FWD

FORTUNE WEEKLY DIGEST

› MATERNITY LEAVE

›IRNSS – NAVIC

› ONLINE CENSORSHIP IN INDIA

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FWD

FORTUNE WEEKLY DIGEST

EDITOR'S NOTE

As UPSC aspirants, it is essential to stay updated on current affairs to excel in the examination. This **Fortune Weekly Digest (ForWarD)** brings you the latest news and developments from around the world, carefully curated and analyzed to help you prepare for the Civil Services (Main) Examination.

We understand that time is precious, and we have made sure to present the information in a concise and easy-to-understand manner.

The magazine is divided into different sections. Mains relevant topics have been covered in detail with a UPSC previous year question perspective. The jot downs are examples and interesting facts to enrich your answer writing. Cherrypicks has some key words from the week, helpful again in answer writing and essay. We have also included essay topics and sample questions to help you guage your preparation.

We have designed this magazine to best supplement the daily current affairs notes we have launched by the name of **FIND (Fortune IAS News Daily)** and **FINDER (Fortune IAS News Daily Explainer)** and the **Fortune Prelims Precise** monthly compilation. This magazine will be explained in detail and your queries addressed in a live class we conduct.

At a time when there is no dearth of current affairs materials, our hope is help you get a one-stop solution for all your current affairs needs.

This magazine is a work in progress and your feedback will be appreciated.

We hope that this magazine will serve as a valuable resource for your exam preparation and contribute to your success in the UPSC examination.

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MATERNITY LEAVE

Syllabus: GS II - Government policies and interventions for development in various sectors

PYQ MAPPING

Q) *Women's social capital complements in advancing empowerment and gender equity. Explain.* ***(2025)***

Q) *"Though women in post-Independent India have excelled in various fields, the social attitude towards women and feminist movement has been patriarchal." Apart from women education and women empowerment schemes, what interventions can help change this milieu?* ***(2021)***

Q) *In order to enhance the prospects of social development, sound and adequate health care policies are needed particularly in the fields of geriatric and maternal health care. Discuss.* ***(2020)***

WHY IN NEWS

The Supreme Court of India recently **read down provisions of the Code on Social Security, 2020 to grant 12 weeks' maternity leave to adoptive mothers irrespective of the child's age,** while also urging the government to recognise paternity leave as a social security benefit.

INTRODUCTION

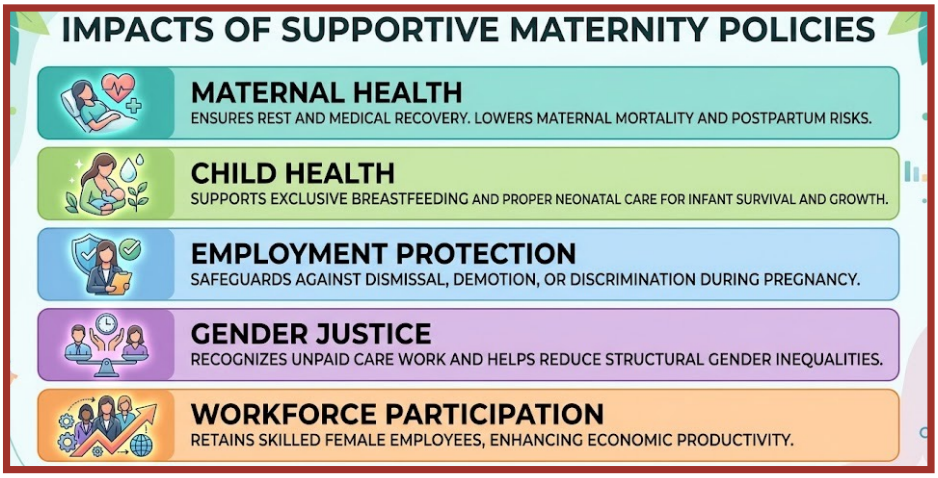
Maternity leave is a crucial labour welfare measure that ensures the health, dignity, and economic security of working women during pregnancy and childbirth. In India, it has evolved into a rights-based entitlement under the Maternity Benefit Act, 1961, reflecting the State's commitment to gender justice and human development.

SHORT TAKES

- **Pradhan Mantri Matru Vandana Yojana (PMMVY)**
  - A centrally sponsored maternity benefit scheme launched in 2017 that provides cash incentives to pregnant and lactating women as partial compensation for wage loss and to promote health-seeking behaviour.
  - It offers **₹5,000 for the first child (and ₹6,000 for a second girl child)** through Direct Benefit Transfer to support maternal nutrition and infant care.

