cabinet approved the 'Scheme to Promote Manufacturing of Sintered Rare Earth Permanent Magnets'

- REPMs are one of the strongest types of permanent magnets and are vital for electric vehicles, renewable energy, electronics, aerospace, and defence applications. The Scheme will support the creation of integrated REPM manufacturing facilities, involving conversion of rare earth oxides to metals, metals to alloys, and alloys to finished REPMs.
- Driven by the rapidly growing demand from electric vehicles, renewable energy, industrial applications, and consumer electronics, India's consumption of REPMs is expected to double by 2030 from 2025. At present, India's demand for REPMs is met primarily through imports. With this initiative, India will establish its first ever integrated REPM manufacturing facilities, generating employment, strengthening self-reliance and advancing the nation's commitment to achieve Net Zero by 2070.

19. Food Irradiation

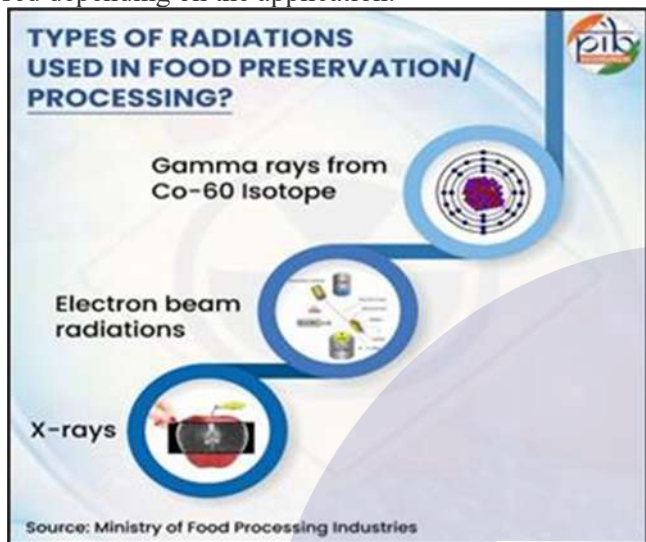
- Exposing fruits to a controlled dose of ionising radiation that kills bacteria, mould, and insects, and extends shelf life without making the fruit 'radioactive' or unsafe.

Among the various methods of food processing, **food irradiation** has emerged as an important technique due to its strong scientific validation and proven safety record. Foods processed by radiation have undergone thorough assessment in national and international laboratories, with studies showing no toxicological, nutritional, or microbiological issues. Its safety has also been endorsed by several reputed scientific bodies and associations, including the American Medical Association, the American Gastroenterological Association, the American Dietetic Association, and the Institute of Food Technologists.

In India, food irradiation is used to preserve and process commodities such as potatoes, onions, spices, mangoes, cereals, pulses, and oilseeds. This technique offers several benefits, including:

- Preventing sprouting in potatoes, onions, and other tubers
- Increasing the shelf life of fruits and vegetables
- Eliminating insect infestations
- Reducing microbial contamination
- Fulfilling quarantine and export requirements

In food irradiation, three types of radiation sources are used depending on the application:



- Gamma rays:** Generated from radioactive forms of Cobalt-60. In India, the **Board of Radiation and Isotope Technology (BRIT)** under the Department of Atomic Energy supplies Cobalt-60 for food irradiation. An MoU or agreement with BRIT is a prerequisite for obtaining this source.
- X-rays:** Produced by reflecting a high-energy stream of electrons off a target substance (usually one of the heavy metals) into food, are also commonly used in medicine and industry.
- Electron beams (e-beam):** A stream of high-energy electrons from an accelerator directed onto food, provides rapid processing

Irradiation serves as one of the important tools for consumers to make informed decisions when buying packaged food items. Consumers should choose certified products by looking for the FSSAI license number, Organic or fortification logos (e.g., fortified with iron, vitamin D), Quality Certification (HACCP, ISO 22000, FSSC), and other certifications with logos like Agmark, BIS, Vegan, and Irradiated products.

In addition to certifications, consumers should carefully examine the **nutrition label**, focusing on per-serving values, including calories, fat, sugar, sodium, added sugars, saturated fats, fiber, and protein. Reviewing the ingredient list is equally important to identify hidden sugars, artificial additives, and other components. Consumers should also be cautious of marketing phrases

like “low-fat,” “sugar-free,” “home-made,” or “natural,” as these terms can be misleading and do not necessarily reflect a healthy product.



20. MAITRI-2

- Maitri II is India's next-generation, environmentally friendly, and technologically advanced research station in East Antarctica, expected to be completed by January 2029. Replacing the 1989-built Maitri I, it will feature renewable energy sources like wind and solar power to support year-round research on climate, biology, and glaciology.
- The new Maitri-II Station is conceived as a state-of-the-art, year-round research hub that will significantly elevate India's scientific capability in biology, earth sciences, glaciology, atmospheric sciences, climate studies and long-term environmental monitoring.

21. MeghRaj

- To meet the cloud requirements of Government of India, a national cloud infrastructure has been established under the Digital India initiative.
- The “GI Cloud”, known as MeghRaj, provides secure, scalable and elastic cloud facilities for delivery of e-Governance services.
- The salient features of the “GI Cloud-MeghRaj” include elasticity, scalability, pay per use metering, self service provisioning, rapid deployment of applications, on demand service provisioning, etc.
- National Informatics Centre (NIC) offers the cloud services to various Ministries/Departments. As on date, 2,170 Ministries/Departments have hosted their cloud-based applications on “MeghRaj”.

22. SINTERED RARE EARTH PERMANENT MAGNETS

In news: The Union Cabinet has approved the scheme to promote manufacturing of Sintered Rare Earth Permanent Magnet (REPM).

- The scheme is aimed at promoting domestic manufacturing of REPM in the country, thereby contributing to reduce dependence on imports for critical sectors such as electric mobility, renewable energy, electronics and defence apart

from facilitating employment generation and strengthening of domestic value chains.

What are these:

- These magnets use light rare-earth elements like neodymium (Nd) and praseodymium (Pr), combined with iron (Fe) and boron (B), for their strong magnetic properties. They also use heavy rare-earth elements such as dysprosium (Dy) and terbium (Tb) to improve susceptibility to demagnetisation, especially at high temperatures.
- The production of these magnets involves various steps: mining, beneficiation, processing, extraction, refining to rare earth oxide, conversion of oxides to metal, then metal to alloy, and finally magnet manufacturing. The scheme aims to support integrated REPM manufacturing facilities which are capable of undertaking final three stages: Converting rare earth oxide to metal, metal to alloy, and alloy to REPM.
- Notably, these high-strength REPMs are crucial for a wide range of technologies – from electric vehicles and renewable energy systems to electronics, aerospace, and defence applications. Yet, their manufacturing is concentrated in just a handful of countries, with China alone controlling over 90 per cent in both manufacturing and processing of raw material needed to produce these magnets.

What are Rare Earth Elements?

- Rare Earth Elements (REEs) or Rare Earth Metals are a set of 17 chemical elements in the periodic table — the 15 lanthanides, plus scandium and yttrium, which tend to occur in the same ore deposits as the lanthanides, and have similar chemical properties. REEs are classified as light RE elements (LREE) and heavy RE elements (HREE).
- The 17 Rare Earths are cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium (Tm), ytterbium (Yb), and yttrium (Y).
- Some REEs are available in India — such as Lanthanum, Cerium, Neodymium, Praseodymium and Samarium, etc. Others such as Dysprosium, Terbium, and Europium, which are classified as HREEs, are not available in Indian deposits in extractable quantities. Hence, there is a dependence on countries such as China for HREEs, which is one of the leading producers of REEs, with an estimated 70 per cent share of the global production.

23. *Chlorella sorokiniana-I* and *Dysmorphococcus globosus-HI*

- A recent experiment on the Axiom-4 mission, under the BioE3 policy, has successfully validated the potential of microalgae for space-based applications. Two edible microalgal species, *Chlorella sorokiniana-I* and *Dysmorphococcus globosus-HI*, demonstrated a remarkable two-fold increase in growth in microgravity compared to ground controls.

24. BlueBird Block-2

- BlueBird Block-2 is a spacecraft of the USA and the heaviest satellite ever launched from Indian soil into its intended orbit. Shri Modi stated that this marks a proud milestone in India's space journey and is reflective of efforts towards an Aatmanirbhar Bharat.
- LVM3, developed by ISRO, is a three-stage launch vehicle comprising two solid strap-on motors (S200), a liquid core stage (L110), and a cryogenic upper stage (C25). It has a lift-off mass of 640 tonnes, a height of 43.5 m, and a payload capability of 4,200 kg to Geosynchronous Transfer Orbit (GTO). In its earlier missions, LVM3 successfully launched Chandrayaan-2, Chandrayaan-3, and two OneWeb missions carrying 72 satellites. The previous launch of LVM3 was the LVM3-M5/CMS-03 mission, that was successfully accomplished on November 02, 2025.



- In this mission, LVM3-M6 will place the BlueBird Block-2 satellite, into the Low Earth Orbit and is the largest commercial communications satellite to be deployed in Low Earth Orbit. It will also be the heaviest payload to be launched by LVM3 from Indian soil. The satellite is part of a next generation of BlueBird Block-2 communication satellites, designed to provide space-based cellular broadband connectivity directly to standard mobile smartphones.

DEFENCE

1. 'Adamyia'

- 'Adamyia' the first Fast Patrol Vessel (FPV) under the eight FPV Project at Goa Shipyard Limited (GSL) was inducted in the Indian Coast Guard (ICG) on June 26, 2025, in Goa. The FPV is the first ship in its class within the ICG fleet to feature Controllable Pitch Propellers (CPPs) and indigenously developed gearboxes, offering superior maneuverability, operational flexibility, and enhanced performance at sea.
- The vessel is equipped with state-of-the-art technology, including a 30mm CRN-91 gun, two 12.7mm stabilized remote-control guns with fire control systems, an Integrated Bridge System (IBS), an Integrated Platform Management System (IPMS), and an Automated Power Management System (APMS). These advanced systems will empower the ICG to perform its charter of duties with increased precision, efficiency, and responsiveness across India's extensive maritime domain.
- Designed and built entirely by GSL, 'Adamyia' exemplifies India's growing shipbuilding capability and represents a major stride towards the nation's vision of Aatmanirbhar Bharat. These FPVs will act as force multipliers in the ICG's operational fleet, enabling swift response for maritime law enforcement, coastal surveillance, search and rescue operations, and the protection of India's Exclusive Economic Zone (EEZ).

2. fifth 25T Bollard Pull (BP) Tug, Ojas

- Launching of fifth 25T Bollard Pull (BP) Tug Ojas was held on 31 Mar 25 at M/s TRSL, Kolkata in presence of Cmde Sanjay Kumar, President SSB, Kolkata as the Chief Guest. These
- Tugs are a part of the contract for construction of six (06) 25T BP Tugs concluded with M/s Titagarh Rail Systems Limited (TRSL), Kolkata on 12 Nov 21. The Tugs have been indigenously designed and built in accordance with relevant Naval Rules and Regulation of Indian Register of Shipping (IRS).
- The Shipyard had successfully delivered four of these Tugs which are utilised by Indian

Navy to provide assistance to Naval ships and submarines during berthing, un-berthing and manoeuvring in confined waters. The Tugs will also provide afloat firefighting support to ships alongside or at anchorage and will also have the capability to conduct limited Search and Rescue Operations.

3. INS TAMAL

- The Indian Navy commissioned **INS Tamal (F 71)** on **01 Jul 2025** at **Yantar Shipyard, Kaliningrad, Russia**
- INS Tamal is the eighth multi-role stealth frigate in the series of Project 1135.6 and the second of the additional follow-on *Tushil* class of ships. The first ship of Tushil class (INS Tushil) was commissioned on 09 Dec 24
- INS Tamal is a formidable moving fortress at sea and is designed for blue water operations across the spectrum of naval warfare in all four dimensions ie. air, surface, underwater and electromagnetic.
- *Tamal* is an amalgamation of Indian and Russian technologies with a host of state of the art communication and network centric operational capabilities. The complement of advanced electronic warfare suite and advanced EO/IR systems adds ears and eyes to this potent platform.

4. 'NISTAR

- Indian Navy is all set to commission the first of the class Diving Support Vessel (DSV) Nistar
- The ship is a testament to the GoI's resolute focus on nation building through self-reliance in defence production and unwavering focus on **Aatmanirbharta**. A total of **120 MSMEs** have participated in the construction of this ambitious, unique and state-of-the-art vessel, achieving more than 80% indigenous content. The project is a step towards realising the Indian Navy's vision of designing and constructing complex indigenous platforms.
- In her earlier avatar ex-Nistar, was a submarine rescue vessel which was acquired by the Indian Navy from the erstwhile USSR in 1969 and commissioned in 1971.

- The ship is also outfitted with an **Operation Theatre, Intensive Care Unit, Eight Bedded Hospital and Hyperbaric Medical Facilities** which are critical towards meeting her operational roles.
- Endurance of over **60 days at sea**, capacity to undertake stage through helicopter operations and a 15-ton **subsea crane** make the ship a very versatile platform.
- The commissioning of Nistar and its induction into the Indian Navy's Eastern Naval Command will not only enhance India's operational preparedness in the underwater domain, but will also reinforce its strategic maritime posture across the Indian Ocean Region.

5. INS ARNALA

- Indian Navy is all set to commission the first Anti-Submarine Warfare Shallow Water Craft (ASW-SWC), **Arnala, at Naval Dockyard, Visakhapatnam, on 18 Jun 2025.**
- **Named after the historic Arnala Fort off Vasai, Maharashtra**, the warship reflects India's rich maritime heritage. Much like the fort, which stood resiliently against various threats, the ship is designed to have a formidable presence at sea. Its robust construction and advanced capabilities ensure that it can withstand the challenges of the maritime domain, safeguarding India's waters from emerging threats.
- The warship incorporates **more than 80% indigenous content** and integrates advanced systems from leading Indian defence firms, including **Bharat Electronics Limited (BEL), L&T, Mahindra Defence, and MEIL**
- **Designed for a range of ASW operations, Arnala is equipped to conduct Subsurface Surveillance, Search and Rescue missions, and Low-Intensity Maritime Operations. This 77.6 m long warship, with a gross tonnage of over 1490 tonnes, is the largest Indian Naval warship to be propelled by a Diesel Engine-Waterjet combination.**
- The commissioning of *Arnala* will mark a transformative moment in India's naval capabilities, strengthening coastal defence and reaffirm India's position as a self-reliant maritime power in the strategically vital Indian Ocean Region.

6. INS SANDHAYAK

- Indian Navy's **indigenously designed and constructed** Survey Vessel Large (SVL) INS Sandhayak
- INS Sandhayak, the first of the indigenously designed and built Sandhayak-class hydrographic survey ship, was commissioned in Feb 2024

7. BOLD KURUKSHETRA 2025

- The 14th edition of the India–Singapore Joint Military Exercise, Exercise Bold Kurukshetra 2025

8. HIMGIRI

Himgiri (Yard 3022), the **third ship** of *Nilgiri* Class (Project 17A) and the **first of the class built at Garden Reach Shipbuilders & Engineers (GRSE)**, was delivered to the Indian Navy on **31 Jul 2025** at GRSE, Kolkata. Project 17A frigates are versatile multi-mission platforms, designed to address current and future challenges in the maritime domain.

Himgiri is a reincarnation of the erstwhile INS *Himgiri*, a Leander-class frigate, that was decommissioned on 06 May 2005 after 30 years of glorious service to the nation. This state-of-the-art frigate reflects a quantum leap in naval design, stealth, firepower, automation and survivability and is an admirable symbol of *Aatmanirbharta* in warship building.

Designed by the Warship Design Bureau (WDB) and overseen by the Warship Overseeing Team (Kolkata), P17A frigates reflect a generational leap in indigenous ship design, stealth, survivability, and combat capability. Driven by the philosophy of 'Integrated Construction', the ship is modular and ergonomic and has been built within the built timelines envisaged.

P17A ships are fitted with an advanced weapon and sensor suite compared to the P17 (Shivalik) class. These ships are configured with **Combined Diesel or Gas (CODOG) propulsion plants**, comprising a diesel engine and gas turbine, that drives a Controllable Pitch Propeller (CPP) on each shaft, and a state-of-the-art Integrated Platform Management System (IPMS). The weapon suite comprises supersonic Surface-to-Surface missile system, Medium-Range Surface to Air Missile system, 76 mm Gun, and a combination of 30 mm and 12.7 mm rapid-fire Close-in Weapon Systems.

Delivery of *Himgiri* showcases the design, ship construction and engineering prowess of the nation, and reflects Indian Navy's unrelenting focus on *Aatmanirbharta* in both ship design and shipbuilding. With an **indigenous content of 75%**, the project has involved over **200 MSMEs** at GRSE and has enabled generation of employment for approx. 4,000 personnel directly and more than 10,000 personnel indirectly.

'TARAGIRI': the fourth ship of *Nilgiri* Class (Project 17A) and the third built by Mazagon Dock Shipbuilding Ltd (MDL). *Taragiri* is a reincarnation of the erstwhile INS *Taragiri*, a Leander-class frigate that was part of the Indian Naval fleet from 16 May 1980 to 27 Jun 2013, rendering 33 years of glorious service to the nation. This state-of-the-art frigate reflects a quantum leap in naval design, stealth, firepower, automation and survivability, and is a symbol of *Aatmanirbharta* in warship building.

9. INS Aravali

- It shall support various information and communication centres of the Indian Navy which are key to India's and Indian Navy's command,

control and **Maritime Domain Awareness (MDA)** framework.

- Guided by the motto 'सामुद्रिक सुरक्षा या: सहयोगं' or 'Maritime Security through Collaboration', the Naval Base exemplifies supportive and collaborative ethos, working seamlessly with naval units, MDA centres and allied stakeholders
- **Location:** Situated in Gurugram, Haryana (part of the National Capital Region), making it a crucial inland, strategic command point
- **Key Features:** It aims to improve real-time tracking of ships, enhancing MDA through advanced, AI-driven, and secure communication systems.
- **Significance:** It supports the "MAHASAGAR" (Mutual and Holistic Advancement for Security and Growth Across Regions) vision, positioning India as a preferred security partner.

10. ANDROTH

- 'Androth', second of the eight ASW SWCs (Anti-Submarine Warfare Shallow Water Craft), being built by Garden Reach Shipbuilders and Engineers (GRSE), Kolkata
- **The name 'Androth' holds strategic and symbolic significance, derived from the Androth Island in the Lakshadweep archipelago, underscoring India's commitment to safeguarding its vast maritime territories. These ships at approx 77 m length, are the largest Indian Naval warships propelled by a Diesel Engine-Waterjet combination and are equipped with state of the art lightweight torpedoes, Indigenous ASW rockets, advanced shallow water SONAR, enabling effective submarine detection and engagement in littoral zones.**

11. Mahe

- 'Mahe', the first of eight Anti-Submarine Warfare Shallow Water Crafts (ASW SWC) being built by Cochin Shipyard Limited (CSL), Kochi
- 'Mahe', named after the historic port town in the Union Territory of Puducherry, symbolises India's rich maritime heritage.
- Induction of ASW SWCs will significantly augment the Indian Navy's ASW capability, enhancing maritime security in the littorals. The delivery of 'Mahe', with over 80% indigenous content, marks yet another milestone and reaffirms the Government of India's vision of 'Aatmanirbhar Bharat'.

12. 'IKSHAK

The Indian Navy's **indigenously** built Survey Vessel (Large), *Ikshak*, is set to be commissioned at **Naval Base Kochi**

As the third ship of her class, *Ikshak's* induction underscores the Indian Navy's steadfast commitment to building advanced, state-of-the-art platforms furthering the momentum of capability enhancement and self-reliance – charting a new course in indigenous hydrographic excellence.

Built by Garden Reach Shipbuilders & Engineers (GRSE) Ltd, Kolkata, under the supervision of the Directorate of Ship Production and the Warship Overseeing Team (Kolkata), *Ikshak* embodies **over 80% indigenous content**. The vessel stands as a testament to the successful collaboration between GRSE and Indian MSMEs, proudly reflecting the spirit and strength of *Aatmanirbhar Bharat*.

Ikshak is also the **first SVL ship with dedicated accommodation for women**, reflecting the Indian Navy's inclusive and progressive approach towards a future-ready fleet.

The ship's name, *Ikshak*, meaning 'The Guide', aptly symbolises her mission – to chart the unknown, ensure safe passage for mariners, and strengthen India's maritime power.

13. INVAR Anti-tank

The INVAR (3UBK20) is a 125mm laser-beam riding, tandem-warhead anti-tank guided missile (ATGM) fired from the gun barrels of T-90 tanks, designed to destroy armored vehicles equipped with Explosive Reactive Armour (ERA). It boasts a 5,000m range, high accuracy against moving targets (up to), and is produced by Bharat Dynamics Limited (BDL) in India

14. AJEYA WARRIOR

- Conducted under a **United Nations mandate**, the exercise focuses on **counter-terrorism operations in semi-urban environment**. Training over the next two weeks will include joint mission planning at Brigade level, integrated tactical drills, simulation-based scenarios and company-level field training exercises replicating real-life counter-terror contingencies. The exercise also aims to **share best practices, enhance tactical proficiency and develop coordinated responses for managing complex operations in challenging environments**.
- Held biennially since 2011, *AJEYA WARRIOR* has evolved into a flagship engagement between the Indian Army and the British Army. The 2025 edition further reinforces shared values of professionalism, cooperation and commitment to regional stability and global peace.

15. EKUVERIN

- Joint Military Exercise EKUVERIN between the Indian Army and the Maldives National Defence Force (MNDF)
- EKUVERIN in Dhivehi translates to 'Friends', underscoring the deep-rooted bonds of friendship, mutual trust and military cooperation between the

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

16. ANJADIP

- *Anjadip*, the third of eight ASW SWC (Anti-Submarine Warfare Shallow Water Craft), **indigenously** designed and built by **Garden Reach Shipbuilders and Engineers (GRSE), Kolkata**, was delivered to the Indian Navy
- These ships at approx. **77m** length, are the largest Indian Naval Warships propelled by Waterjets and are equipped with state of the art **Lightweight Torpedoes, indigenously designed Anti-Submarine Rockets and shallow water SONAR**, enabling effective detection and engagement of underwater threats. The ship will strengthen Navy's Anti-Submarine, coastal surveillance and mine laying capabilities.

17. INSV Kaundinya

INSV Kaundinya, the Indian Navy's pioneering stitched sailing vessel that revives India's ancient shipbuilding and seafaring traditions, will undertake her maiden overseas voyage on 29 Dec 2025. The vessel will be flagged off from Porbandar, Gujarat, for Muscat, Oman, symbolically retracing the historic maritime routes that connected India with the wider Indian Ocean world for millennia.

- **INSV Kaundinya is a stitched sail ship, based on a 5th century CE ship depicted in the**

paintings of Ajanta Caves. The project was initiated through a tripartite agreement signed in Jul 2023 between **the Ministry of Culture, the Indian Navy, and M/s Hodi Innovations**, with funding from the Ministry of Culture. Following the keel laying in September 2023, the vessel's construction was undertaken using a traditional method of stitching by a team of skilled artisans from Kerala, led by **master shipwright Shri Babu Sankaran**. Over several months, **the team painstakingly stitched wooden planks on the ship's hull using coir rope, coconut fibre and natural resin**. The ship was launched in Feb 2025 at Goa.

- The newly inducted vessel incorporates several culturally significant features. Her sails display motifs of the Gandabherunda and the Sun, her bow bears a sculpted Simha Yali, and a symbolic Harappan style stone anchor adorns her deck, each element evoking the rich maritime traditions of ancient India. Named after Kaundinya, the legendary Indian mariner who sailed across the Indian Ocean to Southeast Asia, the ship serves as a tangible symbol of India's long-standing traditions of maritime exploration, trade, and cultural exchange.
- Inducted as an Indian Naval Sailing Vessel (INSV), Kaundinya will be based at Karwar. The ship will now embark on her next historic phase, involving preparations for a transoceanic voyage along the ancient trade route from Gujarat to Oman, scheduled for later this year.

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ECONOMY

1. IEPFA

Context: IEPFA and SEBI Launch First “Niveshak Shivir” in Pune to Empower Investors and Resolve Unclaimed Dividends

- The IEPFA Authority is entrusted with the responsibility of administration of the Investor Education Protection Fund (IEPF), making refunds of shares, unclaimed dividends, matured deposits/debentures etc. to investors, promoting awareness among investors, and protecting the interests of the investors.
- Its function under Ministry of Corporate Affairs
- The Authority is entrusted with the responsibility of administration of the Investor Education Protection Fund (IEPF), make refunds of shares, unclaimed dividends, matured deposits/debentures etc. to investors and to promote awareness among investors.
- Investor Education and Protection Fund (IEPF) has been established under Section 205C of the Companies Act, 1956 by way of Companies (Amendment) Act, 1999 for promotion of investors' awareness and protection of the interests of investors. It was also provided in the Amendment Act that no claims shall lie against the Fund or the Company in respect of individual amounts which were unclaimed and unpaid for a period of seven years from the dates that they first became due for payments and no payment shall be made in respect of any such claims. The following amounts that remained unpaid and unclaimed for a period of seven years from the date they became due for payment are credited to the Fund:

- ✓ Amounts in the unpaid dividend accounts of the companies
- ✓ The application moneys received by companies for allotment of any securities and due for refund
- ✓ Matured deposits with companies
- ✓ Matured debentures with companies
- ✓ The interest accrued on the amounts referred to in clauses (i) to (iv)
- ✓ Grants and donations given to the fund by the Central Government, State Governments, companies or any other institutions for the purposes of the Fund;
- ✓ And, the interest or other income received out of the investments made from the fund

2. Inflation control Measures

Government of India has undertaken a series of administrative measures, including fiscal and trade policy, to control inflation and mitigate its impact on the common citizen. These include, inter alia:

- the augmentation of buffer stocks for essential food items
- strategic sales of procured grains in the open market
- facilitation of imports and export curbs during periods of short supply
- implementation of stock limits to push more supplies of select commodities into the market
- retail sales of select food items under the Bharat brand at subsidised rates, and above all, distribution of food grains free of cost to around 81 crore beneficiaries under the National Food Security Act, and
- increasing the disposable income of individuals by exempting annual incomes up to Rs. 12 lakh (and Rs. 2.75 lakh for salaried individuals with standard deduction) from income tax



3. Account Aggregator Ecosystem

The Account Aggregator (AA) framework was officially launched on **September 2, 2021**, establishing a secure, consent-based system for financial data sharing. In 2016, the **Reserve Bank of India** issued the **Master Directions** for the Account Aggregator (AA) ecosystem.

- Account Aggregators (AA) are NBFCs engaged in the business of providing the service of retrieving or collecting financial information pertaining to the customer. No financial information of the customer is retrieved, shared or transferred by AA framework without the explicit consent of the customer. AA transfers data from one financial institution to another

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based on an individual's instruction and consent. Registering with an AA is fully voluntary for consumers. At present, RBI has granted Certificate of Registration to seventeen companies as AA.

- The AA Framework, allows users to aggregate their financial information (like bank accounts, investments, loans, etc.) from multiple sources and share it with service providers (e.g., lenders, wealth managers) for services like loan applications or financial planning. AAs act as intermediaries, ensuring data privacy and user control through encrypted, permission-driven data sharing.

4. All India Debt and Investment Survey (AIDIS) & Situation Assessment Survey (SAS) of Agricultural Households

National Statistics Office (NSO), under the Ministry of Statistics and Programme Implementation (MoSPI), is conducting the large-scale household surveys on diverse social and economic subjects, conducted regularly since its inception in 1950. Over the years, the NSS has emerged as a vital source of official statistics for evidence-based policymaking, capturing household welfare, consumption, employment, health, assets, indebtedness and related aspects of socio-economic development.

Among its flagship surveys, two stand out for their importance to the country's financial and agricultural sectors — the All India Debt and Investment Survey (AIDIS) and the Situation Assessment Survey (SAS) of Agricultural Households. Both of these nationally representative surveys are scheduled to be conducted from July 2026 to June 2027.

All India Debt and Investment Survey (AIDIS)

The AIDIS is one of India's most significant surveys on household finance. Its origins go back to the All India Rural Credit Survey (1951-52), later expanded to cover both debt and investment in 1961-62. Since then, the NSO has conducted AIDIS roughly once every decade, most recently in the 77th Round (2019) at the request of the Reserve Bank of India (RBI).

The survey provides critical data on household indebtedness and asset ownership across both rural and urban areas. Its findings are instrumental in shaping national accounts, assessing inequality in asset distribution, understanding credit markets, and informing policies of the RBI, MoSPI, and other government institutions.

Situation Assessment Survey (SAS) of Agricultural Households

The SAS of Agricultural Households, first launched in 2003, is designed to assess the economic conditions of farming communities. Expanded in 2013 to cover all agricultural households and further strengthened in the 2019 round, the SAS now provides comprehensive insights into the livelihoods of agricultural households.

The survey covers, among other aspects: Household income and expenditure, Indebtedness and access to credit, Land and livestock ownership, Crop and livestock production, Farming practices and use of technology and Access to government schemes and crop insurance. The Ministry of Agriculture and Farmers Welfare, NITI Aayog, researchers, and financial institutions utilise the survey findings to shape policies and programmes aimed at agriculture and rural development.

To ensure the comprehensiveness and usefulness of the forthcoming AIDIS and SAS, the NSO has initiated the process of developing survey instruments.

5. Limestone as Major Mineral

- The Ministry of Mines issued notification, classifying Limestone as a major mineral completely. Earlier limestone was classified as minor mineral as well as major mineral depending upon the end use. 'Limestone used in kilns for manufacture of lime used as building material' had been notified as minor mineral. Otherwise, it was a major mineral when used for any other purpose like production of cement, chemicals, sugar, fertilizer, steel, etc.
- The Ministry of Mines vide gazette notification dated 10th October, 2025 has removed above distinction based on the end use by deleting 'Limestone used in kilns for manufacture of lime used as building material' from the category of minor minerals. Further, to ensure ease of doing business, the Ministry has issued an order dated 13th October, 2025 under section 20A of the MMDR Act to facilitate smooth regulatory transition of existing minor mineral leases of limestone to major mineral lease.
- The classification of all types of limestone as major mineral will promote ease of doing business as the lease holders will be able to sell or utilise limestone for any purpose, without any end-use restrictions based on artificial regulatory distinction of minor or major mineral. The existing minor mineral leases of limestone will continue to operate as major mineral leases without any disruption.

6. Graphite, Caesium, Rubidium and Zirconium

Context:

Cabinet approves rationalization of royalty rates of Graphite, Caesium, Rubidium and Zirconium minerals critical for Green Energy

- **Graphite** is a crucial component in electric vehicle (EV) batteries, primarily serving as the anode material, which enables high conductivity and charge capacity. However, India imports 60% of its requirement of Graphite. At present, 9 Graphite mines are working in the country and

further 27 blocks have been successfully auctioned. Further, GSI and MECL have handed over 20 Graphite blocks which will be auctioned and around 26 blocks are under exploration.

- **Zirconium** is a versatile metal used in various industries, including nuclear energy, aerospace, healthcare and manufacturing, due to exceptional corrosion resistance and high temperature stability. Caesium is mainly used in high-tech electronic sector, particularly in atomic clocks, GPS systems, other high precision instruments, medical instruments including in cancer therapy, etc. **Rubidium** is used in making specialty glasses used in fibre optics, telecommunication systems, night vision devices etc.

7. Steps to reduce import dependence for critical minerals

The Government has taken various steps to reduce import dependence for critical minerals. The Union Cabinet has approved the National Critical Mineral Mission (NCMM) on 29th January, 2025 to secure a long-term sustainable supply of critical minerals (including lithium) and strengthen India's critical mineral value chain encompassing all stages from mineral exploration and mining to beneficiation, processing, and recovery from end-of life products. Additionally, the following initiatives have, inter-alia, been taken to strengthen the critical mineral sector in the country:-

- The Union Cabinet approved the National Critical Mineral Mission (NCMM) on 29.01.2025 with the objectives of securing India's critical mineral supply chain and strengthening the critical mineral value chains.
- Since the amendment to the MMDR Act in 2023, Central Government has successfully auctioned 46 blocks of Critical and Strategic Minerals. In addition, 7 blocks have been auctioned under the Exploration Licence regime, out of which 3 are critical mineral blocks.
- The Union Cabinet has approved a Rs.1,500 crore Incentive Scheme to promote critical mineral recycling. The Scheme Guidelines were issued, and the Scheme was launched on 02.10.2025.
- Guidelines for funding pilot projects for the recovery of critical minerals from overburden/tailings/ fly ash/ red mud, etc. were issued on 14.11.2025.
- The Government has recognized nine premier institutes as Centres of Excellence (CoEs) under the NCMM to carry out Research & Development (R&D) for strengthening domestic capabilities in the critical mineral value chain.
- KhanijBidesh India Limited (KABIL), under Ministry of Mines, has signed an Exploration and Development Agreement with CAMYEN, a state-owned enterprise of Catamarca province of Argentina, for exploration and mining of five Lithium Brine Blocks in Argentina covering an area of 15703 Ha.

UPSC 2023 | UPSC 2024
333rd Rank | 228th Rank



DEVANSH MOHAN DWIVEDI

I, Devansh Mohan Dwivedi (AIR 333) in UPSC CSE 2023 am grateful to the whole core IAS team and especially Amit Sir for constant guidance and support. I owe my success to him to a great extent.

UPPCS 2018
2nd Rank



SANGEETA RAGHAV

I am thankful to Amit Jain Sir for unconditional support and guidance via answer writing and current affair classes and help me realise my own potential.

Sangeeta Raghav
UPPCS - 2018
RANK - 02

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NATIONAL/ INTERNATIONAL

1. Air Transport Association

Context: PM to participate in International Air Transport Association's 81st Annual General Meeting on 2nd June in New Delhi

- The International Air Transport Association (IATA) is the trade association for the world's airlines, representing over 360 airlines accounting for some 85% of global air traffic. We support many areas of aviation activity and help formulate industry policy on critical aviation issues.
- founded in 1945

2. Quality Council of India

- The Quality Council of India (QCI) is India's national body for accreditation and quality promotion. Established in 1996, QCI works to strengthen trust, credibility, and standards across sectors, helping build systems that improve the quality of life of citizens and enhance India's global competitiveness.
- QCI operates as an autonomous, non-profit organisation through a unique public-private partnership between the Government of India and India's leading industry associations.
- Key Initiatives: Involved in projects like ZED (Zero Defect Zero Effect) for MSMEs, Swachh Survekshan, Ayushman Bharat (AB-PMJAY) certification, and One District One Product (ODOP).
- QCI is governed by a 38-39 member council, with equal representation from government, industry, and other stakeholders. The Chairperson is appointed by the Prime Minister.
- QCI, through its constituent boards—the National Accreditation Board for Testing and Calibration Laboratories (NABL) and the National Accreditation Board for Certification Bodies (NABCB)—partners with global bodies such as the International Laboratory Accreditation Cooperation (ILAC) and the International Accreditation Forum (IAF) to align India's quality and conformance infrastructure with international benchmarks.

3. United Nations Ocean Conference

- The high-level 2025 United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development (the 2025 UN Ocean Conference) will be held in Nice, France, from 9

– 13 June 2025, co-hosted by France and Costa Rica.

- Fourth UN Ocean Conference: Scheduled for 2028, to be co-hosted by Chile and the Republic of Korea.
- The United Nations Ocean Conference (officially the United Nations Conference to Support the Implementation of Sustainable Development Goal 14, abbreviated UNOC) is a triannual conference held by the United Nations to support the implementation of Sustainable Development Goal 14. The conference was inaugurated in 2017 in New York City, and since 2022, has been held once every three years. Each conference is jointly organized and hosted by an elected team consisting of one developed nation and one developing nation

4. India Post Payments Bank

In news: India Post Payments Bank (IPPB), a 100% Government of India-owned entity under the Department of Posts, Ministry of Communications, has been conferred the prestigious Digital Payments Award 2024-25 by the Department of Financial Services (DFS), Ministry of Finance, in recognition of its outstanding contribution to expanding digital payments and financial inclusion across the country.

About India Post Payments Bank

- India Post Payments Bank (IPPB) has been established under the Department of Posts, Ministry of Communication with 100% equity owned by Government of India. IPPB was launched on September 1, 2018. The bank has been set up with the vision to build the most accessible, affordable and trusted bank for the common man in India. The fundamental mandate of India Post Payments Bank is to remove barriers for the unbanked & underbanked and reach the last mile leveraging the Postal network comprising ~1,65,000 Post Offices (~140,000 in rural areas) and ~3,00,000 Postal employees.
- IPPB's reach and its operating model is built on the key pillars of India Stack - enabling Paperless, Cashless and Presence-less banking in a simple and secure manner at the customers' doorstep, through a CBS-integrated smartphone and biometric device. Leveraging frugal innovation and with a high focus on ease of banking for the masses, IPPB delivers simple and

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affordable banking solutions through intuitive interfaces available in 13 languages to 11 Crore customers across 5.57 lakh villages & towns in India.

- IPPB is committed to provide a fillip to a less cash economy and contribute to the vision of Digital India. India will prosper when every citizen will have equal opportunity to become financially secure and empowered. Our motto stands true - Every customer is important, every transaction is significant and every deposit is valuable.

5. National Turmeric Board

- The National Turmeric Board (NTB), inaugurated in 2025 by the Ministry of Commerce and Industry with headquarters in Nizamabad, Telangana, is a statutory body focused on promoting the production, processing, and export of Indian turmeric. It aims to boost farmer income, increase global market share to billion by 2030, and support R&D for value-added products
- **Headquarters:** Nizamabad, Telangana (a major turmeric hub).

6. Wilmington Declaration

- In a significant stride toward strengthening maritime security and interoperability in the Indo-Pacific, the Coast Guards of India, Japan, the United States, and Australia have launched the first-ever 'QUAD at Sea Ship Observer Mission' under the Wilmington Declaration
- The **Wilmington Declaration** is a joint statement adopted by Quad leaders (US, India, Japan, Australia) at the September 2024 summit in Delaware, reinforcing a commitment to a free, open, and resilient Indo-Pacific. It focuses on maritime security, technological cooperation, and regional stability, launching initiatives like the Quad at Sea Ship Observer Mission and MAITRI
- India's participation reinforces its strategic maritime vision of SAGAR (Security and Growth for All in the Region) and complements national efforts under the Indo-Pacific Oceans Initiative (IPOI), with an emphasis on capacity-building, humanitarian outreach, and maritime rule of law.
- The QUAD at Sea initiative thus sets the foundation for a 'QUAD Coast Guard Handshake,' fostering stronger trust, coordination, and collective resilience amid evolving maritime challenges in the region.

6. Chemical Weapons Convention

- Chemical Weapons Convention (CWC) came into force in 1997, the Organisation for the

Prohibition of Chemical Weapons (OPCW) is the implementing body for the Chemical Weapons Convention, with its 193 Member States, it oversees the global endeavour to permanently and verifiably eliminate chemical weapons. The OPCW was awarded the 2013 Nobel Peace Prize for its extensive efforts in eliminating chemical weapons.

- India is an original signatory to the Convention. The National Authority Chemical Weapons Convention (NACWC) is the national authority responsible for implementing the Convention in India. In 2024, NACWC successfully mentored the Kenya National Authority under the OPCW Mentorship/ Partnership Programme to strengthen its implementation capacity.
- The Indian Chemical Council (ICC), India's oldest Chemical Industry Association works closely with the NACWC for reaching out to industry. ICC brought laurels for India as it was awarded the OPCW-The Hague Award 2024, as a co-recipient, for its role in promoting chemical safety, compliance with the Convention, and enhancing industry-wide security practices in India.
- This is **the first time globally**, that a chemical industry body was honoured with this award.
- The 'OPCW-The Hague Award' recognizes individuals and organizations that play a significant role in advancing the goals of the Chemical Weapons Convention.

7. Indian Pharmacopoeia Commission

- The Govt. of India have created a separate, dedicated, autonomous institution in the form of the Indian Pharmacopoeia Commission (IPC) to deal with matters relating to timely publication of the Indian Pharmacopoeia which is the official book of standards for drug included therein, in terms of the
- Second Schedule to the Drugs and Cosmetics Act, 1940 so as to specify the standards of identify, purity and strength of the drugs imported, manufactured for sale, stocked or exhibited for sale or distributed in India.
- The mandate of the Commission is to perform, *inter-alia*, functions such as revision and publication of the Indian Pharmacopoeia and National formulary of India on a regular basis besides providing IP Reference Substances and training to the stakeholders on Pharmacopoeial issues. The Commission has become fully operational from 1st January, 2009 as an Autonomous Body, fully financed by the Central

Government with specific budgetary allocations under administrative control of the Ministry of Health and Family Welfare. The Secretary, Ministry of Health and Family Welfare, is the Chairperson and the Chairman-Scientific Body is the Co-Chairman of the Commission. The Secretary-cum-Scientific Director is the Chief Scientific and Executive Officer of the Commission.

8. Operation Sagar Bandh

- To provide urgent Search & Rescue and Humanitarian Assistance & Disaster Relief (HADR) support to Sri Lanka
- Indian Navy has deployed four more ships INS Gharial, LCU 54, LCU 51 and LCU 57 for supplying HADR stores to cyclone-affected regions of Sri Lanka.
- INS Vikrant, INS Udaygiri and INS Sukanya had earlier rendered relief assistance and heli borne SAR support.

9. National Makhana Board

- The Union Government has established the **National Makhana Board**, fulfilling the announcement made in the Union Budget 2025—26.
- The Board was officially launched by the Prime Minister in Bihar on 15th September 2025, marking a major step toward strengthening and modernizing India's Makhana sector.
- To support this initiative, the Government has approved a Central Sector Scheme for Development of Makhana with an outlay of ₹476.03 crore for the period 2025-26 to 2030-31. The scheme focuses on research and innovation, quality seed production, farmer capacity building, improved harvesting and post-harvest practices, value addition, branding and marketing, export promotion, and quality control.

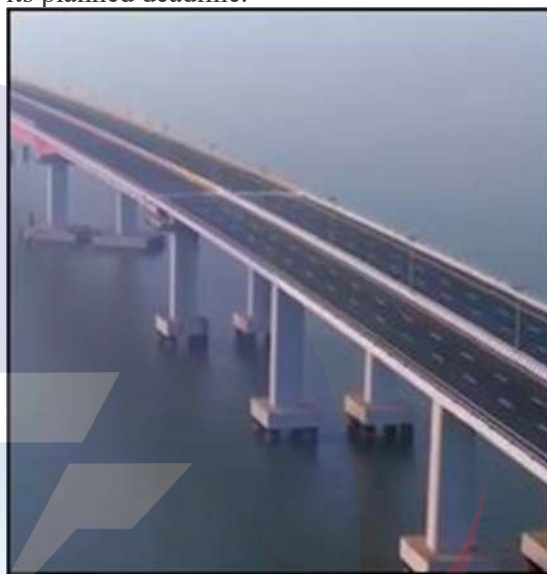
10. Bridges of India: Architecture Against the Odds

Spanning over turbulent rivers, deep gorges, and restless seas, India's bridges stand as silent testimonies to the country's engineering ambition. They connect not just towns and regions, but people, cultures, and economies, often in places where geography had long dictated isolation. Across India, bridges shape everyday life in ways most of us barely notice. They shorten distances that once took days to cross, open access to remote communities, and withstand nature at its fiercest. Among the countless bridges that form a vast network throughout the country, several key bridges exemplify the scale and vision of India's infrastructure. Each one carries its own tale, of daring design, relentless weather, and the human resolve to overcome terrain.

Atal Bihari Vajpayee Sewri-Nhava Sheva Atal Setu

Stretching across the Arabian Sea like a bold stroke on the city's canvas, the **Atal Setu**, also known as the **Mumbai Trans Harbour Link (MTHL)**, marks

Mumbai's biggest step towards a horizon unrestrained by traffic and time. It has been developed to ease the heavy traffic burden of Mumbai's island city. Built using advanced construction and safety systems, the bridge offers a faster and safer route across the bay, reducing accident risks and improving the daily travel experience for commuters. Its impact, however, extends beyond transportation. The MTHL has helped boost tourism in Mumbai and nearby regions, while also enhancing connectivity for trade and industry, contributing to the growth of the local economy. Spanning **16.5 kilometres over the sea** and extending another **5.5 kilometres on land**, the project was approved at a cost of **Rs. 17,843 crore** and stands as **India's longest sea bridge**. Even amid the unprecedented challenges posed by the Covid-19 pandemic, the project managed to stay on track and meet its planned deadline.



Chenab Bridge

India's engineering prowess has reached a new pinnacle with the completion of the Chenab Bridge, the **world's highest railway arch bridge**. It has been hailed as a testament to the brilliance and commitment of the country's engineers and workers as the project confronted hurdles, from difficult terrain and extreme weather to falling rocks in the mountains, making construction exceptionally demanding. While millions travel to Paris to admire the Eiffel Tower, the Chenab Bridge **rises 35 metres higher**, positioning itself not only as a vital infrastructural asset but also as an emerging tourist landmark. Perched **359 metres** above the Chenab River, the bridge forms a crucial segment of the **Udhampur–Srinagar–Baramulla Railway Link (USBRL)**. With Vande Bharat trains set to operate on the route, travel time between Katra and Srinagar will reduce to just about three hours. The **1,315-metre-long steel arch** structure has been designed to withstand wind speeds up to **260 kmph** and built with a projected lifespan of 120 years. Constructed at a cost of **Rs. 1,486 crore**, the Chenab Rail Bridge stands as a symbol of India's ambition, technical excellence, and advancing infrastructure capabilities.

