



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION



**INSIGHTS
DAILY
CURRENT
AFFAIRS + PIB
SUMMARY**

29 MARCH 2025

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AI LITERACY

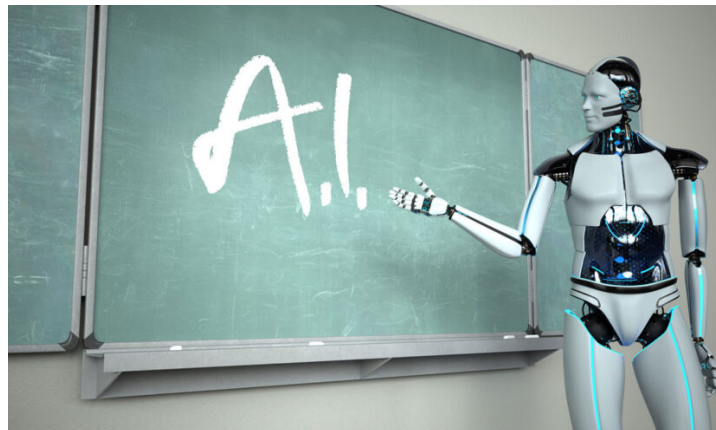
Syllabus: Education

Context: India faces a critical choice in the AI revolution—remain a service provider or emerge as a global innovator. AI literacy is now essential to harness this transformative technology equitably.

About AI Literacy:

What is AI Literacy?

- **Human-AI Collaboration:** Understanding how to effectively partner with AI systems rather than just use them passively. This enables professionals across fields to enhance their work through AI assistance.
- **Critical AI Awareness:** Developing the ability to assess AI outputs for potential biases, errors or ethical concerns. This is crucial in an era of AI-generated content and automated decisions.
- **Problem-Solving with AI:** Applying AI tools creatively to address real-world challenges, regardless of one's technical background. This makes AI accessible beyond just computer scientists.
- **Beyond Just Coding:** Focusing on conceptual understanding and application rather than just programming skills. AI literacy is about mindset more than specific technical abilities.
- **Universal Competency:** Becoming as fundamental as traditional literacy across all professions and demographics. AI understanding should not be limited to tech specialists.



Why Growing Focus on AI Literacy?

- **Economic Imperative:** AI adoption could add nearly \$1 trillion to India's economy by 2035, making literacy essential for workforce participation in this growth.
- **Employment Transformation:** With automation changing job requirements, workers across sectors need AI skills to remain relevant in the [labor market](#).
- **Global Leadership Race:** Countries investing in AI education are pulling ahead in innovation and economic competitiveness on the world stage.
- **Democratic Access:** Widespread AI literacy prevents concentration of benefits among tech elites and ensures equitable distribution of opportunities.
- **National Security Needs:** Understanding AI is becoming crucial for cybersecurity, misinformation detection and strategic decision-making.

Challenges to AI Literacy in India:

- **Digital Divide:** Uneven internet access and device availability creates disparities in AI education opportunities across regions.
Example: Only 38% of rural schools have computer labs versus 72% urban schools.
- **Education System Gaps:** Most Indian schools still focus on rote learning rather than critical thinking skills needed for AI comprehension.
Example: Less than 5% of schools have AI in their curriculum.
- **Skilling Shortages:** India faces a [severe shortage of qualified](#) instructors who can teach AI concepts

effectively.

Example: Many engineering colleges lack faculty trained in machine learning.

- **Ethical Concerns:** Potential biases in AI systems and lack of transparency raise important questions about responsible use.

Example: Facial recognition systems showing racial bias in trials.

- **Funding Limitations:** Inadequate investment in AI research and infrastructure hampers widespread literacy efforts.

Example: Government spending on AI is just 0.1% of the education budget.

India's Current AI Literacy Landscape:

- **Innovation Examples:** Homegrown solutions demonstrate India's potential when combining AI with local needs.

Example: Kisan AI providing voice-based agricultural advice in regional languages.

- **Policy Initiatives:** Government programs are beginning to address AI education at various levels.