WHAT IS MATERNITY LEAVE?

- **Definition:** Maternity leave refers to a **paid leave granted to women employees to care for a child and recover from childbirth or adoption-related responsibilities**, ensuring both physical recovery and emotional bonding.
- **Nature of Benefit:** It is a **statutory right in India**, ensuring both **income security and job protection** during pregnancy.



LEGAL FRAMEWORK IN INDIA

Maternity Benefit Act, 1961

- **Objective:** The Act aims to regulate employment of women before and after childbirth and ensure maternity benefits and job security.
- **Applicability:** Applies to factories, mines, plantations, shops, and establishments employing **10 or more persons**.
- **Eligibility Criteria:** A woman must have worked for **at least 80 days in the preceding 12 months** to claim benefits.
- **Paid Maternity Leave (Original Provision):** Provided **12 weeks of paid maternity leave** (pre-amendment).
- **Wage Protection:** Women are entitled to **full wages based on average daily earnings** during maternity leave.
- **Job Security:** Employers cannot dismiss or

disadvantage a woman during maternity leave.

- **Health and Welfare Provisions:**
  - Prohibits employment of women during **6 weeks after delivery or miscarriage**.
  - Ensures safe working conditions and prohibits arduous work during pregnancy.
- **Additional Benefits:** Includes provisions for:
  - Leave for miscarriage (6 weeks)
  - Medical bonus (if no pre-natal care provided)

Maternity Benefit (Amendment) Act, 2017

- **Change in Maternity Leave:**
  - Extended paid maternity leave from **12 weeks to 26 weeks** for the first two children.
  - For the third **child onwards**, leave is restricted to **12 weeks**.
- **Adoptive and Commissioning Mothers:** Introduced **12 weeks of leave** for:
  - Adoptive mothers (child below 3 months)
  - Commissioning mothers (surrogacy cases)
- **Work from Home Provision:** Enables **work-from-home option** after maternity leave depending on job nature and mutual agreement.
- **Crèche Facility:**
  - Mandatory for establishments with **50 or more employees**.
  - Women allowed **4 visits per day** to the crèche.
- **Employer Awareness Obligation:** Employers must **inform women employees** about maternity benefits at the time of appointment.
- **Pre-delivery Leave Flexibility:** Up to **8 weeks of leave can be taken before delivery**, remaining post-delivery.

The Code on Social Security, 2020 (CoSS)

- The Code on Social Security, 2020 consolidates nine central labour laws, including the Maternity Benefit Act, 1961, and largely retains its provisions while expanding coverage to unorganised, gig, and platform workers.

IMPORTANT CASELAWS

- **K. Umadevi v. State of Tamil Nadu (2025):**
  - The Supreme Court declared **maternity leave as a part of Article 21 (Right to Life and Dignity)**.
  - Recognised maternity benefits as linked to **reproductive rights, privacy, and health**, making them a **constitutional entitlement**.
  - Clarified that **restrictions like the number of children cannot deny maternity benefits**, only affect duration.
- **Hamsaanandini Nanduri v. Union of India (2026):**
  - The petitioner **challenged Section 60(4) of the Code on Social Security, 2020,** which granted 12 weeks' maternity leave to adoptive mothers **only if the child was below 3 months of age**.
  - The Supreme Court of India struck down the 3-month age cap as **arbitrary and discriminatory**, holding it violative of **Articles 14 and 21** of the Constitution.
  - The Court held that **all adoptive mothers are entitled to 12 weeks of maternity leave irrespective of the child's age**, recognising the importance of caregiving, bonding, and family integration.

SIGNIFICANCE

- **Improved Maternal and Infant Health:** Studies show that **longer maternity leave is associated with lower infant mortality rates and better maternal recovery outcomes**.
- **Promotion of Breastfeeding:** The 26-week leave aligns with **WHO recommendations of exclusive breastfeeding for 6 months**, improving child nutrition.
- **Economic Productivity:** By reducing attrition and

retaining trained women employees, maternity benefits contribute to **organizational efficiency and economic growth**.

- **Gender Equality and Empowerment:** It strengthens women's position in society by **recognizing reproductive roles without penalizing employment opportunities**.
- **Human Capital Development:** Early childcare support leads to **better cognitive and health outcomes in children**, benefiting long-term national development.