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New Pamban Bridge

The newly constructed Pamban Bridge, connecting Rameswaram with the mainland, is **India's first vertical lift railway sea bridge**. It has emerged as a standout symbol of modern Indian infrastructure on the world map. Built at a cost exceeding **Rs. 700 crore**, the **2.07 km** structure includes a **72.5-metre vertical lift section** that can **rise 17 metres**, allowing ships to pass safely without halting train movement. The new Pamban Bridge's construction encountered major environmental and logistical challenges, including turbulent waters, strong winds, cyclones and seismic risks, and the difficulty of transporting heavy materials to the remote site within tight tidal windows. Through innovative engineering and advanced technology, over 1,400 tons of fabrication, lift-span launches, 99 girders, and extensive track and electrification work at sea were completed **with zero injuries**. Crafted with stainless reinforcement, high-performance protective coatings, and fully welded joints, the bridge promises greater longevity and lower upkeep. It has also been prepared for future growth, with space for a second railway line. A specialised polysiloxane finish

shields the structure from corrosion, an essential safeguard given the demanding coastal conditions.



Dhola-Sadiya Bridge

The Dhola-Sadiya Bridge, also known as the **Bhupen Hazarika Setu**, is a vital link between Assam and Arunachal Pradesh, providing the first permanent road connection between northern Assam and eastern Arunachal Pradesh. Built as a beam bridge, it sweeps over the **Lohit River**, one of the Brahmaputra's major tributaries, connecting Dhola in Tinsukia district to Sadiya in the north. Stretching **9.15 kilometres**, it is built to withstand the load of 60-tonne military tanks, including the Indian Army's Arjun and T-72 models. This capability adds significant strategic value to the structure.



Anji Khad Bridge

The Anji Khad Bridge pierces the Himalayan landscape with an elegance and scale unmatched, emerging as **India's first cable-stayed railway bridge** and a key link in the **Katra-Banihal** section of the **Udhampur-Srinagar-Baramulla Rail Line**. Located about 80 kilometres from Jammu and set against snow-capped peaks, the bridge soars **331 metres** above the Anji River valley and extends **725 metres** across the gorge. Its defining feature is an inverted Y-shaped pylon **rising 193**

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metres above its foundation, supported by **96 high-tensile cables**. More than **8,200 metric tonnes** of structural steel reinforce the bridge, enabling it to withstand seismic activity. The Anji Khad Bridge was built through extremely rugged Himalayan conditions marked by cherty limestone formations and unstable hill-wash debris with large limestone boulders. To protect the mountain ecology, extensive slope-stabilisation measures were implemented throughout construction. Beyond its technical sophistication, the Anji Khad Bridge stands as a symbol of persistence and vision, with completion in just 11 months. As part of the broader rail link connecting the Kashmir Valley with the rest of India, it is set to improve travel efficiency, enhance regional connectivity, and unlock new economic opportunities.



Conclusion

India's bridges are more than infrastructure; they are statements of intent, connecting a nation defined by scale and contrast. They rise from mountainsides, pierce through monsoon clouds, and skim the surface of some of the subcontinent's most volatile waters. Through every corner of this vast terrain, various bridges continue to reflect India's drive and determination. **The Bogibeel Bridge** and the **New Saraighat Bridge** in Assam, across the mighty Brahmaputra, carry both **road and rail** to strengthen connectivity. Similarly, the **Digha-Sonpur Bridge** in Bihar enhances movement across the river Ganga with its robust **rail-cum-road** design. In their shadows lie stories of innovation, perseverance, and the complex landscapes they dared to conquer. They reshape economies, redraw maps, and reimagine how people move, live, and dream. Each new span reflects not just engineering progress, but the nation's willingness to push beyond the limitations of region, time, and history. As India continues to grow, its bridges will remain among the clearest expressions of a country in motion, always reaching forward, always building its own path.

11. Kimberly Process


Context: Kimberley Process (KP) Plenary has selected India to assume the chairpersonship of the Kimberley Process from 1 January 2026.

What is it?

- The Kimberley Process is a tripartite initiative involving governments, the international diamond industry and civil society, aimed at preventing the trade in "conflict diamonds"—rough diamonds

used by rebel groups or their allies to finance conflicts that undermine legitimate governments, as defined in United Nations Security Council resolutions.

- The Kimberley Process Certification Scheme (KPCS), established pursuant to a UN resolution, came into effect on 1 January 2003 and has since evolved into an effective mechanism for curbing the trade in conflict diamonds. The Kimberley Process currently has 60 participants, with the European Union and its Member States counted as a single participant. Together, KP participants account for over 99 per cent of global rough diamond trade, making it the most comprehensive international mechanism governing this sector.




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SCHEME

1. UMEED Central Portal

- The portal, developed by the Ministry of Minority Affairs, was officially inaugurated
- The UMEED Central Portal, short for Unified Waqf Management, Empowerment, Efficiency and Development Act, 1995 will serve as a centralized digital platform for real-time uploading, verification, and monitoring of Waqf properties. The portal is expected to bring about a paradigm shift in how Waqf assets are administered across India by introducing greater transparency, accountability, and public participation.
- Key Features of the Portal are:
 - Creation of a digital inventory with geo-tagging of all Waqf properties
 - Online grievance redressal system for better responsiveness
 - Transparent leasing and usage tracking
 - Integration with GIS mapping and other e-Governance tools
 - Public access to verified records and reports

2. Full Functional Literacy

- Tripura becomes third state in the country, after Mizoram and Goa, to achieve Full Functional Literacy
- Tripura was declared fully literate today under the ULLAS – Nav Bharat Saaksharta Karyakram (New India Literacy Programme), a centrally sponsored scheme implemented from 2022 to 2027
- The ULLAS scheme, aligned with NEP 2020, targets adults (aged 15 years and above) who can't go to school.
- Since its launch in 2022, ULLAS has been implemented in a mission mode across the country, aiming to empower non-literate youth and adults (15+ years) with Foundational literacy, numeracy, and critical life skills. In Tripura, the scheme was rolled out intensively across all districts, supported by robust community mobilization, door-to-door surveys, and extensive use of the ULLAS mobile app for digital learning and certification.

3. NAVYA

- NAVYA is a pilot initiative aimed at equipping adolescent girls aged 16–18 years with a minimum qualification of Class 10, with vocational training mainly in non-traditional job

roles. This pilot initiative will be implemented in 27 Districts of the country which include Aspirational districts and districts of North - eastern States spanning across 19 States, reflecting the Government's inclusive and targeted approach to reaching underserved regions and vulnerable populations.

- As part of the launch, both Ministries will formalize their collaboration to institutionalize convergence on skilling efforts for adolescent girls. The programme will draw upon the strengths of Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and other flagship skill development schemes.
- A specially designed 7-hour supplementary training module will also be provided under Navya, focusing on four key areas:
 - ✓ Interpersonal Skills – Hygiene, self-presentation, conflict management
 - ✓ Communication Skills – Active listening and effective communication
 - ✓ Workplace Safety – Knowledge of POSH and POCSO laws
 - ✓ Financial Literacy – Budgeting, earnings, and basic financial concepts

4. Kalaa Setu: Real-Time Language Tech for Bharat

- In a strategic push to harness the power of AI for inclusive communication, the Ministry of Information & Broadcasting through its WaveX Startup Accelerator Platform has launched the “**Kalaa Setu – Real-Time Language Tech for Bharat**” Challenge. This nation-wide initiative invites India's leading AI startups to develop indigenous, scalable solutions for **automated generation of audio, video, and graphic content from textual inputs**, with support for multiple Indian languages.
- The challenge focuses on scalable solutions that support three core areas of AI-driven content generation. First, **text-to-video generation**, which allows for automated creation of video content from text, with the ability to customize the environment, tone, and subject matter to suit different communication needs. Second, **text-to-graphics generation**, which enables the production of data-driven infographics and illustrative visuals that make complex information easier to understand and visually engaging. **Third, text-to-audio generation**, which uses advanced voice synthesis to produce

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speech that is not only accurate but also emotionally expressive and sensitive to regional accents, enhancing reliability and impact in multilingual contexts.

5. TALASH

The National Education Society for Tribal Students (NESTS), an autonomous organization under the Ministry of Tribal Affairs, in partnership with UNICEF India launched **TALASH (Tribal Aptitude, Life Skills and Self-Esteem Hub)**— a national- program to support the all-round development of students in Eklavya Model Residential Schools (EMRSs). TALASH aims to improve both the education and personal growth of tribal students across India.

The name **TALASH**, reflects a focused search for self-awareness, life skills, and career clarity among tribal youth.

The **first initiative of its kind in India** is aimed specifically at tribal students. It is expected to benefit over **1,38,336 students** enrolled in **EMRSs across 28 States and 8 Union Territories**, making it a truly national movement for inclusive education.

TALASH is an innovative digital platform designed to equip EMRS students with essential tools for self-discovery and career planning. It promotes self-awareness, helps students make informed career choices, and builds essential life skills. By focusing on both academic and personal development, TALASH prepares students to face the challenges of a competitive world and aims to create a strong foundation for their future success.

The initiative offers:

- **Psychometric Assessments:** Inspired by NCERT's 'Tamanna' initiative, TALASH offers a common aptitude test to help understand each student's strengths and interests. Based on the test results, students receive Career Cards that suggest the best career options suited to their skills and abilities.
- **Career Counselling :** The platform guides students toward informed career decisions, helping them align their aspirations with their aptitudes.
- **Life Skills & Self-Esteem Modules:** TALASH has special sections that help students learn important life skills like solving problems, communication skills, and handling emotions. These build confidence and self- value of students.
- **E-Learning for Teachers:** A specialized portal equips educators with resources and training to effectively mentor and support students in their academic and personal journeys.

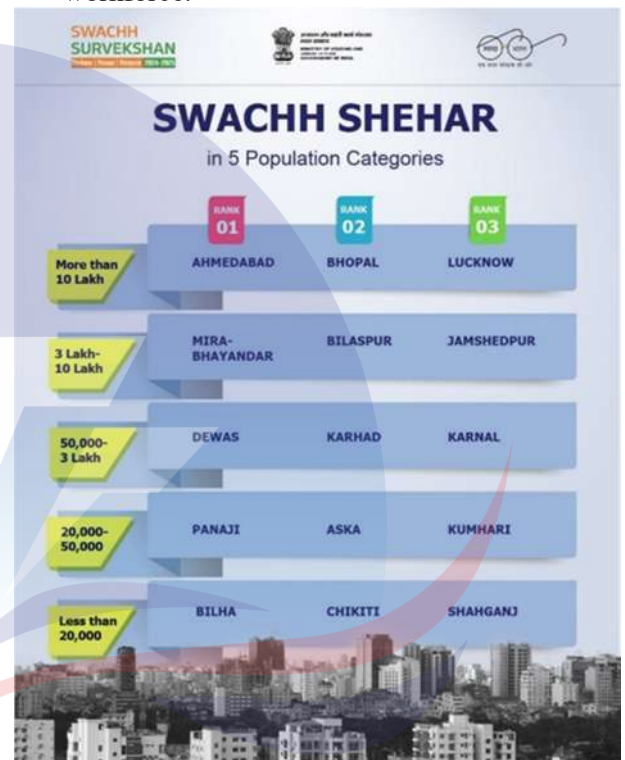
The national rollout of the TALASH initiative will follow a phased rollout across select cities for a smooth and inclusive implementation.

6. Sanchar Mitra Scheme

- Initially piloted in select institutions, the Sanchar Mitra Scheme has now been scaled up for nationwide implementation following an

enthusiastic response and promising impact in its pilot phase. Under this scheme, student volunteers—designated as *Sanchar Mitras*—will be empowered to raise awareness among the public about key telecom issues such as digital safety, cyber fraud prevention, and EMF radiation concerns, while also promoting responsible mobile usage and digital literacy.

- The expanded Sanchar Mitra Scheme not only aims to enhance public awareness but also provides participating students with exposure to cutting-edge telecom technologies including 5G, 6G, Artificial Intelligence, and Cyber Security. Through structured training, project participation, and engagement with real-world telecom initiatives, the scheme seeks to build a digitally aware, skilled, and research-oriented youth workforce.



- Participating institutions will be identified in consultation with local DoT field units, and students from relevant academic backgrounds—telecom, electronics, computer science, cyber security—will be nominated as Sanchar Mitras.
- Sanchar Mitras will receive necessary training from experts from field and from the National Communications Academy–Technology (NCA-T) and DoT's Media Wing. Sanchar Mitras will carry out grassroots-level awareness drives, engage with communities and NGOs, and act as catalysts for informed digital behavior in their surroundings.
- To encourage excellence, participants will be assessed periodically based on innovation, consistency, and outreach impact. Outstanding performers may be offered exclusive

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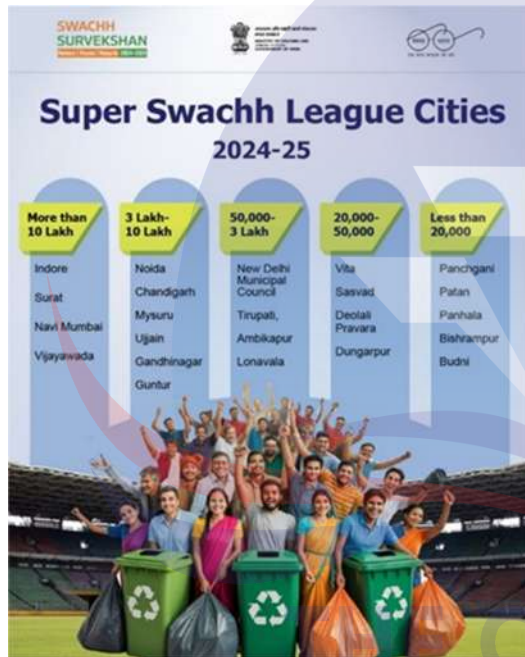
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opportunities including internships, involvement in national telecom projects, participation in high-level forums such as India Mobile Congress, and engagements with ITU standards and policy work.

- This strategic engagement of youth through the Sanchar Mitra Scheme represents a significant step towards India's vision of becoming a telecom research, development, and manufacturing hub.

7. Swachh Survekshan 2024-25 Awards

- This year's Swachh Survekshan not only refined and streamlined the framework for big cities, but also simplified it for small cities, encouraging them to compete and climb the ladder of swachhata. The smaller cities found a level playing ground with big cities in the survey. Following the 'One City, One Award' principle, the top-performing cities from each State were recognized as Promising Swachh Shehars. A total of 34 cities across various States and Union Territories earned this distinction, showcasing their notable progress in urban cleanliness and sanitation excellence.



- At the prestigious Swachh Survekshan 2024-25 Awards Ceremony, Union Minister Shri Manohar Lal presented the award for **Best Ganga Town to Prayagraj**, while **Secunderabad Cantonment Board** was honoured as the **Best Cantonment Board** for its exemplary sanitation efforts. **GVMC Visakhapatnam**, **Jabalpur**, and **Gorakhpur** were declared **Best SaifaiMitra Surakshit Shehar** for their outstanding commitment to the safety and dignity of sanitation workers. A special recognition was accorded to State Govt. of UP, Prayagraj Mela Adhikari and Prayagraj Municipal Corporation, for its exceptional urban waste management during the Mahakumbh, the world's largest

congregation, which witnessed an estimated footfall of 66 crore people.

- Indore, Surat, Navi Mumbai enter the premier Super Swachh League
- Ahmedabad, Bhopal, and Lucknow emerge as India's New Clean Cities

8. Paramparagat Krishi Vikas Yojana

Organic farming is being promoted through Paramparagat Krishi Vikas Yojana (PKVY) in all the States/UTs except North Eastern States and Mission Organic Value Chain Development for North Eastern Region (MOVCDNER) for the North Eastern States. Both schemes stress on end-to-end support to farmers engaged in organic farming i.e. from production to processing, certification and marketing. Primary focus of the schemes is to form organic clusters, with preference to small and marginal farmers, to create a supply chain. Both schemes are also promoting natural resource based integrated and climate resilient sustainable farming systems, natural resource conservation and on-farm nutrient recycling. Both the schemes are implemented through States /UT Governments.

Under PKVY, assistance of Rs. 31,500 per ha in 3 years is provided for promotion of organic farming. Out of this, assistance of Rs. 15,000 per ha is provided to farmers through Direct Benefit Transfer for on- farm /off -farm organic inputs including organic compost.

Under PKVY, financial assistance of Rs. 4,500/ha for 3 years is provided for marketing, packaging, branding, value addition etc. Rs. 3,000/ha in 3 years is provided for certification and residue analysis. Assistance is also provided @Rs. 9,000/ha in 3 years for training, awareness & capacity building. Under MOVCDNER, financial assistance of Rs 4000 per ha in 3 years is provided for value chain marketing at state level, financial assistance of Rs 10000 per ha in 3 years is provided for activities of ICS management, training and certification.

To ensure market linkage States organize seminars, workshops, buyer-seller meetings, exhibitions and organic festivals either within their own region or in key markets of other states. Additionally, Farmer Producer Organisations have been onboarded on GeM platform and Open Network for Digital Commerce for digital market linkage and e-commerce.

9. National Mission on Natural Farming

The National Mission on Natural Farming (NMNF) is implemented in 15,000 natural farming clusters covering 7.5 Lakh Ha area across the country. Each cluster is of contiguous areas of about 50 Ha and with approximately 125 farmers.

The Union Cabinet approved the National Mission on Natural Farming (NMNF) on 25th November 2024 as a standalone centrally sponsored scheme as a shift to strengthen agriculture practices with scientifically backed approaches towards sustainability, climate resilience and safe food. It is aimed towards improving soil health and

restoring ecosystems and reducing input cost to the farmer to achieve greater climate resilience.

Natural Farming (NF) is a chemical free farming, involving livestock (preferably local breed of cow) integrated natural farming methods and diversified crop systems rooted in the Indian traditional knowledge. NF recognises the interdependence of the natural ecosystem amongst soil, water, microbiome, plants, animals, climate and human requirements.

The Mission has a target of initiating natural farming in 7.5 Lakh ha area across 15,000 clusters, setting up 10,000 need-based Bio-Input Resource Centres (BRC) for easy availability of NF bio-inputs and generating awareness among 1 crore farmers on Natural Farming. Further, farmers are supported by a simple certification system and common national brand for naturally grown chemical free produce.

The Mission creates a favourable support ecosystem for farmers to progressively transition to Natural Farming. As natural farming is a knowledge-intensive and local agro-ecology based farming practice, it requires behavioural changes in farmers and community members. Hence, the Mission adopts an extension strategy focussed on on-farm knowledge, which is scientifically derived from practising NF farmers' field, and is supported with continuous hand holding of farmers. The Mission enables a decentralized cross learning ecosystem blending the traditional NF knowledge of practicing farmers and the communities with the scientific approaches evolved.

Objectives of NMNF:

- To promote nature based sustainable systems of farming, enhancing usage of on-farm made natural farming bio-inputs to reduce dependency on externally purchased inputs and input cost reduction. To also improve soil health and have sustainable agriculture practices.
- To popularize livestock (preferably local breed of cow) integrated agriculture-animal husbandry models
- To strengthen on-farm agro ecological research and knowledge based extension capacities of ICAR institutions, KVKs, Agricultural Universities, etc.
- To build upon the on-field experience of practicing NF farmers and scientific expertise to thereby evolve & improvise location specific NF package of practices for increased spread of NF.
- To establish scientifically supported common standards and easy farmer friendly certification procedures for naturally grown chemical-free produce.
- To create and promote a single national brand for naturally grown chemical-free produce.

10. Lakhpati Didi initiative

Lakhpati Didi initiative is an outcome of Deendayal Antyodaya Yojana-National Rural Livelihoods Mission

(DAY-NRLM), a Centrally Sponsored Scheme being implemented by Ministry in partnership of States and UTs (except Chandigarh and Delhi), with the objective to improve the livelihoods of poor rural households in country, and organise rural households into Self-Help Groups (SHGs) for their social and financial inclusion. So far, 10.05 crore rural households have been organised into 90.90 lakh SHGs in country under DAY-NRLM. Lakhpati Didi initiative is to empower and enable Self-Help Groups (SHG) Women, earn a minimum income of Rupees one lakh per annum on a sustainable basis, with an average monthly income of at least Rs. 10,000 (Rupees Ten Thousand) sustained for at least 4 agricultural seasons and/or business cycles. So far 1,48,32,258 SHG households' women have become Lakhpati Didis. The State/UT- wise details are at Annexure-I.

The Lakhpati Didi initiative focusses on the individual SHG women and not on the Self-Help Group (SHG). However, in the entire process of planning, implementation and monitoring, the community institution structures i.e. SHGs, Village Organizations (VOs) and Cluster Level Federations (CLFs) spearhead the engagements. A structured approach has been adopted to make the SHG women Lakhpati Didi. The initiative also aims on enhancing financial literacy, skill development and convergence across government departments as well as building entrepreneurial capacity among SHG women, for social and financial inclusion.

There is no separate budget allocated for the Lakhpati Didi initiative. All activities of Lakhpati Didi initiative for e.g. training and capacity building, financial assistance including seed funding, are funded under the DAY-NRLM Scheme. For additional financial requirements, support to SHG Members is facilitated through bank linkage and bank loan

11. Dhruva Policy

The DHRUVA (Digital Hub for Reference and Unique Virtual Address) Policy, introduced by India Post in 2025, establishes a national Digital Public Infrastructure (DPI) for a standardized, geocoded, and interoperable digital addressing system. It assigns a unique 10-digit alphanumeric code—DIGIPIN—to every location based on 4x4 meter grids, enabling, secure, consent-based, and precise digital address sharing for e-commerce, logistics, and governance.

Key aspects of the DHRUVA Policy include:

- **Purpose:** To replace ambiguous narrative addresses with precise geospatial data, supporting the *Aatma Nirbhar Bharat* vision.
- **DIGIPIN System:**
- A 10-digit code derived from geographical coordinates (meter grid), acting as a "UPI for addresses"
- **.Address-as-a-Service (AaaS):** Provides a framework for public and private stakeholders to use verified, consent-based, and, geo-coded address data.

- **Benefits:** Improves efficiency in postal/courier services, enhances e-commerce, aids in emergency services, and assists in targeting government welfare schemes.
- **Development Stage:** The policy, designed with an open-source approach, is currently in the proof-of-concept (PoC) stage, with a draft document released for stakeholder consultation

12. National Mission on Libraries

The National Mission on Libraries (NML) has 4 components with following objectives: -

- National Virtual Library of India Project (ICP) with an objective to give an open access user-friendly federated search mechanism (Interface) to users for easy access to knowledge and information as well as to the diverse culture of India.
- Setting up of NML Model Library with the objective to provide financial assistance for Upgradation of Infrastructure, Modernization of Technology, Creation of Facilities for Specially abled users and advocacy and Outreach programs, to one State Central Library & one District Library selected by the State Government of each State / UT and 6 libraries under the Ministry of Culture.
- Quantitative and Qualitative Survey with the objective to obtain descriptive statistics of libraries in the Country, to study the existing infrastructure and services of the public libraries and the level of satisfaction and perception of the citizens.
- Capacity Building for providing training to the Library Personnel, students of library science in order to sensitize the library service providers with professional skills as well as to apprise them with the latest technology.

13. NATIONAL CAREER SERVICE

- National Career Service (NCS) Portal is a one-stop solution for providing career related services including jobs from private and government sectors, information on online & offline job fairs, job search & matching, career counselling, vocational guidance, information on skill development courses, skill/training programmes etc. through a digital platform
- Scheme by: Ministry of Labour and Employment

14. CROPIC (Collection of Real Time Observations and Photographs of Crops)

CROPIC (Collection of Real Time Observations and Photographs of Crops) is one of the technology initiatives under Pradhan Mantri Fasal Bima Yojana (PMFBY). It is a digital application for collection of crop field photographs, to ascertain the health of crops and identify damage due to perils. CROPIC app aims at collection of geotagged crowdsourced photographs from farmers and field coordinators through smartphones. The purpose of time-series geotagged photographs is crop validation

against insured crops, and crop damage assessment in case of localized calamities.

The CROPIC supports PMFBY through general crop surveillance information reporting crop risks in near real time and supporting yield estimation models of YESTECH for validation as well as for accounting for certain risks.

CROPIC is envisaged to empower crop insurance stakeholders with a transparent, real-time, evidence-based system for monitoring and managing crops, strengthening the effectiveness of crop insurance and disaster response, and ensuring data-driven policy decisions.

15. National Programme for Organic Production

- The National Programme for Organic Production (NPOP) was launched in 2001 by the Department of Commerce, Ministry of Commerce & Industry, Govt of India for exports of Organic products and APEDA acts as the Secretariat for the implementation of the NPOP. The system of grower group certification was launched in 2005, as it was felt necessary to cater to small and marginal farmers.
- Third party certification is a mandatory requirement for export of organic products. The NPOP standards for crop production have been recognized by the European Commission and Switzerland as equivalent to their country's standards and are also accepted by Great Britain. There is an MRA for organic products with Taiwan.
- The system for Organic Certification under NPOP involves a third-party certification system of organic processes and organic produce, which is certified across the supply chain by a certification body (Govt. or private). The accredited Certification Bodies certify organic operators as per their scope of accreditation. At present, there are 37 active Certification Bodies operating in India, which include 14 State Certification Bodies
- It is pertinent to mention that cotton is covered under NPOP only till production level. Thereafter, the post production including ginning, processing etc is done under private certification.

16. SHAKTI Policy

- Ministry of Power (MoP) in 2017 cleared the Coal Linkage Policy known as SHAKTI (Scheme to Harness and Allocate Koyla Transparently in India). The Policy provides coal linkages to power plants which lack fuel supply agreements (FSAs) through coal auctions.
- Revised SHAKTI Policy, 2025 is a transparent way of allocation of coal to the Power Sector. This Policy enhances scope of the erstwhile coal linkage allocation policy for Power Sector by providing greater flexibility, wider eligibility and

better accessibility to coal. It encourages competition, enhances efficiency, ensures better use of capacity and provides for seamless pit head thermal capacity addition and affordable power to the country.

17. Samarth

The Ministry of Textiles is implementing Samarth (Scheme for Capacity Building in Textiles Sector) with the objective to provide demand driven, placement-oriented skilling programmes to supplement the efforts of the industry in creating jobs in the organized textile and related sectors, covering the entire value chain of textiles, excluding Spinning and Weaving in organized sector. Samarth is being implemented on PAN India basis.

Samarth is demand driven, placement-oriented skilling programmes in which textile industries are directly empanelled to provide the training as their requirement from 120 NSQF aligned courses to enhance employability.

Samarth scheme has the provision of placement for a minimum of 70% under Entry level training programme & 90% under Upskilling Training programme in organized sector with 6-month retention period as post placement support. Also, the provision for self-employment in traditional sector of Handloom, Handicraft, Jute and Wool.

18. BHASKAR platform

- The Bharat Startup Knowledge Access Registry (BHASKAR) enables collaboration among the entrepreneurial ecosystem including startups.
- BHASKAR currently is in pilot phase wherein key features are being tested including peer-to-peer interaction, partnerships, and collaborative engagements, generation of unique personalized identification for stakeholder categories and integration of microsites in place for implementation of various Schemes under Startup India.
- The Government is undertaking various outreach and awareness measures for BHASKAR across States/UTs to understand the requirement and experience of key user stakeholders including small and micro-enterprises. Such measures, include specific outreach to States/UTs, information sessions in workshops and events, and propagation through various social media platforms. These engagements have been undertaken in collaboration with State Startup Nodal Agencies and other ecosystem partners such as incubators, accelerators, colleges, and universities amongst others.

19. DEEP OCEAN MISSION

The Government of India launched the Deep Ocean Mission to be implemented by the Ministry of Earth Sciences. The Deep Ocean Mission encompasses six verticals, of which activities under verticals 1 and 4 aid

the exploration of deep-sea polymetallic nodules (PMN) and polymetallic sulphides (PMS), respectively.

- PMN occur on abyssal plains of the sea floor and contain metals like nickel, copper, cobalt and manganese.
- PMS are deposits in the hydrothermal vent areas and contain precious metals like copper, zinc, lead, iron, silver, etc. As part of India's contract with the International Seabed Authority, the country aims to conduct scientific survey and exploration activities within the 75,000 square km region in the Central Indian Ocean Basin for PMN and the 10,000 square km area in the Central Indian Ridge and Southwest Indian Ridge for PMS.
- Exploration of precious metals in PMN and PMS through deep ocean surveys strategically aligns with the country's contract with the ISA and augments the country's know-how of the collective metal deposits, in addition to its land resources.

Vertical 3 of the Deep Ocean Mission is aimed at technological innovations for exploration and conservation of deep-sea biodiversity. The Centre for Marine Living Resources and Ecology (Kochi), an attached office of the Ministry of Earth Sciences, has conducted six cruises surveying biodiversity across 19 seamounts in the Arabian Sea and Bay of Bengal. Several (~1300) deep-sea organisms have been collected, studied, and vouchered, including conducting in-depth genomic analysis for select organisms and the discovery of nearly 23 species that are new to science.

India has signed a contract with the International Seabed Authority, as part of which the country aims to conduct scientific survey and exploration activities in allotted areas in the Central Indian Ocean Basin, the Central Indian Ridge and the Southwest Indian Ridge.

20. Vigyan Jyoti Programme

- The major objectives of the Vigyan Jyoti Programme, which was initiated in 2019, is to encourage meritorious girls to pursue higher education and careers in STEM (Science, Technology, Engineering, and Mathematics) fields.
- The programme promotes gender parity in STEM through various year-round activities such as hands-on experiential learning sessions, interactions with scientific role models, visits to R&D and industrial laboratories, career guidance workshops, and student-parent counselling sessions. These activities are designed to enhance the interest and inclination of girls towards science.

21. Gyan Bharatam Mission

The primary objectives of the Gyan Bharatam Mission are as follows:

- To identify all Indian manuscripts.

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- To collect metadata and prepare a comprehensive list of manuscripts preserved by institutions and individuals.
- To ensure the proper conservation of rare and important manuscripts.
- To implement a standardized framework for the scientific preservation and conservation of manuscripts held by institutions and individuals.
- To create a National Digital Repository (NDR) for all identified manuscripts.
- To facilitate monetization for the benefit of the custodians of the identified manuscripts.
- To publish selected manuscripts for the wider dissemination of knowledge.
- To provide controlled access to manuscripts in the National Digital Repository (NDR) for research, translation, publication, and other scholarly activities under a monetization model.
- To establish a physical storage facility for rare and important manuscripts using long-term archival materials such as archival paper, plastic imaging, wafer-fiche, etc.

The mission aims to use digital tools like virtual museums, online archives, and a National Digital Repository (NDR) to digitize and showcase Indian Manuscripts. Technologies such as AI, cloud platforms, and mobile apps will enable easy access, research, translation, and monetization, while ensuring preservation and wider dissemination of knowledge.

22. SPARSH

- System for Pension Administration – Raksha
- SPARSH is world's largest pension system for defence personnel. It stands as a transparent, inclusive and efficient model of governance—transforming pension administration from fragmentation to integration and from delay to dignity

23. Deen Dayal SPARSH Yojana

Scholarship for Promotion of Aptitude and Research in Stamps as a Hobby : Launched Pan India on **1 August 2025**, this scholarship program targets **school students from classes 6 to 9** who demonstrate a keen interest in philately alongside a strong academic record.

24. NAVYA

- The NAVYA (**Nurturing Aspirations through Vocational Training for Young Adolescent Girls**) initiative, launched on **June 24, 2025**, is a pioneering joint effort by the **Ministry of Skill Development and Entrepreneurship (MSDE)** and the **Ministry of Women and Child Development (MWCD)** to provide skill training to adolescent girls for job roles in emerging sectors, while also empowering them with skills ranging from personal hygiene to communication, workplace safety and financial literacy.

- The aim is to foster confidence, employability, and entrepreneurial spirit among them. The initiative, launched in **Sonbhadra, Uttar Pradesh**, is for girls aged 16–18 years with a minimum class ten qualification.
- NAVYA integrates resources from flagship schemes like the **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)** and **PM Vishwakarma** to deliver demand-driven training in non-traditional and emerging job roles, such as **digital marketing, cybersecurity, AI-enabled services, graphic design, drone assembly**, professional makeup artist, CCTV and **solar PV installation**. In addition, the initiative seeks to bridge the gap between education and livelihood and create opportunities for **self-employment, internships**, and **apprenticeships** by offering holistic development through modules on health, nutrition, financial literacy, and life skills.
- Launched on **July 15, 2015**, the **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)** promotes skill development by offering free, short-term training and monetary rewards for youth skill certification. **PMKVY 2016-2020** expanded its sectoral and geographic reach, aligning with national initiatives like **Make in India** and **Digital India** to enhance industry relevance and youth employability.
- The **PM Vishwakarma scheme**, launched in September 2023, empowers traditional artisans and craftspeople, such as potters, goldsmiths, sculptors, and artisans, among others, by providing skill training, modern tools, and financial support. It aims to enhance their livelihoods, promote self-employment, and preserve India's cultural heritage through sustainable economic opportunities. The PM Vishwakarma Scheme was launched with a financial outlay of ₹13,000 crore, starting FY 2023–24 to FY 2027–28.

25. Rashtriya Gram Swaraj Abhiyan

Rashtriya Gram Swaraj Abhiyan (RGSA) is a centrally sponsored scheme launched by the Ministry of Panchayati Raj to strengthen the Panchayati Raj Institutions (PRIs) for achieving Sustainable Development Goals (SDGs)
Revised Period: The revamped version was approved on 13 April 2022 and is implemented from 1 April 2022 to 31 March 2026.

The **major objectives** and key features of Revamped Rashtriya Gram Swaraj Abhiyan (RGSA) are as follows:

- Develop the capacity of elected representatives of PRIs for leadership Roles to enable the Gram Panchayats to function effectively as the third tier of Government.

- ii. Strengthening Gram Sabhas to function effectively as the basic forum of people's participation within the Panchayat system.
- iii. Promote e-governance and other technology-driven solutions to enable good governance in Panchayat administrative efficiency and improved service delivery with transparency and accountability;
- iv. Promote devolution of powers and responsibilities to Panchayats according to the spirit of the Constitution and the PESA Act 1996; etc.

26. NATIONAL TECHNICAL TEXTILES MISSION

- With a view to boost Technical Textiles sector in the country, National Technical Textiles Mission (NTTM) was launched in the year 2020.
- The major objective of research projects sanctioned under NTTM is to create an ecosystem for manufacturing of technical textiles in India and also for improving the domestic market size for reducing dependency on imports besides generation of employment. The Mission focuses on research & innovation and indigenous development of machinery; promoting awareness amongst users; enhancing India's exports of technical textiles; and creating human resources with requisite skills.
- **Broad nature of R&D projects sanctioned in the field of Speciality Fibres, Geotextiles, Agro-textiles and Smart Textiles under National Technical Textiles Mission**

Segment	Broad Nature of the Projects
Speciality Fibres	These projects develop advanced fibres and composites carbon, nanofibre, UHMWPE, aramid, glass and natural fibre. The outcomes target high-performance applications in defence, energy storage, healthcare, smart textiles and sustainable materials.
Geotextiles	These projects focus on developing innovative geotextiles, geogrids, and geocomposites using natural fibres, recycled materials, and advanced polymers for pavements, railways, embankments, drainage, erosion control, and landslide mitigation. These emphasise sustainable ground-improvement solutions, performance-enhanced geosynthetic systems, and improved design models for diverse geotechnical conditions.
Agro-textiles	These projects develop sustainable agro-textiles from natural fibres and

	agricultural residues for crop protection, mulching, packaging, and seed preservation. They also include smart and energy-responsive textiles aimed at improving crop productivity and promoting eco-friendly farming.
Smart Textiles	These projects focus on developing advanced smart textiles, including photonic fabrics, conductive fibres, wearable electronics, perovskite solar-textiles, and antenna-integrated materials. They also cover high-performance composites for space applications, gamma-protective clothing, anti-counterfeiting agents, and next-generation piezoelectric/flexoelectric fabrics.

27. ODF Plus

An ODF Plus village is defined as a village which sustains its Open Defecation Free (ODF) Status, ensures solid and liquid waste management and is visually clean. There are 3 progressive stages of ODF Plus villages:

- ODF Plus Aspiring: A Village which is sustaining its ODF status and has arrangements for Solid Waste Management OR Liquid Waste Management
- ODF Plus Rising: A village which is sustaining its ODF status and has arrangements for BOTH Solid Waste Management and Liquid Waste Management
- ODF Plus Model: A village which is sustaining its ODF status and has arrangements for both Solid Waste Management and Liquid Waste Management; observes visual cleanliness, i.e., minimal litter, minimal stagnant wastewater, no plastic waste dump in public places; and displays ODF Plus Information, Education & Communication (IEC) messages

A village that has met all the ODF Plus criteria will self-declare themselves ODF Plus at a Gram Sabha meeting. The district must ensure mandatory third-party verification of a village, within 90 days of ODF Plus declaration for the first time. The mandatory third-party verification will be undertaken for ODF Plus (Model) villages only.

28, 'Mission Shakti'

- The Government of India has launched 'Mission Shakti' – an integrated women empowerment programme as an umbrella scheme for the safety, security, and empowerment of women, implemented during the 15th Finance Commission period.

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- Mission Shakti has two verticals namely "Sambal" for safety and security of women and "Samarthya" for empowerment of women.
- The 'Sambal' has components of One Stop Centre (OSC), Women Helpline (WHL), Beti Bachao Beti Padhao (BBBP) and Nari Adalat.
- The 'Samarthya' has components of Shakti Sadan, Sakhi Niwas, Pradhan Mantri Matru Vandana Yojana, Palna and SANKALP: Hub for Empowerment of Women (SANKALP: HEW).

29. scheme of Conduct of Census of India 2027

The Union Cabinet chaired by the Prime Minister Shri Narendra Modi today, has approved the proposal for conducting Census of India 2027 at a cost of Rs.11,718.24 crore.

Details of the Scheme:

- The Indian Census is the largest administrative and statistical exercise in the world. The Census of India would be conducted in two phases: (i) Houselisting and Housing Census – April to September, 2026 and (ii) Population Enumeration (PE) – February 2027 (For the UT of Ladakh and snow bound non-synchronous areas of UT of Jammu & Kashmir and states of Himachal Pradesh and Uttarakhand, PE shall be conducted in September, 2026).
- About 30 lakh field functionaries will complete this gigantic exercise of national importance.
- Use of mobile app for data collection and the Central portal for monitoring purpose will ensure better quality data.
- Data dissemination will be much better and in a user friendly way so that all the queries on required parameters for policy making will be made available on the click of a button.
- Census-as-a-service (CaaS) will deliver data to ministries in a clean, machine-readable and actionable format.

Benefits:

Census of India 2027 will cover the entire population in the country.

Implementation strategy and targets:

- The Census process involves visiting each and every household and canvassing separate questionnaire for Houselisting & Housing Census and Population Enumeration.
- The enumerators, generally government teachers and appointed by the State Governments, will be doing the field work of Census in addition to their regular duties.
- Other Census functionaries at Sub-district, District and State levels will also be appointed by the State/District Administration.
- New initiatives taken for the Census 2027 are:
 - (i) First Census by digital means in country. Data will be collected using mobile applications that

will be available for both Android as well as iOS versions.

- (ii) A dedicated portal namely Census Management & Monitoring System (CMMS) portal has been developed for managing and monitoring the entire Census process on a real time basis.
- (iv) Houselisting Block (HLB) Creator web map application: Another innovation for Census 2027 is HLB Creator web map application to be used by the Charge Officers.
- (v) Option to self-enumerate will be provided to the public.
- (vi) Suitable security features have been provisioned for this mammoth digital operation.
- (vii) Census 2027 will have a focused and wider publicity campaign for nationwide awareness, inclusive participation, last-mile engagement and support for field operations. It will emphasize on sharing accurate, authentic & timely information ensuring cohesive & effective outreach effort.
- (viii) Cabinet Committee on Political Affairs, in its meeting on 30th April 2025 decided to include caste enumeration in the upcoming census i.e. Census 2027. With the huge social and demographic diversity in our country and related challenges, the Census 2027 will also capture Caste data electronically in second phase, i.e. Population Enumeration (PE).
- (ix) About 30 lakh field functionaries including Enumerators, Supervisors, Master Trainers, Charge Officers and Principal/ District Census Officers will be deployed for data collection, monitoring and supervision of Census operations. All the Census functionaries will be paid suitable honorarium for the work of Census as they will be doing this work in addition to their regular duties

30. National Mission on Natural Farming

The National Mission on Natural Farming (NMNF) was approved by the Union Cabinet on 25.11.2024 to promote Natural Farming (NF) across the country.

As per the Operational Guidelines of NMNF, objectives of the Mission are: -

- i. To promote nature based sustainable systems of farming, enhancing usage of on-farm made natural farming bio-inputs to reduce dependency on externally purchased inputs and input cost reduction. To also improve soil health and have sustainable agriculture practices.
- ii. To popularize livestock (preferably local breed of cow) integrated agriculture-animal husbandry models.
- iii. To strengthen on-farm agroecological research and knowledge based extension capacities of ICAR institutions, KVKs, Agricultural Universities, etc.

- iv. To build upon the on-field experience of practicing NF farmers and scientific expertise to thereby evolve & improvise location specific NF package of practices for increased spread of NF.
- v. To establish scientifically supported common standards and easy farmer friendly certification procedures for naturally grown chemical-free produce.
- vi. To create and promote a single national brand for naturally grown chemical-free produce.

31. ELECTRIC MOBILITY

The Government has implemented following schemes with an aim to establish and facilitate electric mobility in the country to reduce vehicular emission and dependence on fossil fuels in the last five years : -

- i. **Faster Adoption and Manufacturing of Electric (&Hybrid) Vehicles in India' (FAME India) Scheme** : The second phase of FAME India scheme was implemented for a period of 5 years i.e. 01.04.2019 till 31.03.2024
- ii. **Production Linked Incentive (PLI) Scheme for Automobile and AutoComponent Industry in India (PLI-Auto)**: The Government approved this scheme on 23.09.2021 for Automobile and Auto Component Industry in India for enhancing India's manufacturing capabilities for Advanced Automotive Technology(AAT) products. The scheme proposes financial incentives to boost domestic manufacturing of AAT products with minimum 50% Domestic Value Addition (DVA) and attract investments in the automotive manufacturing value chain.
- iii. **Production Linked Incentive Scheme on National Programme on Advanced Chemistry Cell (ACC) Battery Storage**: The Government on 12.05.2021 approved PLI Scheme for manufacturing of ACC in the country. The scheme aims to establish a competitive domestic manufacturing ecosystem for 50 GWh of ACC batteries.
- iv. **PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme**: This scheme aims to support electric vehicles including e-2W, e-3W, e-Trucks, e-buses and e-Ambulances, and also EV public charging stations and upgradation of testing agencies.
- v. **PM e-Bus Sewa-Payment Security Mechanism (PSM) Scheme**: This Schemenotified on 28.10.2024, has an outlay of Rs.3,435.33 crore and aims to support deployment of more than 38,000 electric buses. The objective of scheme is to provide payment security to e-bus operators in case of default by Public Transport Authorities(PTAs).
- vi. **Scheme for Promotion of Manufacturing of Electric Passenger Cars in India(SPMEPCI)**: This schemewas notified on

15.03.2024 to promote the manufacturing of electric cars in India

32. Initiatives to promote women and SC-ST entrepreneur The Government, inter-alia, has taken the following initiatives to promote women and SC-ST entrepreneurs:

- To improve outreach among Entrepreneurs in the country including SC/ST and women, programmes are conducted by the field offices of Ministry of MSME, in coordination with MSME/ Industry Departments of States/UTs concerned and other stakeholders like CGTMSE, SIDBI, Banks, MSME Associations, etc.
- Ministry of MSME implements National Schedule Caste and Schedule Tribe Hub Scheme aiming at capacity enhancement of SC/ST entrepreneurs. Further, Vendor Development Programmes (VDPs) for SC/ST and Women are organised under PMSS. Central Public Sector Undertakings also organise such VDPs.
- Ministry of MSME launched the 'Yashasvini Campaign' on 27.06.2024 to empower women entrepreneurs across India through various schemes on formalization, access to credit, capacity building and mentorship through awareness generation about these schemes.
- A new scheme to provide term loans up to Rs.2 crore to Women, Scheduled Castes and Scheduled Tribes first-time entrepreneurs has been announced in the Union Budget 2025 for promotion and development of MSMEs.
- Ministry of MSME implements Prime Minister's Employment Generation Programme (PMEGP) which is a credit-linked subsidy programme aimed at generating self-employment opportunities through establishment of micro-enterprises in the non-farm sector by helping traditional artisans and rural/urban unemployed youth. Out of the total PMEGP beneficiaries, 39% are women and they are provided higher subsidy (35%) vis-a-vis general category of micro enterprises (upto 25%).
- Ministry of MSME implements MSME Champions scheme with a holistic approach to unify, synergize, and converge various schemes with common purpose. The end objective is to pick up enterprises and modernize their processes, reduce wastages, sharpen business competitiveness, and facilitate their national and global reach and excellence. The scheme has three components which include MSME-Sustainable (ZED) Certification Scheme, MSME-Competitive (Lean) Scheme and MSME-Innovative (Incubation, Design & IPR) Scheme.
- Ministry of Micro, Small and Medium Enterprises has established 65 Export Facilitation Centers (EFCs) across the country with the aim

of providing requisite mentoring and handholding support to MSMEs in exporting their products and services. Export Facilitation Centres (EFCs) provide support to MSME exporters through comprehensive assistance across key areas. These include dissemination of information on export-related schemes and benefits, training and workshops on export compliance, handholding in export documentation and procedures, engagement with industry associations, State Governments, and DGFT to facilitate MSMEs

33. BHAVYA

- At the heart of BHAVYA lies a strong push for deregulation and ease of doing business, with streamlined approvals, effective single-window systems, and investor-friendly reforms led by states.
- The scheme will deliver plug-and-play industrial ecosystems, enabling industries to move from intent to production with speed and certainty. With pre-approved land, ready infrastructure, and integrated services, BHAVYA will significantly reduce entry barriers for investors.
- Under the scheme, industrial parks ranging from 100 to 1000 acres will be taken up for development. Financial support of up to Rs. One crore per acre will be provided for:
- Core infrastructure (internal roads, underground utilities, drainage, common treatment facilities, ICT and administrative systems)
- Value-added infrastructure (ready-built factory sheds, built-to-suit units, testing labs, warehousing)
- Social infrastructure (worker housing and support amenities)
- Support for external infrastructure will also be provided up to 25% of the project cost, ensuring seamless connectivity and integration with existing networks.
- Project selection will be undertaken through a challenge mode, ensuring that only high-quality, reform-oriented and investment-ready proposals are taken forward.