Example: National Education Policy 2020's emphasis on emerging technologies.

- **Private Sector Role:** Tech companies are contributing through training programs and tools development.

Example: Google's AI literacy workshops for small businesses.

- **State-Level Experiments:** Some regions are pioneering localized approaches to AI education.

Example: Karnataka's AI curriculum pilot in 1,000 schools.

- **Persistent Gaps:** Implementation challenges prevent benefits from reaching all segments equally.

Example: Tribal schools lacking even basic computer infrastructure.

Measures Needed for AI Literacy Growth:

- **Education Integration:** Systematically incorporate AI concepts across school and college curricula nationwide.

Example: CBSE's new AI subject for grades 8-10.

- **Public-Private Models:** Combine government resources with industry expertise for scalable solutions.

Example: Microsoft's partnership with states for AI labs in colleges.

- **Localized Content:** Develop teaching materials in regional languages to improve accessibility.

Example: IIT Madras's Tamil-language AI learning platform.

- **Workforce Programs:** Create targeted upskilling initiatives for professionals across industries.

Example: NASSCOM's [FutureSkills Prime platform](#) for working adults.

- **Governance Frameworks:** Establish guidelines for ethical AI development and deployment.

Example: Draft National AI Strategy's principles for responsible AI.

Conclusion:

India's AI literacy journey will shape its technological sovereignty and economic future. Strategic investments in education, infrastructure and governance can position India as an AI leader rather than follower. The window for action is now - delay risks permanent disadvantage in the global AI race.

PYQ:

1. "The emergence of the Fourth Industrial Revolution (Digital Revolution) has initiated e-Governance as an integral part of government". Discuss. (UPSC-2020)

HEATWAVE

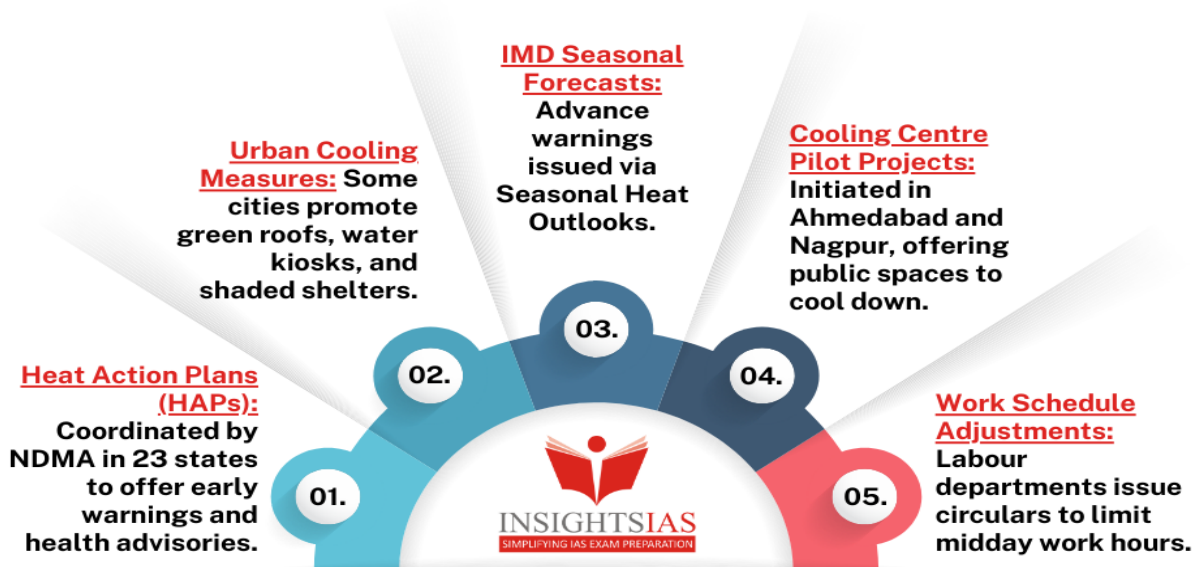
Syllabus: Disaster Management

Context: The India Meteorological Department ([IMD](#)) has forecast 10–12 heatwave days in northwest India this summer, nearly double the usual average of 5–6 days.