CHALLENGES

- **Exclusion of Informal Sector:** Nearly **90% of India's female workforce is in the informal sector**, where maternity benefits are largely absent, creating inequality.
- **Employer Liability Burden:** Since the **entire cost is borne by employers**, it leads to reluctance in hiring or promoting women, especially in SMEs.
- **Hiring Bias and Discrimination:** Evidence suggests that **post-2017 amendment, some firms reduced hiring of women of childbearing age**, indicating unintended consequences.
- **Weak Implementation:** Many establishments fail to comply due to **lack of awareness, monitoring, and enforcement mechanisms**.
- **Absence of Adequate Paternity Leave:** The lack of parallel leave for men reinforces **gender stereotypes of caregiving**, placing disproportionate burden on women.
- **Institutional and Administrative Barriers:** Instances of **penal charges, rejoining fees, or restrictive service conditions imposed on women availing maternity leave** reflect systemic insensitivity and gaps in implementation.
  - **Example** Recently, Telangana Senior Residents Doctors Association flagged the imposition of a **₹15,000 rejoining fee on female postgraduate doctors** availing maternity leave.
- **Limited Awareness Among Women:** Many women, especially in rural and unorganized sectors, are **unaware of their rights under the law**.

GLOBAL BEST PRACTISES

- **Sweden:**
  - Parents are entitled to **480 days (16 months) of paid parental leave**, out of which **90 days are mandatorily reserved for each parent** and cannot be transferred.
  - This policy ensures **active father participation in childcare**, helping reduce the *motherhood penalty* and normalising men taking career breaks.
- **Estonia:**
  - Provides **100 days maternity leave, 30 days paternity leave, and 475 days of shared parental leave**, totaling **over 600 days of paid leave**.
  - Compensation is linked to **100% of prior average earnings**, ensuring that childbirth does not lead to **income loss or economic insecurity** for families.
- **New Zealand:**
  - In 2021, the country introduced **3 days of paid bereavement leave** for miscarriage and stillbirth, recognising reproductive loss.
  - The provision applies to **both partners and also covers adoption/surrogacy cases**, acknowledging emotional trauma and recovery needs.
- **Iceland:**
  - Provides **12 months of paid parental leave**, with **6 months reserved separately for each parent**, largely non-transferable.
  - This equal structure discourages employer bias, promotes **gender-neutral caregiving roles**, and helps reduce the **gender pay gap**.

WAY FORWARD

- **Extending Coverage to Informal Sector:** Introduce **universal maternity entitlements through schemes like PM Matru Vandana Yojana**, ensuring inclusion of vulnerable women.
- **Cost-Sharing Mechanism:** Shift from employer-only liability to a **tripartite model (government + employer + insurance)** to reduce hiring bias.
- **Introducing Paternity and Parental Leave:** Promote **shared caregiving responsibilities** to reduce gender discrimination in workplaces.
- **Strengthening Enforcement:** Enhance **labour inspections, digital compliance systems, and**

penalties for violations.

- **Awareness Campaigns:** Conduct targeted campaigns to **educate women about their legal rights and benefits**.
- **Encouraging Flexible Work Ecosystems:** Promote **remote work, part-time roles, and re-entry programs** for mothers returning to work.
- **Policy Convergence:** Integrate maternity benefits with **nutrition, health, and childcare schemes** for holistic maternal welfare.

CONCLUSION

While India's maternity leave framework is progressive in duration and intent, structural challenges like informal sector exclusion and employer burden limit its effectiveness. A shift towards **inclusive, gender-neutral, and state-supported parental care policies** is essential to balance women's welfare with workforce participation

SAMPLE QUESTION

Q) Discuss the significance of maternity leave in improving maternal and child health outcomes in India. **(10 marks) (150 words)**

ONLINE CENSORSHIP IN INDIA

Syllabus: GS II - Government policies and interventions for development in various sectors

PYQ MAPPING

Q) *What do you understand by the concept "freedom of speech and expression"? Does it cover hate speech also? Why do the films in India stand on a slightly different plane from other forms of expression? Discuss.* ***(2014)***

Q) *Discuss Section 66A of IT Act, with reference to its alleged violation of Article 19 of the Constitution.* ***(2013)***

WHY IN NEWS

The Government of India **plans to allow ministries such as Home Affairs, Defence, External Affairs, and Information & Broadcasting to issue social media content blocking orders** under Section 69A of the IT Act, expanding the power beyond the IT Ministry.