Future-Ready, Sustainable and Efficient Industrial Parks:

- The industrial parks will be designed as futuristic and sustainable ecosystems:
- Aligned with the PM GatiShakti Principles to enable seamless multimodal connectivity and efficient last-mile access
- Green energy and sustainable resource use with integrated underground utility corridors enabling a no-dig environment for efficient maintenance and uninterrupted industrial operations
- These parks will set new benchmarks in industrial infrastructure, ensuring reliability, reducing

inefficiencies, and enhancing productivity across sectors.

34. PM SVANidhi

- Launched in June 2020, the PM SVANidhi scheme was formulated to assist the street vendors to overcome the adverse effects of financial constraints and to restart their lost businesses during the pandemic. However, since the inception of the scheme, it has proved to be more than financial support for street vendors and has given them a sense of identity & formal recognition for their contribution to the economy.
- The key features of the restructured scheme include enhanced loan amount across the first & second tranche, provision of UPI-linked RuPay Credit Card for beneficiaries who have timely repaid the second loan, and digital cashback incentives for retail & wholesale transactions. The scheme's coverage is being expanded beyond statutory towns to census towns, peri-urban areas, etc., in a graded manner.
- The scheme has received national recognition, winning the **Prime Minister's Award for Excellence in Public Administration (2023) for Innovation (Central Level)** for its outstanding contribution to boosting the economy, promoting livelihoods, advancing financial inclusion, and driving digital empowerment, and the **Silver Award for Excellence in Government Process Re-engineering for Digital Transformation (2022)**.



- Though PM SVANidhi is a **Central Government initiative**, its effective implementation is made possible through close **collaboration with States, Banks, and Urban Local Bodies (ULBs)**. State governments and ULBs play a key role by identifying street vendors, facilitating loan processes, and linking beneficiaries to welfare schemes. Banks ensure smooth loan disbursement, timely interest subsidy processing, and promote digital transactions. Together, these partners bring the scheme from policy to reality, creating opportunities and dignity for street vendors across the country.

- To further advance the holistic welfare and development of street vendors and their families, the ‘SVANidhi se Samridhhi’ component is being strengthened through **periodic Lok Kalyan Melas**. The objective is to ensure that the benefits of various Government of India schemes reach vendors and their families in a **saturation approach**, fostering a more inclusive and supportive ecosystem for their growth and well-being. As part of the Special Campaign, “**Lok Kalyan Melas**” were conducted from **17 September to 15 October 2025** across all Urban Local Bodies (ULBs) and monitored through a dedicated Lok Kalyan Portal. These Melas facilitated vendor mobilization, submission of loan applications, accelerated disbursement of loans, and digital onboarding of beneficiaries.

35. e-Jagriti

e-Jagriti, launched on **1 January 2025**, has rapidly emerged as a significant digital platform for consumer grievance redressal in India. It integrates earlier systems, including OCMS, e-Daakhil, NCDRC CMS, and CONFONET, into a single, streamlined interface, thereby enhancing accessibility and simplifying procedures. Now operational across the NCDRC and all States and Union Territories, the platform enables users to file complaints, make payments, participate in virtual hearings, and monitor case progress. **Its multilingual support, chatbot assistance, voice-to-text features, and secure digital access ensure usability for all consumers, including senior citizens and persons with disabilities.**

Key Benefits of e-Jagriti

- **Global Accessibility:** The platform allows both non-resident Indians and domestic users to file and manage cases remotely, supported by secure end-to-end encryption and role-based secure access.
- **Efficiency and Speed:** Automated workflows, real-time SMS and email notifications, and virtual hearings have significantly improved the overall efficiency of the system. Notably, ten states and the NCDRC have recently recorded disposal rates exceeding 100 percent.

- **Inclusivity:** The platform offers multilingual interfaces and accessibility features, making it user-friendly for people from diverse linguistic and socio-economic backgrounds.
- **Secure Transactions:** Integration with Bharat Kosh and PayGov payment gateways ensures that fee payment processes are efficient, secure, and user-friendly.

36. PRADHAN MANTRI GARIB KALYAN ANNA YOJANA (PMGKAY)

The Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) was launched with the specific purpose of ameliorating the hardships faced by the poor and needy due to economic disruptions caused by the COVID-19 outbreak in the country. In view of COVID crisis, the allocation of free foodgrains, under PMGKAY was in addition to regular allocation done. A total quantity of approx. 1118 LMT foodgrains had been allocated under PMGKAY (Phase I-VII) for the period of 28 months with a total planned financial outlay of about Rs. 3.91 lakh crore.

The Central Government, in order to remove the financial burden of the poor beneficiaries and to ensure nationwide uniformity and effective implementation of the Act, had decided to provide foodgrains free of cost to NFSA beneficiaries i.e. AAY households and PHH beneficiaries, for a period of one year beginning from 1st January 2023 under the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY). Prior to that, under NFSA, subsidized food grains were distributed at Rs 3 per kg for rice, Rs 2 per kg for wheat and at Rs 1 per kg for coarse grains to beneficiaries. The period of distribution for free of cost food grains under the PMGKAY has been extended for five years w.e.f. 1st January, 2024.

INDIAN POLITY

1. Lokpal

Full Bench of Lokpal of India has adopted a new Motto replacing the old one. The Logo with the new Motto of Lokpal of India, is as under: -

2. DISASTER MANAGEMENT (AMENDMENT) BILL, 2024

The Disaster Management (Amendment) Act, 2025 has been passed by the Parliament and got assent of the President on 29.03.2025. The provisions of the Act came into force w.e.f. 09.04.2025. The Act, inter-alia, aims to:-

- i. bring more clarity and convergence in the roles of Authorities and Committees working in the field of disaster management;
- ii. provide statutory status to certain pre-Act organizations like the National Crisis Management Committee and the High Level Committee;
- iii. strengthen the efficient working of the National Disaster Management Authority and the State Disaster Management Authorities;
- iv. empower the National Disaster Management Authority and the State Disaster Management Authorities to prepare the disaster plan at national level and State level instead of the National Executive Committee and the State Executive Committee.
- v. provide for creation of disaster data base at national and State level;
- vi. make provision for constitution of "Urban Disaster Management Authority" for State Capital and large cities having Municipal Corporation; and
- vii. make enabling provision for the constitution of "State Disaster Response Force" by the State Government.

3. Khelo Bharat Niti-2025

The Government has recently launched the Khelo Bharat Niti-2025 on 01.07.2025. It is built upon five key pillars that aim to transform India's sports landscape.

First, it focuses on achieving the nation's Excellence on the Global Stage by enhancing infrastructure, talent identification and international competitiveness. Second, Sports for Economic Development emphasizes leveraging sports to boost industries such as tourism, manufacturing and sports technology. Third, Sports for Social Development promotes inclusivity, health and education through sports, fostering societal cohesion. Fourth, Sports – A People's Movement seeks to engage communities in

physical activities, making sports a cultural cornerstone. Finally, the Khelo Bharat Niti-2025 aligns with the National Education Policy (NEP) 2020, integrating sports with education to nurture holistic development and life skills in students, youth, promoting both academic and athletic excellence.

Niti focuses on several key objectives, which are given below:

- Establish comprehensive sports programs for all participation groups, from grassroots to elite levels.
- Organize sports competitions and leagues at various levels, creating a robust competitive structure.
- Implement physical literacy initiatives to promote a culture of sports and physical activity.
- Develop a robust talent identification and development system to nurture future champions.
- Ensure equitable access to sports infrastructure across the country.
- Provide athlete-centric support systems for the holistic development of sportspersons.
- Promote sports science, medicine and innovation to enhance performance and well-being.
- Strengthen governance and institutional frameworks in the sports sector.
- Revamp funding mechanisms to ensure sustainable development of sports.

4. Mission Karmayogi

- Mission Karmayogi, also known as the National Programme for Civil Services Capacity Building (NPCSCB), which is a Central Sector Scheme is being implemented by the Department of Personnel and Training.
- The objective of the Mission is to build a future ready and citizen- centric civil service by shifting from rule-based to a role-based and competency-driven capacity building framework.
- A key component of this initiative is the iGOT Karmayogi digital learning platform, which provides access to online training courses across behavioural, functional, and domain competencies, enabling anytime-anywhere learning for government employees.
- Two institutions - the Capacity Building Commission (CBC) and the Karmayogi Bharat Special Purpose Vehicle (KB-SPV) - were set up

in the year 2021 and 2022 respectively as part of the implementation of Mission Karmayogi.

- CBC aids Ministries/Departments and Organizations in the formulation and implementation of the Capacity Building Plans while the KB-SPV owns and operates the i-GoT digital learning platform.
- The Mission is being implemented across all Ministries and Departments of the Government of India through the existing Civil Service Training Institutions and the digital learning platform - iGOT Karmayogi.

5. Legal Services Authorities

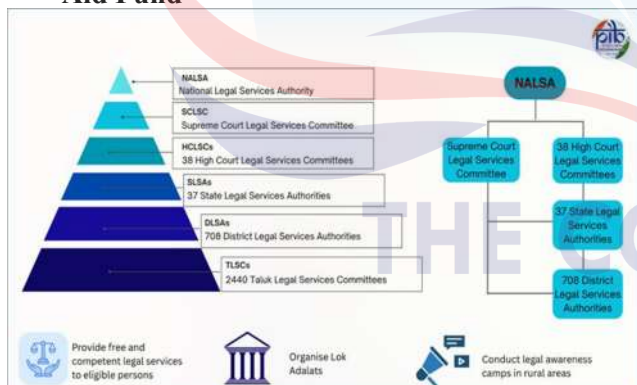
The Legal Services Authority Act, 1987, established legal aid organisations nationwide to ensure that no citizen suffering from economic or other barriers is denied an equal opportunity for getting justice.

The act established a **three-tier system to provide free and competent legal services:**

- National Legal Services Authority (headed by the Chief Justice of India)
- State Legal Services Authorities (headed by the Chief Justice of High Court)
- District Legal Services Authorities (headed by the District Judge)

Legal aid is funded by the central and state governments and donations through a three-tier funding structure:

- Central funding or donations to the Central Authority through the **National Legal Aid Fund**
- Central or State Government funding or other contributions to the State Authority through the **State Legal Aid Fund**
- State Government funding or other donations to the District Authority through the **District Legal Aid Fund**



Anyone who needs free legal services and is eligible can apply to the concerned Legal Services Authority or Committee.

- The application can be submitted **in writing, by filling up a prescribed form**, or made **orally** (in which case an officer or paralegal volunteer will help record the request).
- Applications can also be made **online** through the Legal Aid Application available on the websites of NALSA or State/District Legal Services Authorities.

- If NALSA receives an application directly, it will **forward it to the appropriate authority**.
- Once the application reaches the concerned Legal Services Institution, it is reviewed to decide the next steps. Depending on the case, assistance may include **legal advice, counselling, or appointment of a lawyer** to represent the applicant in court.

If the application is accepted:

- The applicant is **informed about the lawyer assigned**, and both receive a **letter of appointment**.
- The lawyer will then contact the applicant, or the applicant may also reach out to the lawyer.

As per **Regulation 7(2) of the National Legal Services Authority (Free and Competent Legal Services) Regulations, 2010**, a decision on the application must be made **immediately, and not later than seven days** from the date of receipt.

Communication of Application Status:

1. **Physical applications:** Updates are sent to the applicant's postal or email address.
2. **Online applications:** An application number is generated, and the applicant can **track the status online** through the respective portal.
3. **Applications from Government Departments/ Centralised Public Grievance Redress and Monitoring System (CPGRAMS):** Applicants are informed via email and can view the scanned copy and remarks on the **CPGRAMS and Legal Services Authority** websites

6. DPDP Rules

Context: The Government of India has notified the Digital Personal Data Protection (DPDP) Rules, 2025, marking the full operationalisation of the DPDP Act, 2023. Together, the Act and Rules create a simple, citizen-focused and innovation-friendly framework for the responsible use of digital personal data.

The Act is guided by seven core principles including consent and transparency, purpose limitation, data minimisation, accuracy, storage limitation, security safeguards, and accountability.

Inclusive and Consultative Rule-Making : To ensure wide stakeholder participation, MeitY released the draft DPDP Rules for public comments and held consultations across Delhi, Mumbai, Guwahati, Kolkata, Hyderabad, Bengaluru and Chennai. Inputs from startups, MSMEs, industry bodies, civil society and government departments have shaped the final, notified Rules.

Phased and Practical Implementation : The DPDP Rules provide an **18-month phased compliance timeline**, allowing organisations time for smooth transition. They also require Data Fiduciaries to issue standalone, clear and simple consent notices that transparently explain the specific purpose for which personal data is being collected and used. Consent Managers—entities that help

individuals manage their permissions—must be Indian companies.

Clear Protocols for Personal Data Breach Notification: In the event of a personal data breach, Data Fiduciaries must promptly inform affected individuals in plain language, explaining the nature and possible consequences of the breach, the steps taken to address it and contact details for assistance.

Safeguards for Children and Persons with Disabilities: To ensure stronger protection, Data Fiduciaries must obtain verifiable consent before processing the personal data of children, with limited exemptions for essential purposes such as healthcare, education and real-time safety. For persons with disabilities who cannot make legal decisions even with support, consent must come from a lawful guardian verified under applicable laws.

Transparency and Accountability Measures: Data Fiduciaries must display clear contact information—such as that of a designated officer or Data Protection Officer—to help individuals raise queries about personal data processing. Significant Data Fiduciaries have enhanced obligations including independent audits, impact assessments and stronger due diligence for deployed technologies. They must also comply with government-specified restrictions on certain categories of data, including localisation where required.

Strengthening Rights of Data Principals: The DPDP framework reinforces the rights of individuals to access, correct, update or erase their personal data and to nominate another person to exercise these rights on their behalf. Data Fiduciaries must respond to all such requests within a maximum of 90 days.

Digital-First Data Protection Board: The Data Protection Board will function as a fully digital institution, enabling citizens to file and track complaints online through a dedicated platform and mobile app, promoting transparency, efficiency and ease of living. Appeals against its decisions will lie with the Appellate Tribunal, TDSAT.

The Rules seek to strike a careful balance between protecting citizens' privacy and promoting innovation and growth. India's data governance model encourages economic development while safeguarding citizen welfare, and provides a facilitative compliance regime for startups and smaller enterprises so that innovation can continue to thrive alongside strong data protection standards.

With simplified rules, adequate transition time and a technology-neutral approach, the DPDP Act and Rules aim to strengthen privacy, enhance trust and support responsible innovation. Together, they help position India's digital economy as secure, resilient and globally competitive.

7. Banking Laws (Amendment) Act, 2025

The **Banking Laws (Amendment) Act, 2025** is a step towards **strengthening governance standards** in the banking sector by **ensuring uniformity** in reporting by

banks to the Reserve Bank of India along with **improved audit quality** in public sector banks (PSBs). The act enhances **depositor and investor protection** by promoting customer convenience through improved nomination facilities.

- With **The Banking Regulation (Amendment) Act, 2020**, additional powers were provided to the Reserve Bank of India for enhanced effective regulation of Co-operative banks.
- Continuing this momentum, in a recent reform, **The Banking Laws (Amendment) Act, 2025** amends five acts viz. the Reserve Bank of India Act, 1934, the Banking Regulation Act, 1949, the State Bank of India Act, 1955, the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970 and the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1980.
- The move aims to **enhance banking governance, improve audit transparency, strengthen depositor protection, and bring cooperative banks under a more robust regulatory framework.**
- The Banking Amendment Act, 2025 has been introduced amid rapid digital growth and evolving financial challenges. The reform seeks to align governance and compliance frameworks with contemporary industry dynamics and evolving technology. The provisions are primarily needed to:

Gain Clarity in assets succession for smoother transfer of assets for both banks and depositors, minimizing disputes and reducing the need for judicial intervention.

Ensure Uniform terminology to streamline regulatory compliance and facilitate adaptation to emerging technologies within the banking ecosystem.

Revise statutory deadlines aligned with accounting cycles to reduce manual workload, promote automation, and strengthen systemic efficiency.

- The Banking Laws (Amendment) Act, 2025 introduces key reforms focused on depositor security, governance strength, and faster resolution of stress. Beyond structural updates, the 2025 Act reinforces India's ongoing efforts to enhance banking oversight and governance.

8. COMBATING DRUG TRAFFICKING

The Department of Revenue, Ministry of Finance formulated the National Policy on Narcotic Drugs and Psychotropic Substances in 2012, providing a unified framework for regulating the medical and scientific use of narcotic drugs and psychotropic substances while ensuring stringent controls to prevent their diversion, trafficking and abuse. The policy underscores a balanced approach

encompassing awareness generation, treatment, rehabilitation and social reintegration, delivered through Government hospitals and an extensive network of NGOs supported by the Ministry of Social Justice and Empowerment. It further mandates the institutionalization of regular national surveys to monitor trends in drug abuse and to guide evidence-based interventions.

The Government has taken various measures to curb the production, trafficking of synthetic drugs and to counter drug abuse, some of which are as under: -

- i. 18 new precursor chemicals used in manufacture of synthetic drugs have been notified in Schedule B & C of Regulation of Controlled Substances (RCS) Order on 23.01.2025 taking the number of controlled substances to 45.
- ii. List of companies to which Unique registration Number (URN) have been issued by Narcotics Control Bureau (NCB) for precursor chemicals has been shared with all States, Directorate of Revenue Intelligence (DRI) & Intelligence Bureau and request has been made to strictly monitor diversion of precursor chemicals.
- iii. Maritime surveillance systems have been strengthened to prevent trafficking of drugs including synthetic drugs through coastal regions.
- iv. India is actively participating in Global coalitions to address synthetic drugs threats. This involves increased information sharing, joint operations and collaborative efforts to track and disrupt international drug trafficking networks.
- v. Better utilization of International Operation on NPS Incident Communication System (IONICS) and Precursor Incident Communication System (PICS) portals of INCB for sharing and receiving data related with Synthetic drugs and precursors and further taking suitable actions.
- vi. To deter smuggling of synthetic drugs like methamphetamine and MDMA, DRI and Customs filed formations keep a constant vigil and take operational measures.
- vii. Launched Nasha Mukta Bharat Abhiyaan (NMBA) in all districts of the country. It has reached out to more-than 24.9 crore people including 8.7 crore youth and 6 crore women.
- viii. Government is providing financial assistance to 349 Integrated

Rehabilitation Centers for Addicts (IRCAs), 45 Community based Peer Led Intervention (CPLI) Centers, 76 Outreach and Drop In Centers (ODICs), 154 Addiction Treatment Facilities (ATFs), 139 District De-addiction Centres (DDACs) across the country.

- ix. The Government has launched 1933-MANAS Helpline designed as a unified platform for citizens to report the drug-related issues via multiple communication.
- x. A Toll-free Helpline No.14446 for de-addiction is operated for providing primary counseling and immediate assistance to persons seeking help.
- xi. Memorandum of Understanding (MoU) have been signed with Spiritual organizations to support NMBA and conduct mass awareness activities.

The Government is making various efforts at the international level to control drug trafficking, some of which are as under: -

- xii. Director General Level Talks/ Bilateral talks are organized with neighboring and other countries such as Myanmar, Iran, Bangladesh, Indonesia, Singapore, Afghanistan, Sri Lanka, etc. to resolve various issues on drug trafficking having international implications.
- xiii. As a part of international co-operation, India has signed Bilateral Agreements with 27 countries, Memorandum of Understanding with 19 countries for combating illicit trafficking of Narcotic Drugs and Psychotropic Substances (NDPS) and Chemical Precursors as well as related offences.
- xiv. Narcotics Control Bureau (NCB) co-ordinates with various international organizations such as South Asian Association for Regional Cooperation- Drug Offences Monitoring Desk (SAARC-SDOMD), Brazil, Russia, India, China, and South Africa (BRICS), Colombo Plan, Association of Southeast Asian Nations (ASEAN), ASEAN Senior Officials on Drug Matters (ASOD), Bay of Bengal Initiative For Multi-Sectoral Technical and Economic Co-Operation (BIMSTEC), Shanghai Cooperation Organization (SCO), United Nations Office on Drugs and Crime (UNODC), International Narcotics Control Board (INCB), etc. for sharing information and intelligence to combat trans-national drug trafficking.

- xv. NCB takes part in real-time information sharing with various Drug Liaison Officers of other countries such as the Drug Enforcement Agency (DEA) of the United States of America, the National Crime Agency of the United Kingdom, Royal Canadian Mounted Police (RCMP) of Canada, Australian Federal Police (AFP) of Australia, Office Anti-Stupefians (OFAST) of France, etc for operational and intelligence information.

9. Viksit Bharat - Guarantee for Rozgar and Ajeevika Mission (Gramin): VB G RAM G

This landmark legislation aims to establish a future-ready, convergence driven, saturation-oriented rural development architecture. It will support the accelerated pace of rural development in accordance with the vision of Viksit Bharat @2047, thereby empowering the rural households through increased employment opportunities. The Bill provides for institutionalising convergence of all relevant schemes through a unified planning process anchored in Viksit Gram Panchayat Plans, aggregated into Viksit Bharat National Rural Infrastructure Stack. The Bill provides for **Robust transparency and accountability mechanisms** through technology-enabled architecture and enforcement via legal and administrative provisions.

Viksit Bharat - Guarantee for Rozgar and Ajeevika Mission (Gramin): VB G RAM G (विकसितभारत-जीरामजी) Bill, 2025

will enhance the statutory wage employment guarantee to 125 days per rural household in every financial year, for adults who volunteer to undertake unskilled manual work.

All works undertaken under this Bill will be aggregated into the **Viksit Bharat National Rural Infrastructure Stack**, creating a unified national framework for rural public works. The thematic priority will be accorded to water security through water-related works, core rural infrastructure, livelihood-related infrastructure, and special works aimed at mitigating the impact of extreme weather events and disaster preparedness. This approach will ensure the creation of productive, durable, resilient and transformative rural assets across the country.

All works under this Bill will be identified through **Viksit Gram Panchayat Plans (VGPPs)**, which are bottom-up, convergence-based and saturation-oriented. These plans will be aggregated at the Block, District and State levels to ensure alignment with broader sectoral priorities, thereby creating a unified, Whole-of-Government rural development framework. The VGPPs will be prepared using spatial technology and integrated with **PM Gati Shakti** to enable coordinated and efficient planning.

States will be empowered to notify in advance, periods aggregating to 60 days in a financial year during which works under the Bill shall not be undertaken, in order to

facilitate the availability of farm labour during peak sowing and harvesting seasons.

Every State Government is required to prepare a Scheme for giving effect to the guarantee proposed under this bill, within six months of the commencement of the Act. It will operate as a **Centrally Sponsored Scheme (CSS)**, with a fund sharing pattern of 90:10 for North-Eastern and Himalayan States/UT and 60:40 for all other States.

To promote inclusive growth and equitable distribution of financial resources in a fair manner, the bill provides for **Normative Allocation to States based** on objective parameters. States will ensure transparent and need-based intra-State distribution of funds across Districts and Gram Panchayats, taking into account the category of the Panchayats and local developmental needs, thereby strengthening equity, transparency and accountability.

The Bill mandates a comprehensive governance ecosystem built on digital public infrastructure, including biometric authentication, spatial-technology-enabled planning and monitoring, mobile-based reporting with real-time dashboards, AI-enabled analytics and strengthened social audit mechanisms, ensuring transparent, efficient and high-integrity implementation.

The Gram panchayat shall convene Weekly Disclosure meetings in the Gram Panchayat Bhavans to present the status of works, payments, grievances, progress of the works, muster rolls etc. In addition, weekly disclosures shall be automatically generated, and displayed in a publicly accessible physical and digital formats.

Under the Bill, wage rates will be notified by the Central Government and, until such notification, the existing MGNREGA wage rates will continue to apply. Bill provides for Unemployment allowance if employment is not provided within 15 days, at prescribed rates, to be paid by the State Governments.

10. National Cooperative Policy, 2025

The details of the specific mechanisms proposed in the National Cooperative Policy (NCP), 2025 to maintain democracy and trust in cooperatives are reproduce below as given in following sub-sections of NCP-

Measures to Strengthen Cooperative Governance

1. Encourage States/UTs to amend their Cooperative Societies Acts and Rules

The States/UTs should be encouraged to suitably amend their respective Cooperative Societies Acts and Rules so as to provide autonomy, improve ease of doing business, and strengthen good governance in order to:

1. ensure autonomous functioning and democratic member control;
2. ensure free and fair elections of the Board of Directors and office bearers;
3. ensure transparent recruitment processes.

2. Encourage complete digitalization of Registrar offices

States/UTs should be encouraged to completely digitalize all processes of the offices of the Registrar of Cooperative

Societies, as provisioned in their respective Acts, and make them paperless so as to:

- facilitate all types of communication and interaction between cooperative societies and Registrar offices through online digital means such as web portals, e-mail, mobile-based messaging, etc.

3. Facilitate development and adoption of model bye-laws

The development and adoption of model bye-laws for cooperatives across different tiers and sectors should be facilitated, with a focus on strengthening members so as to:

- ensure active participation of members;
- provide a mechanism to collect member-centric feedback and promote activation of dormant members;
- promote membership among women and weaker sections of the community;
- ensure the centrality of members in decision-making;
- ensure transparent and corruption-free organizational governance;
- promote the induction of young and qualified manpower for various positions.

The Tribhuvan Sahkari University will serve as the apex institution for cooperative education and training. It will strive to implement standardized curricula and teaching methodologies through its affiliated institutions, Centres of Excellence, and outlying campuses across t

11. Status of Devolution to Panchayats in States - An Indicative Evidence-Based Ranking, 2024

“Panchayat”, being “Local Government”, is a State subject and part of State List of Seventh Schedule of the Constitution of India. Panchayats are set up and operate through the respective State Panchayati Raj Acts. States have made their own Panchayati Raj Act, subject to the provisions of the Constitution. Article 243G of the Constitution empowers the Legislature of a State to make provisions, by law, for the devolution of power and responsibilities upon Panchayat at appropriate level, subject to such conditions as may be specified, with respect to the preparation of plans for economic development and social justice and implementation of schemes for economic development and social justice as may be entrusted to them including those in relation to matters listed in the Eleventh Schedule to the Constitution. The State legislatures are to consider the 29 subjects listed in the Eleventh Schedule for devolution of power and responsibilities upon Panchayats.

Accordingly, the performance of Panchayats depends on the extent of powers and resources devolved to them by the States concerned, which varies across States.

However, the Ministry of Panchayati Raj reviews performance of Panchayats, from time to time, through

studies, review meetings, field visits, video conferencing, Information Technology applications etc.

The Ministry has released a report titled “Status of Devolution to Panchayats in States - An Indicative Evidence-Based Ranking, 2024” in February 2025 to assess the effectiveness of devolution and the role of local governments in strengthening grassroots democracy. This report presents the Devolution Index, which provides the overall scores and ranks for all States/Union Territories covered under Part-IX of the Constitution, based on six identified dimensions: Framework, Functions, Finances, Functionaries, Capacity Enhancement, and Accountability. As per this report, the State of Madhya Pradesh has ranked 12th position among 18 general category States.

The Ministry has been rolling out People’s Plan Campaign as ‘Sabki Yojana Sabka Vikas’ since 2018 for preparation of evidence based, holistic and inclusive Development Plans at the grassroots level in structured manner for the next financial year through people’s participation at various levels of Panchayati Raj Institutions including Gram/Village Panchayats, Block/Intermediate Panchayats and District Panchayats. The campaign aims to give impetus to the process of attainment of Localized Sustainable Development Goals (LSDGs) at the grassroots, which, in turn, leads to the attainment of Sustainable Development Goals in rural areas.

12. Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill, 2025

At a time when India is reimagining the future of its energy landscape, a new legislative step has emerged to guide the country toward a more advanced and resilient nuclear ecosystem. **The Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill, 2025**, reflects the government’s effort to modernize the laws governing the nuclear sector. It brings together various elements of nuclear development under a **single, comprehensive structure**, aiming to create a more streamlined and future-ready system. The Bill focuses on a **forward-looking approach** and its role in shaping India’s **long-term energy pathway**. As a significant piece of legislation, it marks an important moment in the country’s broader journey toward building a **secure and sustainable energy future**.

Evolution of India’s Nuclear Laws

India’s nuclear power journey has been guided by a series of landmark legislations that ensured the peaceful use of atomic energy while safeguarding national interests. Each step reflected the country’s growing confidence and maturity in managing nuclear technology responsibly.

- **The Atomic Energy Act, 1962**, replaced the earlier 1948 law and laid down the foundation for India's nuclear programme. It empowered the government to regulate atomic energy for peaceful purposes, ensuring strict control over research, development, and use of nuclear materials.
- **Amendments in 1986, 1987, and 2015 in the Atomic Energy Act of 1962** gradually opened the sector beyond the Central Government, allowing government companies and joint ventures to participate in nuclear power generation. The amendments reflected India's intent to expand capacity while keeping strategic oversight intact.
- **The Civil Liability for Nuclear Damage Act, 2010**, introduced a no-fault liability regime, ensuring compensation in case of nuclear incidents. This law provided clarity on responsibility and built public trust by prioritizing safety and accountability in nuclear operations.

Rationale Behind The Bill

At this stage of India's energy transition, the country is revisiting the foundations of its nuclear framework to match present-day needs and future ambitions. Over the decades, India's nuclear programme has matured, its technological capabilities have strengthened, and its clean-energy goals have expanded. These developments have created the need for a modern, comprehensive legislation that reflects today's realities and tomorrow's requirements.

Present Outlook

India's nuclear energy programme has maintained a steady role in the country's electricity mix and is now poised for significant expansion.

- **Stable Contribution:** Nuclear power has consistently accounted for around 3% of total electricity generation, with a share of 3.1% in 2024–25.
- **Installed Capacity:** The present nuclear capacity stands at 8.78 GW.
- **Planned Expansion:** With the indigenous 700 MW and 1000 MW reactors being developed through international cooperation, the capacity is projected to rise to 22.38 GW by 2031–32.

Nuclear Energy Mission

Announced in Union Budget 2025-26, it allocates **₹20,000 crore** to drive design, development, and deployment of **Small Modular Reactors (SMRs)**.

Target: At least five indigenously designed SMRs to be operational by **2033**, strengthening India's clean energy roadmap.

Initiatives by Bhabha Atomic Research Centre (BARC):

200 MWe Bharat Small Modular Reactor

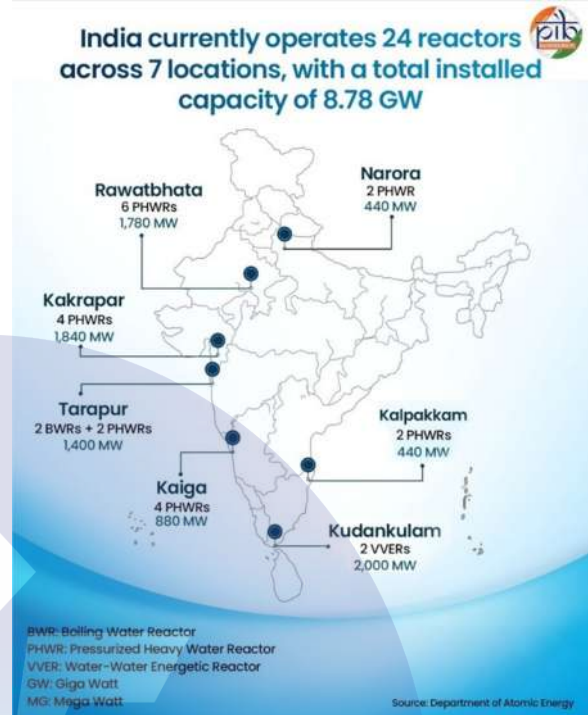
(BSMR-200)

55 Mwe (Megawatt electrical) SMR-55

Up to 5 MWth (Megawatt thermal)

High-temperature gas-cooled reactor for hydrogen generation.

Strategic aim: Position India as a leader in advanced nuclear technologies while ensuring sustainable energy security.



Long-term Mission: The Government has announced a Nuclear Energy Mission to achieve 100 GW by 2047, aligning with India's clean energy goals.

Why India Needs to Scale Nuclear Power

India's growing energy demands and clean energy commitments make a strong case for expanding nuclear capacity. Round-the-clock electricity is vital for emerging needs such as data centres and advanced industries, yet existing laws do not provide the flexibility or speed required for such growth. To meet the national target of 100 GW nuclear capacity by 2047 and advance long-term decarbonisation by 2070, a modern legal framework is essential, which enables wider participation, leverages indigenous resources, and integrates innovation with safety.

Taken together, these developments highlight the need for **progressive legislation** that can repeal the 1962 Act and the 2010 liability law. A **unified legislation** allows India to expand the role of nuclear energy in its overall energy mix, encourage innovation, support non-power applications, and continue to uphold the highest standards of safety, security, safeguards, and liability. In this way, the bill serves as a **natural progression of India's evolving nuclear journey** and provides a foundation for the sector's future growth.

Defining Elements of the Legislation

As India moves toward a more modern and future-ready nuclear energy structure, the **Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill, 2025**, lays down a set of focused provisions to strengthen governance, safety, and institutional mechanisms. Its key objectives can be understood through the following major elements:



- **Private Sector Integration:** The Bill permits private companies to participate in India's nuclear sector, enabling them to undertake plant operations, power generation, equipment manufacturing, and selected activities such as the fabrication of nuclear fuel including conversion, refining and enrichment of uranium-235 up to such threshold value, or production, use, processing or disposal of other prescribed substances. In addition, all activities that involve radiation exposure must obtain prior safety authorisation from the regulatory authority.
- **Activities Under Exclusive Central Government Purview:** Under the Bill, certain sensitive nuclear fuel-cycle activities are reserved exclusively for the Central Government or its wholly owned institutions. These include enrichment or isotopic separation of prescribed or radioactive substances (unless otherwise notified), management of spent fuel such as reprocessing, recycling, radionuclide separation, and high-level waste handling, production and upgradation of heavy water, and any other facilities or activities specifically notified by the Government.
- **Licensing and Safety Oversight:** Establishes a structured system for granting, suspending, or cancelling licences and safety authorisations for nuclear energy production and use.
- **Graded Liability Structure:** In contrast to existing laws that impose a single statutory cap on operator liability, the SHANTI Bill establishes a graded liability framework. Under this framework, the limits on operator liability are detailed in the **Second Schedule of the bill** and vary according to the type and characteristics of the nuclear installation.

- **Regulation of Non-Power Applications:** Provides a regulatory framework for the use of nuclear and radiation technologies in health care, agriculture, industry, research, and other peaceful applications.
- **Exemption for Certain Activities:** Allows exemption from a license for limited activities like research, development, and innovation-related work.
- **Civil Liability Framework:** Introduces a practical and balanced civil liability regime for addressing nuclear damage.
- **Statutory Body:** Grants formal statutory recognition to the **Atomic Energy Regulatory Board (AERB)** to strengthen regulatory independence and authority.
- **Enhanced Safety, Security, and Safeguards:** Improves systems for security, safeguards, quality assurance, and coordinated emergency preparedness and response.
- **Central Government Acquisition Rights:** Vests exclusive acquisition rights with the Central Government in specific cases related to nuclear activities.
- **Dispute Redressal Mechanism:** Establishes an **Atomic Energy Redressal Advisory Council** to facilitate the redressal of disputes.
- **Appellate Tribunal Provision:** The Appellate Tribunal for Electricity, set up under the Electricity Act, 2003, will serve as the appellate authority, empowered to hear appeals under provisions of the bill and any additional matters as notified by the Central Government.
- **Claims Commissioner Appointment:** Empowers the Central Government to appoint Claims Commissioners for adjudicating compensation claims related to nuclear damage.
- **Nuclear Damage Claims Commission:** Provides for a dedicated Commission to handle cases involving severe nuclear damage and ensure timely adjudication.

Safeguards and Strategic Oversight:

At the core of the bill lies a strong emphasis on maintaining India's strategic control over its nuclear ecosystem. Even as the sector opens up to private participation, the Bill ensures that critical functions remain firmly under sovereign oversight.

- ❖ **Control of Sensitive Domains:** The Government retains exclusive authority over the nuclear fuel cycle, waste management, and all security-related operations.
- **Regulatory Strengthening:** The reforms reinforce safety standards and enhance India's nuclear governance framework for future expansion.

- **Protection of Strategic Autonomy:** The nuclear energy sector in the bill is structured in a way that does not compromise national security or India's independent decision-making.
- **Coordinated Oversight Mechanisms:** Enhanced safeguards and monitoring systems ensure consistent compliance across all nuclear activities.

Conclusion:

The Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Bill, 2025, stands as a pivotal step in shaping the next phase of India's nuclear journey. By modernising the legal framework and strengthening institutional oversight, it creates the foundation for a more **efficient, innovative, and secure nuclear ecosystem**. The Bill supports India's long-term vision of **expanding clean, reliable energy** while ensuring that strategic interests remain fully protected. As the country moves toward greater **energy independence and technological advancement**, this legislation can play a defining role in driving the growth of India's nuclear power and broader energy landscape.

**BPSC 69th
5th Rank**



VINEET ANAND

मैं . The core ias की पूरी टीम और विशेष तौर पर मेरे सच को धन्यवाद देना चाहता हूँ। जिन्होंने वीपीएससी परीक्षा के दौरान निरंतर मार्गदर्शन तथा आकरामक सहयोग प्रदान किया। व्यासलेख पर सर के द्वारा उत्तर लेखन शैली को जिलतरह से बदलते मांगों के अनुसार और प्रभावशाली ढंग से सिखाया गया, वह मेरी इस सफलता में निर्णायक योगदान हुआ।

विनीत आनन्द
69th BPSC
(Rank 5)
(ARCS)

**UPSC 2024
118 Rank**



GARIMA JAIN

Dear team at CoreIAS
I would like to express my heartfelt gratitude for the guidance provided to me during my upsc preparation. My special thanks goes to Hon. Amit Jain sir for his exceptional mentoring during answer writing sessions and current affairs class. The answer writing sessions helped me understand the importance of breaking up and brainstorming questions. CSAT classes helped me build confidence in attempting questions. Intending my thanks again to the entire team

Garima Jain
AIR-118, UPSC CSE 2024

**UPSC 2025
272nd Rank**



ESHA JAIN

I am Esha Jain (AIR-272). I would like to express my heartfelt gratitude to Amit Sir and entire Core IAS team for their unwavering support and guidance throughout my UPSC journey.

This achievement would not have been possible without your constant encouragement, expert mentorship and the structured environment. Every lecture, discussion and piece of evidence advice played a crucial role in shaping my understanding and boosting my confidence.

I am deeply grateful to be a part of this institution. With sincere thanks & respect.

ESHA JAIN
AIR-272



HISTORY / ART & CULTURE

1. Maratha Military Landscapes of India

In news: Inclusion of Maratha Forts in UNESCO World Heritage Site

- Spanning from the 17th to 19th centuries CE, this extraordinary network of twelve forts demonstrates the strategic military vision and architectural ingenuity of the Maratha Empire.
- Spread across the states of Maharashtra and Tamil Nadu, the selected sites, include Salher, Shivneri, Lohgad, Khanderi, Raigad, Rajgad, Pratapgad, Suvarnadurg, Panhala, Vijaydurg, and Sindhudurg in Maharashtra, along with Gingee Fort in Tamil Nadu.
- While Shivneri fort, Lohgad, Raigad, Suvarnadurg, Panhala fort, Vijaydurg, Sindhudurg and Gingee fort are protected under the Archaeological Survey of India whereas Salher fort, Rajgad, Khanderi fort and Pratapgad are protected by the Directorate of Archaeology and Museums, Government of Maharashtra.
- Located across a range of diverse terrains—from coastal outposts to hilltop strongholds - these forts reflect a sophisticated understanding of geography and strategic defence planning. Together, they form a cohesive military landscape that highlights the innovation and regional adaptation of fortification traditions in India.
- Salher, Shivneri, Lohgad, Raigad, Rajgad, and Gingee are situated in hilly terrains and are therefore known as hill forts. Pratapgad, nestled within dense woods, is classified as a hill-forest fort. Panhala, located on a plateaued hill, is a hill-plateau fort. Vijaydurg, positioned along the shoreline, is a notable coastal fort, while Khanderi, Suvarnadurg, and Sindhudurg, surrounded by the sea, are recognized as island forts.
- The purpose of including these heritage sites in UNESCO's list is to preserve and promote shared heritage based on OUVs (Outstanding Universal Values) found in cultural, natural as well as mixed properties across 196 countries. On its part, India became a member of the World Heritage Committee from 2021-25.
- India **ranked 6th globally and 2nd in Asia Pacific Region** for the most number of World Heritage Sites. 196 nations have ratified the World Heritage Convention, 1972.

2. Piprahwa Relics

Context: The Ministry of Culture, Government of India, proudly announces the historic return of the sacred Piprahwa relics of Lord Buddha to their rightful home in India. This momentous repatriation has been made possible through an exemplary public-private partnership between the Government of India and the Godrej Industries Group.

- The Piprahwa relics, discovered in 1898 by British civil engineer William Claxton Peppé in Piprahwa, Uttar Pradesh, are believed to be associated with the mortal remains of Lord Buddha.
- Enshrined by His followers around the 3rd century BCE, these relics have long held immense spiritual value for the global Buddhist community and represent one of the most important archaeological discoveries in India's history.
- Discovery: Found in 1898 in Piprahwa, Siddharthnagar district, Uttar Pradesh, near the Nepal border, in an ancient stupa believed to be ancient Kapilavastu

3. Scheme For Conservation of Intangible Cultural Heritage And Diverse Cultural Traditions of India

The “*Scheme for Safeguarding the Intangible Heritage and Diverse Cultural Traditions of India*”, which was operational during the period 2013–2016, was formulated with the objective of reinvigorating and revitalizing institutions, groups, individuals, identified non-Ministry of Culture institutions, non-governmental organizations, researchers, and scholars to undertake activities and projects aimed at the preservation, protection, promotion, and strengthening of India's rich intangible cultural heritage

A total of ten (10) Intangible Cultural Heritage (ICH) forms were formally recognized and supported under the Scheme. The details of the specific ICH forms that received official recognition and support are as follows:

S.No	Element	Geographical Region/Location
1	Kutiyattam	Kerala (Inscribed 2008)
2	Ramlila	Uttar Pradesh & other Hindi-speaking

		regions (Inscribed 2008)
3	Chhau Dance	Odisha, Jharkhand, West Bengal (Inscribed 2010)
4	Mudiyettu	Kerala (Inscribed 2010)
5	Sankirtana	Manipur (Inscribed 2013)
6	Sattriya	Assam (Part of National Inventory)
7	Qawwali	Pan-India/Delhi (Part of National Inventory)
8	Nautanki	North India – Uttar Pradesh, Haryana (Part of National Inventory)
9	Festival of Salhesh	Bihar (Part of National Inventory)
10	Dashavatar	Maharashtra, Goa (Part of National Inventory)

The Sangeet Natak Akademi (SNA), as the nodal agency for safeguarding Intangible Cultural Heritage (ICH) under the Ministry of Culture, undertakes a range of initiatives for training, awareness generation, documentation, and promotion of ICH across India. The Akademi conducts capacity-building workshops involving local communities, cultural practitioners, stakeholders, and students. These initiatives have resulted in a significant increase in requests from various regions for inclusion of elements in the National Inventory of ICH, which is maintained by the SNA with the approval of its Advisory Body

4. Kalmykia Republic

In news: The sacred Relics of the Buddha enshrined in the National Museum, New Delhi will travel to Russia's Kalmykia Republic for an exposition, accompanied by a high-level delegation of 11- senior Indian monks who will Bless the local devotees and conduct religious service for the predominantly Buddhist population of the region.

- It was the 19th Kushok Bakula Rinpoche, the revered Buddhist monk and diplomat from Ladakh who played a pivotal role in reviving

Buddhism in Mongolia and subsequently, also instrumental in reintroducing interest in Buddha dharma in the three regions of Russia, namely Buryatia, Kalmykia, and Tuva.

- The Holy Relics exposition, a first in the Russian Republic, is organised by the Ministry of Culture, Government of India in collaboration with the International Buddhist Confederation (IBC), the National Museum, and the Indira Gandhi National Centre for the Arts (IGNCA). It will be held in the capital city of Elista from 11-18 October, 2025.
- The Sacred Relics will be enshrined in the main Buddhist monastery in Elista, known as the Geden Sheddup Choikorling Monastery, also called the "Golden Abode of Shakyamuni Buddha." This is a significant Tibetan Buddhist centre, opened for the public in 1996 and is surrounded by the Kalmyk steppe.

5. Classical Languages of India

India has a rich, diverse linguistic heritage, with many languages and dialects spoken across the country. The Government of India works for the preservation and promotion of the country's linguistic heritage through various policies, programmes and initiatives. One such means of recognition and promotion is assigning "Classical Language" status to languages with ancient roots, having a rich heritage of literature, philosophy, and culture over thousands of years that shape India's cultural identity. The Indian government grants "Classical Language" status to languages that meet certain specific criteria and provides support for the preservation and promotion of these languages. On October 3, 2024, the Union Cabinet approved adding Marathi, Pali, Prakrit, Assamese, and Bengali to this category, bringing the total of Classical Languages in the country to 11.