- A recent study found that many Indian cities lack long-term strategies in their [Heat Action Plans \(HAPs\)](#) to address rising heat stress.

About Heatwaves:

- **Temperature Threshold:** Heatwaves occur when temperatures cross **40°C in plains** or **30°C in hills**, persisting for ≥ 2 days.
- **Geographic Hotspots:** Northwest India (Rajasthan, Delhi) faces highest frequency due to arid climate and urbanization.
- **Humidity Impact:** Coastal areas face “wet bulb” threats where high humidity makes 35°C feel like 50°C.
- **Climate Change Link:** Rising global temperatures and El Niño events intensify heatwave frequency/duration.
- **Urban Heat Islands:** Concrete-dominated cities are 4-5°C hotter than rural areas due to heat absorption.



GOVERNMENT INITIATIVES ON HEATWAVE MANAGEMENT

Effects of Heatwaves:

- **On People:**
 - **Heatstroke & Dehydration:** Can cause fainting, organ failure, and even death. E.g. 733 heatstroke deaths were reported across 17 states in 2024 (HeatWatch).
 - **Mental Health Stress:** Sleep disturbances and heat anxiety increase during extreme heat spells.

- **Reduced Work Productivity:** Affects **daily wage workers**, especially in agriculture and construction.
- **On Ecology:**
 - **Water Stress:** Increased **evaporation** leads to **dry rivers and lakes**.
 - **Forest Fires:** Drought-like conditions promote the spread of **wildfires**, especially in central India.
 - **Crop Failure:** Heatwaves during flowering stages harm **wheat, pulses, and vegetables**.
- **On Wildlife:**
 - **Mass Bird Deaths:** Birds die due to **dehydration and heat stress** (e.g., 100+ birds died in Gujarat, 2023).
 - **Aquatic Mortality:** **Fish kills** occur due to oxygen depletion in warm water bodies.
 - **Human-Wildlife Conflict:** Animals enter cities in search of **shade and water**.

Loopholes and Challenges:

- **Lack of Long-Term Strategies:** Most HAPs focus on **emergency response**, not **resilience building**. E.g. The SFC study found no long-term cooling or insurance initiatives in 9 major cities.
- **Poor Implementation:** Even well-drafted plans **fail in execution** due to poor inter-agency coordination.
- **Urban Planning Gaps:** Lack of **green spaces**, poor building design, and inadequate ventilation.
- **Insufficient Data Tracking:** Underreporting of **heat-related deaths** distorts real impact (e.g., 2024 NDMA vs HeatWatch gap).
- **Limited Budget Allocation:** No **dedicated funding lines** for HAPs in many municipalities.

Way Forward:

- **Integrate HAPs into Master Plans:** Make **heat resilience** part of city development frameworks.
- **Expand Green Infrastructure:** Promote **urban forests, reflective rooftops**, and water conservation systems.
- **Strengthen Data Systems:** Create a unified **national database** for heatwave mortality and hospitalizations.
- **Community Awareness Programs:** Launch **heat literacy drives** and targeted awareness campaigns.
- **Climate-Smart Infrastructure:** Retrofit buildings with **passive cooling**, improve **electricity access** and backup systems.

Conclusion:

The rise in heatwave frequency is a stark warning of the climate crisis unfolding in India. Without robust long-term planning, vulnerable populations will bear the brunt of this avoidable public health emergency. A proactive, inclusive, and science-based approach is the only sustainable solution.

PYQ:

1. Discuss the recent measures initiated in disaster management by the Government of India departing from the earlier reactive approach. (UPSC-2020)

Content for Mains Enrichment (CME)

UNDERUTILIZATION OF FUNDS

Context: The Standing Committee on Cooperation flagged significant **underutilization** of funds by the Ministry of Cooperation during FY 2023–24 and 2024–25.