INTRODUCTION

The digital revolution in India has transformed communication, access to information, and civic engagement, making online spaces central to modern life. Simultaneously, the proliferation of harmful content, misinformation, and cyber threats has necessitated measures to regulate and monitor digital platforms without undermining democratic freedoms.

SHORT TAKES

➢ **Deep Packet Inspection (DPI)**

- A network monitoring technique that examines both packet headers (basic routing details like source and destination IP, port, and protocol) and the actual content of data packets.
- It is used for security, traffic management, and also for surveillance or censorship by filtering or blocking specific online content.

LEGAL AND CONSTITUTIONAL FRAMEWORK

Article 19(1)(a) – Freedom of Speech and Expression:

- The Constitution guarantees citizens the right to free speech, which includes expression on digital platforms and the internet.

Article 19(2) – Reasonable Restrictions:

- The State can impose restrictions on grounds such as sovereignty, security, public order, decency, and defamation, forming the legal basis for online censorship.

Information Technology Act, 2000 :

- Provides the statutory framework for regulating electronic communication, digital transactions, and cyber activities, including mechanisms to control unlawful online content.
- **Section 69A** empowers the Central Government to **block websites, apps, or content** in the interest of national security, sovereignty, defence, or public order, through procedures under the Blocking Rules, 2009.
- **Section 79** grants intermediaries **conditional immunity from liability for third-party content**, provided they exercise due diligence and comply with takedown orders issued by the government or courts.

Procedural Safeguards under Blocking Rules, 2009:

- Establish a **committee-based review mechanism**, mandate **recording of reasons in writing**, and allow **emergency blocking**, ensuring limited procedural checks on executive power.

IT (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021:

- Impose obligations such as grievance redressal mechanisms, time-bound content removal, appointment of compliance officers, and traceability requirements for significant social media intermediaries.

SAHYOG PORTAL

- **Overview:** Launched in **2024 by the Ministry of Home Affairs** under the **Indian Cyber Crime Coordination Centre (I4C)**, the Sahyog portal streamlines government content takedown notices to social media platforms.
- **Legal and Operational Context:** *It* operates under **Section 79(3)(b) of the IT Act,** meaning platforms must act quickly on takedown requests or risk losing safe-harbour protections.
- **Purpose:** Centralises and automates sending notices to platforms like **Meta, Google, and X**, enabling faster removal of unlawful content.

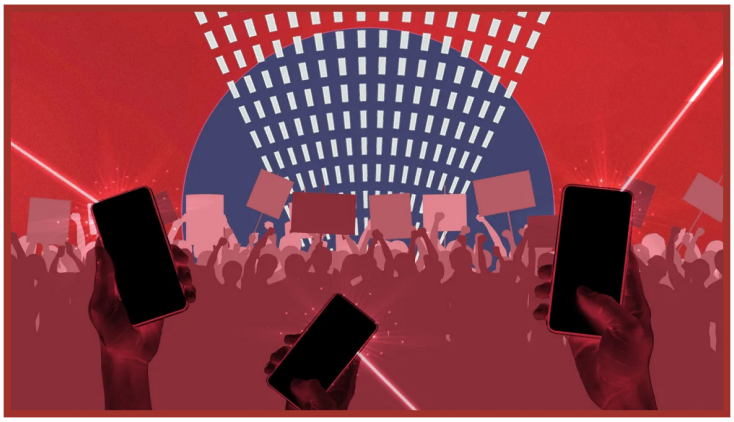
Controversy: Critics argue it may bypass procedural safeguards, risking censorship without due process, though courts uphold its use for rapid action against illegal content.

OBJECTIVES OF ONLINE CENSORSHIP

- **Protection of National Security and Sovereignty:** Online censorship aims to prevent dissemination of content that could threaten India's territorial integrity, facilitate terrorism, or undermine national interests.
- **Maintenance of Public Order:** It seeks to regulate hate speech, inflammatory content, and misinformation that could incite violence, communal disharmony, or social unrest.
- **Combating Fake News and Disinformation:** Censorship mechanisms attempt to curb the spread of fake news, deepfakes, and manipulated content that can distort public opinion and democratic processes.
- **Protection of Vulnerable Groups:** It aims to safeguard women and children from cyberbullying, harassment, pornography, and exploitation in the digital space.
- **Preservation of Morality and Cultural Values:** The State imposes restrictions on obscene or offensive content to uphold societal norms and public decency.
- **Prevention of Cybercrime and Radicalization:** Online censorship helps curb extremist propaganda, recruitment by terrorist organizations, financial fraud, and other cybercrimes.