Why Classical Language Status Matters

Recognising a language as Classical is a way of honouring and acknowledging its historical importance and profound impact on India's cultural and intellectual identity, and in preserving and transmitting ancient knowledge, philosophies, and values over thousands of years. This status not only enhances their prestige but also supports efforts to protect, promote, and further study these languages, helping to ensure they remain relevant in today's world.

What Makes a Language "Classical"

The Government of India, through the Ministry of Culture and in consultation with linguistic and historical experts, has established criteria for designating a language as a Classical Language.

The criteria for a language to be classified as a Classical Language include the following:

- High antiquity of its early texts or recorded history, spanning a period of 1,500-2,000 years.
- A body of ancient literature or texts that is considered heritage by generations of speakers.

- Knowledge texts, especially prose texts, in addition to poetry, epigraphical and inscriptional evidence.
- The Classical Language and its literature may be distinct from its current form or show discontinuity with later forms derived from the original.

Expanding India's Linguistic Heritage: New Additions in 2024

Six languages - Tamil, Sanskrit, Telugu, Kannada, Malayalam, and Odia—were recognised as Classical Languages between 2004 and 2014. On October 3, 2024, the Union Cabinet approved adding **Marathi, Pali, Prakrit, Assamese, and Bengali** to this category, expanding the recognised Classical Languages to eleven.

Steps Undertaken to Promote Classical Languages

The promotion of all Indian languages, including Classical Languages, is done through the Central Institute of Indian Languages (CIIL), part of the Language Bureau of Ministry of Education. In addition to this special centres have been set up for the study and promotion of the classical languages, either independently or under CIIL.

In 2020, three Central Universities were established through an Act of Parliament to promote the study of Sanskrit. These are the Central Sanskrit University and Shri Lal Bahadur Shastri National Sanskrit University in New Delhi, and the National Sanskrit University in Tirupati. In addition to this, financial assistance is provided to Adarsh Sanskrit Mahavidyalayas and Shodha Sansthan.

The Central Institute of Classical Tamil has been established to promote and preserve classical Tamil literature by facilitating the translation of ancient Tamil texts, supporting research, and providing courses for university students and scholars in Classical Tamil.

To further support the study and preservation of classical languages, the Centres for Excellence in Classical Kannada, Telugu, Malayalam, and Odia have also been established under the Central Institute of Indian Languages (CIIL) in Mysuru.

Key Activities and Objectives of the Centres for Classical Languages

- Promote, propagate, and preserve India's Classical Languages and Literatures.
- Research and Documentation.
- Digitizing manuscripts in collaboration with State Museums and Archives.
- Publishing books, research reports, and manuscript catalogues.
- Translating classical texts into Indian and foreign languages.
- Audio-Visual Documentation: Producing documentaries on eminent scholars and classical texts.
- Promoting studies linking classical languages with epigraphy, archaeology, anthropology, numismatics, and ancient history.

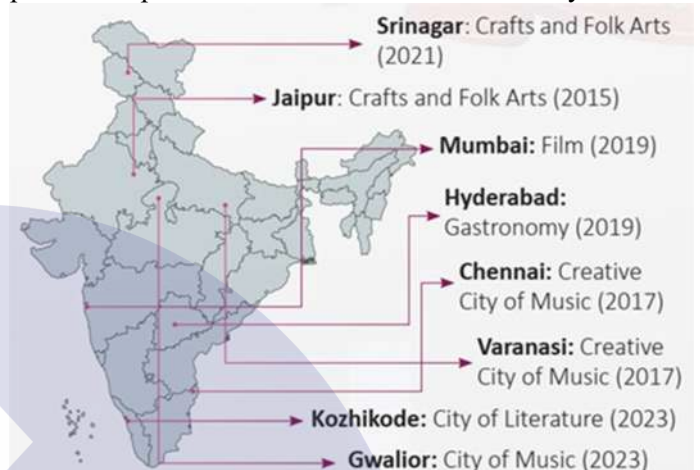
- Conducting epistemological studies linking classical heritage with indigenous knowledge systems

6. UNESCO Creative City of Gastronomy

Lucknow being designated a UNESCO Creative City of Gastronomy.

What is this: The UNESCO Creative Cities Network (UCCN) is a global program launched in 2004 to promote cooperation between cities that use culture and creativity as a primary driver for sustainable urban development.

By joining the Network, cities commit to sharing their best practices and developing partnerships involving the public and private sectors as well as civil society.



UNESCO designates the creative cities in seven fields.

- Crafts and Folk Art
- Media Arts
- Film
- Design
- Gastronomy
- Literature
- Music

7. Historical Importance of Sithannaval

- Sittanaval is a monument of national importance under the care and maintenance of Archaeological Survey of India (ASI), located in the Viralmalai Assembly Constituency, Pudukkottai district, Tamil Nadu bears significant historical and archaeological importance.
- It includes rock shelter featuring Jain ascetic stone beds and Tamil-Brahmi inscriptions, the 7th–9th century CE rock-cut cave temple with rare early mural paintings etc. reflecting early Jain characters and ancient art traditions.

8. National Culture Fund (NCF)

- Government has set up National Culture Fund (NCF) in 1996 as a Trust under the Charitable Endowment Act, 1890 with an objective to mobilize extra resources through Public Private Partnerships (PPP) mode towards conservation and development of heritage sites, and overall promotion of India's cultural heritage

- A donor/sponsor while making contributions to the NCF can indicate a project to be taken up for conservation or developing amenities around any monument. The conservation of protected monuments is carried out by Archaeological Survey of India (ASI) and the same is maintained by them. All donor agencies comply with the norms set up by NCF and ASI.

9. Piprahwa Relics

Context: The Ministry of Culture, Government of India, is organizing a landmark cultural exposition titled 'The Light & the Lotus: Relics of the Awakened One', showcasing the revered Sacred Piprahwa Relics along with significant associated antiquities. The exposition underscores India's enduring civilizational connection with the teachings of the Buddha and its commitment to preserving and presenting its rich spiritual heritage.

What are they?

- Piprahwa Relics, discovered in the late 19th century, are widely believed to be associated with the mortal remains of Gautama Buddha, enshrined by the Shakya clan.
- Their repatriation and public display reflect India's continued efforts to protect its cultural patrimony and promote the universal values of peace, compassion, and enlightenment embodied in the Buddha's teachings.

Sports

1. FIDE Women's World Chess Champion

- Union Minister for Youth Affairs & Sports and Labour & Employment, Dr. Mansukh Mandaviya, felicitated the FIDE Women's World Cup 2025 medalists, Divya Deshmukh and Koneru Humpy, in New Delhi today. Indian chess prodigy Divya and veteran Grandmaster (GM) Koneru made the nation proud with a dominant performance at the recently concluded tournament in Batumi, Georgia.
- The FIDE Women's World Cup 2025, held from July 5–28 in Batumi, saw a historic all-Indian final between 19-year-old Divya Deshmukh and seasoned GM Koneru Humpy. This marked the first time that two Indian women reached the final, and is also the first-ever Women's World Cup title for India. Divya, hailing from Nagpur, defeated Humpy in a tense tiebreak after two drawn classical games. She also secured her first GM norm during the event, defeating top players like Zhu Jiner, Harika Dronavalli, and Tan Zhongyi.
- With India also set to host the FIDE Men's World Cup 2025 in Goa this October

Mains News:

1. Doubling Farmer Income

The Government of India has identified the following seven sources for enhancing growth of farmers: -

- Increase in crop productivity
- Increase in livestock productivity
- Resource use efficiency - reduction in cost of production
- Increase in cropping intensity
- Diversification to high value agriculture
- Remunerative prices on farmers' produce
- Shift of surplus manpower from farm to non-farm occupations

To achieve the above seven objectives, Government of India supplements the efforts of States through appropriate policy measures and budgetary support and various schemes/ programmes.

The various schemes/programmes of the Government of India are meant for the Welfare of farmers by increasing production, remunerative returns and income support to farmers is at Annexure.

As per EU website (agriculture.ec.europa.eu), Common Agricultural Policy (CAP) of European Union is linked to farmed area and conditionality for compliance with EU rules. Indian system is broad and inclusive, as per national priorities of farmers welfare and self sufficiency in food grains. Besides PM KisanSammanNidhi, Government fixes Minimum Support Prices (MSPs) for mandated crops based on the recommendations of the Commission for Agricultural Costs & Prices (CACP) after considering the views of concerned State Governments and Central Ministries/ Departments. The Union Budget for 2018-19 had announced the pre-determined principle to keep MSPs at levels of one and half times of the cost of production. Accordingly, Government had consistently increased MSPs for all mandated Kharif, Rabi and other Commercial crops with a minimum margin of 50 percent over all India weighted average cost of production from the year 2018-19 onwards.

Integrated Scheme of Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA) strengthens implementation of MSP and acts as a tool for market price stabilisation. PM-AASHA has components of Price Support Scheme (PSS), Price Deficit Payment Scheme (PDPS) and Market Intervention Scheme (MIS).

PSS is implemented on the request of the State Govt./ UT that agrees to exempt from levy of Mandi tax on the procurement of notified pulses, oilseeds and copra and make arrangements like booking of scientific storage facility, identification of procurement centres, arrangement of gunny bags etc.. It is implemented within the stipulated period as and when the market prices of agricultural commodities fall below the notified MSP during peak harvesting period to provide the remunerative price to the farmers. From the procurement year 2024-25, the sanction for the procurement of notified Pulses, Oilseeds and Copra under PSS is given to the States/UTs initially upto a maximum of 25% of the production of the State for that particular season. Subsequently, if the State/UT achieves the overall procurement against

sanctioned quantity and further intends to procure more beyond the sanctioned quantity, the proposal for the procurement under the PSS is considered upto a maximum of 25% of the national production. In order to incentivize the farmers contributing in enhancement of domestic production of pulses and to reduce the dependence on imports, the Government has allowed the procurement of Tur, Urad and Masur under PSS equivalent to 100% of the estimated production of the State till 2028-29.

PDPS envisages the direct payment of the price difference between the MSP and the selling / modal price in notified market upto 15% of MSP value (including 2% administrative cost) by the Central Government to the pre-registered farmers selling the oilseeds upto 40% of its production with prescribed Fair Average Quality (FAQ) in the notified market yard through a transparent auction process within the stipulated period. However, the States/UTs have the option to implement either PSS or PDPS for the notified oilseeds for the particular year/season. If any State is willing to cover quantities beyond 40%, it can do so from its resources.

MIS further enhances the diversity by supporting the perishable and horticulture crops that are not covered under above price stabilisation measures. MIS offers both physical as well as price difference payment along with a provision for storage and transportation of TOP (Tomato, Onion and Potato) crops.

This integrated approach leads to the prevention of distress sale by farmers, ensuring remunerative prices for their produce. It also facilitates the creation of buffer stock to address market volatility. Overall, these measures strengthen farmer confidence in market operations due to the assurance of price support.

Precision farming enhances the productivity of agriculture, efficiency of water use and farmers income on sustainable basis without any adverse impact on environment. The crop yields are reported to increase substantially. Mission for Integrated Development of Horticulture (MIDH) has provision for establishment of Centres of Excellence (CoEs) in public sector for demonstration of latest technologies, including precision farming. The technical support for these CoEs, for specific crops and technology is provided by research institutes and through bilateral cooperation with other countries.

Digital Agriculture Mission which enables a robust digital agriculture ecosystem in the country for driving innovative farmer-centric digital solutions and making available timely and reliable crop-related information to farmers. The Mission envisages the creation of Digital Public Infrastructure for Agriculture such as Agristack, Krishi Decision Support System, Comprehensive Soil Fertility & Profile Map, and other IT initiatives undertaken by Central Government/State Governments. Agristack project is one of the major components of this Mission, which consists of three foundational registries or

databases in the agriculture sector, i.e., the Farmers' Registry, Geo-referenced village maps, and the Crop Sown Registry, all created and maintained by the State Governments/Union Territories. This system aims to enhance interoperability and convergence of efforts, fostering the development of applications in the agricultural sector using emerging digital technologies.

Under National e-Governance Plan in Agriculture (NeGPA) program, which is a component under Digital Agriculture Mission, funding is given to State Governments for Digital Agriculture Projects using emerging technologies like Artificial Intelligence, and Machine Learning (AI/ML), Internet of Things (IOT), Block chain etc.

Under the Agriculture Infrastructure Fund (AIF), support is extended to cold storages in agri-export clusters, at farm gate level, for small and marginal farmers as well as big businesses, APMCs/mandis to reduce post-harvest losses and increase farmers' returns. Entrepreneurs, cooperatives, PACS, and SHGs are actively availing AIF support for establishing cold chain logistics, often integrated with grading, sorting, and packaging units. Till 30.06.2025, 2454 cold storage projects have been sanctioned under AIF with sanctioned amount of ₹8258 crore.

Besides, under the MIDH, for holistic development of horticulture sector, including reducing of harvest and post-harvest losses, financial assistance is provided for various horticulture activities. These include setting up of Pack Houses, Integrated Pack House, cold storages, Reefer Transport, Ripening Chamber etc. The component is demand/entrepreneur driven for which Government assistance in the form of credit linked back ended subsidy is available at the rate of 35% of the project cost in general areas and at the rate of 50% of the project cost in hilly and scheduled areas through respective State Horticulture Mission(s) (SHMs).

As of now, there is no proposal to develop agricultural models like those in the Netherlands and Israel in metropolitan areas.

Annexure

Various Schemes/Programmes of Department of Agriculture & Farmers Welfare

- Pradhan MantriKisanSammanNidhi (PM-KISAN)
- Pradhan MantriKisanMaanDhanYojana (PM-KMY)
- Pradhan MantriFasalBimaYojana (PMFBY)/ Restructured Weather Based Crop Insurance Scheme (RWBCIS)
- Modified Interest Subvention Scheme (MISS)
- Agriculture Infrastructure Fund (AIF)
- Formation and Promotion of 10,000 new Farmer Producers Organizations (FPOs)
- National Bee Keeping and Honey Mission (NBHM)
- Namo Drone Didi
- National Mission on Natural Farming (NMNF)

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- Pradhan Mantri Annadata Aay Sanraksha Abhiyan (PM-AASHA)
- Agri Fund for Start-Ups & Rural Enterprises' (AgriSURE)
- Per Drop More Crop (PDMC)
- Sub-Mission on Agriculture Mechanization (SMAM)
- Paramparagat Krishi Vikas Yojana (PKVY)
- Soil Health & Fertility (SH&F)
- Rainfed Area Development (RAD)
- Agroforestry
- Crop Diversification Programme (CDP)
- Sub-Mission on Agriculture Extension (SMAE)
- Sub-Mission on Seed and Planting Material (SMSP)
- National Food Security and Nutrition Mission (NFSNM)
- Integrated Scheme for Agriculture Marketing (ISAM)
- Mission for Integrated Development of Horticulture (MIDH)
- National Mission on Edible Oils (NMEO)-Oil Palm
- National Mission on Edible Oils (NMEO)-Oilseeds
- Mission Organic Value Chain Development for North Eastern Region
- Digital Agriculture Mission
- National Bamboo Mission

2. Cyber crime dealing measures by GoI

To strengthen the mechanism to deal with cyber crimes including cyber crime against elderly persons in a comprehensive and coordinated manner, the Central Government has taken steps which, inter-alia, include the following:

- i. The Ministry of Home Affairs has set up the 'Indian Cyber Crime Coordination Centre' (I4C) as an attached office to deal with all types of cyber crimes in the country, in a coordinated and comprehensive manner.
- ii. The 'National Cyber Crime Reporting Portal' (NCRP) (<https://cybercrime.gov.in>) has been launched, as a part of the I4C, to enable public to report incidents pertaining to all types of cyber crimes, with special focus on cyber crimes against women and children. Cyber crime incidents reported on this portal, their conversion into FIRs and subsequent action thereon are handled by the State/UT Law Enforcement Agencies concerned as per the provisions of the law.
- iii. The 'Citizen Financial Cyber Fraud Reporting and Management System' (CFCFRMS), under I4C, has been launched in year 2021 for immediate reporting of financial frauds and to stop siphoning off funds by the fraudsters. As per CFCFRMS operated by I4C, financial amount of more than Rs. 5,489 Crore has been saved in more than 17.82 lakh complaints so far. A toll-free Helpline number '1930' has been

operationalized to get assistance in lodging online cyber complaints.

- iv. A State of the Art, Cyber Fraud Mitigation Centre (CFMC) has been established at I4C where representatives of major banks, Financial Intermediaries, Payment Aggregators, Telecom Service Providers, IT Intermediaries and representatives of States/UTs Law Enforcement Agency are working together for immediate action and seamless cooperation to tackle cybercrime.
- v. So far, more than 9.42 lakhs SIM cards and 2,63,348 IMEIs as reported by Police authorities have been blocked by Government of India.
- vi. The Central Government has taken various initiatives to create cyber crime awareness which, inter-alia, include:-

3. SELF-HELP GROUPS UNDER NRLM

Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY – NRLM) is a poverty alleviation programme of the Ministry of Rural Development (MoRD), which was launched in June, 2011. It is being implemented across the country (except Delhi & Chandigarh) with the objective of organizing the rural poor households into Self Help Groups (SHGs) and continuously nurturing and supporting them till they attain appreciable increase in income over a period of time and improve their quality of life and come out of abject poverty. So far 10.05 crore rural women household have been mobilized into more than 90.90 lakh Self-Help Groups in the country.

In Chhattisgarh, 2.79 lakh SHGs are proactive under DAY-NRLM and at present, around 29.78 lakh women have benefitted from the programme across the state.

The details of special schemes and financial assistance provided under NRLM to promote women entrepreneurship are:

- Start-up Village Entrepreneurship Programme (SVEP) is a sub-scheme under DAY-NRLM which aims to support SHGs and their family members in establishing small enterprises in the non-farm sector. SVEP has a provision to support beneficiary households, through the Community Enterprise Fund to partially meet the cost of setting up the enterprise while the remaining cost is expected to be contributed by the beneficiary, from her own savings or bank credit. Under SVEP, 3.74 lakh enterprises are supported as of 30th June 2025.
- Micro-Enterprise Development (MED): This sub-component focuses on supporting nano enterprises by enabling access to finance, skill development, and market linkages, creating a conducive ecosystem for small-scale rural entrepreneurship. Under MED component 63,000 enterprises have been supported as of 30th June 2025.

- One Stop Facility (OSF): The OSF sub-component aims to provide advanced support to growth-stage nano enterprises. This includes assistance with compliance, access to larger markets, bank credit, product development, and standardization. Under OSF 88,000 enterprises have been supported as of 30th June 2025.
- Incubator: The incubator initiative is designed to scale up 100–150 existing women-owned or women-led growth-oriented enterprises in each State, creating replicable models. Selected enterprises receive extensive mentorship and ecosystem support. Under this initiative 600 enterprises have been supported as of 30th June 2025.
- Cluster Development Programme: This component aims to promote collective growth by leveraging synergies and shared resources to enhance competitiveness and reduce market risks. The programme supports artisan and sector-specific clusters with market potential and provides access to technical support for business planning, linkages, financing, and skill upgradation. 21 clusters with 11,000 entrepreneurs/artisans have been supported under this initiative as of 30th June 2025.
- Aajeevika Grameen Express Yojana (AGEY): AGEY aims to enhance rural transport connectivity by providing safe, affordable, and community-monitored transport services in remote villages. The scheme enables SHG members or Community-Based Organisations (CBOs) to own and operate vehicles for rural transport. A total of 2297 vehicles have been sanctioned under AGEY.
- Capitalization support is provided in the form of Revolving Fund (RF) at the rate of Rs. 20,000-30,000 per SHG and Community Investment Fund (CIF) to the extent of Rs. 2,50,000 per SHG to support their income generating and livelihood activities including entrepreneurial ventures. As of 30th June 2025, a total of Rs. 58714.44 Crore of capitalization support has been provided to SHGs and their federations since inception.

DAY-NRLM is a major poverty alleviation initiative which has expanded its reach to 7,145 blocks across 745 districts nationwide. So far, the mission has mobilized 10.05 crore rural poor women households, forming them into 90.90 lakh Self Help Groups (SHGs). The process of bringing women from rural households into the SHG fold is a continuous and aims at achieving saturation in an area.

The Government has developed the monitoring mechanism to track and evaluate the overall implementation of DAY-NRLM activities for SHGs, the details are:

1. Monitoring through MIS data: DAY-NRLM has a centralized MIS in which data entry is enabled right from the block level. The MIS data is used for monitoring progress at various levels of program implementation.
2. Reviews with the SRLMs: All states' performance is reviewed on a quarterly basis at the senior level of administration. This is a continuous mechanism to undertake corrective action as and when required.
3. Performance Review Committee Meeting (PRC): The performance of the programme is also reviewed with the state teams on a half-yearly basis during the PRC Meetings of the Ministry.
4. National Level Monitors, Common Review Missions and Officers of the Ministry visit States/UTs at regular interval to review implementation of the programme. After the field visits, the findings/shortcomings and recommendations are shared with the States/UTs for appropriate action at their end.

The Ministry has commissioned several impact evaluation studies to understand the overall impact of the Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM). An impact evaluation study of DAY-NRLM was conducted during 2019-20 by the International Initiative for Impact Evaluation (3ie) with the support of the World Bank. The assessment covered 9 states with around 27,000 respondents and 5,000 SHGs across Bihar, West Bengal, Odisha, Jharkhand, Madhya Pradesh, Chhattisgarh, Maharashtra, Rajasthan and Uttar Pradesh. The evaluation indicates that an additional exposure to the Mission for **2.5 years led to:**

- i. Increase in income by 19% over the base amount.
- ii. Decline in share of informal loans by 20%
- iii. Increase in savings by 28%
- iv. Improved labour force participation - proportion of females reporting secondary occupation is higher (4%) in treatment areas.
- v. Improved access to other Schemes - Significant increase in number of social schemes availed by treatment households (6.5% higher over the base value of 2.8 schemes).

These monitoring and evaluation exercises are a crucial step in ensuring that the programme is effectively reaching and benefiting SHG women, as intended, and support evidence-based improvements in the programme. Following Apps and portals are being used at village level as part of digital initiatives under NRLM.

- i. LokoS App and *lokos.in* web portal
- ii. VPRP App

3. EFFICIENCY AND EFFECTIVENESS OF THE JUDICIAL SYSTEM

The Government has taken several initiatives for enhancing the efficiency and effectiveness of the Country's judicial system which include the following:

- i. The National Mission for Justice Delivery and Legal Reforms was set up in August, 2011, with the twin objectives of increasing access to justice by reducing delays in the system and enhancing accountability through structural changes and by setting performance standards and capacities. The Mission has been pursuing a coordinated approach for phased liquidation of arrears and pendency in judicial administration, which, inter-alia, involves better infrastructure for courts including computerization, increase in sanctioned strength of District and Subordinate Courts, policy and legislative measures in the areas prone to excessive litigation and re-engineering of court procedure for quick disposal of cases and emphasis on human resource development.
- ii. Under the Centrally Sponsored Scheme for development of Judicial Infrastructure, funds are being released to States/UTs for construction of court halls, residential quarters for judicial officers, lawyers' halls, toilet complexes and digital computer rooms that ease the life of various stakeholders including the litigants, thereby aiding justice delivery
- iii. Under Phase I and II of the e-Courts Mission Mode Project, Information and Communication Technology (ICT) was leveraged for IT enablement of District and Subordinate Courts and 18,735 District and Subordinate Courts were computerized till 2023..
- iv. The Government has been filling up vacancies of Judges in the Supreme Court of India and the High Courts from time to time. From 01.05.2014 to 21.07.2025, 70 Judges have been appointed in the Supreme Court. 1058 new Judges were appointed and 794 Additional Judges were made permanent in the High Courts during the same period. The sanctioned strength of Judges of the High Courts has increased from 906 in May, 2014 to 1122 till date. The sanctioned and working strengths of judicial officers in District and Subordinate Courts have increased as under:
- v. In pursuance of a Resolution passed in Chief Justices' Conference held in April, 2015, Arrears Committees have been set up in all 25 High Courts to clear cases pending for more than five years. Arrears Committees have now been set up under District Courts as well.
- vii. Under the aegis of the Fourteenth Finance Commission, the Fast Track Courts have been established for dealing with cases of heinous crimes, cases involving senior citizens, women, children, etc.
- viii. With a view to reduce pendency and unclogging of the courts, the Government has amended various laws like The Negotiable Instruments (Amendment) Act, 2018, The Commercial Courts (Amendment) Act, 2018, The Specific Relief (Amendment) Act, 2018, The Arbitration and Conciliation (Amendment) Act, 2019 and The Criminal Laws (Amendment) Act, 2018.
- ix. Alternate Dispute Resolution methods have been progressively promoted. Accordingly, The Commercial Courts Act, 2015 was amended in August, 2018 making Pre-institution Mediation and Settlement (PIMS) mandatory in case of commercial disputes. In order to further enhance the efficiency of the PIMS mechanism, the Government, through The Mediation Act, 2023, has further amended the Commercial Court Act, 2015. The amendments to The Arbitration and Conciliation Act, 1996 have been made in the years 2015, 2019 and 2021 for expediting the speedy resolution of disputes.
- Under The Commercial Courts Act, 2015, there is a provision for case management hearing, which provides for an efficient, effective and purposeful judicial management of a case so as to achieve a timely and qualitative resolution of a dispute. It assists in early identification of disputed issues of facts and law, establishment of procedural calendar for the life of the case and the exploration of possibilities of the resolution of the dispute.
- Another novel feature introduced for the commercial courts is the system of color banding, which limits the number of adjournments that can be granted in any commercial matter to three and alerts the judges about listing of the cases in accordance with their stage of pendency.
- ix. Efforts have been made to institutionalize pro bono culture and pro bono lawyering in the country. A technological framework has been put in place where advocates volunteering to give their time and services for pro bono work can register as Pro Bono Advocates on Nyaya Bandhu (Android & iOS and Apps). Nyaya Bandhu Services are also available on UMANG Platform. Pro Bono Panel of advocates has been initiated in 23 High Courts at the State/UT level. Pro Bono Clubs have been started in 109 Law Schools to instill Pro Bono culture in budding lawyers.

4. Key Measures for Transparency and Efficiency in the Public Distribution System (PDS)

The Government has undertaken multiple interventions to enhance **Public Distribution System (PDS) reforms**: -

- **Digitization:** Ration cards and the beneficiaries' database have been fully (100%) digitized across all States and Union Territories (UTs).
- **Transparency & Grievance Redressal:** A transparency portal, online grievance redressal facility, and toll-free number have been implemented nationwide.
- **Online Allocation & Supply Chain Management:** Online allocation has been

implemented in all States/UTs, except the UTs of Chandigarh, Puducherry, and urban areas of Dadra & Nagar Haveli, which have adopted DBT Direct Benefit cash transfer schemes. On the other hand, the Supply chain management has been computerized in 31 States/UTs.

- **Aadhaar Seeding:** Approximately **99.9%** of ration cards are seeded with Aadhaar numbers at the national level.
- **Automation of Fair Price Shops (FPS):** Almost all FPSs are now equipped with ePoS devices, enabling biometric/Aadhaar-based authentication for electronic and transparent distribution of foodgrains under NFSA.
- **One Nation, One Ration Card (ONORC):** This initiative allows beneficiaries to access PDS benefits anywhere in the country, ensuring portability and convenience.
- **Helpline number 1967/1800-State series number** is operational in all the States/ UTs for contacting and redressal of the complaints in Public Distribution System and filing any type of complaints by the intended beneficiaries. As and when complaints, including corruption and embezzlement in the PDS, are received in this Department from any source, they are sent to State/ UT Governments concerned for inquiry and appropriate action.

Digital Reforms in Public Distribution System (PDS)

Mera Ration 2.0: To enhance transparency and convenience for beneficiaries under the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY), the Department of Food and Public Distribution (DFPD) launched the Mera Ration 2.0 mobile application on 20 August 2024. The upgraded app provides real-time information to beneficiaries on their entitlements, withdrawal details, and the location of the nearest Fair Price Shop (FPS), along with a suite of new value-added features for a seamless, user-friendly experience. More than 1 crore downloads have already been recorded.

The Anna Mitra mobile app: The app empowers Public Distribution System (PDS) field functionaries by providing secure access to critical operational data. It is designed to streamline field-level monitoring, stock management, and compliance reporting for Fair Price Shop (FPS) dealers, Food Inspectors, and District Food Supply Officers (DFSOs).

Key Design Features of Anna Mitra:

- Streamlines field-level operations, stock tracking, and compliance reporting.
- Provides transaction summaries of ration cards, beneficiary management, and other stakeholder information.
- Includes inspection modules, feedback, and rating features.
- Enables stock-level management from the district to FPS level.

Benefits:

- Reduces bottlenecks and eliminates manual paperwork.
- Enhances decision-making through real-time data access.
- Improves transparency, speed, and efficiency by bringing all key PDS stakeholders onto a single secure digital platform.

Currently, the Anna Mitra app is operational in 15 states— Assam, Meghalaya, Manipur, Mizoram, Sikkim, Andaman & Nicobar Islands, Lakshadweep, Nagaland, Goa, Jammu & Kashmir, Daman & Diu, Ladakh, Maharashtra, Punjab and Tripura —and is available in **English and Hindi**. Its rollout to other States and Union Territories is being implemented in a **phased manner**

5. Labour Codes Catalysing Growth

India's export performance reflects a sustained push for innovation and deeper global integration. The **Export-Oriented Industries (EOIs)**- including textiles, garments, leather, electronics, gems & jewellery, pharmaceuticals, auto components and IT-enabled services- are critical contributors to India's employment and foreign exchange earnings. Their competitiveness depends heavily on the ability to maintain a flexible, compliant, and skilled workforce while adhering to international labour standards. In order to **catalyse the growth momentum** of the sector, the Government's recent integration of 29 laws into 4 streamlined Codes, enables an environment that promotes **industrial efficiency while safeguarding workers' interests**.

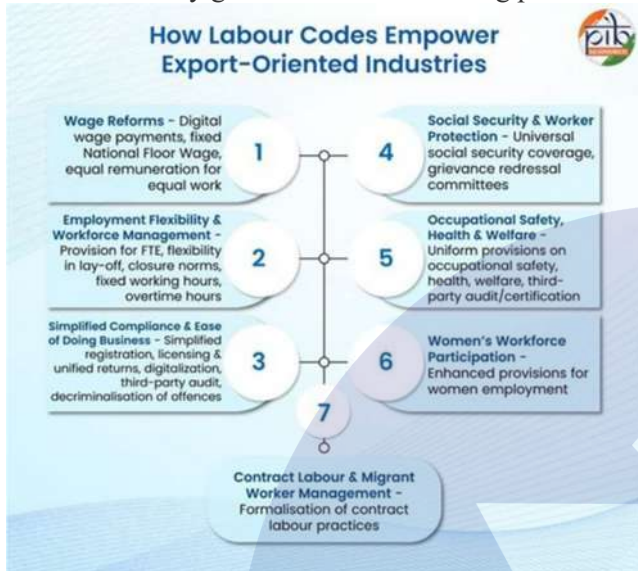
Benefits for Export-Oriented Industries/ Employers

The Labour Reform brings about a series of benefits for India's export sector, especially simplifying compliance for employers and enabling improved workforce management.

Wage Reforms

- **Uniform Definition of Wages-** One of the most impactful reforms is the introduction of a uniform definition of "wages" across all labour codes. **This provision eliminates the ambiguity created by multiple, inconsistent definitions in earlier laws.** For EOIs operating in multiple states, it simplifies payroll administration and compliance, ensuring uniformity in wage calculations for social security contributions, bonus, and gratuity.
- **National Floor Wage & Minimum Wage Rationalisation-** The provision for fixing a National Floor Wage by the Government establishes a benchmark below which no state can fix its minimum wage. For EOIs functioning across states, this offers **predictability in labour cost structures and eliminates regional disparities**.

- **Digital Payment of Wages-** The legal recognition of digital wage payments encourages the **adoption of transparent and traceable payment systems**. EOIs benefit from the ability to maintain verifiable payment records, which are often required by global buyers and compliance audits.
- **Equal Remuneration & Non-Discrimination-** The prohibition of gender-based discrimination in recruitment and wages ensures **equal remuneration for equal work**. For EOIs, this aligns domestic practices with international labour and human rights standards, particularly those demanded by global retail and sourcing partners.



Employment Flexibility & Workforce Management

- **Fixed Term Employment (FTE)-** The provision for FTE allows employers to hire workers directly for a specific duration or project, with all statutory benefits equivalent to those of permanent workers. This is particularly beneficial to EOIs that experience fluctuating or seasonal demand linked to global order cycles. Industries gain flexibility to scale their workforce up or down **without resorting to informal or contractual hiring**, thereby remaining compliant with law and maintaining a positive image among international clients.
- **Flexibility in Lay-off & Closure Norms-** Raising the threshold for prior government approval for lay-off, retrenchment, or closure from 100 to 300 workers offers industries **operational flexibility** to adjust to changing export orders and global market conditions. This provision gives exporters the confidence to **expand employment during peak demand periods** without the fear of excessive rigidity during downturns.
- **Flexibility in fixing working hours & overtime hours-** The Governments (State/Central, as applicable) have been given full flexibility for fixing the limit of working hours. Earlier this limit was 75 overtime hours in a quarter which now can

be fixed by the (State/Central, as applicable) Government. This flexibility in hours of work will **enable industry to fix the hours of work as per the business needs including when they get peak orders**. It will also generate growth and employment.

Simplified Compliance & Ease of Doing Business

- **Simplified Registration, Licensing & Unified Returns-** The introduction of **single registration and unified returns** provisions reduces the multiplicity of licenses and inspections under different labour laws. EOIs, which often operate multiple production units or engage numerous contractors, benefit from simplified compliance and reduced administrative costs.
- **Digitalisation & Portability of Records-** The codes promote digital maintenance of employment records, registers, and returns. EOIs, which are frequently audited by overseas clients and certification agencies, gain credibility through **transparent and traceable digital documentation**.
- **Inspector-cum-Facilitator & Randomised Digital Inspections-** This provision aims to reduce the traditional "inspector raj," where inspections were often seen as intrusive and burdensome. **Inspectors will function more as facilitators- helping employers comply with law, creating awareness among workers**. This shift promotes harmonious environment and facilitates ease of doing business.
- **Third-Party Audit & Certification-** Provision has been made for third-party audit and certification of start-up establishments or class of establishments. It will help EOIs to assess and improve health & safety without intervention of Inspector-cum-Facilitator.
- **Compounding of Offences-** First-time offences that carry only a fine can now be settled by paying 50% of the maximum penalty. Offences that earlier involved a fine, imprisonment, or both can be settled by paying 75% of the maximum penalty, **making the law less punitive and more focused on encouraging compliance**. Further, employers can avoid prolonged litigation by paying a prescribed penalty that enables quicker resolution, minimizes litigation, and lowers compliance risk for small EOIs.
- **Improvement Notice & Decriminalisation of Offences-** The provision aims to replace criminal penalties (like imprisonment) with civil penalties (like monetary fines). The employer will be given mandatory 30 days' notice for compliance before taking any legal action. **Several offences have been decriminalized replacing criminal penalties with fines making the law less punitive**

and more compliance-oriented which will promote voluntary compliance, reduce fear of prosecution and make enforcement facilitative for export sector.

Social Security & Worker Protection

- **Universal Social Security Coverage-** The universalisation of social security through provisions covering all employees (including fixed-term, contract, gig workers), strengthens the protection net for workers in export industries. Employers in export sectors benefit from clarity and consolidation of earlier fragmented schemes such as provident fund, ESI, and gratuity under one framework.
- **Grievance Redressal & Collective Dialogue-** The mandatory establishment of **Grievance Redressal Committees in workplaces** employing 20 or more workers ensures that issues are resolved internally and promptly. Export industries, which must maintain uninterrupted production schedules, benefit from the reduction in industrial unrest and legal disputes.

Occupational Safety, Health & Welfare

- **Occupational Safety, Health & Welfare Standards-** Uniform and comprehensive provisions on occupational safety, health, and welfare benefit export industries by providing a **single, harmonised set of standards applicable across states and sectors**. Compliance with these standards enhances workplace safety and supports certification under international social compliance regimes, which are increasingly demanded by global buyers.

Women's Workforce Participation

- **Enhanced Provisions for Women's Employment-** The provision permitting **employment of women during night shifts**, subject to their consent and adequate safety measures, greatly benefits EOIs that function on a 24-hour production cycle to meet international orders. Industries in sectors like apparel, electronics, and IT-enabled services can now legally employ women during late hours with proper transportation, security, and welfare arrangements. This supports continuous production and order fulfilment.

Contract Labour & Migrant Worker Management

- **Regulation of Contract Labour & Inter-State Migrant Workers-** Provisions requiring registration of contractors and licensing of principal employers help **formalise contract labour practices** in export units. EOIs benefit from reduced legal uncertainty and improved oversight of their supply chains.

Benefits for Export Sector Workers

With expanded social security, stronger protections and nationwide portability of entitlements, the Labour Reform

places workers, especially women, youth, unorganised, gig and migrant workers, firmly at the centre of labour governance.

Wage Reforms & Income Protection

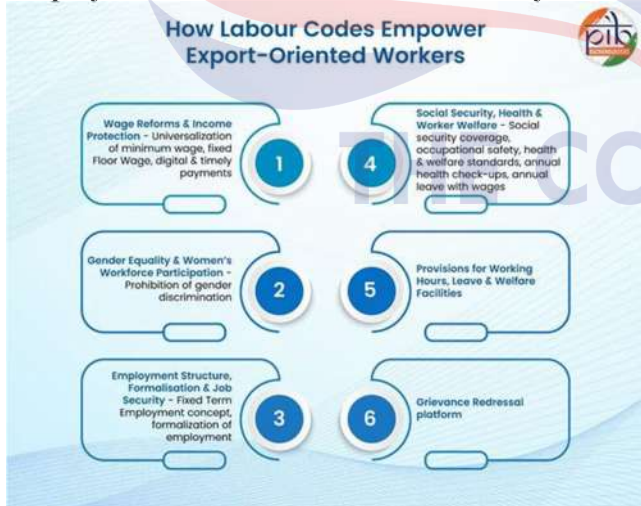
- **Minimum Wage Universalisation-** Previously, minimum wages applied only to scheduled employments, but now it covers all employees. The Government shall review or revise minimum rates of wages ordinarily at interval not exceeding five years. Further, the Government shall fix minimum rate of wages for timework, piece work for different wage period i.e. by hours, day or by month taking into account the skill of employee and complexity of the work. **For workers of EOIs, this ensures transparency and predictability in the computation of their take-home pay and benefits.** It also curbs the earlier practice of artificially splitting wages into multiple allowances to reduce statutory contributions. Notably, the uniform definition of wages **promotes fairness and transparency for workers.**
- **Floor Wage-** Floor wage will be fixed by the Government considering the minimum living standards of an employee including food, clothing etc. The Government will revise the floor wage at regular interval. For workers of EOIs, it **guarantees a minimum level of income protection** across regions, preventing exploitation in low-wage clusters and supporting basic living standards. By ensuring a decent floor, this provision also **strengthens India's compliance with international fair wage principles-** an important factor for exporters dealing with ethical and socially responsible buyers.
- **Digital Payment of Wages-** Through this provision, workers of EOIs will benefit through **timely credit of wages directly into their bank accounts**, reduction in cash handling risks, and creation of a formal financial record that supports access to credit and social benefits. Notably, this provision contributes to **financial inclusion and accountability in wage practices.**
- **Timely payment of wages & un-authorized deductions-** The provisions relating to timely payment of wages and un-authorized deductions from wages, which was earlier applicable only in respect of employees drawing wages up to ₹24,000 per month, is made applicable to all employees irrespective of wage ceiling. For workers in EOIs- where production pressure is high and order deadlines are strict- this ensures **financial stability, fairness, and transparency in remuneration**, while also promoting a sense of trust and accountability between employer and employee.

- **Overtime Wages-** Employers must pay employees at least **twice the normal wage rate for any work beyond normal working hours.** The provision is especially beneficial for workers in EOIs, where production demands often rise sharply to meet export deadlines or bulk orders. It will ensure that workers are fairly rewarded for additional hours of work.

Gender Equality & Women's Workforce Participation

- **Prohibition of Gender Discrimination-** Employers shall not discriminate on ground of gender including transgender in matter relating to recruitment, wages, or conditions of employment in respect of the same work or work of a similar nature done by employees. For workers, especially women who form a large part of the export workforce in garments, leather, and electronics sectors, it **guarantees equality, improves morale, and encourages greater female participation** in formal employment.
- **Allowing women to work in all types of employment (including night shifts)-** This reform is highly beneficial for female workers in EOIs such as textiles, garments, electronics, and IT-enabled services, where round-the-clock operations are common. It will **enable women to access higher-paying night-shift opportunities and enhances their employability and career progression** in industries driven by global time zones and just-in-time export schedules. Importantly, the provision is balanced with **mandatory safeguards-** such as safe working conditions, adequate transportation, rest facilities, and consent-based deployment- which ensure women's safety, dignity, and well-being.

Employment Formalisation & Job Security



- **Fixed Term Employment-** The FTE is particularly beneficial for workers engaged in EOIs, where production cycles often depend on fluctuating global demand and seasonal orders. It would provide them **formal employment status,**

social security benefits, and legal rights for the duration of employment. They also become **eligible for gratuity on a pro-rata basis,** even if their service period is less than five years. Moreover, working directly in reputed export units enhances **their skills, exposure, and employability,** offering them a credible pathway from informal or temporary work towards stable and dignified participation in the formal sector.

- **Formalization of employment-** The provision mandating the **issuance of appointment letters to all employees** plays a crucial role in promoting formalization of employment in EOIs, where a large segment of the workforce has traditionally been engaged informally. This provision establishes legal recognition and job transparency. It protects workers from arbitrary termination or denial of statutory entitlements. For female and migrant workers in particular, it provides verifiable proof of employment that can be used to claim benefits or settle disputes.

Social Security, Health & Worker Welfare

- **Social Security Coverage for All Categories of Workers-** For workers, it ensures **inclusion in PF, ESI, maternity, and other benefits,** irrespective of the type or duration of employment. The introduction of **digital registration and portable account numbers** also allows continuity of benefits when workers move between export units or states. This promotes long-term welfare, loyalty, and stability among the workforce, while improving the industry's compliance image globally.
- **Re-skilling Fund & Retrenchment Compensation-** The provision for **setting up a Re-skilling Fund for retrenched workers** ensures that a portion of the employer's contribution (equivalent to 15 days' wages) is used to help workers acquire new skills and transition to fresh employment. For workers, it provides **financial and skill support at a critical transition stage,** reducing hardship and facilitating re-employment. This provision promotes sustainable employability in volatile global markets.
- **Occupational Safety, Health, and Welfare Standards-** The Government will prescribe uniform provisions for cleanliness, drinking water, toilets, rest rooms in factory mines employing 50 or more workers, canteens in the establishments employing 100 or more workers including contract labour. For workers, it ensures **better working conditions-** including safe workplaces, adequate ventilation, canteens, medical facilities, and restrooms. These provisions also include **mandatory medical check-ups, welfare**

officers, and safety committees in larger establishments. The result is a safer and healthier working environment, reducing accidents and improving productivity.

- **Healthcare measures-** The provision for **free annual health check-ups** ensures that every employee, irrespective of their employment category, has access to preventive healthcare. In export sectors like textiles, leather, electronics, and garment manufacturing, workers are frequently exposed to dust, chemicals, noise, and ergonomic strain. **Regular health assessments** help in early detection of occupational illnesses, enabling timely treatment and preventing chronic conditions. For women workers, periodic check-ups provide crucial preventive care and contribute to overall well-being.
- **Annual leave with wages-** The provision of annual leave with wages- made available to every employee completing 180 days of work in a calendar year (reduced from the earlier 240-day requirement) will be beneficial for workers in EOIs, who often face intense production pressures and tight export deadlines, this ensures adequate rest, recovery, and work-life balance without any loss of income. Paid annual leave will enable them to spend time with their families, attend to personal or health needs, and return to work rejuvenated, leading to better morale and efficiency.

Working Conditions, Hours & Leave

- **Provisions for Working Hours, Leave & Welfare Facilities-** The rationalisation of working hours, weekly rest, and leave entitlements creates a uniform and predictable framework for export units.

- Workers will benefit from regulated work schedules, rest periods, and welfare amenities such as canteens, crèches, and medical facilities. The combination of structured work time and welfare will improve job satisfaction for the workers.

Industrial Harmony & Worker Representation

- **Grievance Redressal & Collective Dialogue-** For workers, it provides an accessible platform to raise concerns about working conditions, pay, or welfare without fear of reprisal. In addition, provisions for recognition of trade unions and negotiation councils strengthen collective bargaining and foster a cooperative industrial climate.

Conclusion

Each provision under the Labour Codes strengthens India's export ecosystem in a distinct yet interconnected way. **For EOIs**, the Codes offer the **flexibility, simplification, and predictability needed to compete in dynamic global markets** while meeting rising international compliance standards. **For workers**, these same reforms guarantee **fair wages, social security, safety, equality, and opportunities for upskilling-enhancing both their welfare and dignity at work**. Together, the Codes advance India toward a modern labour regime that balances ease of doing business with ease of living for workers, driving both economic growth and inclusive development across the export sector

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Environment MCQs

- Q1. Assertion–Reason
 Assertion (A): Green Credits are not issued immediately after plantation.
 Reason (R): Under the revised framework, Green Credits are issued only after five years of restoration on achieving at least 40% canopy density.
- (a) Both A and R are correct, and R is the correct explanation of A
 - (b) Both A and R are correct, but R is not the correct explanation of A
 - (c) A is correct, but R is incorrect
 - (d) A is incorrect, but R is correct

Answer: (a)
Explanation

This is a classic process-based question. The trap lies in equating “plantation done” with “credit earned.” In reality, the framework is not rewarding mere planting activity. It is rewarding successful ecological restoration, and that requires both a time condition and a performance condition.