About Underutilization of Funds:

- **What is Underutilization?**
 - Underutilization refers to **spending less than the allocated budget**, indicating delays or inefficiencies in scheme execution or fund release.
- **Key Data Points:**
 - **2023-24:** Budget Estimate (BE) was ₹1,150 crore, revised to ₹747 crore (RE), but only ₹689 crore was spent, leaving ₹59 crore (7.7%) unused.
 - **2024-25:** Budget Estimate was ₹1,183 crore, revised to ₹750 crore, with ₹573 crore (76%) spent by Feb 2025. The ministry expects to utilize the remaining 24% by year-end.
- **Factors Causing Underutilization:**
 - **Delays in state proposals** and approvals.
 - **Non-readiness of state machinery.**
 - **Technical issues** like unmapped Single Nodal Agency (SNA) accounts.
 - **Transition challenges** with new accounting systems.



Relevance in UPSC Exam Syllabus:

- **GS Paper 2 – Governance**
 - **Government policies and interventions** for development
 - **Issues relating to planning and implementation of schemes**
 - **Role of cooperative institutions in governance**
- **GS Paper 3 – Economy:**
 - **Mobilization of resources**, budgetary allocations and their efficient use
 - **Inclusive growth and cooperative development**
- **Essay & Ethics (GS4):**
 - **Public resource management**, accountability, and efficient delivery of welfare schemes

Facts for Prelims (FFP)

FIRST PERSON VIEW KAMIKAZE ANTI-TANK DRONE

Context: The Indian Army has **successfully developed and tested** a First-Person View (FPV) kamikaze-role **drone** equipped with anti-tank munition.

About First Person View Kamikaze Anti-Tank Drone:

- **What is it?**
 - A low-cost, First-Person View (FPV) drone equipped with impact-based anti-tank munition developed for kamikaze-style tactical warfare.
- **Developed by:**
 - Indian Army's **Fleur-De-Lis Brigade**, in collaboration with **DRDO's Terminal Ballistics Research Laboratory (TBRL)**, Chandigarh.



- **Aim:** To enhance India's capability in **modern drone warfare** through indigenous, cost-effective, and precision-strike systems.
- **Features and Functions:**
 - **First-Person View Control:** Operated using FPV goggles that stream live visuals, providing real-time battlefield awareness and control.
 - **Kamikaze Strike Role:** Acts as a single-use drone carrying impact-explosive payloads designed to destroy armoured targets like tanks.
 - **In-House Fabrication:** Assembled at the **Rising Star Drone Battle School**, with over 100 units fabricated by March 2025 for training and trials.
 - **Dual-Safety Mechanism:** Prevents accidental detonation; payload can only be activated via pilot's radio controller under controlled conditions.
 - **Real-Time Feedback Relay:** Live status updates of payload visible through FPV interface for safe and accurate deployment.
 - **Technical Optimization:** Focus on **weight balance, flight stability, and manoeuvrability** for effective tactical deployment.
 - **Low-Cost Innovation:** Estimated cost of ₹1.4 lakh per drone, with 5 inducted and 95 more being procured.
- **Applications:**
 - **Anti-Tank Missions:** Effective against armoured targets in tactical zones
 - **Urban Warfare:** Can fly through narrow spaces with precision control
 - **High-Risk Terrain Operations:** Remote strike capability reduces soldier casualties.
 - **Surveillance and Target Elimination:** Offers both eye-in-the-sky and direct kill capability.

LIGHT FISHING

Context: Despite being banned in India's **Exclusive Economic Zone (EEZ)** since 2017, light fishing continues unchecked, damaging marine biodiversity.

- Centre has banned light fishing in all coastal states in 2017.