The assertion is correct because Green Credits are not granted immediately after planting. The reason is also correct because the framework clearly requires five years of restoration and a minimum of 40% canopy density before credits are issued. That is exactly why the assertion is true. The framework also adds that the accounting is based on one credit per tree older than five years, which further reinforces that this is not an instant-credit mechanism.

Why UPSC may ask this: It tests whether a student understands the distinction between afforestation activity and verified restoration outcome.

Q2. Consider the following pairs:

Initiative	Correct Association
National Clean Air Programme	Performance-linked funding and PM10 reduction tracking
Wetland Cities Recognition	First recognised cities were Indore and Udaipur
Eco-Sensitive Zones	Meant to replace protected areas with flexible conservation zones
Mission LiFE	Citizen mobilisation towards sustainable lifestyles

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pair 1 is correct. NCAP is not merely an advisory-style programme; it has a measurable performance architecture. It covers 130 cities, includes performance-linked funding, and tracks outcomes such as PM10 reduction. That makes this a correct pairing.

Pair 2 is also correct. The first two Wetland Cities recognised under Ramsar were Indore and Udaipur. This is an important fact because UPSC may try to swap one of these with another prominent city such as Prayagraj, Ahmedabad, or Bhopal.

Pair 3 is incorrect. Eco-Sensitive Zones do not replace protected areas. They are regulatory buffer-type zones around Protected Areas. Their role is to regulate development and support sustainable livelihoods while maintaining ecological integrity. The Protected Area remains the core legal conservation category.

Pair 4 is correct. Mission LiFE is centered on behavioural change and public mobilisation toward sustainable lifestyles. It is not confined to diplomacy or school activities alone; it has a broad citizen-centred orientation.

Key lesson: UPSC often inserts one pair that sounds administratively reasonable but is conceptually wrong. Here that trap is Pair 3.

Q3. With reference to Project Elephant, consider the following statements:

1. Elephant Reserves increased to 33 in 2025 from 26 in 2014.
2. About 8,610 sq km of additional area was brought under protection.
3. DNA profiling of captive elephants is linked with the Gaj Sochna App.
4. Ex gratia for human fatalities was reduced from ₹10 lakh to ₹5 lakh to discourage moral hazard.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

The reserve expansion is correct: the number of Elephant Reserves rose from 26 to 33. The additional protected area figure of about 8,610 sq km is also correct. Further, one of the notable modern interventions is the DNA profiling of captive elephants through the Gaj Sochna App, which is the kind of detail UPSC likes because it

mixes species conservation with digital governance.

Statement 4 is incorrect. The opposite happened: ex gratia for human fatalities was enhanced from ₹5 lakh to ₹10 lakh. UPSC often inserts numerical reversals like this. If a student only vaguely remembers that “some compensation change happened,” the trap works.

What makes this a good prelims question: It combines statistics, app-based governance, and compensation policy in a single frame.

Q4. Assertion–Reason

Assertion (A): The International Big Cat Alliance is broader in scope than Project Cheetah.

Reason (R): The Alliance is designed for cooperation on conservation of seven big cat species globally, while Project Cheetah is species-specific.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

Project Cheetah is a focused conservation initiative centred on reintroduction and expansion of cheetah populations within India. The International Big Cat Alliance, by contrast, is much wider: it is built around seven big cat species globally, and it aims at transnational cooperation in research, capacity building, technology transfer, and conservation support. That broader species range and international architecture is exactly why it is wider in scope than Project Cheetah.

Another subtle point is that the Alliance also links conservation with climate adaptation, ecosystem services, water security, and community livelihoods, which makes its scope broader not only in species terms but also in governance terms.

UPSC-style trap: Students may remember “cheetah + big cat” and wrongly assume both are basically the same initiative at different scales.

Q5. Which one of the following best captures the core rationale behind the Environment Audit Rules, 2025?

- (a) To reduce the legal status of environmental compliance and convert it into voluntary self-reporting

- (b) To bridge manpower and infrastructure deficits in compliance monitoring while improving transparency and credibility
- (c) To transfer all environmental monitoring powers exclusively to private industry
- (d) To exempt projects with prior approvals from all subsequent compliance verification

Answer: (b)

Explanation

Option (b) is correct because the central logic of the reform is institutional strengthening. The rules arise from the recognition that the existing compliance architecture—through CPCB, regional offices, and State Boards/Committees—faces manpower, capacity, and infrastructure limitations. The reform therefore aims to bridge that gap while increasing transparency, accountability, and credibility.

Option (a) is wrong because the reform does not downgrade compliance into a purely voluntary model.

Option (c) is wrong because the purpose is not to hand over sovereign environmental oversight to private industry.

Option (d) is wrong because prior approval is not the same as permanent immunity from compliance verification.

This is the kind of question UPSC may ask when it wants to test whether the student has understood the administrative purpose of a reform, not just its title.

Q6. Consider the following three-column combinations:

List I	List II	List III
A. Aravalli Green Wall Initiative	1. 6.31 million hectares	i. Convergence with CAMPA, MGNREGS and Green India Mission
B. Traditional Knowledge Digital Library	2. Prior art protection	ii. Jointly established by CSIR and the then Department of Indian Systems of Medicine and Homeopathy
C. Saffron Heritage of Kashmir	3. Agro-pastoral heritage system	iii. Characterised by intercropping and organic farming practices

How many of the above combinations are correctly matched?

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

Answer: (c) All three

Explanation

This is a high-quality integrated question because each row tests a different type of memory.

A-1-i is correct. The Aravalli Green Wall initiative proposes restoration of 6.31 million hectares, and its phase-wise plan explicitly works through convergence with CAMPA, MGNREGS, Green India Mission, and related programmes.

B-2-ii is also correct. TKDL is a prior art database, and it was established jointly by CSIR and the then Department of Indian Systems of Medicine and Homeopathy. Its purpose is not branding, GI tagging, or commercial cataloguing; it is mainly about preventing misappropriation through the IPR system.

C-3-iii is correct as well. The Saffron Heritage of Kashmir is described as a rich agro-pastoral system marked by traditional saffron cultivation, intercropping, and organic farming practices.

Such a question is important because UPSC increasingly rewards students who can retain facts in relationship form rather than as isolated points.

Q7. With reference to GFRA 2025 and India's forest-related position, consider the following statements:

1. India moved up to 9th place globally in total forest area.
2. India retained 3rd position globally in annual net gain of forest area.
3. Europe has the highest proportion of forest relative to total land area.
4. India ranked 5th among top global carbon sinks, with forests removing 150 Mt of CO₂ per year during 2021–2025.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 4 only

Explanation

Statements 1 and 2 are correct. India advanced to 9th position in total forest area and retained 3rd position in annual net forest gain.

Statement 3 is incorrect. Europe has the largest forest area in absolute terms, but South America has the highest proportion of forest relative to total land area. This is a very typical UPSC distinction: absolute quantity versus proportional share.

Statement 4 is correct. India ranked 5th among top global carbon sinks, with forests removing 150 Mt CO₂ per year during 2021–2025.

This question is conceptually rich because it uses rankings, proportions, and carbon sink

terminology together. A student who only memorises “India did better in forest stats” may still fall into the Europe-versus-South America trap.

Q8. Assertion–Reason

Assertion (A): Mission LiFE should not be understood only as a domestic awareness campaign.

Reason (R): Its principles were also reflected in India's resolution on promoting sustainable lifestyles for the wise use of wetlands at Ramsar COP-15.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

The assertion is correct because Mission LiFE has both a domestic and an international dimension. Domestically, it mobilises citizens toward sustainable lifestyles and has recorded participation on a very large scale. Internationally, its principles feed into India's environmental diplomacy.

The reason is also correct. India introduced a resolution on promoting sustainable lifestyles for the wise use of wetlands at Ramsar COP-15, and that resolution was explicitly aligned with the principles of Mission LiFE. So the reason directly explains why the assertion is valid.

This is the kind of question UPSC likes because it tests whether the candidate can see how a seemingly domestic programme is being embedded in multilateral environmental governance.

Q9. Consider the following statements regarding PARIVESH 2.0:

1. It provides an integrated digital platform for Environment, Forest, Wildlife and CRZ clearances.
2. It integrates GIS for real-time decision support.
3. It is linked with PM GatiShakti NMP, NSWS, CAMPA's digital payment gateway and QCI-NABET's accreditation portal.
4. It was conceived only for post-clearance environmental litigation management.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2 and 3 are correct. PARIVESH 2.0 is a single-window-style integrated platform covering Environment, Forest, Wildlife and CRZ clearances. It uses GIS for real-time decision support and is also integrated with PM GatiShakti NMP, NSWS, CAMPA's digital payment gateway and QCI-NABET's accreditation portal.

Statement 4 is incorrect. That description is far too narrow. PARIVESH 2.0 is not just a litigation-management tool. It is a clearance-management and governance platform designed to improve transparency, tracking, coordination, accountability, and decision support.

This is a good conceptual prelims question because UPSC can easily convert digital governance architecture into an elimination-based question.

Q10. Which one of the following is not correctly matched?

- (a) Wetland conservation — India has 96 Ramsar Sites and the largest network in Asia
- (b) National Coastal Mission — extended for 2025–31 with allocation aimed at climate resilience of coastal ecosystems
- (c) Eco-Sensitive Zones — 353 final notifications covering 496 Protected Areas
- (d) National Clean Air Programme — all 130 cities met National Ambient Air Quality Standards for PM10

Answer: (d)

Explanation

Options (a), (b), and (c) are correctly matched. Option (d) is incorrect because although NCAP covered 130 cities, only 22 cities met National Ambient Air Quality Standards for PM10. UPSC often creates this kind of totalisation trap—turning a limited success into a universal success. This question also tests whether the student reads outcomes carefully. “130 cities covered” does not mean “130 cities compliant.” Coverage, progress, and compliance are three different things.

Q11. With reference to the MISHTI programme, consider the following statements:

- 1. It was launched as part of the Union Budget announcement for 2023–24.
- 2. Its primary objective is to restore mangrove forests through reforestation and afforestation measures along the coast of India.
- 3. Under CRZ Notification, 2019, a 50-metre buffer is specified for all mangrove areas irrespective of their size.

How many of the above statements are correct?

(a) Only one

(b) Only two

(c) All three

(d) None

Answer: (b) Only two

Explanation

Statement 1 is correct. PIB states that MISHTI was launched as part of the Budget Announcement 2023–24 and was launched on 5 June 2023.

Statement 2 is correct. Its stated objective is restoration of mangrove forests through mangrove reforestation and afforestation measures along India's coast.

Statement 3 is incorrect. The 50-metre buffer under CRZ-IA applies where mangrove cover is greater than 1,000 square metres, not for all mangrove areas.

UPSC trap: “all mangrove areas” is the classic overgeneralisation.

Q12. Consider the following statements regarding the Environment Protection (Management of Contaminated Sites) Rules, 2025:

- 1. A site is declared contaminated only after detailed site assessment shows contaminants above prescribed response levels.
- 2. The local body or district administration can identify suspected contaminated sites and list them on a centralized online portal.
- 3. The State Pollution Control Board can directly declare a site contaminated solely on the basis of preliminary site assessment.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 only

(c) 1 and 3 only

(d) 1, 2 and 3

Answer: (a) 1 and 2 only

Explanation

Statement 1 is correct. The rules say a contaminated site is declared after detailed site assessment if contamination is above prescribed threshold/response levels.

Statement 2 is correct. The local body or district administration may identify areas affected with contaminants and list them as suspected contaminated sites on the centralized online portal.

Statement 3 is incorrect. Preliminary site assessment can lead to classification as a probable contaminated site, not final contaminated site status. Final declaration follows detailed site assessment.

UPSC trap: confusing screening stage with final legal declaration stage.

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Q13. With reference to human-wildlife conflict management in India, consider the following statements:

1. The Ministry issued an advisory on dealing with human-wildlife conflict in February 2021.
2. Species-specific guidelines were issued in March 2023 for conflict involving elephant, gaur, leopard, snake, crocodile, rhesus macaque, wild pig, bear, blue bull and blackbuck.
3. Ex gratia norms for losses due to human-wildlife conflict are uniform across all States and UTs.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statement 1 is correct. PIB explicitly mentions a Ministry advisory issued in February 2021.

Statement 2 is correct. PIB lists species-specific guidelines issued on 21.03.2023 covering those species.

Statement 3 is incorrect. PIB clearly says ex gratia norms vary from State to State.

UPSC trap: anything related to compensation is often assumed centrally uniform. It often is not.

Q14. Consider the following statements regarding Section 11 of the Wild Life (Protection) Act, 1972:

1. The State Chief Wild Life Warden may permit hunting of a Schedule I animal if it has become dangerous to human life.
2. Hunting of a Schedule II animal may be permitted if it has become dangerous to human life or property.
3. Such powers are exercised only by the Central Government.

How many of the above statements are correct?

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

Answer: (b) Only two

Explanation

Statement 1 is correct. Section 11(1)(a), as cited in PIB, empowers the State Chief Wild Life Warden to grant permits for hunting Schedule I animals that become dangerous to human life.

Statement 2 is correct. Section 11(1)(b), as cited, allows the State Chief Wild Life Warden or authorized officer to permit hunting of Schedule II animals dangerous to human life or property.

Statement 3 is incorrect. The power mentioned here is at the State level, not exclusively with the Central Government.

UPSC trap: mixing central law with state-level implementing authority.

Q15. With reference to the International Big Cat Alliance (IBCA), consider the following statements:

1. It was launched in April 2023.
2. It is intended for conservation cooperation concerning seven big cat species globally.
3. The framework agreement entered into force in January 2025.

Which of the statements given above is/are correct?

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

Answer: (d) 1, 2 and 3

Explanation

All three statements are correct. PIB mentions IBCA was launched in April 2023, aims to conserve seven big cat species globally, and its framework agreement entered into force on 23 January 2025.

UPSC trap: exact launch year and “framework entered into force” date can be mixed up.

Q16. Consider the following statements regarding GFRA 2025 as :

1. India advanced to 9th position globally in total forest area.
2. India maintained 3rd position globally in annual net gain of forest area.
3. Europe has the highest proportion of forest relative to land area.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statement 1 is correct. PIB says India moved from 10th to 9th in total forest area globally.

Statement 2 is correct. India maintained 3rd position globally in annual net forest gain.

Statement 3 is incorrect. PIB says Europe has the largest forest area, but South America has the highest proportion of forest relative to total land area.

UPSC trap: “largest absolute area” versus “highest proportion.”

Q17. With reference to the Green Credit Programme (revised framework), consider the following statements:

1. Green Credits are to be issued after 5 years of restoration upon achieving at least 40% canopy density.
2. One Green Credit is issued per tree older than 5 years.
3. Green Credits may be used multiple times for compensatory afforestation and CSR compliance.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statement 1 is correct. PIB explicitly states credits are issued after 5 years of restoration on achieving at least 40% canopy density.

Statement 2 is correct. It also says 1 credit per tree older than 5 years.

Statement 3 is incorrect. PIB clearly says credits may be used once for CA, CSR obligations, or statutory plantation requirements.

UPSC trap: “used once” versus “used multiple times.”

Q18. Consider the following pairs:

Programme / Initiative — Feature

1. NCAP — Performance-linked funding to cities
2. Nagar Van Yojana — Urban forestry enhancement
3. Mission LiFE — Only school-based environmental education campaign
4. Wetland conservation — India has 96 Ramsar Sites and the highest number in Asia

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pair 1 is correct. NCAP is shown in PIB as having performance-linked funding support.

Pair 2 is correct. Nagar Van Yojana is linked with urban forestry and green spaces.

Pair 3 is incorrect. Mission LiFE is much broader; PIB mentions it mobilised students and citizens, with crores of participants and events, not only schools.

Pair 4 is correct. PIB says India had 96 Ramsar Sites and the highest number in Asia.

UPSC trap: “only” makes an otherwise plausible statement wrong.

Q19. With reference to Eco-Sensitive Zones (ESZs), consider the following statements:

1. ESZs regulate development around Protected Areas.
2. They are meant to support sustainable livelihoods of local communities as well.
3. final ESZ notifications had been issued for fewer than 100 Protected Areas.

Which of the statements given above is/are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statements 1 and 2 are correct. PIB notes that ESZs regulate development around Protected Areas while supporting sustainable livelihoods of local communities.

Statement 3 is incorrect. PIB says 353 final ESZ notifications covering 496 Protected Areas had been issued.

UPSC trap: underestimating the scale and confusing number of notifications with number of PAs covered.

Q20. Consider the following statements regarding MoEFCC reforms under Air Acts and Water Acts, as :

1. Uniform nationwide guidelines were introduced for Consent to Establish and Consent to Operate across SPCBs/PCCs.
2. Industries with prior Environmental Clearance were exempted from Consent to Establish.
3. All White category industries continue to require both CTE and CTO.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statement 1 is correct. PIB mentions nationwide uniform guidelines for CTE/CTO.

Statement 2 is correct. Industries with prior Environmental Clearance were exempted from CTE.

Statement 3 is incorrect. PIB says 86 sectors notified as White category were exempted from CTE/CTO.

UPSC trap: White category is often used to test exemptions.

Q21. Which of the following were specifically as part of the five national-level projects launched during Wildlife Week 2025?

1. Project Dolphin Phase II
2. Project Sloth Bear
3. Project Gharial
4. Centre of Excellence for Human-Wildlife Conflict Management

Select the correct answer using the code below:

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

Answer: (b) 2, 3 and 4 only

Explanation

PIB mentions Project Dolphin Phase II, Project Sloth Bear, Project Gharial, a Centre of Excellence for Human-Wildlife Conflict Management, and a project on Tigers Outside Tiger Reserve. So 2, 3 and 4 are definitely correct. However, PIB text as displayed says "Project Dolphin Phase 11," clearly meaning Phase II in typography, but since UPSC-style questions require exactness, I have not treated statement 1 as cleanly safe wording unless written exactly as "Project Dolphin Phase II" in official source formatting. Based on PIB snippet alone, the safest answer is 2, 3 and 4 only.

UPSC lesson: when source text appears typographically inconsistent, avoid building absolute certainty on the ambiguous piece.

Q22. With reference to wetland conservation outcomes, consider the following statements:

1. In 2025, eleven new Ramsar Sites were added in India.
2. Udaipur and Indore became India's first Ramsar-accredited Wetland Cities.
3. India has the largest Ramsar network in the world.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statement 1 is correct. PIB says 11 Ramsar Sites were declared and added in 2025.

Statement 2 is correct. It also says Udaipur and Indore became India's first Ramsar-accredited Wetland Cities.

Statement 3 is incorrect. PIB says India has the largest Ramsar network in Asia and the 3rd largest globally by number of sites.

UPSC trap: Asia versus world.

Q23. With reference to Globally Important Agricultural Heritage Systems (GIAHS), consider the following statements:

1. GIAHS is a programme of FAO.
2. India currently has three GIAHS sites: Koraput region, Kuttanad farming system, and Saffron Heritage of Kashmir.
3. The Kuttanad system is noted for its below-sea-level farming landscape.

How many of the above statements are correct?

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

Answer: (c) All three

Explanation

All three statements are correct. PIB clearly says GIAHS is an FAO programme and names the three Indian sites as Koraput in Odisha, Kuttanad in Kerala, and Saffron Heritage of Kashmir. It also specifically describes Kuttanad as a unique below-sea-level farming landscape.

UPSC trap: mixing FAO heritage recognition with UNESCO or assuming saffron is just a crop tag, not a heritage farming system.

Q24. Consider the following pairs:

GIAHS site — Key feature

1. Koraput — Diversity of paddy landraces and medicinal plant genetic resources
2. Kuttanad — Predominantly highland-slope paddy cultivation
3. Saffron Heritage of Kashmir — Intercropping and organic farming practices

How many pairs are correctly matched?

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

Answer: (b) Only two

Explanation

Pair 1 is correct. Koraput is associated with subsistence paddy cultivation and rich diversity of paddy landraces, along with medicinal plant genetic resources.

Pair 2 is incorrect. That description belongs to Koraput, not Kuttanad. Kuttanad is described as a below-sea-level farming landscape with wetlands, garden lands, and inland water bodies.

Pair 3 is correct. The Saffron Heritage of Kashmir is described as an agro-pastoral system with traditional saffron cultivation, intercropping, and organic farming practices.

UPSC trap: swapping site characteristics between Koraput and Kuttanad.

Q25. With reference to the Traditional Knowledge Digital Library (TKDL), consider the following statements:

1. It was established in 2001 jointly by CSIR and the then Department of Indian Systems of Medicine and Homeopathy.
2. It is designed mainly to provide GI tagging for Indian medicinal products in foreign countries.
3. It contains material transcribed from several Indian and traditional languages into five international languages.

Which of the statements given above are correct?

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

Answer: (a) 1 and 3 only

Explanation

Statement 1 is correct. PIB says TKDL was established in 2001 jointly by CSIR and the then Department of Indian Systems of Medicine and Homeopathy.

Statement 2 is incorrect. TKDL is a prior art database aimed at preventing misappropriation of Indian traditional knowledge through IPR claims, not mainly for GI tagging.

Statement 3 is correct. PIB says material in Sanskrit, Hindi, Tamil, Malayalam, Arabic, Persian, Urdu, Bhoti, etc. has been transcribed into English, French, German, Spanish and Japanese.

UPSC trap: GI, patent opposition, and prior art are often confused.

Q26. Consider the following statements regarding TKDL:

1. Access to the TKDL database is given to patent offices that have signed non-disclosure access agreements with CSIR.
2. Since 2009, TKDL evidence has helped in refusal, withdrawal, amendment, or setting aside of hundreds of patent applications.
3. TKDL currently covers only Ayurveda and Yoga.

How many of the above statements are correct?

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

Answer: (b) Only two

Explanation

Statement 1 is correct. PIB states that access is provided to 18 patent offices worldwide that have signed non-disclosure access agreements with CSIR.

Statement 2 is correct. It says that since 2009, 375 patent applications were refused, withdrawn, amended, or set aside based on TKDL evidence.

Statement 3 is incorrect. TKDL covers Ayurveda, Unani, Siddha, Sowa Rigpa and Yoga, not only Ayurveda and Yoga.

UPSC trap: "only" makes the statement collapse.

Q27. With reference to the Aravalli Green Wall initiative, consider the following statements:

1. It proposes restoration of 6.31 million hectares.
2. Its priority intervention areas include Rajasthan, Gujarat, Haryana and Delhi.
3. Its phase-wise plan focuses only on afforestation and excludes grassland rejuvenation and mine reclamation.

Which of the statements given above is/are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statements 1 and 2 are correct. PIB says the Aravalli Green Wall initiative proposes restoration of 6.31 million hectares, with priority intervention areas in Rajasthan, Gujarat, Haryana and Delhi.

Statement 3 is incorrect. The phase-wise plan explicitly includes forest restoration, grassland rejuvenation, and mine reclamation.

UPSC trap: narrowing a multi-component programme into a single activity.

Q28. Consider the following statements:

1. A detailed action plan for Aravalli Landscape Restoration was unveiled on 21 May 2025.
2. Around 36,025 hectares had been restored in 2025 under the initiative.
3. The initiative is described in PIB as a purely engineering-led road-building project in the Aravallis.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statements 1 and 2 are correct. PIB mentions a detailed action plan unveiled on 21 May 2025 and notes that about 36,025 hectares had been restored in 2025.

Statement 3 is incorrect. PIB describes it as a science-based, community-led, and policy-

supported roadmap to restore ecological integrity, not as a road-building project.

UPSC trap: replacing ecological restoration language with infrastructure language.

Q29. With reference to Access and Benefit Sharing (ABS), consider the following statements:

1. It reinforced the role of local communities as custodians of biodiversity.
2. More than ₹61 crore was released to local communities under ABS.
3. ABS in PIB is described as a mechanism exclusively for wildlife tourism revenue sharing.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statements 1 and 2 are correct. PIB explicitly says ABS reinforced the role of local communities as custodians of biodiversity and that over ₹61 crore was released to local communities.

Statement 3 is incorrect. PIB does not define ABS as an exclusive wildlife-tourism revenue mechanism. It is presented more broadly in the biodiversity-governance context.

UPSC trap: turning a biodiversity-governance concept into a tourism-only mechanism.

Q30. Consider the following statements regarding the National Clean Air Programme (NCAP) as :

1. NCAP covered 130 cities.
2. It had received only regulatory support, with no performance-linked financial funding.
3. In 2024–25, 103 cities recorded reduction in PM10 levels compared to 2017–18.

How many of the above statements are correct?

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

Answer: (b) Only two

Explanation

Statement 1 is correct. PIB says NCAP covered 130 cities.

Statement 2 is incorrect. PIB explicitly notes ₹13,415 crore as performance-linked funding till then.

Statement 3 is correct. It says 103 cities recorded reduction in PM10 in 2024–25 compared to 2017–18.

UPSC trap: policy schemes are often incorrectly framed as non-fiscal.

Q31. With reference to NCAP outcomes, consider the following statements:

1. Of the 103 cities showing PM10 reduction, 64 showed reduction by more than 20 percent.
2. Twenty-five cities achieved reduction by more than 40 percent.
3. All 130 NCAP cities met National Ambient Air Quality Standards for PM10.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statements 1 and 2 are correct. PIB gives those exact numbers: 64 cities reduced PM10 by more than 20 percent and 25 cities by more than 40 percent.

Statement 3 is incorrect. Only 22 cities met National Ambient Air Quality Standards for PM10 levels.

UPSC trap: replacing a limited success figure with a universal one.

Q32. With reference to Project Elephant as described in PIB, consider the following statements:

1. Elephant Reserves increased to 33 in 2025 from 26 in 2014.
2. Around 8,610 sq km additional area was brought under protection.
3. Gaj Soochna App is in connection with DNA profiling of captive elephants.

Which of the statements given above is/are correct?

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

Answer: (d) 1, 2 and 3

Explanation

All three statements are correct. PIB explicitly records the increase in Elephant Reserves to 33, the addition of about 8,610 sq km, and DNA profiling of captive elephants through the Gaj Soochna App.

UPSC trap: digital tools like apps are often linked to the wrong species or project.

Q33. Consider the following measures mentioned under Project Elephant:

1. India–Bangladesh Transboundary Elephant Conservation Protocol
2. Identification of 150 elephant corridors across 15 States
3. Ex gratia for human fatalities enhanced from ₹5 lakh to ₹10 lakh
4. Introduction of captive-cheetah genetic profiling under Gaj Soochna App

Select the correct answer using the code below:

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2 and 3 are correct and are explicitly listed under Project Elephant interventions.

Statement 4 is incorrect. Gaj Sookna App is linked to captive elephants, not cheetahs.

UPSC trap: transferring a species-linked intervention from one conservation programme to another.

Q34. With reference to Project Cheetah, consider the following statements:

1. In 2025, cheetahs were introduced into Gandhisagar Wildlife Sanctuary.
2. Planned expansion includes Noradehi and Banni Grasslands.
3. The total cheetah population reached 30, including 19 cubs born in India.

How many of the above statements are correct?

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

Answer: (c) All three

Explanation

All three are directly supported by PIB. It states introduction into Gandhisagar Wildlife Sanctuary, planned expansion to Noradehi and Banni Grasslands, and total population reaching 30 including 19 cubs born in India.

UPSC trap: Gandhisagar may be confused with Kuno due to earlier cheetah discourse.

Q35. Consider the following statements regarding Mission LiFE

1. It mobilised students and citizens towards sustainable lifestyles.
2. More than six crore people had participated in over 34 lakh LiFE events.
3. Mission LiFE only as an international negotiating slogan, not as a domestic public-mobilisation platform.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statements 1 and 2 are correct. PIB says Mission LiFE mobilised students and citizens towards

sustainable lifestyles, with more than six crore participants across over 34 lakh events.

Statement 3 is incorrect. PIB clearly shows Mission LiFE as a domestic mobilisation platform as well, though it also appears in international environmental diplomacy.

UPSC trap: assuming Mission LiFE is only diplomatic branding.

Q36. Which of the following is correctly matched

- (a) Mission LiFE — Exclusive programme for Ramsar contracting parties only
- (b) NCAP — Scheme limited to million-plus cities only
- (c) Project Elephant — DNA profiling of captive elephants via Gaj Sookna App
- (d) TKDL — GI certification portal for handicrafts

Answer: (c)

Project Elephant — DNA profiling of captive elephants via Gaj Sookna App

Explanation

Option (c) is correctly matched. PIB explicitly mentions DNA profiling of captive elephants under Project Elephant via Gaj Sookna App.

Option (a) is incorrect because Mission LiFE is much broader.

Option (b) is incorrect because NCAP covers 130 cities, not only million-plus cities.

Option (d) is incorrect because TKDL is a prior art database for protecting traditional knowledge, not a GI portal.

Q37. With reference to the International Big Cat Alliance (IBCA), consider the following statements:

1. It seeks conservation cooperation for seven big cat species globally.
2. Its Framework Agreement entered into force in January 2025.
3. It treats biodiversity conservation separately from climate adaptation and community livelihoods.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statement 1 is correct. The alliance is structured around cooperation for seven big cat species globally.

Statement 2 is correct. The Framework Agreement entered into force on 23 January 2025.

Statement 3 is incorrect. Its approach explicitly

links biodiversity conservation with climate adaptation, ecosystem services, water security, and community livelihoods.

UPSC trap: separating ecology from livelihoods when the initiative is built around integration.

Q38. Consider the following statements regarding GFRA 2025:

1. India ranks 9th globally in total forest area.
2. India retained 3rd position in annual net gain of forest area.
3. Europe has the highest proportion of forest relative to total land area.
4. More than half of the world's forests are concentrated in just five countries.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1 and 2 are correct. India moved to 9th place globally in total forest area and retained 3rd position in annual net forest gain. Statement 3 is incorrect. Europe has the largest forest area in absolute terms, but South America has the highest proportion of forest relative to land area.

Statement 4 is correct. More than half of global forests are concentrated in five countries.

UPSC trap: absolute size versus percentage share.

Q39. With reference to Green Credit Programme (revised framework), consider the following statements:

1. Participation was expanded to both public and private entities for restoring degraded forest land.
2. Green Credits are issued immediately after plantation is completed.
3. Credits may be used once for compensatory afforestation, CSR obligations, or statutory plantation requirements.

Which of the statements given above are correct?

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

Answer: (a) 1 and 3 only

Explanation

Statement 1 is correct. Participation was widened to public and private entities. Statement 2 is incorrect. Credits are issued only after 5 years of restoration and on achieving at least 40% canopy density.

Statement 3 is correct. The framework allows one-time use for those listed purposes.

UPSC trap: plantation is not the same as credit eligibility.

Q40. Consider the following pairs:

Item — Correct association

1. Wetland Cities Recognition — Indore and Udaipur
2. Ramsar network in Asia — India has the largest by number of sites
3. Global ranking by number of Ramsar sites — India ranks 1st globally

How many pairs given above are correctly matched?

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

Answer: (b) Only two

Explanation

Pair 1 is correct. Indore and Udaipur received recognition as Wetland Cities.

Pair 2 is correct. India has the largest Ramsar network in Asia by number of sites.

Pair 3 is incorrect. India ranks 3rd globally by number of Ramsar sites, not 1st.

UPSC trap: Asia and world rankings are often swapped.

Q41. With reference to Eco-Sensitive Zones (ESZs), consider the following statements:

1. They regulate development around Protected Areas.
2. They are meant to balance conservation with sustainable livelihoods of local communities.
3. Final ESZ notifications had been issued for 496 ESZs.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statements 1 and 2 are correct. ESZs are regulatory buffers around Protected Areas and are intended to support an ecosystem-based conservation approach along with sustainable livelihoods.

Statement 3 is incorrect. The figure 496 refers to the number of Protected Areas covered, not the number of ESZ notifications. The number of final ESZ notifications is 353.

UPSC trap: mixing notifications with the number of areas covered.

Q42. Consider the following statements regarding the Environment Audit Rules, 2025:

1. They were introduced to address gaps in environmental compliance monitoring.
2. They were conceived partly because existing monitoring authorities faced manpower and infrastructure constraints.
3. Their purpose is to weaken compliance scrutiny in favour of ease of doing business.

How many of the above statements are correct?

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

Answer: (b) Only two

Explanation

Statements 1 and 2 are correct. The reform was introduced to strengthen compliance monitoring, especially in view of capacity constraints among existing authorities.

Statement 3 is incorrect. The aim is stronger transparency, accountability, and credibility in compliance monitoring, not weaker scrutiny.

UPSC trap: assuming reform plus business facilitation automatically means dilution.

Q43. With reference to Mission LiFE, consider the following statements:

1. It mobilised students and citizens towards sustainable lifestyles.
2. More than six crore people had participated in over 34 lakh events.
3. It was also aligned with India's wetlands diplomacy at Ramsar COP-15.

Which of the statements given above are correct?

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

Answer: (d) 1, 2 and 3

Explanation

All three statements are correct. Mission LiFE operated as a large domestic behaviour-change platform, recorded participation of more than six crore people across over 34 lakh events, and its principles were linked with India's resolution on sustainable lifestyles for wise use of wetlands at Ramsar COP-15.

UPSC trap: treating Mission LiFE as only a domestic campaign or only a diplomatic slogan. It functions across both planes.

Q44. Consider the following:

1. Performance-linked funding under NCAP
2. Ward-level Swachh Vayu Sarvekshan guidelines
3. Wetland Cities recognition
4. National Ambient Air Quality Standards for PM10

Which of the above are connected with India's urban environmental governance landscape?

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

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

Explanation

All four belong to the wider urban environmental governance space. NCAP includes performance-linked support and PM10-based outcomes; ward-level Swachh Vayu Sarvekshan guidelines strengthen city-level air governance; Wetland

Cities recognition links urban form with wetland stewardship.

UPSC trap: assuming wetland governance is only rural/ecological and unrelated to urban policy.

Q45. Which one of the following is correctly matched?

- (a) GFRA 2025 — South America has the largest forest area in the world
- (b) Green Credit Programme — Credits may be reused multiple times
- (c) Environment Audit Rules, 2025 — introduced to strengthen transparency and credibility in compliance monitoring
- (d) ESZs — meant to replace Protected Areas under the Wild Life (Protection) Act

Answer: (c)

Environment Audit Rules, 2025 — introduced to strengthen transparency and credibility in compliance monitoring

Explanation

Option (c) is correct.

Option (a) is incorrect because Europe has the largest forest area, while South America has the highest proportion of forest cover.

Option (b) is incorrect because credits may be used once.

Option (d) is incorrect because ESZs regulate development around Protected Areas; they do not replace them.

Q46. Consider the following statements:

1. India had 96 Ramsar Sites in 2025.
2. Eleven new Ramsar Sites were added in 2025.
3. Wetland Cities recognition was conferred on Prayagraj and Udaipur.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

Explanation

Statements 1 and 2 are correct. India had 96 Ramsar Sites after the addition of eleven new sites in 2025.

Statement 3 is incorrect. The recognised Wetland Cities were Indore and Udaipur, not Prayagraj and Udaipur.

UPSC trap: replacing Indore with another high-profile city.

Q47. Consider the following statements:

1. Under the revised Green Credit framework, restoration may be carried out directly by user agencies.
2. Green Credits are issued after five years of restoration, subject to achieving the prescribed canopy threshold.

3. Such credits may be used multiple times for different statutory and CSR purposes.
4. The framework expanded participation to both public and private entities.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2 and 4 are correct.

The revised framework widened the participation base by allowing both public and private entities to take part in restoring degraded forest land. It also permitted restoration to be undertaken directly by user agencies, which marks an important administrative shift from a purely passive compliance model toward a more execution-oriented one. Further, Green Credits are not issued merely because plantation has occurred. They are granted only after five years of restoration, and only when the prescribed ecological benchmark is met, namely the required canopy density threshold.

Statement 3 is incorrect. This is the main trap. The credits may be used once, not multiple times. The permitted uses include compensatory afforestation, CSR obligations, or statutory plantation requirements. UPSC often inserts “multiple times” or “reusable” to catch candidates who remember the eligible uses but not the restriction on reuse.

Q48. Assertion–Reason

Assertion (A): A suspected contaminated site and a contaminated site are not the same in law or procedure.

Reason (R): A site becomes a contaminated site only after detailed site assessment establishes contamination above the prescribed response levels.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason directly explains the assertion.

The contaminated-sites framework follows a staged process. First, a local body or district administration may identify an area as a suspected contaminated site and list it on the centralized online portal. Then the State Pollution Control

Board or Pollution Control Committee undertakes preliminary site assessment. If contamination exceeds the screening level at that stage, the site may be treated as a probable contaminated site. Only after detailed site assessment and confirmation that the contamination exceeds the prescribed response levels can it be declared a contaminated site. So the categories are not interchangeable.

This is exactly the kind of UPSC trap that tests procedural understanding. Many students remember the term “contaminated site” but not the multi-stage legal ladder leading to that declaration.

Q49. Consider the following pairs:

Species / Ecosystem Measure	Associated Feature
1. MISHTI	Mangrove restoration and afforestation along the coast
2. NCAP	Million-plus cities only
3. ESZs	Regulation of development around Protected Areas
4. Wetland Cities Recognition	Indore and Udaipur

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pair 1 is correct. MISHTI is specifically aimed at restoring mangrove forests through reforestation and afforestation measures along India’s coast. It is important because it links coastal ecology, habitat protection, and climate resilience.

Pair 2 is incorrect. NCAP is not limited only to million-plus cities. It covers 130 cities, and while separate finance commission-linked air quality grants may concern million-plus cities, the core programme itself is broader. UPSC often inserts such scope-reduction traps.

Pair 3 is correct. Eco-Sensitive Zones regulate development around Protected Areas while seeking to support sustainable local livelihoods. They are neither substitutes for Protected Areas nor mere symbolic declarations.

Pair 4 is correct. The first recognized Wetland Cities were Indore and Udaipur. That pairing is particularly important because prominent cities are often swapped in options.

Q50. With reference to Project Elephant, consider the following statements:

1. The number of Elephant Reserves increased between 2014 and 2025.
2. A rail-track mitigation portal was part of the interventions.
3. The Gaj Sookna App is linked with DNA profiling of captive elephants.
4. Elephant corridors were identified across all States and Union Territories.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2 and 3 are correct.

The reserve network expanded over time, and the interventions under Project Elephant were not confined only to habitat declaration. They also included a rail-track mitigation portal, which reflects an important evolution in conservation policy: the shift from classical protected-area thinking to conflict and infrastructure mitigation. Likewise, the Gaj Sookna App is linked with DNA profiling of captive elephants, showing how digital tools are increasingly being integrated into wildlife governance.

Statement 4 is incorrect. Elephant corridors were identified across 15 States, not across all States and Union Territories. The phrase “all States and UTs” is a classic UPSC exaggeration trap. A student who remembers “many corridors were identified” but not the exact administrative spread may get trapped here.

Q51. Assertion–Reason

Assertion (A): Eco-Sensitive Zones are compatible with an ecosystem-based approach to conservation.

Reason (R): They are intended to regulate development around Protected Areas while supporting sustainable livelihoods of local communities.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and reason are correct, and the reason explains the assertion.

An ecosystem-based conservation approach does not stop at the legal boundary of a national park or

sanctuary. It recognizes that ecological processes, land use, and human livelihoods around the Protected Area matter greatly. Eco-Sensitive Zones embody this approach by regulating development around Protected Areas instead of allowing an abrupt ecological transition from strict protection to unrestricted economic activity. At the same time, they are also meant to support sustainable livelihoods, which prevents conservation from becoming socially disconnected.

This is an excellent conceptual question because it checks whether the student understands ESZs as a governance tool, not just as a memorized term.

Q52. Consider the following three-column combinations:

List I	List II	List III
A. Koraput	1. Diversity of paddy landraces	i. Indigenous knowledge-linked agricultural heritage
B. Kuttanad	2. Below-sea-level farming landscape	ii. Wetlands, garden lands, inland water bodies
C. Saffron Heritage of Kashmir	3. Intercropping and organic practices	iii. Agro-pastoral heritage system

How many of the above combinations are correctly matched?

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

Answer: (c) All three

Explanation

All three combinations are correct.

Koraput is associated with a wide diversity of paddy landraces and indigenous knowledge systems, making it an agricultural heritage landscape of very high ecological and cultural significance.

Kuttanad is distinct because it is a below-sea-level farming system combining wetlands used for paddy, garden lands used for coconut and food crops, and inland waters used for fishing and shell collection.

The Saffron Heritage of Kashmir is described as an agro-pastoral system featuring intercropping and organic farming practices.

This kind of question is difficult not because the facts are individually obscure, but because UPSC can shuffle characteristics between similar-looking heritage systems. Students must remember the relational identity of each site.

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Q53. Which one of the following is the most appropriate interpretation of Mission LiFE?

- (a) A negotiating phrase used only in climate conferences
- (b) A citizen-centred behavioural change initiative linked with sustainable lifestyles, which also carries international relevance
- (c) A school-literacy campaign confined to environmental clubs
- (d) A fund for afforestation activities under compensatory plantation rules

Answer: (b)

Explanation

Option (b) is the most accurate.

Mission LiFE is essentially about mobilising citizens toward sustainable lifestyles, which makes it a public behavioural-change initiative. At the same time, it is not domestically confined; its principles also intersect with India's international environmental diplomacy, including its support for sustainable-lifestyles thinking in multilateral platforms. So it is neither just a slogan nor just a school programme.

Option (a) is too narrow.

Option (c) is also too narrow and incorrectly educationally confines the initiative.

Option (d) confuses it with afforestation-linked regulatory frameworks.

This is the type of question UPSC uses when it wants to test conceptual character rather than raw fact recall.

Q54. Consider the following statements regarding TKDL:

- 1. It functions as a prior art database to prevent misappropriation of traditional knowledge through intellectual property claims.
- 2. It includes knowledge from Ayurveda, Unani, Siddha, Sowa Rigpa and Yoga.
- 3. Its primary purpose is to issue patents to Indian traditional medicine producers more efficiently.
- 4. Access to its database is available to patent offices that have signed non-disclosure access agreements.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2 and 4 are correct.

TKDL is fundamentally a defensive knowledge-protection mechanism. It is designed so that patent examiners can identify prior art and prevent the wrongful patenting of knowledge that is

already part of India's traditional systems. That is why it covers traditions such as Ayurveda, Unani, Siddha, Sowa Rigpa and Yoga, and why access is shared with patent offices under non-disclosure access agreements.

Statement 3 is incorrect. TKDL is not primarily a system for issuing patents more efficiently. Its central role is almost the reverse: to prevent the grant of improper patents based on existing traditional knowledge. This is a common trap where students confuse IP protection with IP granting.

Q55. Assertion–Reason

Assertion (A): NCAP cannot be evaluated merely by asking how many cities it covers. Reason (R): Its outcomes also involve indicators such as PM10 reduction, compliance with air quality standards, and performance-linked funding.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both are correct, and the reason explains the assertion.

If one says only that NCAP covers 130 cities, that captures programme reach but not programme performance. Evaluation must also look at whether PM10 levels declined, how many cities achieved major reductions, how many met ambient standards, and how performance-linked funding is being structured. In other words, coverage is a necessary descriptive fact, but not a sufficient measure of programme effectiveness.

This is a highly UPSC-style question because it tests whether the candidate can move from a static fact to a governance-performance perspective.

Q56. Which one of the following is not correctly matched?

- (a) MISHTI — restoration of mangroves along the coast
- (b) Aravalli Green Wall — mine reclamation as one of the focus areas
- (c) Environment Audit Rules, 2025 — introduced to address gaps in compliance monitoring
- (d) Wetland Cities recognition — first awarded to Bhopal and Prayagraj

Answer: (d)

Explanation

Option (d) is not correctly matched. The first recognized Wetland Cities were Indore and

Udaipur, not Bhopal and Prayagraj. This is the kind of fact-swapping trap UPSC loves to use with prominent cities.

Option (a) is correct because MISHTI targets mangrove restoration.

Option (b) is correct because the Aravalli initiative includes not only forest restoration and grassland rejuvenation, but also mine reclamation.

Option (c) is correct because the Environment Audit Rules were introduced to strengthen monitoring by addressing institutional capacity gaps and improving transparency and credibility.

SCI AND TECH MCQs

Q1. With reference to microgravity, consider the following statements:

1. It refers to a condition in which gravity is absent.
2. In microgravity, density differences do not produce buoyancy-driven fluid flow in the same way as on Earth.
3. Pendulum-based mechanisms do not work in the same way in microgravity.

How many of the above statements are correct?

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

Answer: (b) Only two

Explanation

Statement 1 is incorrect. Microgravity does not mean gravity is absent. It refers to a condition in which gravity appears to be very small, which is why “zero gravity” is considered a misleading expression. This is a classic UPSC trap: replacing a nuanced scientific condition with an absolute one.

Statement 2 is correct. On Earth, density differences often create fluid motion because denser fluids sink below lighter ones under gravity. In microgravity, that familiar buoyancy-driven ordering is largely absent, which is why fluids and gases can remain comparatively still even in the presence of density or temperature differences. This makes microgravity valuable for controlled experiments in fluid science.

Statement 3 is correct. Pendulum-based or hanging-mass mechanisms do not behave in the usual way in microgravity. A pendulum clock, for example, would not function there in the same manner as on Earth. This helps students understand that microgravity affects not just floating astronauts but also the working principles of many mechanical systems.

Q2. Assertion–Reason

Assertion (A): Microgravity is useful for certain kinds of fluid research.

Reason (R): In microgravity, fluids can remain comparatively still because buoyancy-driven flow is greatly reduced.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason directly explains the assertion.

Microgravity reduces the normal gravitational sorting of fluids by density. As a result, fluids do not automatically set up the same convection and buoyancy patterns that they do on Earth. This allows scientists to observe fluid behaviour under more controlled conditions over longer time periods. So microgravity becomes an excellent research environment when the goal is to study processes without the usual disturbance caused by gravity-driven flow.

This is a strong UPSC-style concept question because it tests whether the student understands why a space condition matters scientifically, not just what it is called.

Q3. With reference to the nano-material based explosive detection platform, consider the following statements:

1. It is based on Surface-Enhanced Raman Spectroscopy (SERS).
2. The sensing platform uses reduced graphene oxide, silver nanoparticles, and cerium oxide.
3. Silver is preferred mainly because it is highly stable in humid and warm conditions.
4. The system demonstrated detection of TNT and RDX at trace levels.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 4 only

Explanation

Statements 1 and 2 are correct. The sensing platform is built around SERS, a technique that amplifies the molecular fingerprint signals of chemicals, and the material stack uses reduced graphene oxide (rGO), silver nanoparticles, and cerium oxide on a glass substrate. Each layer contributes a distinct function.

Statement 3 is incorrect. In fact, silver has the opposite problem: although it is excellent for signal enhancement, it is prone to oxidation,

especially in humid or warm conditions, which weakens long-term stability. That is one reason cerium oxide is added. It acts as both a protective barrier and a charge-transfer enhancer.

Statement 4 is correct. The platform demonstrated trace-level detection of explosives such as TNT and RDX, which is why it has potential applications in airport security and environmental monitoring.

The key prelims lesson here is that UPSC often asks science questions through functional roles of components, not merely through names.

Q4. Consider the following pairs:

Component	Main Role
Silver nanoparticles	Raman signal enhancement
Cerium oxide layer	Protection against oxidation and improved charge transfer
Reduced graphene oxide	Quenching unwanted fluorescence
Glass substrate	Biological nutrient medium

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2 and 3 are correctly matched. Silver nanoparticles are crucial because they strongly amplify Raman signals. Cerium oxide improves charge transfer and protects silver from humidity- and temperature-induced degradation. Reduced graphene oxide plays another important role by suppressing excessive fluorescence that would otherwise drown out the Raman fingerprint of the analyte.

Pair 4 is incorrect. The glass substrate is part of the physical sensing platform; it is not functioning as a biological nutrient medium. That option is deliberately absurd-sounding to a well-prepared student, but in an exam setting fatigue can still cause errors.

This kind of question is valuable because it trains students to connect material → function, which is a recurring pattern in modern science prelims.

Q5. With reference to the stress-responsive CRISPR system developed for plants, consider the following statements:

1. It uses dCas9, which functions without cutting DNA.
2. It remains inactive until stress triggers its movement into the nucleus.
3. It was tested only in Arabidopsis.
4. It helped activate defence-related genes in tomato under stress conditions.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1 and 2 are correct. The innovation lies in using dCas9, a modified CRISPR component that does not cut DNA. Instead, it acts more like a switch that can turn genes on or off. It stays held outside the nucleus until stress conditions release that restraint.

Statement 3 is incorrect. The system was tested in tomato, potato, and tobacco, not only in Arabidopsis. UPSC frequently uses “only” to turn an otherwise plausible statement false.

Statement 4 is correct. In tomato, the system was used to activate defence-related genes such as CBP60g and SARD1, helping plants fight bacterial attack under heat-stress conditions. It also activated heat-helper genes like NAC2 and HSFA6b during high temperatures.

This question is conceptually important because it captures a growing UPSC trend: asking not just “what is CRISPR?” but how a modified CRISPR system is being used.

Q6. Assertion–Reason

Assertion (A): The stress-responsive CRISPR tool is more energy-efficient for plants than a continuously active defence system.
Reason (R): The system activates target genes only when stress conditions arise.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both statements are correct, and the reason explains the assertion.

A defence system that remains active all the time can consume energy even when the plant is not under threat. The smart feature of this CRISPR-based switch is that it remains inactive until stress appears, and then activates only the necessary genes. That is why it conserves energy while still strengthening the plant's defence and heat-resilience capacity.

This is precisely the kind of applied-biology logic UPSC has increasingly been favouring.

Q7. With reference to biostimulants, consider the following statements:

1. A plant biostimulant may be a substance, a micro-organism, or a mixture thereof.
2. Its action is defined independently of its nutrient content.
3. It may improve nutrient availability, use efficiency, tolerance to abiotic stress, and crop quality.
4. It is the same as a conventional fertilizer supplying only major nutrients.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2 and 3 are correct. A biostimulant is defined broadly and may be a substance, microorganism, or mixture. Its importance lies not in nutrient supply alone, but in its ability to support natural plant processes such as nutrient uptake, tolerance to abiotic stress, improvement of soil microbial health, crop vigor, and yield quality.

Statement 4 is incorrect. A biostimulant is not simply a conventional fertilizer. The definition specifically emphasises that its action is independent of its nutrient content. That distinction is likely to be a UPSC trap because students often confuse plant-input categories.

Q8. Which one of the following best describes perovskite solar cells?

- (a) They rely on thick silicon wafers as the only light-absorbing layer
- (b) Their active layer is commonly based on metal-halide perovskites and functions as a thin-film absorber
- (c) They require oxygen-based inorganic perovskites only and never use halogens
- (d) They generate electricity through mechanical deformation of crystals

Answer: (b)

Explanation

Option (b) is correct. In perovskite solar cells, the active light-absorbing layer is commonly made of metal-halide perovskites, and the technology is described as thin-film because the active layer can be much thinner than in conventional crystalline silicon PV.

Option (a) is incorrect because that describes a silicon-dominant framework, not the essence of perovskite cells.

Option (c) is incorrect because the photovoltaic perovskites discussed here are specifically associated with metal-halide compositions; oxygen-based forms relate to other applications.

Option (d) confuses photovoltaic behaviour with piezoelectric behaviour.

This is a strong prelims question because it distinguishes material chemistry + device structure.

Q9. With reference to photocatalytic hydrogen peroxide production, consider the following statements:

1. Hydrogen peroxide is environmentally attractive because it breaks down into water and oxygen.
2. Conventional production methods are described as energy-intensive and environmentally hazardous.
3. The new approach uses a dimolybdenum paddlewheel-embedded covalent organic framework.
4. The photocatalyst requires fossil fuel combustion for activation.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2 and 3 are correct.

Hydrogen peroxide is considered environmentally attractive because its breakdown products are simply water and oxygen. Conventional methods of producing it are energy-intensive, costly, and environmentally problematic. The new approach uses a novel Mo-DHTA COF, a dimolybdenum paddlewheel-embedded covalent organic framework, to synthesize hydrogen peroxide using sunlight and water under greener conditions. Statement 4 is incorrect. The whole significance of the approach is that it is photocatalytic, meaning it harnesses light, not fossil fuel combustion, to drive the process. This is an important distinction because UPSC often asks science questions by contrasting old and new production pathways.

Q10. Consider the following statements regarding applications of atomic energy:

1. Radiation-induced mutagenesis and cross-breeding have enabled development of new crop varieties.
2. Food irradiation can extend the shelf life of products without making them radioactive.
3. Bhabha Kavach is linked to bullet-proof protection.
4. Nuclear power contributed around 30% of India's total electricity generation in 2024–25.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2 and 3 are correct.

Atomic energy applications extend far beyond electricity. In agriculture, radiation-induced mutagenesis and cross-breeding have been used to develop new crop varieties with useful agronomic traits. In food preservation, irradiation helps extend shelf life and improve storage outcomes. In defence, Bhabha Kavach is a lightweight, cost-effective bullet-proof jacket technology.

Statement 4 is incorrect. Nuclear power was reported as contributing about 3%, not 30%, of total electricity generation. This is a classic numerical trap where a zero is mentally added.

Q11. With reference to the BioE3 policy, consider the following statements:

1. It was approved in August 2024.
2. It aims to support R&D, entrepreneurship, and commercialization through biomanufacturing and Bio-AI hubs and Biofoundry.
3. Its larger vision includes sustainable and circular bio-based industrialization.
4. It is confined exclusively to pharmaceutical manufacturing.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2 and 3 are correct. BioE3 was approved in August 2024 and aims to support innovation-driven R&D, entrepreneurship, technology development, and commercialization by creating Biomanufacturing & Bio-AI hubs and Biofoundry. Its broader vision is to industrialize biology in a way that supports sustainable and circular practices, including climate mitigation, food security, and human health.

Statement 4 is incorrect. The policy is not limited only to pharmaceuticals. Its scope is much wider and touches multiple societal and industrial

sectors. UPSC often narrows a broad mission into one sector to test whether candidates understand policy range.

Q12. With reference to the closed nuclear fuel cycle in India, consider the following statements:

1. It involves recovery and recycling of fissile and fertile materials from spent nuclear fuel.
2. It is aligned with India's three-stage nuclear power programme.
3. Plutonium from reprocessed PHWR spent fuel is intended for use in fast breeder reactors.
4. The long-term objective includes breeding Uranium-233 from Thorium-232.

Which of the statements given above are correct?

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

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

Explanation

All four statements are correct.

The closed nuclear fuel cycle is designed to recover and reuse materials rather than discard spent fuel as mere waste. It is explicitly tied to India's three-stage nuclear programme. Domestic uranium is used in PHWRs, plutonium recovered from reprocessed PHWR spent fuel is intended for fast breeder reactors, and the longer-term thorium strategy includes breeding U-233 from Th-232 and using that for future energy security.

This is one of the most UPSC-relevant science-policy themes because it links resource scarcity, reactor strategy, and long-term energy planning in one framework.

Q13. Consider the following statements regarding Kulasekarapattinam Spaceport:

1. It is a dedicated facility for Small Satellite Launch Vehicles.
2. Its coastal location enables direct southward launches suited to polar orbits.
3. It avoids the more fuel-consuming manoeuvres around Sri Lanka required from Sriharikota.
4. It is located in Gujarat near Deendayal Port.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2 and 3 are correct. The Kulasekarapattinam spaceport is meant for SSLVs, and its location in Tamil Nadu supports

direct southward launches for polar orbits. This reduces the need for more complex and fuel-consuming routing around Sri Lanka, which is a constraint associated with launches from Sriharikota.

Statement 4 is incorrect. It is located in Thoothukudi district, Tamil Nadu, not in Gujarat. This option is a geographical trap.

Q14. Assertion–Reason

Assertion (A): Kavach is more than just a signal-warning system.

Reason (R): It can automatically apply brakes, prevent signal-passing-at-red incidents, help avoid collisions between equipped locomotives, and support live train monitoring.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both statements are correct, and the reason explains the assertion.

Kavach is an Automatic Train Protection (ATP) system, not just an alert mechanism. Its significance lies in active intervention: it can automatically trigger braking if the loco pilot fails to respond appropriately, prevent trains from passing a signal at red, reduce collision risk between equipped locomotives, and support centralized live monitoring through the Network Monitor System. That makes it a full safety system rather than a passive signalling aid.

This is exactly the kind of question UPSC may frame to test whether the candidate understands the difference between warning technology and control technology.

Q15. With reference to blockchain types and the National Blockchain Framework (NBF), consider the following statements:

- 1. A private blockchain is permissioned and can be well-suited to government applications.
- 2. A consortium blockchain is jointly governed by multiple organizations.
- 3. The National Blockchain Framework is aimed at accelerating permissioned blockchain-based applications.
- 4. The NBF was officially launched in September 2024.

Which of the statements given above are correct?

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

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

Explanation

All four statements are correct.

A private blockchain is permissioned and restricted to selected participants, which makes it particularly suitable for sensitive institutional or governmental uses. A consortium blockchain is governed jointly by multiple organizations. The National Blockchain Framework was created to accelerate the development and deployment of permissioned blockchain-based applications, and it reached a significant milestone with its official launch on 4 September 2024.

The deeper prelims lesson here is that UPSC may not ask blockchain as a generic term; it may ask the distinctions between governance architectures.

Q16. With reference to 6G, consider the following statements:

- 1. It is expected to use higher radio frequencies than 5G.
- 2. It aims to reduce response time to around one microsecond.
- 3. It may improve advanced imaging, precise location tracking, and immersive virtual experiences.
- 4. Its architecture is presented as entirely separate from artificial intelligence.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2 and 3 are correct. The description of 6G emphasizes higher radio frequencies, much faster response times, and stronger support for advanced imaging, location tracking, and rich virtual experiences. It is framed as a major leap beyond 5G in both speed and responsiveness.

Statement 4 is incorrect. In fact, the architecture is described as increasingly integrated with AI, which can help decide where data should be stored, processed, and shared. That AI-link is central to the future vision of intelligent network management.

Q17. With reference to Vanadium Redox Flow Batteries (VRFBs), consider the following statements:

- 1. They store energy in liquid, water-based vanadium electrolytes kept in external tanks.
- 2. They are especially suited for long-duration, grid-scale storage.
- 3. Their fire risk is relatively low because they are non-flammable.
- 4. They are generally most cost-competitive for very small-scale applications.

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How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

A vanadium redox flow battery stores energy not inside tightly packed solid electrodes in the same way as lithium-ion systems, but in liquid electrolytes held in external tanks. That is why it scales differently. It is particularly useful for long-duration, grid-scale energy storage, where the energy capacity can be expanded by enlarging tank volume rather than only by adding more expensive cathode-type material. Its safety profile is also strong because the system is non-flammable, which makes it attractive for large stationary installations.

Statement 4 is incorrect. Flow batteries are not typically most cost-competitive at very small scale. Their economics improve as the system becomes larger and as discharge duration lengthens. That is the opposite of the small-scale claim. UPSC often hides the trap in the word “small-scale.”

Q18. Assertion–Reason

Assertion (A): Vanadium flow batteries are often seen as better suited than lithium-ion batteries for long-duration discharge applications.

Reason (R): Their per-unit cost of electricity tends to fall as tank size and electrolyte volume increase.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

The key design logic of a flow battery is that power and energy capacity can be decoupled to a large extent. If one wants more stored energy, the electrolyte tanks can be enlarged. Since the electrolyte volume is comparatively cheaper to scale than the solid active material burden in lithium-ion systems, the economics improve for longer discharge durations, especially beyond around four hours. This is exactly why flow batteries are increasingly discussed for renewable integration and large-grid balancing rather than for short-burst mobile uses.

This is a strong UPSC-type conceptual question because it tests whether the student understands why one battery chemistry fits one use-case better than another.

Q19. With reference to Pumped Storage Projects (PSPs), consider the following statements:

1. They involve two reservoirs at different elevations.
2. Electricity is generated when water moves downward through turbines.
3. The system also consumes power when water is pumped back upward.
4. It is best understood as a form of electrochemical battery storage.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

Pumped storage hydropower works with two reservoirs at different elevations. During discharge, water from the upper reservoir flows downward through turbines and generates electricity. During recharge, electricity is used to pump the water back upward, effectively storing energy for later use. So it behaves like a giant storage battery at the system level, but it is not an electrochemical battery. It is a form of hydroelectric energy storage.

Statement 4 is therefore incorrect. That distinction matters because UPSC may deliberately blur “battery-like behaviour” with “battery chemistry.” PSP mimics a battery functionally, but physically it is a gravitational-hydraulic storage system.

Q20. Consider the following pairs:

1. Sharavathy Project — Karnataka
2. Kadamparai — Tamil Nadu
3. Purulia — West Bengal
4. Nagarjuna Sagar — Andhra Pradesh only

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2, and 3 are correct.

Sharavathy is associated with Karnataka. Kadamparai is in Tamil Nadu. Purulia is in West Bengal. These are important because UPSC often turns energy-storage questions into geography-linked elimination questions.

Pair 4 is incorrect because the plant named in the source is Nagarjuna Sagar (Telangana), not “Andhra Pradesh only.” The word “only” again acts as the trap.

Q21. With reference to BIRSA-101, consider the following statements:

1. It is India’s first indigenous CRISPR-based gene therapy for sickle cell disease.
2. It is named in honour of Bhagwan Birsa Munda.
3. It is primarily meant for treatment of thalassemia major only.
4. Its public relevance is especially high because sickle cell disease significantly affects tribal populations in India.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 4 are correct.

BIRSA-101 is notable because it is presented as India’s first indigenous CRISPR-based gene therapy for sickle cell disease. It is named after Bhagwan Birsa Munda, which gives the programme a strong symbolic association with tribal history and dignity. Its relevance is particularly high in India because sickle cell disease disproportionately affects tribal communities in several regions.

Statement 3 is incorrect. The therapy is not described as being mainly for thalassemia major only. UPSC often inserts another blood-disorder name to exploit partial biomedical familiarity.

Q22. Which one of the following best captures the strategic significance of the Scheme to Promote Manufacturing of Sintered Rare Earth Permanent Magnets?

- (a) It is mainly intended to reduce food imports by promoting agricultural storage magnets
- (b) It is meant to create integrated domestic capacity in a critical technology used in EVs, renewable energy, electronics, aerospace, and defence
- (c) It aims to replace all lithium imports with vanadium-based magnetic alternatives
- (d) It is designed only for classroom and laboratory use in universities

Answer: (b)

Explanation

Option (b) is correct.

Sintered Rare Earth Permanent Magnets are among the strongest permanent magnets and are critical for a range of advanced technologies, especially electric vehicles, renewable energy

systems, electronics, aerospace, and defence applications. The scheme is strategically important because it seeks to build integrated domestic manufacturing capability, moving from rare-earth oxide to metal, metal to alloy, and alloy to finished REPMs. That is a classic example of India trying to reduce dependence in a strategic manufacturing chain.

Options (a), (c), and (d) are distractors designed to sound technical while having no policy basis.

Q23. With reference to Rare Earth Elements (REEs), consider the following statements:

1. REEs consist of the 15 lanthanides plus scandium and yttrium.
2. Neodymium and praseodymium are examples of light rare earth elements used in permanent magnets.
3. Dysprosium and terbium are used to improve resistance to demagnetisation, especially at high temperatures.
4. All heavy rare earth elements required for advanced magnet manufacturing are available in extractable quantities in India.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

REEs are defined as the 15 lanthanides plus scandium and yttrium. In the context of advanced permanent magnets, neodymium and praseodymium are key light rare-earth inputs, while dysprosium and terbium improve resistance to demagnetisation, especially under high-temperature conditions. This is why advanced magnet supply chains are technologically and strategically sensitive.

Statement 4 is incorrect. A major strategic vulnerability is precisely that some heavy rare earth elements, such as dysprosium, terbium, and europium, are not available in extractable quantities in India, creating dependence on external suppliers.

Q24. Assertion–Reason

Assertion (A): Food irradiation should not be confused with making food radioactive.

Reason (R): Food irradiation uses controlled doses of ionising radiation to kill bacteria, mould, and insects and to extend shelf life.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both statements are correct, and the reason explains the assertion.

Food irradiation is a processing technique, not a process of turning food into a radioactive substance. The controlled exposure helps reduce microbial load, control insects, delay sprouting, and extend shelf life. That is why the technology is used for commodities such as potatoes, onions, spices, mangoes, cereals, pulses, and oilseeds. The misunderstanding arises because students hear the word “radiation” and assume residual radioactivity, which is incorrect in this context.

This is exactly the kind of science misconception UPSC likes to test.

Q25. In food irradiation, which of the following are recognised radiation sources?

1. Gamma rays from Cobalt-60
2. X-rays
3. Electron beams
4. Alpha particles from radium needles

Select the correct answer using the code below:

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

Answer: (b) 1, 2 and 3 only

Explanation

The recognised sources listed are:

- Gamma rays, typically from Cobalt-60
- X-rays
- Electron beams (e-beam)

These are the three standard irradiation routes mentioned. Alpha particles from radium needles are not part of this food-irradiation framework. UPSC often mixes a real scientific radiation type with an application where it does not belong.

The conceptual point is not just to memorize sources, but to link each source to controlled industrial food processing rather than to medical or laboratory imagery.

Q26. With reference to MAITRI-II, consider the following statements:

1. It is India’s next-generation research station in East Antarctica.
2. It is expected to replace the earlier Maitri station built in 1989.
3. It is expected to draw on renewable energy sources such as wind and solar power.
4. It is being developed mainly as a summer-only expedition camp.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

MAITRI-II is conceived as a next-generation research station in East Antarctica and is intended to replace the older Maitri-I, which dates back to 1989. It is being planned as a more advanced, environmentally aware station using renewable energy such as wind and solar power, and is meant to support year-round research in areas like climate, biology, glaciology, and long-term environmental monitoring.

Statement 4 is incorrect because the design is for a year-round research hub, not a seasonal-only camp. This is a classic UPSC trap—downgrading a permanent strategic/scientific installation into a temporary one.

Q27. With reference to MeghRaj, consider the following statements:

1. It is the GI Cloud created under the Digital India initiative.
2. It provides secure, scalable, and elastic cloud facilities for e-governance services.
3. It is operated in the context of National Informatics Centre support to ministries and departments.
4. It is a private-sector cloud marketplace with no government role.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

MeghRaj is the GI Cloud under the Digital India framework. It is intended to provide secure, scalable, elastic cloud infrastructure for the delivery of e-governance services. It is closely associated with NIC, which offers these cloud services to ministries and departments. Its architecture emphasizes elasticity, rapid deployment, self-service provisioning, and pay-per-use metering—features that align with modern public digital infrastructure.

Statement 4 is incorrect. MeghRaj is not a private-sector-only cloud marketplace with no government role. That would completely misrepresent its design and purpose.

Q28. Consider the following statements regarding the Axiom-4 related microalgae experiment:

1. Chlorella sorokiniana-I & Dysmorphococcus globosus-HI are edible microalgal species.
2. They showed a two-fold increase in growth in microgravity compared to ground controls.

3. The experiment was linked with the BioE3 policy.
4. Their possible long-term significance includes nutrient support and carbon capture in space environments.

How many of the above statements are correct?

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

Answer: (d) All four

Explanation

All four statements are correct.

The experiment involving *Chlorella sorokiniana-I* and *Dysmorphococcus globosus-HI* is important because it shows how microalgae may support future space missions. These were described as edible microalgal species, and they demonstrated a two-fold increase in growth in microgravity relative to ground controls. The work was explicitly connected with the BioE3 policy, linking biotechnology, environment, and future bio-manufacturing logic. Their long-term relevance lies in their ability to grow quickly, help capture excess CO₂, and potentially generate nutrients and supplements useful for astronaut life-support systems.

This is the kind of science question UPSC may ask because it combines biotechnology, space science, and policy.

Q29. Assertion-Reason

Assertion (A): The microalgae experiment under Axiom-4 has significance beyond pure academic biology.

Reason (R): Such organisms may contribute to future biological life-support systems in space by assisting in carbon recycling and nutrient generation.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both statements are correct, and the reason explains the assertion.

The space experiment is not just about observing algae growth for curiosity. Its broader importance lies in the possibility of closed-loop biological support systems for long-duration missions. Microalgae and related organisms can help recycle carbon, possibly interact with nitrogen cycling systems, and provide usable biological products such as nutrients. That takes the experiment into the domain of future space habitat sustainability, which is strategically much bigger than laboratory biology alone.

Q30. With reference to BlueBird Block-2 and LVM3, consider the following statements:

1. BlueBird Block-2 is a U.S. spacecraft.
2. It is described as the heaviest satellite ever launched from Indian soil into its intended orbit.
3. LVM3 is a three-stage launch vehicle with two solid strap-on motors, a liquid core stage, and a cryogenic upper stage.
4. BlueBird Block-2 is intended for direct space-based cellular broadband connectivity to standard smartphones.

Which of the statements given above are correct?

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

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

Explanation

All four statements are correct.

BlueBird Block-2 is identified as a spacecraft of the USA and is described as the heaviest satellite ever launched from Indian soil into its intended orbit. The launch vehicle, LVM3, is correctly described as a three-stage system consisting of two solid strap-on motors (S200), one liquid core stage (L110), and one cryogenic upper stage (C25). BlueBird Block-2 is also notable because it is part of a communication-satellite generation meant to deliver space-based cellular broadband connectivity directly to standard mobile smartphones.

This is a strong prelims-style question because it blends launch architecture, satellite significance, and application.

Defence MCQs

Q1. With reference to *Adamyia*, consider the following statements:

1. It is the first Fast Patrol Vessel under the eight-FPV project at Goa Shipyard Limited.
2. It was inducted into the Indian Navy.
3. It is the first ship in its class within the Indian Coast Guard fleet to feature Controllable Pitch Propellers and indigenously developed gearboxes.
4. It is intended only for ceremonial coastal duties.

How many of the above statements are correct?

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

Answer: (b) Only two

Explanation

Statements 1 and 3 are correct. *Adamyia* is the first Fast Patrol Vessel under the eight-FPV project at Goa Shipyard Limited, and it is the first ship in its

class in the Indian Coast Guard fleet to feature Controllable Pitch Propellers (CPPs) and indigenously developed gearboxes, which improve maneuverability and operational flexibility.

Statement 2 is incorrect because it was inducted into the Indian Coast Guard, not the Indian Navy. Statement 4 is also incorrect because its role is much wider: maritime law enforcement, coastal surveillance, search and rescue, and protection of India's Exclusive Economic Zone. This is a classic UPSC-style trap where a platform is narrowed into a token role.

Q2. Assertion–Reason

Assertion (A): *Adamyia* reflects a move toward greater operational self-reliance in India's maritime security framework.

Reason (R): It was designed and built entirely by Goa Shipyard Limited and incorporates indigenously developed components.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason directly explains the assertion.

The significance of *Adamyia* is not just that it is a new patrol vessel, but that it represents a broader pattern of indigenous shipbuilding and the domestic incorporation of systems such as CPPs and gearboxes. That directly strengthens operational self-reliance. In UPSC terms, this is not merely a platform-identification question; it is also a question about defence-industrial capability.

Q3. With reference to the 25T Bollard Pull Tug *Ojas*, consider the following statements:

1. It is part of a six-tug contract with Titagarh Rail Systems Limited.
2. These tugs are used only for towing aircraft carriers.
3. They can assist in berthing and unberthing of naval ships and submarines.
4. They also have limited search and rescue capability.

Which of the statements given above are correct?

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

Answer: (a) 1, 3 and 4 only

Explanation

Statements 1, 3, and 4 are correct. *Ojas* is the fifth 25T Bollard Pull tug under a contract for six such tugs with Titagarh Rail Systems Limited. These tugs support Indian Navy operations by helping naval ships and submarines during berthing, unberthing, and maneuvering in confined waters. They also provide afloat firefighting support and have limited search and rescue capability.

Statement 2 is incorrect. The tug's role is not confined to towing aircraft carriers. UPSC often creates such traps by taking one plausible use and converting it into an exclusive function.

Q4. Which one of the following is correctly matched?

- (a) INS Tamal — first survey vessel with accommodation for women
(b) Nistar — Diving Support Vessel
(c) *Ojas* — anti-submarine shallow water craft
(d) *Adamyia* — hydrographic survey ship

Answer: (b) Nistar — Diving Support Vessel

Explanation

Option (b) is correct. Nistar is the first of its class Diving Support Vessel (DSV). It is a highly specialized platform with more than 80% indigenous content and includes medical and subsea support facilities suited to complex underwater roles.

Option (a) is incorrect because the first survey vessel in this list with dedicated accommodation for women is *Ikshak*, not INS Tamal. Option (c) is incorrect because *Ojas* is a 25T Bollard Pull tug, not an ASW shallow water craft. Option (d) is incorrect because *Adamyia* is a Fast Patrol Vessel of the Indian Coast Guard.

Q5. With reference to INS Tamal, consider the following statements:

1. It is the eighth multi-role stealth frigate in the Project 1135.6 series.
2. It is the second of the follow-on Tushil class ships.
3. It was commissioned at Kaliningrad, Russia.
4. It is intended only for littoral anti-submarine warfare.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct. INS Tamal is the eighth multi-role stealth frigate in the Project 1135.6 series and the second of the follow-on Tushil class ships. It was commissioned at Yantar Shipyard, Kaliningrad, Russia.

Statement 4 is incorrect. INS Tamal is designed for blue-water operations across all four dimensions of naval warfare: air, surface, underwater, and electromagnetic. That makes it far broader than a littoral anti-submarine platform. This is a common UPSC trap: shrinking a blue-water platform into a single tactical role.

Q6. Assertion–Reason

Assertion (A): INS Tamal is not merely a conventional surface combatant.

Reason (R): It integrates advanced electronic warfare, network-centric operational capability, and is designed for multi-dimensional naval warfare.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

INS Tamal is described as a multi-role stealth frigate built for blue-water operations across air, surface, underwater, and electromagnetic domains. It also includes a sophisticated communications, electronic warfare, and network-centric operational suite. So its significance lies not just in hull classification, but in its place within modern, integrated naval warfare.

Q7. Consider the following features:

- 1. More than 80% indigenous content
- 2. Participation of 120 MSMEs
- 3. Operation Theatre, ICU, eight-bedded hospital and hyperbaric medical facilities
- 4. A 15-ton subsea crane

The above features are associated with:

- (a) INS Arnala
- (b) Nistar
- (c) Himgiri
- (d) Androth

Answer: (b) Nistar

Explanation

All these features are associated with Nistar, the Diving Support Vessel. Its importance lies in underwater support, rescue, diving-related operations, and extended endurance at sea. The presence of hyperbaric medical facilities is particularly important because such infrastructure is crucial for diving operations and decompression-related contingencies.

This is a good prelims question because it forces the student to connect specialized onboard facilities with platform function, rather than relying only on the name of the vessel.

Q8. With reference to INS Arnala, consider the following statements:

- 1. It is the first Anti-Submarine Warfare Shallow Water Craft.
- 2. It incorporates more than 80% indigenous content.
- 3. It is the largest Indian naval warship propelled by a diesel engine–waterjet combination.
- 4. It is meant exclusively for blue-water carrier battle-group escort.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct. INS Arnala is the first ASW-SWC, carries more than 80% indigenous content, and is described as the largest Indian naval warship propelled by a diesel engine–waterjet combination. It is equipped for subsurface surveillance, search and rescue, and low-intensity maritime operations.

Statement 4 is incorrect. Its operational role is not framed as exclusive blue-water carrier escort. It is designed specifically for shallow-water anti-submarine and related maritime tasks. UPSC often places “exclusively” in a statement to make it false.

Q9. Consider the following pairs:

- 1. INS Sandhayak — hydrographic survey ship
- 2. Bold Kurukshetra — India–Singapore joint military exercise
- 3. Ajeya Warrior — India–UK army exercise
- 4. Ekuverin — India–Maldives military exercise

How many pairs given above are correctly matched?

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

Answer: (d) All four

Explanation

All four pairs are correctly matched.

INS Sandhayak is the first indigenously designed and built Sandhayak-class hydrographic survey ship. Bold Kurukshetra is the India–Singapore joint military exercise. Ajeya Warrior is the India–UK exercise focused on counter-terror operations, and Ekuverin is the India–Maldives exercise, whose name in Dhivehi translates to “Friends.”

This is the kind of high-accuracy matching question UPSC likes in the defence section because it mixes platforms with exercises and bilateral partners.

Q10. Assertion–Reason

Assertion (A): Himgiri represents a generational leap over the earlier Project 17 frigates.

Reason (R): Project 17A frigates incorporate improved stealth, survivability, combat capability, and more advanced weapons and sensors than the P17 (Shivalik) class.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both statements are correct, and the reason explains the assertion.

Himgiri, a Project 17A frigate, is described as a major step forward in indigenous warship design. Compared with the earlier Project 17 (Shivalik) class, the P17A frigates are said to have an advanced weapon and sensor suite, greater stealth, better survivability, and stronger combat capability. That is precisely why Himgiri is treated as a generational leap rather than just another iteration.

Q11. With reference to Himgiri and Taragiri, consider the following statements:

- 1. Himgiri is the third ship of Nilgiri Class (Project 17A).
- 2. Himgiri is the first of its class built at GRSE.
- 3. Taragiri is the fourth ship of Nilgiri Class and the third built by MDL.
- 4. Both are reincarnations of erstwhile Leander-class frigates.

How many of the above statements are correct?

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

Answer: (d) All four

Explanation

All four statements are correct.

Himgiri is the third ship of the Nilgiri Class (Project 17A) and the first of its class built at GRSE. Taragiri is the fourth ship of the same class and the third built by MDL. Both names revive earlier Leander-class frigates, which adds a historical continuity element to the naval modernization story.

UPSC may frame such a question because it combines shipyard identity, class sequence, and historical lineage.

Q12. Which one of the following is correctly matched?

- (a) INS Aravali — anti-tank guided missile
- (b) Ikshak — third ship of Survey Vessel (Large) class and first SVL ship with dedicated accommodation for women
- (c) Androth — diving support vessel
- (d) INVAR — shallow water sonar-equipped survey vessel

Answer: (b)

Ikshak — third ship of Survey Vessel (Large) class and first SVL ship with dedicated accommodation for women

Explanation

Option (b) is correct. Ikshak is the third ship of the Survey Vessel (Large) class and is notable for being the first SVL ship with dedicated accommodation for women, an important detail that connects defence modernization with institutional inclusion.

Option (a) is incorrect because INS Aravali is a naval base/support node linked with maritime domain awareness, not an anti-tank missile. Option (c) is incorrect because Androth is an ASW Shallow Water Craft. Option (d) is incorrect because INVAR is a 125 mm laser-beam riding tandem-warhead anti-tank guided missile fired from T-90 tanks.

Q13. With reference to INS Aravali, consider the following statements:

- 1. It is located in Gurugram, Haryana.
- 2. It is linked with command, control, and Maritime Domain Awareness functions.
- 3. It is intended to improve real-time tracking of ships through advanced and secure communication systems.
- 4. It is an Anti-Submarine Warfare Shallow Water Craft.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

INS Aravali is not a seagoing combat craft in this context; it is a strategically important support node linked to Indian Navy information and communication centres. It is situated in Gurugram, Haryana, and is meant to strengthen command, control, and Maritime Domain Awareness (MDA). Its significance lies in improving real-time ship tracking through advanced, AI-driven, and secure communication

systems. It also aligns with the wider maritime-security vision associated with MAHASAGAR. Statement 4 is incorrect. That description belongs to ships like Androth, Mahe, or Anjadip, not INS Aravali. The trap here is confusing a shore-based or support-oriented naval asset with a combat platform.

Q14. Assertion–Reason

Assertion (A): INS Aravali is strategically important even though it is not described as a front-line warship.

Reason (R): Modern maritime security depends not only on warships but also on communication, command, and MDA infrastructure.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and reason are correct, and the reason explains the assertion.

A frequent UPSC trap in defence is to equate strategic value only with missiles, tanks, or frontline ships. In reality, modern defence capability depends equally on situational awareness, data fusion, communication security, and networked command systems. INS Aravali matters because it supports the information backbone of maritime operations, especially in the context of MDA and coordinated naval functioning.

Q15. Consider the following statements regarding Androth:

- 1. It is the second of the eight Anti-Submarine Warfare Shallow Water Crafts.
- 2. It is being built by Garden Reach Shipbuilders and Engineers, Kolkata.
- 3. It is named after an island in the Lakshadweep archipelago.
- 4. It is designed mainly for high-altitude logistics support.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

Androth is the second of the eight ASW SWCs and is being built by GRSE, Kolkata. Its name comes from Androth Island in Lakshadweep, reflecting the maritime-geographic symbolism often used in Indian naval naming conventions. It

is equipped with lightweight torpedoes, indigenous ASW rockets, and shallow-water sonar, showing that its operational orientation is toward submarine detection and engagement in littoral waters.

Statement 4 is incorrect. High-altitude logistics support is completely unrelated to its role. The option is designed as an elimination trap by placing a plausible defence phrase in the wrong domain.

Q16. Which one of the following is correctly matched?

- (a) Mahe — second ASW SWC built by GRSE
- (b) Androth — first of eight ASW SWCs built by CSL
- (c) Mahe — first of eight ASW SWCs built by Cochin Shipyard Limited
- (d) Ikshak — anti-tank missile fired from T-90 tanks

Answer: (c) Mahe — first of eight ASW SWCs built by Cochin Shipyard Limited

Explanation

Option (c) is correct.

Mahe is the first of eight Anti-Submarine Warfare Shallow Water Crafts being built by Cochin Shipyard Limited, Kochi. It is named after the historic port town in Puducherry, and its induction is intended to strengthen the Navy's anti-submarine capability in littoral waters. It also carries over 80% indigenous content, which is a recurring theme in Indian naval modernization.

Option (a) confuses Mahe with Androth.

Option (b) reverses both the sequence and the shipyard.

Option (d) actually describes INVAR, not Ikshak.

Q17. With reference to Ikshak, consider the following statements:

- 1. It is the third ship of the Survey Vessel (Large) class.
- 2. It was built by Garden Reach Shipbuilders & Engineers.
- 3. It is the first SVL ship with dedicated accommodation for women.
- 4. It is designed to fire laser-beam riding anti-tank guided missiles.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

Ikshak is the third ship of the Survey Vessel (Large) class and has been built by GRSE. It is also notable for being the first SVL ship with

dedicated accommodation for women, which reflects an institutional modernization beyond just hardware. Its symbolic meaning, “The Guide,” is also well aligned with its hydrographic mission of charting and safe navigation.

Statement 4 is incorrect. That description belongs to INVAR, not Ikshak. UPSC frequently mixes a naval survey vessel with a land-warfare weapon to test whether the student is reading carefully.

Q18. With reference to INVAR (3UBK20), consider the following statements:

1. It is a 125 mm laser-beam riding anti-tank guided missile.
2. It is fired from the gun barrels of T-90 tanks.
3. It carries a tandem warhead designed to defeat armored vehicles fitted with Explosive Reactive Armour.
4. It is produced by Bharat Dynamics Limited in India.

Which of the statements given above are correct?

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

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

Explanation

All four statements are correct.

INVAR is a 125 mm laser-beam riding, tandem-warhead anti-tank guided missile. It is fired from the gun barrels of T-90 tanks, which itself makes it notable because UPSC often asks not only what a missile is, but also its launch platform. The tandem warhead is designed to deal with armored vehicles fitted with Explosive Reactive Armour (ERA), and it is produced in India by Bharat Dynamics Limited.

This is a classic technology-identification question where range, guidance method, launch mode, and warhead type can all become elimination tools.

Q19. Assertion–Reason

Assertion (A): Ajeya Warrior is more than just a ceremonial bilateral military interaction.

Reason (R): It includes brigade-level mission planning, simulation-based scenarios, and field exercises replicating real-life counter-terror contingencies.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

Ajeya Warrior is a substantive operational exercise. It is conducted under a United Nations mandate focus on counter-terrorism in semi-urban environments and includes serious training elements such as brigade-level planning, integrated tactical drills, simulation-based scenarios, and company-level field exercises. So it is not a symbolic or parade-type interaction; it is an operational learning and interoperability exercise.

This kind of question helps students distinguish between defence diplomacy and functional military preparedness.

Q20. Consider the following pairs:

1. Ajeya Warrior — India and the United Kingdom
2. Ekuverin — India and Maldives
3. Bold Kurukshetra — India and Singapore
4. Ekuverin — held only in India since 2009

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2, and 3 are correct.

Ajeya Warrior is between the Indian Army and the British Army. Ekuverin is between the Indian Army and the Maldives National Defence Force, and Bold Kurukshetra is the India–Singapore military exercise. These are all important because UPSC loves country-military pairing questions.

Pair 4 is incorrect because Ekuverin is conducted alternately in both countries since 2009, not only in India. The word “only” is again the trap.

Q21. With reference to Anjadip, consider the following statements:

1. It is the third of the eight ASW SWCs.
2. It was designed and built by GRSE, Kolkata.
3. It is propelled by waterjets.
4. Its role includes anti-submarine, coastal surveillance, and mine-laying capability.

How many of the above statements are correct?

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

Answer: (d) All four

Explanation

All four statements are correct.

Anjadip is the third of the eight ASW SWCs, and it was indigenously designed and built by GRSE, Kolkata. It is propelled by waterjets, and it is equipped with lightweight torpedoes, anti-submarine rockets, and shallow-water sonar. Its role extends beyond pure submarine hunting to include coastal surveillance and mine-laying

capability, making it a multi-dimensional littoral combat asset.

This is exactly the type of question UPSC may ask when it wants to test whether a student can distinguish between ship class, builder, propulsion, and operational role.

Q22. With reference to INSV Kaundinya, consider the following statements:

1. It is a stitched sailing vessel that revives ancient Indian shipbuilding traditions.
2. It is based on a 5th century CE ship depicted in the paintings of Ajanta Caves.
3. Its maiden overseas voyage is planned from Porbandar to Muscat.
4. Its hull was stitched using coir rope, coconut fibre, and natural resin.

Which of the statements given above are correct?

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

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

Explanation

All four statements are correct.

INSV Kaundinya is one of the most culturally distinctive entries in the defence section because it is not merely a naval vessel, but also a revival of ancient Indian maritime tradition. It is a stitched sail ship, based on a 5th century CE vessel depicted in Ajanta Cave paintings, and its maiden overseas voyage is to retrace historic maritime routes from Porbandar to Muscat. Its construction method is especially notable: wooden planks were stitched using coir rope, coconut fibre, and natural resin, under the guidance of traditional artisans.

This is a highly UPSC-worthy topic because it blends defence, culture, maritime history, and indigenous craftsmanship.

Q23. Assertion–Reason

Assertion (A): INSV Kaundinya is significant not only as a naval vessel but also as a cultural statement.

Reason (R): Its symbolism, construction method, route, and visual motifs all consciously evoke India's historical maritime traditions.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

Kaundinya is not important merely because it belongs to the Navy. It deliberately revives the

memory of India's ancient seafaring world through its stitched construction, its Ajanta-based inspiration, its Porbandar–Muscat route, and its decorative-cultural motifs such as Gandabherunda, the Sun, Simha Yali, and a Harappan-style stone anchor. The naming after the legendary mariner Kaundinya further deepens the civilizational symbolism.

This is a very good prelims theme because UPSC increasingly likes questions that cut across defence + heritage + technology + symbolism.

Economy MCQs

Q1. With reference to the Investor Education and Protection Fund Authority (IEPFA), consider the following statements:

1. It functions under the Ministry of Corporate Affairs.
2. It administers refunds of shares, unclaimed dividends, and matured deposits/debentures to investors.
3. The Investor Education and Protection Fund was established under Section 205C of the Companies Act, 1956.
4. Any amount transferred to the Fund can still be individually claimed without any time limitation.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

IEPFA works under the Ministry of Corporate Affairs and is entrusted with administering the Investor Education and Protection Fund, making refunds relating to shares, unclaimed dividends, matured deposits, matured debentures, and related investor dues. The legal origin of the Fund lies in Section 205C of the Companies Act, 1956, introduced through the Companies (Amendment) Act, 1999.

Statement 4 is incorrect. The scheme specifically provides that when certain amounts remain unpaid and unclaimed for seven years, they are credited to the Fund, and the older legal position described here does not support an unlimited-time individual claim in the way the statement suggests. This is a typical UPSC trap: stretching investor protection into an unlimited entitlement.

Q2. Consider the following amounts:

1. Unpaid dividends in company accounts
2. Application money due for refund
3. Matured deposits
4. Interest accrued on the above unpaid/unclaimed amounts

Which of the above may be credited to the Investor Education and Protection Fund after the prescribed period?

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

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

Explanation

All four are correct.

Amounts that remain unpaid and unclaimed for seven years may be credited to the IEPF. These include unpaid dividends, application money due for refund, matured deposits, matured debentures, and even the interest accrued on such unpaid/unclaimed sums. This is important because UPSC often tests not just the principal financial item, but also whether accrued interest is included.

Q3. Assertion–Reason

Assertion (A): The government’s inflation-control strategy is not confined to monetary tightening alone.

Reason (R): It includes administrative, fiscal, and trade measures such as buffer stocks, open-market sales, import facilitation, export curbs, and stock limits.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

This is a very important conceptual point in macroeconomics and public policy. Inflation control is often simplistically associated only with interest-rate action by the central bank. But in practice, governments also use non-monetary instruments such as buffer stock management, open-market grain sales, import facilitation, export restrictions during shortage, stock limits, subsidised retail sales under public brands, and food-security interventions. That broader toolkit is exactly why the assertion is correct.

A UPSC question here is likely to test whether the candidate can distinguish monetary policy from administrative supply-side and fiscal-trade responses.

Q4. With reference to the Account Aggregator (AA) ecosystem, consider the following statements:

- 1. The AA framework was officially launched in September 2021.
- 2. Account Aggregators are NBFCs.
- 3. Financial information can be transferred through the AA framework without the customer’s consent if requested by a regulated lender.
- 4. The RBI had issued Master Directions relating to the AA ecosystem before the official launch of the framework.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 4 only

Explanation

Statements 1, 2, and 4 are correct.

The AA framework was officially launched on 2 September 2021. Account Aggregators are NBFCs engaged in the business of retrieving or collecting financial information pertaining to customers. Also, the RBI had already issued Master Directions for the AA ecosystem in 2016, which means the regulatory groundwork preceded the system’s operational launch.

Statement 3 is incorrect. The AA system is explicitly consent-based. No financial information of the customer is to be retrieved, shared, or transferred without the explicit consent of the customer. This is the core principle of the framework and the central trap in the question.

Q5. Which one of the following best describes the role of an Account Aggregator?

- (a) It lends money directly to retail customers using their banking history
- (b) It acts as a consent-based intermediary for financial information transfer between institutions
- (c) It is a public-sector platform for cryptocurrency exchange
- (d) It is a deposit-taking NBFC created only for agricultural credit

Answer: (b)

Explanation

Option (b) is correct.

An Account Aggregator is essentially a consent-based data intermediary. It does not primarily exist to lend, speculate, or collect deposits. Instead, it transfers financial data from one institution to another based on the customer’s permission. That makes it a crucial part of digital financial infrastructure, especially for services like loans, planning, and account visibility across multiple institutions.

Option (a) is incorrect because lending is not its defining role.

Option (c) is unrelated.

Option (d) is incorrect because the description is too narrow and also misstates the functional design of the AA system.