About Light Fishing:

- **What is Light Fishing?**
 - A fishing method using **high-intensity artificial lights** (often powered by generators) to attract fish to the water surface during night operations.
 - Predominantly used by **mechanised trawlers**, especially for catching squid, sardines, and juvenile fish.
 - **LED light** fishing usually takes place between **December and February**, a season which sees meagre catches.
- **How It Works:**
 - **LED or halogen lights** are suspended over the water or placed underwater.
 - The bright light disturbs the fish's natural orientation and attracts entire shoals.
 - Fish, including juveniles, are **easily netted**, increasing bycatch and unsustainable harvest.
- **Impacts on the Marine Ecosystem:**
 - **Juvenile Fish Depletion:** Removes immature fish before reproduction, reducing **future fish populations**.
 - **Biodiversity Loss:** Attracts **non-target species**, disturbing the marine food web.
 - **Spawning Disruption:** Artificial lights interfere with **natural spawning cycles**.



- **International Trade Risks:** Overfishing can impact **seafood exports**, especially to the EU and Japan.

NATIONAL GENE BANK

Context: The Union Government has announced the establishment of a [Second National Gene Bank](#) to conserve 10 lakh crop germplasm, under the theme “Investing in Innovations” in [Budget 2025–26](#).

- The initiative aims to safeguard **India’s agricultural biodiversity** and ensure long-term food and nutritional security.



About [National Gene Bank \(NGB\):](#)

- **What is a Gene Bank?**
 - A **repository of plant genetic material** (seeds, tissue, pollen) designed to conserve biodiversity and protect crop varieties from extinction.
- **Organisation Involved:** Managed by [ICAR – National Bureau of Plant Genetic Resources \(NBPGR\)](#), under the Ministry of Agriculture & Farmers’ Welfare.
- **Aim:** To conserve **genetic resources of cultivated and wild crops**, enabling sustainable agriculture, food security, and resilience against climate change.
- **Technology & Facilities:**
 - Uses **cryogenic storage, long-term seed preservation chambers, DNA fingerprinting, and digital databases** for germplasm management.
 - Facilitates **distribution to breeders, scientists, and global researchers**.
- **Key Features:**
 - Strengthens **national and international biodiversity initiatives** (e.g., SAARC, BRICS).
 - Supports **public-private partnerships** in crop improvement and seed conservation.
 - Acts as a **fail-safe genetic vault** to secure heritage and climate-resilient varieties.

About India’s First National Gene Bank:

- **Location:** New Delhi, at ICAR-NBPGR headquarters
- **Established in:** 1996
- **Features:**
 - Stores **4.71 lakh accessions** from **2157 species**.
 - Includes **cereals (1.7 lakh), legumes (69,200+), oilseeds (63,500+), millets (60,600+), vegetables (30,000)**.
 - Operates with **12 regional stations** across India.
 - **Second-largest gene bank globally**, contributing to international PGR conservation.

About India's Second National Gene Bank:

- **Location:** Yet to be finalised
- **Announced in:** Union Budget 2025–26
- **Key Features:**
 - Capacity to **conserve 10 lakh germplasm lines**, doubling India's gene banking capability.
 - Equipped with **state-of-the-art infrastructure**, focused on **advanced genetic storage technologies**.
 - Supports **future-ready agriculture, climate adaptation**, and **nutritional security goals**.
 - Serves as a **safety duplicate gene vault**, ensuring redundancy against natural or man-made threats.

SECTION 44(3) OF THE DIGITAL PERSONAL DATA PROTECTION (DPDP) ACT

Context: Activists and Opposition leaders have raised alarm over Section 44(3) of the [Digital Personal Data Protection \(DPDP\) Act, 2023](#), citing threats to transparency under the Right to Information (RTI) Act, 2005.

About Section 44(3) of the Digital Personal Data Protection (DPDP) Act:

- **What is Section 44(3)?**
 - This clause **amends Section 8(1)(j)** of the [RTI Act](#) to restrict disclosure of personal information, removing earlier safeguards like public interest tests and legislative access exceptions.
- **Features of the Clause:**
 - Replaces the original wording with a **broader exemption:**
 - “(j) information which relates to personal information.”
- **Removes clauses that:**
 - **Balanced privacy with public interest**,
 - Allowed disclosure if information was **relevant to public activity**,
 - Mandated **non-denial of info to citizens if not denied to Parliament**.
- **Why It's Controversial?**
 - It **expands the scope of denial** under RTI.



About Section 8(1)(j) of the Right to Information (RTI) Act, 2005:

- **What is Section 8?**
 - Lists exemptions where **public authorities can refuse disclosure** of certain information.
- **Key Exemptions under Section 8(1):**
 1. National security and sovereignty (Clause a)
 2. Judicial restrictions or contempt of court (Clause b)
 3. Parliamentary privilege (Clause c)
 4. Commercial confidence or IP (Clause d)
 5. Fiduciary relationships (Clause e)
 6. Foreign government communications (Clause f)
 7. Threat to life or safety of informants (Clause g)

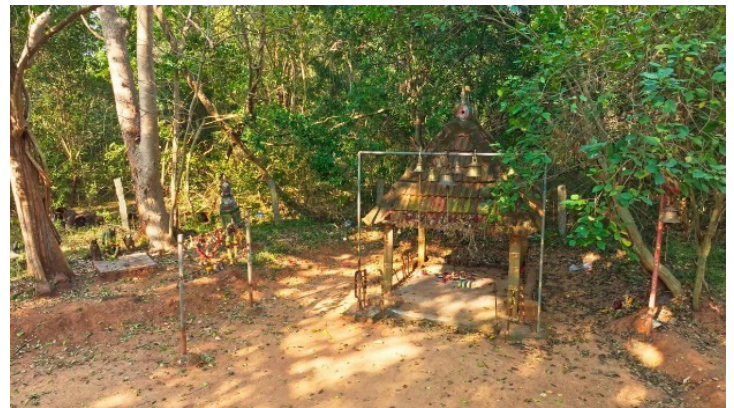
8. Ongoing investigations (Clause h)
 9. Cabinet deliberations (Clause i)
 10. Personal information with public interest override (Clause j)
- **Impact of DPDP's Section 44(3) on RTI Act's Section 8(1)(j):**
 - Dilutes **transparency** by eliminating the public interest balancing clause.
 - Hampers access to key data on **public officials' assets, salaries, and misconduct cases**.
 - **Overrides judicial precedents** that interpreted Section 8(1)(j) in favour of public disclosure.
 - May lead to **blanket denials of legitimate information requests**, weakening democratic accountability.

KASAMPATTY SACRED GROVE

Context: Kasampatty Sacred Grove in Dindigul district has been officially notified as Tamil Nadu's second [Biodiversity Heritage Site](#) (BHS) under the Biological Diversity Act, 2002.

About Biodiversity Heritage Sites (BHS):

- **Definition:**
 - **Biodiversity Heritage Sites** are ecologically fragile areas possessing **rich biodiversity, endemism, and cultural importance**, often conserved by local communities.
- **Declared Under:** Section 37 of the [Biological Diversity Act, 2002](#).
- **Criteria for Declaration:**
 - Areas with:
 - **Rich wild and domesticated species diversity**
 - **High endemism or rare species**
 - **Cultural or sacred** significance (e.g., sacred groves)
 - **Ecological corridors or habitats for threatened species**
- **Procedure for Declaration:**
 - Suggestions invited by **State Biodiversity Boards (SBBs)** through **Panchayats or Biodiversity Management Committees (BMCs)**
 - Ecological and cultural studies conducted in consultation with local communities
 - **Government Gazette notification** issued by the State after public consultation
 - Management plan implemented by local bodies and monitored by **State Biodiversity Boards (SBBs)**.



About Kasampatty Sacred Grove (Veera Kovil Grove):

- **Location:**
 - Kasampatty village, near **Alagarmalai Reserve Forest, Dindigul district, Tamil Nadu**
 - Total area: **4.97 hectares**
- **First BHS in Tamil Nadu:** [Arittapatti village](#) in Madurai district, declared in 2022
- **Key Features of Kasampatty Grove:**
 - **Cultural Significance:**
 - Locals worship deity **Veeranan** at the **Veera Kovil Temple**
 - **Ecological Importance:**

- Acts as an **ecological bridge**, supporting pollination and soil fertility in nearby mango plantations
- Enhances **local climate stability** and **wildlife connectivity**
- **Community-Led Conservation:**
 - Protected following a resolution by **Reddiyapatty Panchayat Council**
 - Supported by the **Tamil Nadu Biodiversity Board** and **District Collector**.