Q6. With reference to AIDIS and SAS of Agricultural Households, consider the following statements:

1. Both are large-scale household surveys conducted by the National Statistics Office.
2. AIDIS provides data on household indebtedness and asset ownership in both rural and urban areas.
3. SAS is confined only to crop output and excludes livestock, income, and access to schemes.
4. The upcoming rounds of both surveys are scheduled from July 2026 to June 2027.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 4 are correct.

Both AIDIS and SAS are important large-scale surveys under the National Statistics Office (NSO). AIDIS focuses on household indebtedness and assets across both rural and urban India. The forthcoming rounds of both AIDIS and SAS are scheduled from July 2026 to June 2027.

Statement 3 is incorrect. SAS is much broader than crop output. It includes income, expenditure, indebtedness, access to credit, land and livestock ownership, crop and livestock production, farming practices, technology use, and access to schemes and crop insurance. UPSC often narrows a survey's scope to create a false impression.

Q7. Assertion–Reason

Assertion (A): AIDIS is relevant not only for welfare analysis but also for macroeconomic and financial policy.

Reason (R): Its findings help in shaping national accounts, understanding credit markets, and assessing inequality in asset distribution.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

AIDIS is not just a descriptive poverty or rural-distress survey. It has relevance for national accounts, asset inequality analysis, and the functioning of credit markets, which makes it highly important for institutions such as RBI, MoSPI, and other policymakers. This is exactly why it matters beyond narrow welfare interpretation.

This kind of question is likely in UPSC because it tests whether the candidate understands the policy utility of official statistics, not just their expansion.

Q8. With reference to the reclassification of limestone, consider the following statements:

1. Earlier, limestone could be treated as either a minor mineral or a major mineral depending on end use.
2. Limestone used in kilns for manufacture of lime used as building material had earlier been treated as a minor mineral.
3. After the 2025 notification, all limestone is classified as a major mineral.
4. Existing minor-mineral leases of limestone were required to stop operations until fresh auctions were completed.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

Earlier, limestone classification depended on end use. Limestone used in kilns for manufacture of lime used as building material had been treated as a minor mineral, while for uses such as cement, chemicals, fertilizer, steel, and sugar, it functioned as a major mineral. The 2025 reform removed this distinction and classified all types of limestone as major mineral.

Statement 4 is incorrect. The reform was specifically intended to facilitate a smooth regulatory transition, and existing minor-mineral leases were to continue as major-mineral leases without disruption. The “stop operations” claim is the trap.

Q9. Consider the following pairs:

1. Graphite — anode material in EV batteries
2. Caesium — atomic clocks and GPS-related precision instruments
3. Rubidium — specialty glasses, fibre optics, and telecom systems
4. Zirconium — mainly used only in agriculture for fertilizer granules

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2, and 3 are correct.

Graphite is crucial in EV batteries as an anode material. Caesium is important in atomic clocks, GPS systems, and other high-precision instruments, including some medical applications. Rubidium is used in specialty glasses, fibre optics, telecom systems, and night vision devices.

Pair 4 is incorrect. Zirconium is described as a versatile metal used in nuclear energy, aerospace, healthcare, and manufacturing due to corrosion resistance and high-temperature stability. The option reduces it to an agriculture-only use, which is false.

Q10. With reference to the National Critical Mineral Mission (NCMM), consider the following statements:

- 1. It was approved on 29 January 2025.
- 2. It aims to strengthen the value chain from exploration and mining to beneficiation, processing, and recovery from end-of-life products.
- 3. It is confined only to lithium and excludes other critical minerals.
- 4. A ₹1,500 crore incentive scheme to promote critical mineral recycling has also been approved.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 4 are correct.

The NCMM was approved on 29 January 2025 and is designed to secure long-term sustainable supply of critical minerals while strengthening the entire value chain—from exploration and mining to beneficiation, processing, and recovery from end-of-life products. A separate ₹1,500 crore incentive scheme for critical mineral recycling was also approved, which shows that the mission goes beyond extraction and includes circular-economy thinking.

Statement 3 is incorrect. The mission includes lithium, but it is not confined only to lithium. The option is a classic UPSC narrowing trap.

Q11. Consider the following statements regarding steps taken to reduce import dependence in critical minerals:

- 1. Since the MMDR Act amendment in 2023, 46 blocks of Critical and Strategic Minerals had been auctioned.
- 2. Seven blocks had been auctioned under the Exploration Licence regime, of which three were critical mineral blocks.
- 3. Nine premier institutes were recognised as Centres of Excellence under NCMM.
- 4. KABIL signed an agreement in Argentina relating to lithium brine blocks.

Which of the statements given above are correct?

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

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

Explanation

All four statements are correct.

The post-2023 policy architecture includes 46 auctioned blocks of Critical and Strategic Minerals, 7 blocks under the Exploration Licence regime (including 3 critical mineral blocks), recognition of nine premier institutes as Centres of Excellence, and the overseas strategic mineral initiative through KABIL, which signed an Exploration and Development Agreement with CAMYEN in Argentina for five lithium brine blocks.

This is an important UPSC theme because it combines domestic mineral policy, recycling, R&D capacity, and overseas resource diplomacy in one frame.

Q12. Assertion–Reason

Assertion (A): Critical mineral strategy in India is moving beyond extraction alone.

Reason (R): Recent measures include recycling incentives, recovery from tailings/fly ash/red mud, Centres of Excellence, and overseas sourcing arrangements.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

Modern critical mineral strategy is no longer only about mining more ore. It now includes recycling, secondary recovery from waste streams like overburden, tailings, fly ash, and red mud,

development of domestic R&D capacity, and overseas acquisition/exploration partnerships. That is precisely why the assertion is true: the strategy has expanded from pure extraction to a whole value-chain and resilience approach.

Q13. Assertion–Reason

Assertion (A): The Investor Education and Protection Fund framework is not limited to investor awareness alone.

Reason (R): It also provides for administration of refunds relating to shares, unclaimed dividends, matured deposits, and debentures.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

A common mistake is to read the title “Investor Education and Protection Fund” and assume it is mostly an awareness mechanism. In reality, its scope is broader. It has a real administrative and refund-related function concerning shares, unclaimed dividends, matured deposits, matured debentures, and similar investor dues. So the “protection” component is not merely educational in spirit; it also has an operational claims dimension.

This is a good UPSC-style question because it tests whether the candidate understands the functional design of an institution, not just its name.

Q14. Consider the following statements regarding the Investor Education and Protection Fund:

1. Grants and donations from governments, companies, or other institutions may form part of the Fund.
2. Interest or other income arising from investment of the Fund may also accrue to it.
3. Only unpaid dividends can be credited to the Fund; matured deposits and debentures are excluded.
4. The legal basis traces back to the Companies Act, 1956.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 4 are correct.

The Fund is not restricted to one narrow source. It can receive unpaid and unclaimed investor-related amounts, but it may also receive grants and donations, and the income generated from investments of the Fund may also become part of it. Its legal basis was created under the Companies Act, 1956 through later amendment.

Statement 3 is incorrect because the Fund is not confined to unpaid dividends. It can also include matured deposits, matured debentures, and other specified unpaid/unclaimed amounts after the prescribed period. The trap lies in reducing a broad fund mechanism into a single item.

Q15. Which one of the following is the most appropriate way to understand the government’s anti-inflation toolkit described here?

- (a) It relies exclusively on monetary tightening by the Reserve Bank of India
- (b) It combines supply management, trade policy, food-security interventions, and income-support measures
- (c) It is confined only to import liberalisation of food items
- (d) It depends mainly on reducing tax exemptions to contract demand

Answer: (b)

Explanation

Option (b) is correct.

The anti-inflation toolkit described here is multi-dimensional. It includes augmentation of buffer stocks, strategic sale of grains in the open market, import facilitation, export curbs during shortage, stock limits, subsidised retail sale of selected food items under the Bharat brand, food-grain distribution under the National Food Security Act, and even measures that raise disposable income through tax relief. That is much broader than a pure central-bank response.

Option (a) is too narrow.

Option (c) captures only one tool.

Option (d) is not the thrust of the measures discussed.

This is a likely UPSC theme because inflation questions increasingly test whether the candidate can distinguish macro policy instruments by type.

Q16. With reference to the Account Aggregator ecosystem, consider the following statements:

1. Registration with an Account Aggregator is voluntary for consumers.
2. An Account Aggregator itself becomes the owner of the customer’s financial data once consent is given.
3. The framework allows aggregation of information from multiple financial sources

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for use in services such as lending or financial planning.

4. RBI has granted Certificates of Registration to multiple companies as Account Aggregators.

Which of the statements given above are correct?

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

Answer: (a) 1, 3 and 4 only

Explanation

Statements 1, 3, and 4 are correct.

The Account Aggregator ecosystem is built on voluntary participation, user consent, and controlled data sharing. It allows a person's financial information from multiple institutions—such as bank accounts, loans, or investments—to be aggregated and shared with service providers for uses like lending or financial planning. Also, multiple companies have been registered as AAs by the RBI.

Statement 2 is incorrect. An AA is not supposed to become the owner of the customer's financial data in the sense suggested here. It functions as a consent-based intermediary, not as a proprietary controller that absorbs ownership over data. This distinction is central to the framework and a classic trap area for digital economy questions.

Q17. Assertion–Reason

Assertion (A): The Account Aggregator ecosystem can improve credit access without requiring borrowers to physically compile multiple financial records.

Reason (R): It enables encrypted, permission-driven transfer of financial data from one institution to another based on customer consent.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both statements are correct, and the reason explains the assertion.

One of the biggest frictions in financial intermediation is data fragmentation. If a system can securely and consentfully move information across institutions, then borrowers need not manually assemble every document trail. That can reduce transaction costs and make financial services more efficient and potentially more inclusive. The AA system is built exactly on that logic of permission-driven interoperability.

This is a very UPSC-friendly question because it connects digital public infrastructure with economic efficiency and inclusion.

Q18. Consider the following pairs:

Survey	Main Focus
AIDIS	Household indebtedness and asset ownership
SAS of Agricultural Households	Income, expenditure, crop and livestock production, indebtedness, and access to schemes
AIDIS	Conducted only in rural areas
SAS	Used by agriculture-related policymakers and institutions

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2, and 4 are correct.

AIDIS focuses on household debt and assets, and it is important for understanding household finance, inequality, and credit markets. SAS is much broader in the agricultural livelihood sense: it covers income, expenditure, indebtedness, land and livestock ownership, crop and livestock production, technology use, and access to government schemes and insurance. It is naturally used by agriculture-related policymakers and research bodies.

Pair 3 is incorrect because AIDIS is not confined only to rural areas; it covers both rural and urban areas. This is a classic UPSC-style narrowing trap.

Q19. With reference to the reclassification of limestone, consider the following statements:

1. The reform removed the earlier end-use distinction between minor and major mineral treatment of limestone.
2. Limestone used for building lime had earlier been treated differently from limestone used in cement or steel.
3. The reform was expected to improve ease of doing business by removing end-use restrictions.
4. The reform converted all limestone into a minor mineral to simplify small-scale extraction.

How many of the above statements are correct?

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

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Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

Earlier, limestone could be treated differently depending on how it was to be used. Limestone for building lime had a minor mineral treatment, whereas limestone for uses such as cement, chemicals, sugar, fertilizer, or steel had a major mineral treatment. The reform removed this distinction and classified all limestone as a major mineral, thereby improving ease of doing business by eliminating artificial end-use restrictions.

Statement 4 is incorrect because the reform moved in the opposite direction: it did not convert all limestone into a minor mineral. This reversal-style trap is very typical in prelims.

Q20. Which one of the following best explains why graphite is strategically important in the clean-energy economy?

- (a) It is the dominant cathode material in nuclear reactors
- (b) It serves as an anode material in EV batteries and is linked to conductivity and charge capacity
- (c) It is a rare radioactive metal used only in defence electronics
- (d) It is primarily a fuel for thermal power generation

Answer: (b)

Explanation

Option (b) is correct.

Graphite is strategically important because it is a crucial anode material in electric vehicle batteries. Its role is tied to high conductivity and charge capacity, which makes it central to battery performance. That is why import dependence in graphite becomes a matter of industrial strategy in the green transition.

The other options are either unrelated or deliberately misleading. UPSC likes this style of question because it tests whether the candidate can connect a mineral to its actual technological role.

Q21. Consider the following statements regarding caesium, rubidium, and zirconium:

1. Caesium has applications in atomic clocks and GPS-linked precision instruments.
2. Rubidium is used in specialty glasses and fibre-optic-related applications.
3. Zirconium is valued for corrosion resistance and high-temperature stability.
4. All three are discussed only in the context of agricultural fertilisers.

Which of the above statements are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

Caesium is important in atomic clocks, GPS systems, and precision instruments. Rubidium has uses in specialty glasses, fibre optics, telecom systems, and related advanced applications. Zirconium is valued because of its exceptional corrosion resistance and high-temperature stability, with uses in sectors such as nuclear energy and aerospace.

Statement 4 is incorrect and intentionally absurd in a policy-economy context. The purpose of the trap is to see whether the candidate remains anchored in actual industrial usage.

Q22. Assertion–Reason

Assertion (A): India’s critical mineral policy now reflects a full value-chain approach rather than an extraction-only approach.

Reason (R): It includes mining, beneficiation, processing, recycling, recovery from end-of-life products, research support, and overseas partnerships.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

The policy architecture around critical minerals is significant precisely because it is not confined to geological discovery or domestic mining alone. It stretches across the whole value chain—from exploration, mining, beneficiation, and processing to recycling, recovery from waste streams, research capability, and even overseas resource access. That is what makes it a resilience-oriented strategic policy rather than a narrow mining policy.

This is a classic UPSC conceptual theme: identifying when policy has shifted from a sectoral view to an ecosystem view.

Q23. Consider the following:

1. Incentive scheme for critical mineral recycling
2. Guidelines for recovery of critical minerals from overburden, tailings, fly ash, and red mud

3. Centres of Excellence for R&D in the critical mineral value chain

4. Overseas agreement by KABIL for lithium brine blocks in Argentina

Which of the above form part of the broader strategic effort to reduce India's import dependence on critical minerals?

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

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

Explanation

All four are part of the broader strategy. This is exactly what makes the critical mineral policy so significant: it is multi-pronged. It includes recycling incentives, secondary recovery from industrial and mining waste streams, institutional R&D strengthening through Centres of Excellence, and international sourcing arrangements through KABIL's agreement in Argentina for lithium brine blocks. Together, these indicate a strategic approach to reduce dependence and strengthen supply security.

Q24. Which one of the following is not correctly matched?

- (a) IEPFA — Ministry of Corporate Affairs
(b) AIDIS — household indebtedness and assets
(c) Account Aggregator — unsecured consumer lending platform owned by the borrower's bank
(d) NCMM — critical mineral supply-chain strengthening

Answer: (c)

Explanation

Option (c) is not correctly matched. An Account Aggregator is not an unsecured lending platform owned by the borrower's bank. It is a consent-based data-sharing intermediary, typically in the NBFC-AA category, that facilitates transfer of financial information between institutions with customer approval. Options (a), (b), and (d) are correctly matched. This kind of question is very UPSC-like because it presents one institution in a distorted functional form and asks the candidate to identify the mismatch.

National / International MCQs

Q1. With reference to the International Air Transport Association (IATA), consider the following statements:

1. It is a trade association of airlines.
2. It was founded in 1945.
3. It represents more than 85% of global air traffic.
4. It is a United Nations specialized agency.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct. IATA is a trade association of the world's airlines, not an intergovernmental treaty body. It was founded in 1945 and represents over 360 airlines accounting for about 85% of global air traffic. That makes it an influential industry institution in civil aviation governance, standards, and policy coordination. Statement 4 is incorrect. IATA is not a UN specialized agency. This is a classic UPSC trap: taking a globally important body and assuming it is part of the UN system.

Q2. Assertion-Reason

Assertion (A): IATA influences global aviation without being a treaty-based intergovernmental organization.

Reason (R): It is an industry association that supports aviation activity and helps formulate policy on critical aviation issues.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and reason are correct, and the reason explains the assertion. This question tests whether a student can distinguish between global influence and legal status. IATA shapes aviation norms and industry policy because it is an influential airline association, not because it is a formal intergovernmental agency. Its role in coordinating and supporting aviation activity gives it policy weight even without treaty-based sovereign membership.

Q3. With reference to the Quality Council of India (QCI), consider the following statements:

1. It was established in 1996.
2. It functions as an autonomous, non-profit body through a public-private partnership model.
3. Its Chairperson is appointed by the Prime Minister.
4. It operates only through the Bureau of Indian Standards and has no independent institutional boards.

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Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

QCI was established in 1996 and operates as an autonomous, non-profit organisation under a public-private partnership model involving the Government of India and industry associations. Its Chairperson is appointed by the Prime Minister, which reflects its high institutional importance.

Statement 4 is incorrect. QCI has its own constituent boards, such as NABL and NABCB, and is not merely an extension of BIS. This is the kind of structural trap UPSC may use: confusing distinct quality institutions.

Q4. Consider the following pairs:

1. NABL — National Accreditation Board for Testing and Calibration Laboratories
2. NABCB — National Accreditation Board for Certification Bodies
3. QCI — statutory regulator for stock exchanges
4. ZED — one of QCI's major initiatives

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2, and 4 are correct.

QCI works through boards such as NABL and NABCB, which align India's accreditation ecosystem with international benchmarks. It is also associated with initiatives such as ZED (Zero Defect Zero Effect) for MSMEs, along with work in Swachh Survekshan, Ayushman Bharat certification, and ODOP-linked quality support.

Pair 3 is incorrect. QCI is not the statutory regulator for stock exchanges. That role belongs elsewhere in India's financial regulatory architecture. The trap here is institutional misplacement.

Q5. With reference to the United Nations Ocean Conference (UNOC), consider the following statements:

1. It supports the implementation of Sustainable Development Goal 14.
2. It has been held annually since 2017.
3. Since 2022, it has been held once every three years.
4. Each conference is jointly organized by one developed and one developing country.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 3, and 4 are correct.

UNOC is the UN conference meant to support implementation of SDG 14, which focuses on oceans, seas, and marine resources. Since 2022, it has followed a three-year cycle, and each conference is jointly organized by a pair of host countries consisting of one developed and one developing nation.

Statement 2 is incorrect because it is not annual. UPSC often inserts time-frequency traps into international-institution questions.

Q6. Which one of the following is correctly matched?

- (a) 2025 UN Ocean Conference — New York, co-hosted by Chile and Republic of Korea
- (b) Fourth UN Ocean Conference — Nice, co-hosted by France and Costa Rica
- (c) 2025 UN Ocean Conference — Nice, co-hosted by France and Costa Rica
- (d) 2025 UN Ocean Conference — Geneva, co-hosted by India and Costa Rica

Answer: (c)

2025 UN Ocean Conference — Nice, co-hosted by France and Costa Rica

Explanation

Option (c) is correct.

The 2025 UN Ocean Conference was scheduled for Nice, France, and was to be co-hosted by France and Costa Rica. The fourth conference is scheduled for 2028, to be co-hosted by Chile and the Republic of Korea.

This is a good prelims question because it combines place + year + host-country pairing, which UPSC frequently tests.

Q7. With reference to India Post Payments Bank (IPPB), consider the following statements:

1. It is 100% owned by the Government of India.
2. It functions under the Department of Posts, Ministry of Communications.
3. It was launched on 1 September 2018.
4. Its operating model excludes India Stack and relies solely on branch-based manual banking.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

IPPB is a 100% Government of India-owned entity under the Department of Posts, Ministry of Communications, and it was launched on 1

September 2018. Its mandate is to deepen financial inclusion by reaching the unbanked and underbanked through India's vast postal network. Statement 4 is incorrect. IPPB's model is explicitly built on the pillars of India Stack, enabling paperless, cashless, and presence-less banking, supported through technology such as CBS-integrated smartphones and biometric devices. So the statement gets the architecture exactly backward.

Q8. Assertion–Reason

Assertion (A): IPPB is best understood as a last-mile financial inclusion platform rather than merely a conventional bank branch expansion exercise.

Reason (R): It leverages the postal network, digital identity-linked tools, and doorstep banking architecture.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

IPPB's importance lies not simply in opening accounts but in creating a last-mile delivery model for finance. It uses the large postal network, biometric-enabled devices, and India Stack-type digital rails to bring banking to customers' doorsteps. That makes it especially relevant for underserved and rural populations.

This is a classic UPSC conceptual question because it asks the student to identify the real policy logic behind an institution.

Q9. With reference to the National Turmeric Board, consider the following statements:

1. It is headquartered in Nizamabad, Telangana.
2. It was inaugurated in 2025 under the Ministry of Commerce and Industry.
3. It is focused on promoting production, processing, and export of Indian turmeric.
4. It is a regulatory wing of the Food Safety and Standards Authority of India.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

The National Turmeric Board is headquartered in Nizamabad, Telangana, a major turmeric hub. It

was inaugurated in 2025 under the Ministry of Commerce and Industry and is focused on strengthening the production, processing, export, and value-addition chain of Indian turmeric.

Statement 4 is incorrect. It is not a regulatory arm of FSSAI. The trap here lies in confusing a commodity-promotion institution with a food-safety regulator.

Q10. With reference to the Wilmington Declaration and the QUAD-at-Sea initiative, consider the following statements:

1. The Wilmington Declaration was adopted at the September 2024 Quad summit in Delaware.
2. It reinforced commitment to a free, open, and resilient Indo-Pacific.
3. The Quad-at-Sea Ship Observer Mission involves the Coast Guards of India, Japan, the United States, and Australia.
4. It is mainly a BRICS maritime security statement.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

The Wilmington Declaration emerged from the Quad summit in Delaware in September 2024 and reaffirmed the Quad's commitment to a free, open, and resilient Indo-Pacific. One concrete expression of this is the Quad-at-Sea Ship Observer Mission, involving the Coast Guards of India, Japan, the United States, and Australia.

Statement 4 is incorrect. It is not a BRICS document. The trap is based on confusing one multilateral grouping with another.

Q11. Consider the following statements regarding the Chemical Weapons Convention (CWC) and related institutions:

1. The CWC came into force in 1997.
2. OPCW is the implementing body for the Convention.
3. India is an original signatory to the Convention.
4. NACWC is India's national authority for implementing the Convention.

How many of the above statements are correct?

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

Answer: (d) All four

Explanation

All four statements are correct.

The Chemical Weapons Convention entered into force in 1997. The Organisation for the

Prohibition of Chemical Weapons (OPCW) serves as the implementing body. India is an original signatory, and the National Authority Chemical Weapons Convention (NACWC) is the domestic authority responsible for implementation in India. This is an important UPSC theme because it links treaty law, international organization, and domestic implementation machinery.

- Q12. Which one of the following is correctly matched?
- Indian Pharmacopoeia Commission — autonomous institution dealing with standards of drugs in India
 - OPCW — Indian national authority for chemical safety
 - NACWC — global body headquartered under the United Nations Security Council
 - ICC — regulator of Indian aviation routes

Answer: (a)

Indian Pharmacopoeia Commission — autonomous institution dealing with standards of drugs in India

Explanation

Option (a) is correct.

The Indian Pharmacopoeia Commission (IPC) is an autonomous institution created to deal with publication and revision of the Indian Pharmacopoeia, which is the official book of standards for drugs included under the relevant legal framework. It also supports work relating to reference substances and pharmacopoeial training. Option (b) is incorrect because OPCW is the international implementing body for the Chemical Weapons Convention, not India's national authority.

Option (c) is incorrect because NACWC is India's domestic authority, not a UN-based global organization.

Option (d) is incorrect because ICC here refers to the Indian Chemical Council, not an aviation regulator.

- Q13. With reference to Operation Sagar Bandh, consider the following statements:

- It was launched to provide urgent Search and Rescue and Humanitarian Assistance & Disaster Relief support to Sri Lanka.
- It involved deployment of INS Gharial, LCU 54, LCU 51, and LCU 57 for supply of relief stores.
- INS Vikrant, INS Udaygiri, and INS Sukanya had earlier provided relief assistance and heli-borne SAR support.
- It was an anti-piracy operation in the Gulf of Aden.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

Operation Sagar Bandh was a humanitarian mission aimed at Search & Rescue and HADR support for Sri Lanka, particularly for cyclone-affected regions. It included deployment of INS Gharial, LCU 54, LCU 51, and LCU 57 for supply of relief stores. It also followed earlier assistance by INS Vikrant, INS Udaygiri, and INS Sukanya, which had provided relief and heli-borne SAR support.

Statement 4 is incorrect. It was not an anti-piracy operation in the Gulf of Aden. The trap lies in confusing two different categories of maritime operations: security operations and HADR missions.

- Q14. Assertion–Reason

Assertion (A): Operation Sagar Bandh reflects India's use of naval capability for regional humanitarian diplomacy.

Reason (R): Naval platforms can deliver relief stores, evacuation support, and search-and-rescue assistance rapidly across the Indian Ocean region.

- Both A and R are correct, and R is the correct explanation of A
- Both A and R are correct, but R is not the correct explanation of A
- A is correct, but R is incorrect
- A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

This operation shows that naval forces are not only instruments of warfighting but also of regional response, diplomacy, and humanitarian outreach. Ships and landing craft can move supplies quickly, provide aviation support, and operate in difficult coastal conditions. That is why such missions are strategically important even when they are non-combat in nature.

This is very UPSC-like because it tests whether the candidate can see the civilian-strategic role of armed forces.

- Q15. With reference to the National Makhana Board, consider the following statements:

- It was established following an announcement in the Union Budget 2025–26.
- It was officially launched in Bihar in September 2025.
- It is supported by a Central Sector Scheme for Development of Makhana.

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4. Its focus is confined only to export promotion and excludes research, seed quality, and post-harvest practices.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

The National Makhana Board was established in line with the Union Budget 2025–26 announcement and was launched in Bihar on 15 September 2025. It is backed by a Central Sector Scheme for Development of Makhana with an outlay of ₹476.03 crore for the period 2025–26 to 2030–31. Its scope includes research and innovation, quality seed production, farmer capacity building, improved harvesting and post-harvest practices, value addition, branding, marketing, export promotion, and quality control. Statement 4 is incorrect because it artificially narrows the Board's focus to exports alone. That is a classic UPSC trap.

Q16. Which one of the following best captures the policy logic behind the National Makhana Board?

- (a) It is meant to regulate cryptocurrency-based agri-trade in eastern India
(b) It represents an attempt to modernize and strengthen a niche agricultural sector through value-chain support
(c) It is only a price-control authority for makhana retail markets
(d) It is a statutory environmental regulator for wetland farming zones

Answer: (b)

Explanation

Option (b) is correct.

The National Makhana Board is best understood as a sector-strengthening institution focused on the whole value chain: research, quality seed, harvesting, post-harvest, value addition, branding, exports, and quality control. It is not merely a pricing body or a regulator in the narrow legal sense.

UPSC increasingly asks such questions where the student must identify the policy character of an institution, not just memorize its name.

Q17. With reference to Atal Setu (Mumbai Trans Harbour Link), consider the following statements:

1. It spans 16.5 km over the sea and another 5.5 km on land.
2. It is India's longest sea bridge.
3. It was developed mainly to ease the traffic burden on Mumbai's island city.

4. It is a railway sea bridge with a vertical lift mechanism.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

Atal Setu, also known as the Mumbai Trans Harbour Link, is described as stretching 16.5 km over the sea and 5.5 km on land, making it India's longest sea bridge. Its purpose includes reducing the heavy traffic burden on Mumbai's island city and improving regional connectivity and economic activity.

Statement 4 is incorrect. The vertical lift railway sea bridge description belongs to the New Pamban Bridge, not Atal Setu. This is the trap.

Q18. Consider the following pairs:

1. Chenab Bridge — world's highest railway arch bridge
2. New Pamban Bridge — India's first vertical lift railway sea bridge
3. Dhola-Sadiya Bridge — built over the Chenab River
4. Anji Khad Bridge — India's first cable-stayed railway bridge

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2, and 4 are correct.

The Chenab Bridge is the world's highest railway arch bridge. The New Pamban Bridge is India's first vertical lift railway sea bridge. The Anji Khad Bridge is India's first cable-stayed railway bridge.

Pair 3 is incorrect. The Dhola-Sadiya Bridge is built over the Lohit River, a major tributary of the Brahmaputra, not over the Chenab. This is a classic river-location trap.

Q19. Assertion-Reason

Assertion (A): The Chenab Bridge has significance beyond engineering prestige. Reason (R): It is a crucial part of the Udhampur-Srinagar-Baramulla Railway Link and is expected to improve connectivity and reduce travel time in Jammu and Kashmir.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and reason are correct, and the reason explains the assertion.

The Chenab Bridge is not just a record-setting structure. Its importance lies in its role in the USBRL project, which aims to deepen regional integration and improve mobility in Jammu and Kashmir. So its value is strategic, economic, and social, not merely symbolic.

This is very much a UPSC-style theme: moving from fact to functional significance.

Q20. With reference to the New Pamban Bridge, consider the following statements:

1. It connects Rameswaram with the mainland.
2. It includes a 72.5-metre vertical lift section.
3. It can rise 17 metres to allow ships to pass.
4. It was built mainly as a road bridge for freight trucks.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

The New Pamban Bridge connects Rameswaram with the mainland and is India's first vertical lift railway sea bridge. It contains a 72.5-metre vertical lift section that can rise 17 metres to enable safe passage of ships.

Statement 4 is incorrect because it is not mainly described as a road bridge for freight trucks. It is a railway sea bridge. The trap here is mode confusion: rail versus road.

Q21. Which one of the following is correctly matched?

- (a) Dhola-Sadiya Bridge — built to withstand load of 60-tonne military tanks
- (b) Anji Khad Bridge — India's longest sea bridge
- (c) Chenab Bridge — first vertical lift railway sea bridge
- (d) Atal Setu — world's highest railway arch bridge

Answer: (a)

Dhola-Sadiya Bridge — built to withstand load of 60-tonne military tanks

Explanation

Option (a) is correct.

The Dhola-Sadiya Bridge, also known as the Bhupen Hazarika Setu, has major strategic value because it was built to withstand 60-tonne military tanks, including Arjun and T-72 models. That

gives it significance beyond ordinary civilian connectivity.

Option (b) is incorrect because India's longest sea bridge is Atal Setu.

Option (c) is incorrect because the first vertical lift railway sea bridge is New Pamban Bridge.

Option (d) is incorrect because the world's highest railway arch bridge is the Chenab Bridge.

Q22. With reference to the Kimberley Process, consider the following statements:

1. It is a tripartite initiative involving governments, the international diamond industry, and civil society.
2. It aims to prevent trade in conflict diamonds.
3. The Kimberley Process Certification Scheme came into effect on 1 January 2003.
4. The European Union and its Member States are counted separately as multiple individual participants.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

The Kimberley Process is a tripartite initiative involving governments, the diamond industry, and civil society, and it is aimed at preventing the trade in conflict diamonds. Its Certification Scheme came into effect on 1 January 2003.

Statement 4 is incorrect. The European Union and its Member States are counted as a single participant, not separately. This is a very typical UPSC-style institutional-counting trap.

Q23. Assertion-Reason

Assertion (A): The Kimberley Process is regarded as a highly comprehensive mechanism in the rough diamond trade.

Reason (R): Its participants account for over 99% of global rough diamond trade.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and reason are correct, and the reason explains the assertion.

A mechanism becomes comprehensive not merely because of its moral purpose, but because of the breadth of participation and market coverage. The Kimberley Process is described as the most

comprehensive mechanism in this sector precisely because its participants account for over 99% of global rough diamond trade.

Q24. Consider the following statements:

1. India was selected to assume the chairpersonship of the Kimberley Process from 1 January 2026.
2. Conflict diamonds are rough diamonds used by rebel groups or their allies to finance conflicts against legitimate governments.
3. The Kimberley Process is limited only to customs inspection and has no certification architecture.
4. The Kimberley Process arose in connection with United Nations Security Council resolutions.

Which of the above statements are correct?

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

Answer: (a) 1, 2 and 4 only

Explanation

Statements 1, 2, and 4 are correct.

India was selected to take up the chairpersonship from 1 January 2026. Conflict diamonds are defined in relation to financing conflicts that undermine legitimate governments, and the Kimberley Process Certification Scheme was established pursuant to a UN-linked framework. Statement 3 is incorrect because the entire framework explicitly includes a Certification Scheme (KPCS). So it is not merely a customs inspection arrangement. That is the trap.

Schemes MCQs

Q1. With reference to the UMEED Central Portal, consider the following statements:

1. It is a centralized digital platform for real-time uploading, verification, and monitoring of Waqf properties.
2. It includes geotagging of all Waqf properties as part of a digital inventory.
3. It is designed mainly as a closed internal portal with no public-facing access to records.
4. It integrates GIS mapping and other e-governance tools.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 4 are correct.

The UMEED Central Portal is meant to bring real-time digital administration to Waqf property management. Its key features include creation of a digital inventory, geotagging, integration with

GIS mapping, and use of e-governance tools for monitoring and transparency. It is intended to improve record quality, verification, and public accountability.

Statement 3 is incorrect because the portal is not meant to be only a closed internal system. One of its important features is public access to verified records and reports. That is a typical UPSC trap: converting a transparency-oriented portal into a closed administrative database.

Q2. Assertion–Reason

Assertion (A): The UMEED Central Portal represents a shift from fragmented property administration to digitally traceable governance.

Reason (R): It combines inventory creation, verification, grievance redressal, leasing transparency, GIS integration, and public access features.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

The portal is not just a data-entry exercise. Its architecture reflects a governance shift toward traceability, visibility, transparency, and administrative responsiveness. Because it includes digital inventory, online grievance redressal, transparent leasing and usage tracking, GIS-based support, and public access to verified records, it becomes a tool of institutional modernization rather than mere digitization.

This is the kind of governance question UPSC may frame to test whether the candidate understands the administrative significance of a portal.

Q3. With reference to ULLAS – Nav Bharat Saaksharta Karyakram, consider the following statements:

1. It is a centrally sponsored scheme implemented from 2022 to 2027.
2. It targets adults aged 15 years and above who could not go to school.
3. Tripura became the first State in India to achieve full functional literacy under this scheme.
4. The scheme is aligned with NEP 2020.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 4 only

Explanation

Statements 1, 2, and 4 are correct.

ULLAS is a centrally sponsored scheme running from 2022 to 2027, aligned with NEP 2020, and it targets adults aged 15 years and above who missed formal schooling. Its orientation is toward foundational literacy, numeracy, and life skills.

Statement 3 is incorrect. Tripura became the third State, after Mizoram and Goa, to achieve full functional literacy. This is a classic UPSC trap where the rank order is altered while the achievement itself remains correct.

- Q4. Which one of the following best captures the policy logic of ULLAS?
- (a) It is a school-enrolment scheme for children below 14 years
 - (b) It is an adult literacy and foundational learning mission with a strong community mobilisation component
 - (c) It is a digital-only higher-education scholarship platform
 - (d) It is a labour-market skilling scheme confined to industrial apprentices

Answer: (b)

Explanation

Option (b) is correct.

ULLAS is fundamentally an adult literacy and foundational learning mission, not a conventional school-enrolment scheme. It combines literacy goals with community mobilisation, local outreach, surveys, and digital tools such as the ULLAS mobile app for learning and certification. That makes it both a social mobilisation and capability-building programme.

The other options incorrectly reframe it as child schooling, higher education, or labour skilling.

- Q5. With reference to NAVYA, consider the following statements:
- 1. It is aimed at adolescent girls aged 16–18 years.
 - 2. It requires a minimum qualification of Class 10.
 - 3. It focuses mainly on traditional home-based occupations.
 - 4. It includes a supplementary module covering interpersonal skills, communication, workplace safety, and financial literacy.
- How many of the above statements are correct?
- (a) Only one
 - (b) Only two
 - (c) Only three
 - (d) All four

Answer: (c) Only three

Explanation

Statements 1, 2, and 4 are correct.

NAVYA is targeted at girls aged 16–18 years with at least Class 10 qualification. It is designed to equip them with vocational skills, especially in non-traditional job roles, and includes a 7-hour supplementary module covering interpersonal skills, communication skills, workplace safety, and financial literacy.

Statement 3 is incorrect because the programme is not mainly about traditional home-based occupations. In fact, its emphasis is on non-traditional roles, which is central to its gender-empowerment logic. This is the key trap in the question.

- Q6. Assertion–Reason

Assertion (A): NAVYA is not just a skilling programme but also a social empowerment intervention.

Reason (R): It includes training in workplace safety, communication, self-presentation, conflict management, and financial literacy in addition to vocational preparation.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

The deeper significance of NAVYA lies in the fact that it does not treat employability as only a technical matter. It addresses confidence, safety awareness, communication, self-presentation, conflict handling, and basic financial capability. That makes it a broader empowerment and transition programme for adolescent girls, especially those entering unfamiliar workspaces or emerging sectors.

This is a strong UPSC-style question because it tests whether the candidate understands why schemes are designed the way they are.

- Q7. With reference to Kalaa Setu – Real-Time Language Tech for Bharat, consider the following statements:
- 1. It was launched through the WaveX Startup Accelerator Platform.
 - 2. It aims to support indigenous AI solutions for multilingual content generation.
 - 3. It includes text-to-video, text-to-graphics, and text-to-audio generation.
 - 4. It is restricted to English-language broadcasting use only.
- Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct. Kalaa Setu was launched through the WaveX Startup Accelerator Platform and invites AI startups to create indigenous, scalable multilingual solutions. Its core design space includes text-to-video, text-to-graphics, and text-to-audio generation, making it a very contemporary AI-governance initiative. Statement 4 is incorrect because the entire initiative is oriented toward multiple Indian languages, not English-only broadcasting. The trap here is to turn an inclusion-oriented AI scheme into a narrow language-specific one.

Q8. With reference to TALASH, consider the following statements:

1. It is an initiative of NESTS in partnership with UNICEF India.
2. It is designed for students of Eklavya Model Residential Schools.
3. It includes psychometric assessments, career counselling, life-skills modules, and e-learning support for teachers.
4. It is meant only for postgraduate tribal students in central universities.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct. TALASH is a national initiative launched by NESTS, in partnership with UNICEF India, to support the all-round development of students in Eklavya Model Residential Schools (EMRSs). It includes psychometric assessments, career counselling, life-skills and self-esteem modules, and even an e-learning portal for teachers. That gives it both student-facing and institutional support features. Statement 4 is incorrect because the programme is not designed for postgraduate tribal students in universities. It is specifically focused on EMRS students. The trap is institutional misplacement.

Q9. Consider the following pairs:

1. TALASH — NESTS and UNICEF India
2. Sanchar Mitra Scheme — awareness on telecom issues, cyber fraud prevention, and digital literacy
3. Kalaa Setu — multilingual AI-enabled content generation challenge

4. TALASH — scheme for women's SHGs under DAY-NRLM

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2, and 3 are correct. TALASH is linked with NESTS and UNICEF India. The Sanchar Mitra Scheme aims to spread awareness on telecom-related issues such as digital safety, cyber fraud prevention, EMF concerns, responsible mobile use, and digital literacy. Kalaa Setu is a multilingual AI content-generation challenge covering text-to-video, text-to-graphics, and text-to-audio. Pair 4 is incorrect because TALASH is not a women's SHG scheme under DAY-NRLM. That description belongs to an entirely different policy ecosystem. This is a very typical UPSC trap: shifting a scheme into the wrong ministry and beneficiary group.

Q10. Assertion-Reason

Assertion (A): The Sanchar Mitra Scheme is both a public-awareness programme and a youth-capacity-building programme.

Reason (R): It combines grassroots digital-awareness work with exposure to advanced telecom technologies such as 5G, 6G, AI, and cyber security.

- (a) Both A and R are correct, and R is the correct explanation of A
 (b) Both A and R are correct, but R is not the correct explanation of A
 (c) A is correct, but R is incorrect
 (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and reason are correct, and the reason explains the assertion. The scheme is designed not only to improve public understanding of telecom-related issues but also to create a digitally aware, research-oriented youth base. Students serve as community-facing awareness volunteers while also gaining exposure to cutting-edge telecom fields like 5G, 6G, AI, and cyber security through structured training and real-world engagement. That dual character—public education plus talent pipeline building—is what makes the scheme distinctive.

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Q11. With reference to Swachh Survekshan 2024–25, consider the following statements:

1. The framework was simplified for smaller cities while being refined for big cities.
2. Under the “One City, One Award” principle, top-performing cities from each State were recognized as Promising Swachh Shehars.
3. Prayagraj received the award for Best Ganga Town.
4. Indore, Surat, and Navi Mumbai entered the Super Swachh League.

Which of the statements given above are correct?

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

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

Explanation

All four statements are correct.

The design of Swachh Survekshan 2024–25 is notable because it tried to create a more level playing field by refining the framework for big cities and simplifying it for smaller cities. Under the One City, One Award principle, top cities from each State were recognized as Promising Swachh Shehars. Prayagraj was awarded Best Ganga Town, while Indore, Surat, and Navi Mumbai entered the Super Swachh League.

This is exactly the kind of urban-governance current-affairs question UPSC may use because it blends policy design, recognition categories, and specific city outcomes.

Q12. With reference to Paramparagat Krishi Vikas Yojana (PKVY), consider the following statements:

1. It promotes organic farming in all States and UTs except the North Eastern States, which are covered under MOVCNDR.
2. It provides end-to-end support from production to processing, certification, and marketing.
3. Under PKVY, assistance for organic farming promotion is provided at ₹31,500 per hectare over three years.
4. PKVY is a scheme exclusively for large commercial agribusiness companies.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

PKVY promotes organic farming in all States and UTs except the North Eastern States, where MOVCNDR operates. Its support is explicitly end-to-end, covering production, processing, certification, and marketing. It provides ₹31,500 per hectare over three years for promotion of

organic farming, including DBT support for organic inputs.

Statement 4 is incorrect because PKVY is not designed exclusively for large agribusiness companies. In fact, it gives preference to small and marginal farmers through organic clusters and supply-chain development. This is the key trap.

Q13. With reference to the National Mission on Natural Farming (NMNF), consider the following statements:

1. It was approved as a standalone Centrally Sponsored Scheme in November 2024.
2. It aims to initiate natural farming in 7.5 lakh hectares across 15,000 clusters.
3. It is based on chemical-intensive farming with selective reduction of fertilizer use.
4. It seeks to establish 10,000 need-based Bio-Input Resource Centres.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 4 are correct.

NMNF was approved on 25 November 2024 as a standalone Centrally Sponsored Scheme. It aims to bring 7.5 lakh hectares under natural farming through 15,000 clusters, and it also targets creation of 10,000 Bio-Input Resource Centres to improve access to natural farming inputs. This shows that the mission is structured as a scaled transition ecosystem rather than a small pilot intervention.

Statement 3 is incorrect. Natural farming is described as chemical-free farming, rooted in integrated natural methods, diversified cropping, and ecological interdependence among soil, water, plants, animals, microbes, climate, and human needs. The trap is to dilute “chemical-free” into “chemical-lite.”

Q14. Assertion–Reason

Assertion (A): The National Mission on Natural Farming is not merely an input-subsidy programme.

Reason (R): It emphasizes behavioural change, on-farm knowledge, local agro-ecology, handholding, certification, and a common national brand for naturally grown produce.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

NMNF is designed as a knowledge-intensive transition mission, not a simple subsidy-distribution programme. It recognizes that natural farming requires behavioural change, on-field learning, local agro-ecological adaptation, and sustained handholding. It also aims to create scientifically supported standards, a farmer-friendly certification system, and even a single national brand for naturally grown chemical-free produce. That broader architecture is exactly why the assertion is true.

This is very UPSC-like because it tests whether the candidate can understand the governance philosophy behind a scheme.

Q15. With reference to the Lakhpati Didi initiative, consider the following statements:

1. It emerges from DAY-NRLM.
2. It focuses on the SHG institution as a whole rather than the individual SHG woman.
3. It aims at enabling an annual income of at least one lakh rupees on a sustainable basis.
4. It does not have a separate budget line and is financed through the DAY-NRLM framework.

Which of the statements given above are correct?

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

Answer: (a) 1, 3 and 4 only

Explanation

Statements 1, 3, and 4 are correct.

Lakhpati Didi is an outcome of DAY-NRLM and is aimed at enabling SHG women to earn at least ₹1 lakh annually on a sustainable basis, with an average monthly income of at least ₹10,000 sustained across the required business or agricultural cycles. It does not have a separate budget line; the support comes through the DAY-NRLM scheme, along with bank linkage and loans where needed.

Statement 2 is incorrect. The initiative focuses on the individual SHG woman, not on the SHG as an institutional unit. However, SHGs, Village Organizations, and Cluster Level Federations do play an enabling role in planning and implementation. This distinction is exactly where UPSC may place the trap.

Q16. Which one of the following best captures the logic of the Lakhpati Didi initiative?

- (a) It is a universal cash-transfer programme for all rural women
- (b) It is an SHG-linked livelihood and income enhancement initiative focused on sustainable household earnings
- (c) It is a pension scheme for women in self-help groups
- (d) It is a subsidy-only scheme for dairy cooperatives

Answer: (b)

Explanation

Option (b) is correct.

Lakhpati Didi is not a generic cash transfer or pension programme. Its aim is to enable sustainable income enhancement for women associated with SHG ecosystems, along with financial literacy, entrepreneurial capacity, skill development, and convergence support. It is therefore best understood as a livelihood transformation framework, not merely as a transfer scheme.

Q17. With reference to the DHRUVA Policy, consider the following statements:

1. It creates a national Digital Public Infrastructure for a standardized, geocoded, interoperable addressing system.
2. It assigns a unique 10-digit alphanumeric code called DIGIPIN to every location.
3. DIGIPIN is based on 4x4 metre grids.
4. It is meant only for postal sorting and has no wider relevance for logistics, e-commerce, or governance.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

The DHRUVA Policy creates a Digital Public Infrastructure for digital addressing. It assigns a 10-digit alphanumeric code called DIGIPIN to every location, based on 4x4 metre grid logic, thereby enabling precise and interoperable location referencing.