ASSET DECLARATION NORMS FOR JUDGES

Context: Discovery of unaccounted cash at Delhi High Court judge [Yashwant Varma's](#) residence has renewed debate on mandatory disclosure of judges' assets.

About Asset Declaration Norms for Judges:

- **Restatement of Values of Judicial Life (1997)**
 - Judges must declare all movable and immovable assets (in their name, spouse's or dependents') **to the Chief Justice**.
 - It does **not mandate public disclosure**.
- **Supreme Court Resolution (2009)**
 - Judges' asset disclosures were made **voluntarily available** on the Supreme Court's website.
 - No statutory compulsion; updates have ceased since 2018.
- **RTI Act Interpretation (2019)**
 - Supreme Court ruled that judges' asset details do **not constitute personal information**, bringing them within the RTI ambit.
- **Judicial Standards and Accountability Bill, 2010**
 - Proposed **mandatory public declaration** of assets by judges.
 - Bill lapsed with the dissolution of the 15th Lok Sabha; never reintroduced.
- **Parliamentary Committee Recommendation (2023)**
 - Urged the introduction of legislation to ensure **mandatory disclosures by SC and HC judges**.
 - Awaiting legislative action.



About Asset Declaration by Public Officials:

- **RTI Act, 2005**
 - Promotes transparency; citizens can access details of public servants' assets via RTI applications.
- **All India Services (Conduct) Rules, 1968**
 - **Rule 16(1):** Mandatory annual declaration of assets and liabilities to the cadre-controlling authority.
- **Political Candidates & MPs/MLAs**
 - Based on SC ruling (2002), **mandatory disclosure at the time of nomination**.
 - Submitted to Speaker (Lok Sabha) or Chairperson (Rajya Sabha); publicly accessible.
- **Union Ministers & Bureaucrats**
 - Declare assets to PMO or respective state departments.
 - Information is often published online (e.g., PMO website, IAS officers list).

Mapping:

OPERATION BRAHMA

Context: A 7.7 magnitude earthquake hit Mandalay, Myanmar, killing over 140 people and causing structural damage across Myanmar and neighbouring countries.

- India has launched **Operation Brahma**, sending humanitarian aid and relief supplies to the affected region.



About Myanmar:

- Location:** Southeast Asia, between latitudes 10°N to 28.5°N
- Capital:** Nay Pyi Taw (declared in 2006, replacing Yangon)
- Neighbouring Countries:**
 - India, China, Bangladesh, Thailand, Laos.
 - Bordered by Andaman Sea and Bay of Bengal to the south.
- Geological Features:**
 - Mountain Ranges:**
 - Northern Mountains (Mount Hkakabo, 5,881 m – highest peak).

- **Western Ranges** (Patkai, Naga, Chin, Rakhine Hills).
- **Shan Plateau** (Eastern uplands with steep ranges and deep valleys).
- **Major Rivers:**
 - **Irrawaddy River** (Main navigable river).
 - **Chindwin, Sittang, and Salween Rivers** drain different physiographic zones.

Why Myanmar Experiences Frequent Earthquakes?

- **Tectonic Plates Involved:**
 - Lies on the **collision zone** between the **Indian Plate** and the **Eurasian Plate**.
 - Earthquakes occur due to **strike-slip faulting** caused by **horizontal movement** of plates.
- **Sagaing Fault:**
 - A major active fault running **north to south** through central Myanmar.
 - Acts as a boundary between the **Indian Plate (moving north)** and the **Eurasian Plate**.

About Operation Brahma:

- Launched by the **Indian Air Force** using **C-130J aircraft**.
- First batch: **15 tonnes** of relief material and includes **search and rescue personnel** and **medical teams**.