Statement 4 is incorrect. The policy is not limited to postal sorting. Its relevance extends to e-commerce, logistics, governance, emergency response, and welfare delivery, which is precisely what gives it strategic significance. UPSC may easily test this by shrinking a broad public infrastructure reform into a narrow departmental use case.

Q18. Assertion–Reason

Assertion (A): DHRUVA attempts to transform the idea of an address from a descriptive narrative into a digital infrastructure layer.

Reason (R): The policy seeks to replace ambiguous text-based addresses with precise geospatial referencing that can be securely and consentfully shared.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and reason are correct, and the reason explains the assertion.

Traditionally, addresses are often narrative, inconsistent, and locally interpreted. DHRUVA tries to convert that into a standardized, geospatial, interoperable digital layer. That is a major shift in governance thinking because it turns location itself into a public digital utility, much like identity or payments infrastructure.

This is a highly UPSC-relevant conceptual point because it links digital governance with state capacity and service delivery.

Q19. Consider the following pairs:

- 1. National Mission on Libraries — National Virtual Library of India
- 2. National Mission on Libraries — upgrading State Central and District Libraries
- 3. National Career Service — one-stop platform for career services, jobs, counselling and skill-related information
- 4. CROPIC — platform for crowdsourced geotagged crop photographs to support crop insurance workflows

How many pairs given above are correctly matched?

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

Answer: (d) All four

Explanation

All four pairs are correctly matched.

The National Mission on Libraries includes a National Virtual Library of India, upgradation of model libraries, surveys, and capacity building. The National Career Service (NCS) is a one-stop platform for jobs, fairs, counselling, vocational guidance, and skill-related information. CROPIC is a digital initiative under PMFBY that collects geotagged, time-series crop photographs from farmers and field coordinators for crop validation, crop health, and damage assessment.

This is the kind of dense but solvable matching question UPSC likes in the schemes section.

Q20. With reference to CROPIC, consider the following statements:

- 1. It is a technology initiative under PMFBY.
- 2. It collects geotagged and time-series crop photographs using smartphones.
- 3. It is intended to support crop validation and assessment of localized calamity damage.
- 4. It is designed as a digital marketplace for organic crop exports.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

CROPIC is one of the technology initiatives under Pradhan Mantri Fasal Bima Yojana. It enables collection of geotagged, crowdsourced, time-series photographs of crop fields through smartphones. These photographs support crop validation, crop-health monitoring, and damage assessment, especially in the case of localized calamities. It also contributes to more evidence-based insurance and yield-estimation workflows. Statement 4 is incorrect. It has nothing to do with being an export marketplace. That distractor is intended to confuse crop-data infrastructure with agri-commerce platforms.

Q21. With reference to the National Programme for Organic Production (NPOP), consider the following statements:

- 1. It was launched in 2001 by the Department of Commerce.
- 2. APEDA acts as the Secretariat for implementation of NPOP.
- 3. Third-party certification is a mandatory requirement for export of organic products.
- 4. Cotton is covered under NPOP only till the production stage, while later processing is done under private certification.

How many of the above statements are correct?

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

Answer: (d) All four

Explanation

All four statements are correct.

NPOP was launched in 2001 by the Department of Commerce, and APEDA functions as its Secretariat. A key feature is that third-party certification is mandatory for exports of organic products. Another important nuance is that cotton

is covered under NPOP only till the production stage, after which post-production processes such as ginning and processing are handled under private certification.

This is the kind of question UPSC may ask because it combines institutional design, certification logic, and commodity-specific nuance.

Q22. Assertion–Reason

Assertion (A): SHAKTI is not merely a coal-allocation scheme in the narrow administrative sense.

Reason (R): The revised SHAKTI Policy, 2025 aims to improve flexibility, competition, capacity utilization, and affordable power by broadening the logic of coal linkage allocation.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and reason are correct, and the reason explains the assertion.

The SHAKTI Policy began as the coal linkage policy for power plants that lacked fuel supply agreements, but the revised framework goes beyond simple allocation. It aims to improve flexibility, efficiency, competition, affordability, and capacity utilization in the power sector. So its importance lies not just in administrative allocation, but in how fuel linkage affects the wider electricity economy.

This is a classic UPSC policy question where the real test is to identify the system-level significance of a reform.

Q23. Consider the following statements regarding Samarth:

- 1. It is a demand-driven, placement-oriented skilling scheme for the textiles sector.
- 2. It excludes the entire textile value chain from its scope.
- 3. It provides for placement-linked outcomes in organized-sector training.
- 4. It also allows self-employment orientation in traditional sectors such as handloom, handicraft, jute, and wool.

Which of the statements given above are correct?

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

Answer: (a) 1, 3 and 4 only

Explanation

Statements 1, 3, and 4 are correct.

Samarth is a demand-driven, placement-oriented skilling programme in the textiles sector. It is linked to employability outcomes and includes organized-sector placement norms, while also allowing self-employment pathways in traditional sectors such as handloom, handicraft, jute, and wool.

Statement 2 is incorrect because the scheme is explicitly meant to support the textiles value chain, not exclude it. The trap lies in reversing the scope.

Q24. With reference to BHASKAR, consider the following statements:

- 1. It stands for Bharat Startup Knowledge Access Registry.
- 2. It is in a pilot phase.
- 3. It aims to enable collaboration across the entrepreneurial ecosystem.
- 4. It is a dedicated registry only for foreign venture capital funds.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

BHASKAR stands for Bharat Startup Knowledge Access Registry. It is in a pilot phase and is intended to support collaboration, peer interaction, partnerships, and ecosystem linkages across startups and other entrepreneurial actors. It is therefore an ecosystem-enabling platform rather than a narrow funding registry.

Statement 4 is incorrect. It is not exclusively for foreign venture capital funds. That option narrows a broad startup-registry concept into a specific financial niche.

Q25. With reference to the Deep Ocean Mission, consider the following statements:

- 1. It is implemented by the Ministry of Earth Sciences.
- 2. Polymetallic nodules are found on abyssal plains and contain metals such as nickel, copper, cobalt, and manganese.
- 3. Polymetallic sulphides occur in hydrothermal vent areas.
- 4. India's allotted exploration area for polymetallic nodules in the Central Indian Ocean Basin is 75,000 sq km.

Which of the statements given above are correct?

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

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

Explanation

All four statements are correct.

The Deep Ocean Mission is implemented by the Ministry of Earth Sciences. Polymetallic nodules occur on abyssal plains and contain metals such as nickel, copper, cobalt, and manganese, while polymetallic sulphides occur in hydrothermal vent areas and contain other valuable metals. India's contract-linked exploration area for PMN in the Central Indian Ocean Basin is 75,000 sq km, while PMS-related exploration is linked with areas in the Central Indian Ridge and Southwest Indian Ridge.

This is exactly the kind of science-schemes crossover topic that UPSC loves.

Q26. Consider the following pairs:

1. Vigyan Jyoti — encouraging meritorious girls to pursue STEM
2. Gyan Bharatam Mission — identification, digitization, repository creation, and preservation of Indian manuscripts
3. SPARSH — System for Pension Administration, Raksha
4. Deen Dayal SPARSH Yojana — scholarship for promotion of aptitude and research in stamps as a hobby

How many pairs given above are correctly matched?

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

Answer: (d) All four

Explanation

All four pairs are correctly matched.

Vigyan Jyoti encourages meritorious girls toward STEM education and careers. Gyan Bharatam Mission is built around identifying, preserving, digitizing, and providing controlled scholarly access to Indian manuscripts through digital tools and repositories. SPARSH stands for System for Pension Administration – Raksha, and Deen Dayal SPARSH Yojana is the philately scholarship scheme for school students.

This is a strong multi-sector matching question because UPSC often mixes education, culture, pensions, and scholarships in one block.

Indian Polity MCQs

Q1. With reference to the Disaster Management (Amendment) Act, 2025, consider the following statements:

1. It received presidential assent in March 2025.
2. It provides statutory status to pre-existing bodies such as the National Crisis Management Committee and the High Level Committee.

3. It shifts preparation of national and state disaster plans from the National/State Executive Committees to the National/State Disaster Management Authorities.

4. It abolishes the possibility of State Disaster Response Forces.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct. The amendment received presidential assent on 29 March 2025 and came into force on 9 April 2025. It gives statutory status to bodies like the National Crisis Management Committee and the High Level Committee, and it also shifts disaster-plan preparation to the NDMA and SDMAs, instead of leaving it with the executive committees.

Statement 4 is incorrect. The law does the opposite of abolition: it creates an enabling provision for States to constitute a State Disaster Response Force. This is a classic UPSC trap where “provision for creation” is twisted into “removal of possibility.”

Q2. Assertion–Reason

Assertion (A): The Disaster Management (Amendment) Act, 2025 tries to improve administrative clarity in India's disaster-governance framework.

Reason (R): It seeks convergence in the roles of authorities and committees, creates disaster databases, and provides for Urban Disaster Management Authorities in State capitals and large municipal cities.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

The amendment is not a cosmetic update. Its logic is structural: it reduces ambiguity, clarifies who does what, formalizes some institutions, and strengthens planning and data architecture. The provision for national and state disaster databases and for Urban Disaster Management Authorities also shows a move toward more differentiated and data-backed governance.

This is exactly the type of governance question UPSC likes because it tests whether the candidate can see the institutional purpose behind legislative reform.

Q3. With reference to Mission Karmayogi, consider the following statements:

1. It is also known as the National Programme for Civil Services Capacity Building.
2. It is implemented by the Department of Personnel and Training.
3. Its core objective is to move from a rule-based model to a role-based, competency-driven framework.
4. It is limited only to officers of the All India Services.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct. Mission Karmayogi is indeed the National Programme for Civil Services Capacity Building (NPCSCB), implemented by the Department of Personnel and Training, and its stated objective is to make civil services more future-ready, citizen-centric, role-based, and competency-driven.

Statement 4 is incorrect. The mission is not confined to the All India Services alone. It is being implemented across all Ministries and Departments of the Government of India through training institutions and the iGOT platform. UPSC often narrows the beneficiary base to create a trap.

Q4. Consider the following pairs:

1. iGOT Karmayogi — digital learning platform for government employees
2. Capacity Building Commission — assists Ministries and Departments in formulation and implementation of Capacity Building Plans
3. Karmayogi Bharat SPV — owns and operates iGOT
4. Mission Karmayogi — constitutional amendment relating to civil services

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2, and 3 are correct.

The iGOT Karmayogi platform is a digital learning architecture for civil servants. The Capacity Building Commission supports ministries and organizations in preparing and implementing capacity-building plans, while Karmayogi Bharat SPV owns and operates the digital learning platform. These three together form the operational backbone of Mission Karmayogi.

Pair 4 is incorrect because Mission Karmayogi is a Central Sector Scheme, not a constitutional amendment. That option is deliberately designed to confuse administrative reform with constitutional restructuring.

Q5. With reference to Legal Services Authorities in India, consider the following statements:

1. The Legal Services Authorities Act, 1987 created a three-tier system for free and competent legal services.
2. The National Legal Services Authority is headed by the Chief Justice of India.
3. District Legal Services Authorities are headed by the District Judge.
4. A decision on an application for free legal services may be delayed indefinitely depending on pendency.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

The Legal Services Authorities Act, 1987 created a three-tier structure consisting of NALSA, State Legal Services Authorities, and District Legal Services Authorities. NALSA is headed by the Chief Justice of India, and the district-level authority is headed by the District Judge. This structure exists to ensure that lack of means does not become a barrier to justice.

Statement 4 is incorrect. Under the relevant regulations, a decision on an application is to be made immediately and not later than seven days from receipt. This is a strong prelims trap because students often assume such processes are open-ended by nature.

Q6. Assertion–Reason

Assertion (A): India's legal-aid framework is not restricted to physical court-based interaction.

Reason (R): Applications for legal aid can be made physically, orally with assistance, online through portals, and even through grievance-linked institutional channels.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

The legal-aid architecture has clearly moved beyond a narrow walk-in model. A person may apply through written forms, oral submission with assistance from an officer or paralegal volunteer, online application systems, or even through government grievance-linked routes in appropriate cases. That reflects an attempt to make legal access more citizen-friendly and procedurally flexible.

This kind of question tests whether the candidate understands access-to-justice mechanisms, not just statutory names.

Q7. With reference to the Digital Personal Data Protection (DPDP) Rules, 2025, consider the following statements:

1. They operationalise the DPDP Act, 2023.
2. They are presented as citizen-focused and innovation-friendly.
3. Appeals against decisions under this framework lie to TDSAT.
4. The framework is explicitly described as rejecting a technology-neutral approach.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

The DPDP Rules, 2025 are described as completing the operationalisation of the DPDP Act, 2023. The framework is characterized as simple, citizen-focused, innovation-friendly, and appeals against decisions are to lie with TDSAT. It also seeks to balance privacy with innovation and economic growth.

Statement 4 is incorrect because the framework explicitly speaks of a technology-neutral approach, not a rejection of it. That reversal is the trap.

Q8. Assertion–Reason

Assertion (A): The DPDP framework is presented as both privacy-protective and growth-supportive.

Reason (R): It aims to protect citizens while also providing a facilitative compliance regime for startups and smaller enterprises.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

The framework is not described in purely restriction-heavy terms. Instead, it is framed as one that tries to balance privacy, trust, innovation, growth, and compliance feasibility, especially for startups and smaller entities. That dual orientation—citizen protection plus innovation support—is central to the policy narrative.

This is a likely UPSC angle because it tests whether the candidate sees digital-governance law as a balancing exercise, not a one-dimensional privacy shield.

Q9. With reference to the Banking Laws (Amendment) Act, 2025, consider the following statements:

1. It seeks uniformity in reporting by banks to the Reserve Bank of India.
2. It aims to improve audit quality in public sector banks.
3. It improves depositor and investor protection, including through better nomination facilities.
4. It amends only the Banking Regulation Act, 1949.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

The Banking Laws (Amendment) Act, 2025 is described as a governance-strengthening reform. It aims at uniform reporting to RBI, better audit quality in PSBs, and stronger depositor and investor protection, including through improved nomination facilities and smoother asset succession.

Statement 4 is incorrect because the Act does not amend only the Banking Regulation Act. It amends five Acts: the RBI Act, 1934; Banking Regulation Act, 1949; SBI Act, 1955; and the Banking Companies (Acquisition and Transfer of Undertakings) Acts of 1970 and 1980. That is the central trap.

Q10. Consider the following objectives linked with the Banking Laws (Amendment) Act, 2025:

1. Clarity in asset succession
2. Uniform terminology for regulatory compliance
3. Revision of statutory deadlines aligned with accounting cycles
4. Full withdrawal of RBI oversight from cooperative banks

Which of the above are correctly associated?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correctly associated. The reform seeks to improve banking governance by ensuring clarity in asset succession, uniform terminology, and statutory timelines aligned with accounting cycles, all of which are aimed at reducing manual friction, aiding automation, and strengthening systemic efficiency. Statement 4 is incorrect. Far from withdrawing RBI oversight, the broader reform trajectory emphasizes a more robust regulatory framework, including strengthened regulation of cooperative banks. This is a very typical UPSC reversal trap.

Q11. With reference to Panchayats and devolution, consider the following statements:

1. Article 243G empowers State legislatures to provide for devolution of powers and responsibilities to Panchayats.
2. The 29 subjects in the Eleventh Schedule must automatically stand transferred to Panchayats in every State.
3. The extent of devolution varies across States.
4. The Devolution Index 2024 uses dimensions such as framework, functions, finances, functionaries, capacity enhancement, and accountability.

Which of the statements given above are correct?

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

Answer: (a) 1, 3 and 4 only

Explanation

Statements 1, 3, and 4 are correct. Article 243G empowers the State legislature to make laws for devolution to Panchayats, including matters relating to planning and implementation in relation to the Eleventh Schedule. However, the actual extent of devolution varies across States. The Devolution Index 2024 evaluates the situation across dimensions such as framework, functions, finances, functionaries, capacity enhancement, and accountability. Statement 2 is incorrect. The 29 subjects do not automatically and uniformly stand transferred everywhere. States are expected to consider them for devolution, but the actual transfer depends on State law and practice. This is a major UPSC conceptual trap in local governance.

Q12. With reference to the SHANTI Bill, 2025 and the Nuclear Energy Mission, consider the following statements:

1. The SHANTI Bill, 2025 is presented as an effort to modernize India’s nuclear legal framework.
2. The Union Budget 2025–26 announced a Nuclear Energy Mission with ₹20,000 crore for Small Modular Reactors.
3. The target includes at least five indigenously designed SMRs to be operational by 2033.
4. The long-term mission includes a 100 GW nuclear-capacity target by 2047.

How many of the above statements are correct?

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

Answer: (d) All four

Explanation

All four statements are correct. The SHANTI Bill, 2025 is framed as a forward-looking legislative step to modernize and streamline India’s nuclear ecosystem. Alongside that, the Nuclear Energy Mission announced in the Union Budget 2025–26 allocates ₹20,000 crore to support design, development, and deployment of Small Modular Reactors. The near-term target is at least five indigenously designed SMRs operational by 2033, while the long-term mission points toward 100 GW of nuclear capacity by 2047.

This is a very UPSC-worthy topic because it combines legislation, energy policy, industrial capability, and long-term national targets.

Q13. With reference to the Lokpal of India, consider the following statements:

1. The Full Bench of Lokpal has adopted a new motto replacing the earlier one.
2. Lokpal is a statutory body established under the Lokpal and Lokayuktas Act, 2013.
3. The Chairperson of Lokpal must necessarily be a sitting Judge of the Supreme Court.

How many of the above statements are correct?

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

Answer: (b) Only two

Explanation

- Statement 1 – Correct The Full Bench of Lokpal adopted a new motto replacing the earlier one. This reflects a recent institutional update.
- Statement 2 – Correct Lokpal is a statutory body established under the Lokpal and Lokayuktas Act, 2013, not a constitutional body.
- Statement 3 – Incorrect The Chairperson of Lokpal need not necessarily be a sitting Supreme Court judge. It can be:

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- A current or former Chief Justice of India, or
- A current or former Judge of the Supreme Court, or
- An eminent person meeting specified criteria

UPSC Trap: The word “*must necessarily*” makes the statement incorrect.

Q14. With reference to Khelo Bharat Niti-2025, consider the following statements:

1. It was launched on 1 July 2025.
2. It is built on five key pillars.
3. One of its pillars is to use sports for economic development through sectors such as tourism, manufacturing, and sports technology.
4. It rejects alignment with the National Education Policy 2020 in order to keep sports separate from education.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct. Khelo Bharat Niti-2025 was launched on 1 July 2025, is built on five pillars, and one of those pillars is Sports for Economic Development, which explicitly links sports with sectors like tourism, manufacturing, and sports technology.

Statement 4 is incorrect. The policy does not reject NEP 2020. In fact, it explicitly aligns with the National Education Policy 2020, integrating sports with education for holistic development and life skills. This is the central trap in the question: turning a positive alignment into an exclusion.

Q15. Assertion–Reason

Assertion (A): Khelo Bharat Niti-2025 is broader than a medal-oriented sports policy.

Reason (R): Besides global sporting excellence, it also treats sports as a tool for economic development, social development, community participation, and educational integration.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason correctly explains the assertion.

A narrow sports policy would focus only on elite performance, medals, and infrastructure for top

athletes. Khelo Bharat Niti-2025 goes much further. It includes Excellence on the Global Stage, but also Sports for Economic Development, Sports for Social Development, Sports as a People’s Movement, and integration with NEP 2020. That means it treats sport as an economic, social, educational, and cultural instrument—not only as elite competition.

This is very UPSC-like because it tests whether the student can identify the philosophy of a policy instead of just memorizing launch dates.

Q16. Consider the following pairs:

1. Excellence on the Global Stage—talent identification and international competitiveness
2. Sports for Economic Development—tourism, manufacturing, and sports technology
3. Sports for Social Development—inclusivity, health, and education
4. Sports as a People’s Movement—discouraging community participation in informal physical activity

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2, and 3 are correct. The policy clearly associates these pillars with those specific goals: elite excellence through infrastructure and talent systems, economic development through linked sectors, and social development through inclusivity, health, and education.

Pair 4 is incorrect. The very idea of Sports as a People’s Movement is to engage communities in physical activities and make sports a cultural cornerstone. The option reverses the meaning entirely. This kind of inversion is a classic UPSC trap.

Q17. With reference to the objectives of Khelo Bharat Niti-2025, consider the following statements:

1. It seeks to establish sports programmes from grassroots to elite levels.
2. It aims to strengthen governance and institutional frameworks in the sports sector.
3. It proposes to revamp funding mechanisms for sustainable sports development.
4. It limits sports science and medicine support only to Olympic-level athletes.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct. The policy's objectives include comprehensive programmes from grassroots to elite levels, strengthening governance and institutions, and revamping funding mechanisms to ensure sustainable development of sports. It also speaks of talent identification, equitable infrastructure access, athlete-centric support, and promotion of sports science and innovation.

Statement 4 is incorrect because the policy does not confine sports science and medicine to Olympic-level athletes only. The statement artificially narrows the scope and is therefore false.

Q18. With reference to combating drug trafficking, consider the following statements:

1. The National Policy on Narcotic Drugs and Psychotropic Substances was formulated in 2012.
2. It was formulated by the Department of Revenue under the Ministry of Finance.
3. The policy seeks to regulate medical and scientific use of narcotic drugs and psychotropic substances while preventing diversion, trafficking, and abuse.
4. The policy is based only on punitive enforcement and excludes treatment and rehabilitation.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct. The National Policy on Narcotic Drugs and Psychotropic Substances was formulated in 2012 by the Department of Revenue, Ministry of Finance. It provides a unified framework that balances medical and scientific use with strict controls against diversion, trafficking, and abuse.

Statement 4 is incorrect. The policy explicitly reflects a balanced approach, which includes awareness generation, treatment, rehabilitation, and social reintegration. The trap is to portray anti-drug policy as purely punitive, whereas the framework is actually more comprehensive.

Q19. Assertion–Reason

Assertion (A): India's anti-drug framework is not limited to seizure and policing alone.

Reason (R): It includes treatment, rehabilitation, social reintegration, awareness generation, helplines, and support institutions in addition to enforcement.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

A common mistake is to think of narcotics policy only in law-enforcement terms. The material makes it clear that India's approach includes treatment, rehabilitation, social reintegration, awareness campaigns, de-addiction support structures, and helplines, along with enforcement and international cooperation. That is why the assertion is correct.

This is a very UPSC-type question because it tests whether the candidate can distinguish between a security-only framework and a public-health-plus-enforcement framework.

Q20. Consider the following measures:

1. Addition of 18 new precursor chemicals into Schedule B and C of the Regulation of Controlled Substances Order in January 2025
2. Sharing with States and agencies of the list of companies issued Unique Registration Numbers for precursor chemicals
3. Strengthening maritime surveillance systems to prevent trafficking through coastal regions
4. Better use of INCB's IONICS and PICS portals

Which of the above are part of India's strategy to combat synthetic-drug trafficking?

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

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

Explanation

All four are part of the strategy.

India's anti-synthetic-drug response includes tighter control over precursor chemicals, better regulatory monitoring through Unique Registration Numbers, stronger maritime surveillance, and improved international information-sharing through INCB platforms such as IONICS and PICS. These measures show that the strategy covers chemical control, inter-agency coordination, coastal enforcement, and cross-border intelligence exchange.

This is a strong prelims question because it mixes chemical regulation, institutional coordination, and international systems.

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Q21. With reference to Nasha Mukh Bharat Abhiyaan (NMBA) and de-addiction support, consider the following statements:

1. NMBA has been launched in all districts of the country.
2. It has reached more than 24.9 crore people.
3. The government supports multiple categories of institutions such as IRCAs, CPLI Centres, ODICs, ATFs, and DDACs.
4. The 1933-MANAS Helpline is exclusively for online passport grievances.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct. The anti-drug effort includes Nasha Mukh Bharat Abhiyaan in all districts, outreach to more than 24.9 crore people, and support to a large network of institutions such as IRCAs, CPLI Centres, ODICs, ATFs, and DDACs.

Statement 4 is incorrect. The 1933-MANAS Helpline is a platform for citizens to report drug-related issues, not passport grievances. The option is an intentional absurdity, but in exam conditions such mismatches still catch candidates who are rushing.

Q22. Which one of the following is correctly matched?

- (a) 14446 Helpline — immediate de-addiction assistance and primary counselling
- (b) PICS — portal for panchayat infrastructure compliance scoring
- (c) IONICS — institutional online nomination interface for cooperative societies
- (d) NMBA — banking-sector anti-fraud campaign

Answer:

- (a) 14446 Helpline — immediate de-addiction assistance and primary counselling

Explanation

Option (a) is correct. The toll-free helpline 14446 is operated to provide primary counselling and immediate assistance to persons seeking help for de-addiction-related issues.

Option (b) is incorrect because PICS refers to the Precursor Incident Communication System under the anti-drug framework.

Option (c) is incorrect because IONICS is the NPS Incident Communication System used for data sharing on synthetic drugs and precursors.

Option (d) is incorrect because NMBA is Nasha Mukh Bharat Abhiyaan, not a banking campaign.

Q23. With reference to India's international anti-drug cooperation, consider the following statements:

1. Director General-level or bilateral talks are held with several neighbouring and other countries on drug trafficking issues.
2. India has signed bilateral agreements with 27 countries in this area.
3. India has signed Memoranda of Understanding with 19 countries for combating illicit trafficking of NDPS and chemical precursors.
4. India's anti-drug international cooperation is restricted only to SAARC countries.

How many of the above statements are correct?

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

Answer: (c) Only three

Statements 1, 2, & 3 are correct. India's international anti-drug effort includes DG-level and bilateral talks, & it has signed bilateral agreements with 27 countries and MoUs with 19 countries for combating illicit trafficking in NDPS substances, chemical precursors, & related offences.

Statement 4 is incorrect. The cooperation is not confined to SAARC countries. The list includes a wider range such as Myanmar, Iran, Bangladesh, Indonesia, Singapore, Afghanistan, and Sri Lanka, among others. The trap is to reduce a broad network to a regional bloc.

Q24. Consider the following pairs:

1. Khelo Bharat Niti-2025 — aligns with NEP 2020
2. National Policy on NDPS, 2012 — Department of Revenue, Ministry of Finance
3. 1933-MANAS Helpline — unified platform to report drug-related issues
4. Lokpal — adopted a new motto through a Full Bench decision

How many pairs given above are correctly matched?

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

Answer: (d) All four

All four pairs are correctly matched.

Khelo Bharat Niti-2025 explicitly aligns with NEP 2020. The National Policy on NDPS, 2012 was formulated by the Department of Revenue, Ministry of Finance. The 1933-MANAS Helpline is a unified platform to report drug-related issues. And the Full Bench of Lokpal adopted a new motto replacing the old one.

This is a good mixed-governance matching question because it joins sports policy, anti-drug governance, & constitutional/institutional current affairs in one frame.

History / Art & Culture MCQs

Q1. With reference to the Classical Languages of India, consider the following statements:

1. On 3 October 2024, Marathi, Pali, Prakrit, Assamese, and Bengali were added to the list of Classical Languages.
2. After this addition, the total number of Classical Languages became 11.
3. A language can be declared classical only if it has high antiquity of early texts or recorded history spanning about 1,500–2,000 years.
4. A Classical Language must always remain identical to its present-day spoken form.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct. Marathi, Pali, Prakrit, Assamese, and Bengali were added on 3 October 2024, taking the total to 11 Classical Languages. One of the criteria is high antiquity of early texts or recorded history, spanning roughly 1,500–2,000 years.

Statement 4 is incorrect. A Classical Language and its literature may be distinct from the current form or may show discontinuity with later forms derived from the original. This is a classic UPSC trap: turning a criterion of historical depth into a requirement of modern continuity.

Q2. Assertion–Reason

Assertion (A): Classical Language status is not merely symbolic recognition.

Reason (R): It is accompanied by institutional support for preservation, research, translation, digitisation, and advanced study.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

Classical Language status does not stop at prestige. It is linked with support for preservation and promotion, and special centres have been created to encourage research, documentation, digitising manuscripts, publication, translation, and interdisciplinary study involving epigraphy, archaeology, anthropology, numismatics, and ancient history. That is why the recognition is functional as well as symbolic.

This is very UPSC-like because it tests whether the student understands the policy significance behind a cultural designation.

Q3. Consider the following pairs:

1. Central Institute of Classical Tamil — promotion and preservation of classical Tamil literature
2. Centres for Excellence in Classical Kannada, Telugu, Malayalam, and Odia — established under CIIL in Mysuru
3. Central Sanskrit University — created through an Act of Parliament in 2020
4. Classical Language status — granted by the Election Commission of India

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2, and 3 are correct. The Central Institute of Classical Tamil promotes and preserves classical Tamil literature. Centres for Classical Kannada, Telugu, Malayalam, and Odia were established under CIIL, Mysuru. Also, three Central Universities for Sanskrit were established through an Act of Parliament in 2020.

Pair 4 is incorrect. Classical Language status is granted by the Government of India through the Ministry of Culture in consultation with experts, not by the Election Commission. The trap is institutional misplacement.

Q4. With reference to the UNESCO Creative Cities Network (UCCN), consider the following statements:

1. It was launched in 2004.
2. It promotes cooperation among cities that use culture and creativity as drivers of sustainable urban development.
3. UNESCO designates creative cities in seven fields.
4. Gastronomy is not one of the recognised fields under the network.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct. The UCCN was launched in 2004 and encourages cities to use culture and creativity as drivers of sustainable urban development. UNESCO identifies seven fields, including Gastronomy.

Statement 4 is incorrect because Gastronomy is very much one of the seven fields. That is the central trap.

- Q5. Which one of the following is correctly matched?
- Lucknow — UNESCO Creative City of Literature
 - Lucknow — UNESCO Creative City of Gastronomy
 - Varanasi — UNESCO Creative City of Gastronomy
 - Mysuru — UNESCO Creative City of Gastronomy

Answer: (b)

Lucknow — UNESCO Creative City of Gastronomy

Explanation

Lucknow has been designated a UNESCO Creative City of Gastronomy. This is an important example of how cultural recognition now extends beyond monuments and manuscripts to include culinary heritage as part of urban cultural identity. UPSC may use such a question because it tests precise pairing between city and UNESCO cultural category.

- Q6. With reference to Sittannavasal, consider the following statements:

- It is located in Tamil Nadu.
- It is associated with Jain ascetic stone beds and Tamil-Brahmi inscriptions.
- It includes a 7th–9th century CE rock-cut cave temple with early mural paintings.
- It is maintained by the National Archives of India.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct. Sittannavasal is located in Pudukkottai district, Tamil Nadu. It is associated with Jain stone beds, Tamil-Brahmi inscriptions, and a 7th–9th century CE rock-cut cave temple with rare mural paintings.

Statement 4 is incorrect. It is under the care and maintenance of the Archaeological Survey of India (ASI), not the National Archives of India. The trap lies in confusing preservation institutions.

- Q7. Assertion–Reason

Assertion (A): Sittannavasal is important not only archaeologically but also art-historically.

Reason (R): Its significance lies in the coexistence of inscriptions, Jain remains, and rare mural traditions within the same site.

- Both A and R are correct, and R is the correct explanation of A
- Both A and R are correct, but R is not the correct explanation of A
- A is correct, but R is incorrect
- A is incorrect, but R is correct

Answer: (a)

Explanation

Both statements are correct, and the reason explains the assertion.

Sittannavasal is not merely an epigraphic or religious site. Its importance is layered: Jain ascetic remains, Tamil-Brahmi inscriptions, and early mural paintings together make it relevant to archaeology, religion, epigraphy, and art history at the same time. That integrated significance is what makes it a strong UPSC topic.

- Q8. With reference to the National Culture Fund (NCF), consider the following statements:

- It was set up in 1996.
- It was created as a Trust under the Charitable Endowment Act, 1890.
- Its objective includes mobilising extra resources through public-private partnership for conservation and development of heritage sites.
- Donors have no role at all in indicating projects for conservation support.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct. The National Culture Fund was set up in 1996 as a Trust under the Charitable Endowment Act, 1890, with the aim of mobilising extra resources through PPP mode for heritage conservation and cultural promotion.

Statement 4 is incorrect. A donor or sponsor can indicate a project to be taken up for conservation or for developing amenities around a monument, subject to the norms of NCF and ASI. The statement becomes false because of the absolute phrase “no role at all.”

- Q9. Consider the following statements regarding Piprahwa Relics:

- They were discovered in 1898.
- They are believed to be associated with the mortal remains of Gautama Buddha.
- They were discovered in Uttar Pradesh near the Nepal border.
- They are linked with Mughal court painting traditions.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct. The Piprahwa Relics were discovered in 1898, are widely believed to be associated with the mortal remains of Gautama Buddha, and were found in Piprahwa, Siddharthnagar district, Uttar Pradesh, near the Nepal border.

Statement 4 is incorrect. Their significance is Buddhist, archaeological, and civilizational—not Mughal-painting related. The trap is to shift the relics into an unrelated art-historical tradition.

Q10. Assertion–Reason

Assertion (A): The return and public exposition of the Piprahwa Relics has significance beyond archaeology.

Reason (R): It connects heritage preservation with civilizational memory, spiritual diplomacy, and public presentation of India’s Buddhist legacy.

- (a) Both A and R are correct, and R is the correct explanation of A
(b) Both A and R are correct, but R is not the correct explanation of A
(c) A is correct, but R is incorrect
(d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

The Piprahwa Relics matter not only as excavated material remains but also as part of India’s Buddhist civilizational heritage. Their repatriation and exposition are described in terms of preserving cultural patrimony and promoting universal values such as peace, compassion, and enlightenment. So their significance extends into heritage diplomacy and public history.

Q11. With reference to the Scheme for Safeguarding the Intangible Heritage and Diverse Cultural Traditions of India, consider the following statements:

1. It was operational during the period 2013–2016.
2. It aimed at preserving, protecting, promoting, and strengthening India’s intangible cultural heritage.
3. It supported institutions, groups, individuals, NGOs, researchers, and scholars for related activities and projects.
4. It dealt only with protected monuments and archaeological sites.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct. The scheme was operational in 2013–2016 and aimed to reinvigorate and revitalize institutions, groups, individuals, NGOs, researchers, and scholars engaged in the preservation, protection, promotion, and strengthening of India’s rich intangible cultural heritage.

Statement 4 is incorrect because the scheme dealt with intangible cultural heritage, not only with protected monuments and archaeological sites. The trap is to confuse tangible heritage with intangible heritage.

Q12. With reference to the Maratha Military Landscapes of India, consider the following statements:

1. The group includes forts situated in diverse terrains such as hills, forests, plateaus, coastlines, and islands.
2. Vijaydurg is identified as a coastal fort.
3. Khanderi, Suvarnadurg, and Sindhudurg are recognised as island forts.
4. The site grouping reflects only religious architecture and not strategic adaptation.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct. The Maratha military landscape is described through forts located across diverse terrains, reflecting strategic adaptation to geography. Vijaydurg is identified as a coastal fort, while Khanderi, Suvarnadurg, and Sindhudurg are recognised as island forts.

Statement 4 is incorrect. The very significance of the grouping lies in its sophisticated understanding of geography and strategic defence planning, not merely religious architecture. This is the key trap.

Miscellaneous MCQs

Q1. With reference to India’s institutional response to cybercrime, consider the following statements:

1. The Indian Cyber Crime Coordination Centre (I4C) has been set up by the Ministry of Home Affairs.
2. The National Cyber Crime Reporting Portal is part of the I4C ecosystem.
3. The portal focuses only on cybercrimes against financial institutions and excludes crimes against individuals.
4. Action on complaints converted into FIRs is handled by the concerned State/UT law-enforcement agencies.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 4 are correct.

The Indian Cyber Crime Coordination Centre (I4C) was established by the Ministry of Home Affairs as an attached office to deal with cybercrime in a coordinated and comprehensive manner. The National Cyber Crime Reporting Portal (NCRP) operates as part of that ecosystem and allows citizens to report all types of cybercrime, with particular attention to crimes against women and children. Once complaints are converted into FIRs, further action is handled by the relevant State/UT law-enforcement agencies.

Statement 3 is incorrect. The portal does not deal only with cybercrimes against institutions or only with financial fraud. It covers all types of cybercrime. The trap is to narrow a broad digital-governance platform into a single-use category.

Q2. Assertion–Reason

Assertion (A): India’s cyber-fraud response mechanism is designed not only for reporting but also for immediate damage control.

Reason (R): The Citizen Financial Cyber Fraud Reporting and Management System was launched for prompt reporting of financial frauds and to stop siphoning off funds.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

The logic of a cyber-fraud response system is not satisfied by complaint registration alone. In financial fraud, speed matters because delay can allow money to move irretrievably. That is why the Citizen Financial Cyber Fraud Reporting and Management System (CFCFRMS) was launched—to enable immediate reporting and help stop siphoning off funds.

This is a very UPSC-like governance question because it tests whether the student can identify the functional intent behind a digital-response mechanism.

Q3. Consider the following:

- 1. 1930 toll-free number
 - 2. Cyber Fraud Mitigation Centre (CFMC)
 - 3. I4C
 - 4. Blocking of suspect SIM cards and IMEIs
- Which of the above are linked with India’s anti-cybercrime architecture?

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

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

Explanation

All four are linked with the anti-cybercrime architecture.

The 1930 toll-free number supports immediate assistance in lodging cyber complaints. I4C is the broader institutional coordination hub. The Cyber Fraud Mitigation Centre (CFMC) brings together banks, financial intermediaries, telecom service providers, IT intermediaries, and law-enforcement representatives for fast, coordinated response. The government has also blocked large numbers of SIM cards and IMEIs reported by police authorities.

UPSC may use such a question to test whether the candidate recognizes that digital-security governance includes reporting, coordination, enforcement, and technological disruption measures.

Q4. With reference to PM SVANidhi and its strengthening measures, consider the following statements:

- 1. The “SVANidhi se Samridhhi” component is linked with a saturation approach to connecting vendors and their families to welfare schemes.
- 2. Lok Kalyan Melas were conducted across Urban Local Bodies during a special campaign period in 2025.
- 3. These Melas facilitated vendor mobilization, loan applications, accelerated loan disbursement, and digital onboarding.
- 4. PM SVANidhi is exclusively a pension scheme for retired municipal employees.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

The strengthened SVANidhi se Samridhhi component is aimed at ensuring that a broad set of welfare benefits reaches street vendors and their families in a saturation mode. The Lok Kalyan Melas conducted from 17 September to 15 October 2025 across ULBs were meant to facilitate loan applications, faster disbursement,

vendor mobilization, and digital onboarding. That shows that the scheme is evolving into a more integrated inclusion platform.

Statement 4 is incorrect. PM SVANidhi is not a pension scheme for retired municipal employees. The trap is to substitute the actual target group—street vendors—with a completely different one.

Q5. Which one of the following best captures the significance of e-Jagruti?

- (a) It is a digital portal only for cybercrime FIR registration
- (b) It is a unified digital platform for consumer grievance redressal integrating earlier fragmented systems
- (c) It is a single-window platform for export clearance at ports
- (d) It is a fintech grievance portal for credit-card disputes only

Answer: (b)

Explanation

Option (b) is correct.

e-Jagruti, launched on 1 January 2025, is a major digital platform for consumer grievance redressal. Its significance lies in integrating older systems such as OCMS, e-Daakhil, NCDRC CMS, and CONFONET into a single interface. It supports complaint filing, payments, virtual hearings, and case tracking across the NCDRC and all States and UTs.

This is the kind of question UPSC may ask because it tests whether the candidate understands the move from fragmented procedural systems to an integrated digital justice architecture.

Q6. Assertion–Reason

Assertion (A): e-Jagruti is designed as an access-enhancing reform, not merely an administrative back-end upgrade.

Reason (R): It includes multilingual support, chatbot assistance, voice-to-text features, virtual hearings, and remote access for both domestic users and NRIs.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both the assertion and the reason are correct, and the reason explains the assertion.

The real significance of e-Jagruti is not only that different systems were merged, but that the platform is being made usable and accessible for diverse users. Features such as multilingual

interfaces, chatbot support, voice-to-text, virtual hearings, remote filing, secure payment gateways, and accessibility support show that it is intended as a citizen-facing digital reform.

This is a very UPSC-style theme because it asks the candidate to identify the governance purpose of digital reform.

Q7. With reference to PMGKAY, consider the following statements:

- 1. It was launched to reduce the hardship faced by the poor during the COVID-19 disruption.
- 2. The free foodgrain allocation under PMGKAY was over and above the regular allocation.
- 3. PMGKAY Phase I to VII together covered a period of 28 months.
- 4. Its objective was to replace the National Food Security Act permanently.

How many of the above statements are correct?

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

Answer: (c) Only three

Explanation

Statements 1, 2, and 3 are correct.

PMGKAY was launched to mitigate the hardship caused by the COVID-19 crisis. The free foodgrain allocation under it was in addition to the regular allocation, and Phases I to VII together covered a period of 28 months, with a very large foodgrain allocation and financial outlay.

Statement 4 is incorrect. PMGKAY was not designed to permanently replace the NFSA. The trap is to confuse an emergency-support measure with a permanent substitution of the underlying food-security framework.

Q8. Consider the following statements regarding labour reform benefits for the export sector:

- 1. Universal social security coverage extends protection to categories including gig and migrant workers.
- 2. Grievance Redressal Committees are required in workplaces employing 20 or more workers.
- 3. Uniform occupational safety, health, and welfare standards can improve compliance with international social-compliance expectations.
- 4. The reforms prohibit women from working during night shifts in export-oriented industries.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Explanation

Statements 1, 2, and 3 are correct.

The labour reform framework described here aims to support both workers and export-oriented industries. It extends social security coverage broadly, includes Grievance Redressal Committees in establishments with 20 or more workers, and creates more harmonized standards for occupational safety, health, and welfare that can also help with global compliance expectations.

Statement 4 is incorrect. The reforms do not prohibit women from working night shifts. In fact, they permit such employment subject to consent and adequate safety measures. This is the exact kind of reversal trap UPSC frequently uses.

Q9. Assertion–Reason

Assertion (A): Labour reform can matter for export competitiveness even when the reform is framed as worker protection.

Reason (R): Clearer wages, social security, grievance mechanisms, and compliant workplace standards reduce uncertainty and support stable production for export industries.

- (a) Both A and R are correct, and R is the correct explanation of A
- (b) Both A and R are correct, but R is not the correct explanation of A
- (c) A is correct, but R is incorrect
- (d) A is incorrect, but R is correct

Answer: (a)

Explanation

Both statements are correct, and the reason explains the assertion.

This is an important economic-governance insight. Labour protection and export competitiveness are not always in opposition. Clear wage rules, broader social security, internal grievance resolution, and credible occupational standards can reduce industrial disruption, improve workforce reliability, and support certification or compliance expectations in international markets. That is why worker protection and export competitiveness can move together.

This is exactly the type of integrative reasoning UPSC increasingly rewards.

Q10. With reference to electric-mobility initiatives, consider the following pairs:

1. PM E-DRIVE — supports electric vehicles, charging stations, and testing-agency upgradation
2. PM e-Bus Sewa – PSM — provides payment security to e-bus operators in case of PTA default
3. SPMEPCI — scheme to promote manufacturing of electric passenger cars in India

4. PM E-DRIVE — exclusively for electric two-wheelers only

How many pairs given above are correctly matched?

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

Answer: (c) Only three

Explanation

Pairs 1, 2, and 3 are correct.

PM E-DRIVE supports a broad electric mobility ecosystem including e-2W, e-3W, e-trucks, e-buses, e-ambulances, EV charging stations, and testing-agency upgrades. PM e-Bus Sewa – PSM is designed to provide payment security to e-bus operators if Public Transport Authorities default. SPMEPCI seeks to promote manufacturing of electric passenger cars in India.

Pair 4 is incorrect because PM E-DRIVE is not limited only to electric two-wheelers. The trap is to narrow a broad scheme into one vehicle segment.

Q11. With reference to initiatives for women and SC/ST entrepreneurs, consider the following statements:

1. The National SC/ST Hub Scheme aims at capacity enhancement of SC/ST entrepreneurs.
2. The Yashasvini Campaign was launched to empower women entrepreneurs through awareness, formalization, access to credit, and mentorship.
3. A new term-loan scheme up to ₹2 crore for women and SC/ST first-time entrepreneurs was announced in the Union Budget 2025.
4. PMEGP denies higher subsidy to women beneficiaries in comparison to the general category.

Which of the statements given above are correct?

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

Answer: (a) 1, 2 and 3 only

Statements 1, 2, and 3 are correct.

The policy measures listed here show a clear inclusion approach toward women and SC/ST entrepreneurship. The National SC/ST Hub Scheme works on capacity enhancement, the Yashasvini Campaign supports women entrepreneurs through credit, mentorship, formalization, and awareness, and a new term-loan scheme up to ₹2 crore for women and SC/ST first-time entrepreneurs was announced in the Union Budget 2025.

Statement 4 is incorrect. Under PMEGP, women actually receive higher subsidy (35%) compared with the general category of micro-enterprises. So the statement reverses the policy benefit.

Q12. Which one of the following best captures the logic behind the women and SC/ST entrepreneurship initiatives described here?

- (a) They are designed only as welfare grants without any market or enterprise orientation
- (b) They combine awareness, credit access, formalization, capacity building, mentorship, and enterprise support
- (c) They are restricted only to export houses with more than 500 employees
- (d) They exclude first-time entrepreneurs in order to prioritise established firms

Answer: (b)

Option (b) is correct.

These initiatives are not just subsidies or symbolic outreach. They aim to build an enterprise ecosystem through awareness generation, formalization, access to credit, capacity building, mentorship, vendor development, and enterprise support. That makes them part of a broader inclusion-and-productivity framework rather than mere welfare transfers.

This is a very UPSC-style conceptual question because it asks the candidate to identify the policy architecture rather than only scheme names.



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