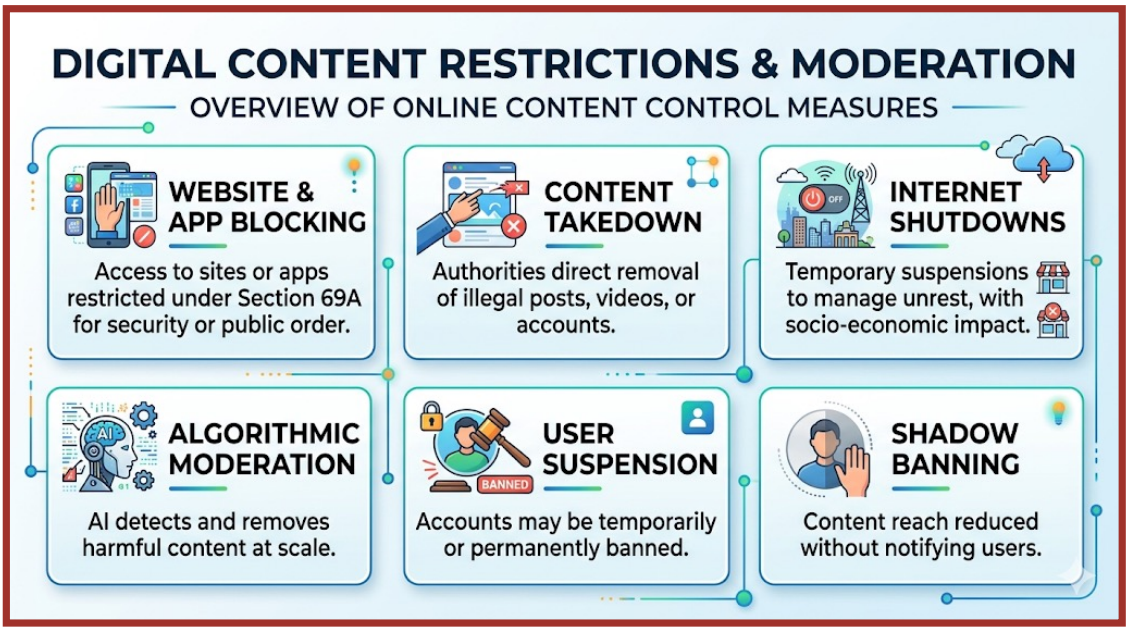
KEY CASE LAWS

- **Anuradha Bhasin v. Union of India (2020):**
  - The case arose from the **internet shutdown and movement restrictions in Jammu & Kashmir (2019)** following the abrogation of Article 370.
  - The Supreme Court of India held that **indefinite internet shutdowns are unconstitutional** and any restriction must satisfy the **tests of legality, necessity, and proportionality**.
  - The Court recognised that **freedom of speech and trade through the internet is protected under Article 19**, and restrictions must be **temporary, reasoned, and subject to judicial review**



- **Shreya Singhal v. Union of India (2015):**
  - **Section 66A** of the Information Technology Act, 2000 criminalised sending **"offensive", "grossly offensive", or false messages via electronic communication**, punishable with up to **3 years imprisonment and fine**.
  - The Supreme Court of India struck down Section 66A as **vague, overbroad, and violative of Article 19(1)(a)**, holding that restrictions must strictly fall within **Article 19(2)**.
  - The Court highlighted the **"chilling effect" on free speech**, ruling that unclear terms like "offensive" allowed arbitrary arrests and suppression of dissent.

METHODS OF ONLINE CENSORSHIP



CHALLENGES

- **Threat to Freedom of Speech and Expression:** Excessive or arbitrary censorship undermines democratic values and restricts the free exchange of ideas and opinions.
- **Lack of Transparency:** Many blocking decisions are confidential, preventing public scrutiny and raising concerns about accountability and misuse of power.
- **Vagueness:** Ambiguous terms like "offensive" or "harmful" content can lead to subjective interpretation and misuse by authorities.
- **Chilling Effect on Dissent and Journalism:** Fear of censorship or legal action discourages journalists, activists, and citizens from expressing critical views.
- **Frequent and Prolonged Internet Shutdowns:** India has witnessed numerous shutdowns, impacting economic activity, education, healthcare, and governance.
- **Burden on Intermediaries:** Platforms face compliance pressure, including traceability requirements, which may conflict with privacy rights and encryption.
- **Concerns of Surveillance and Privacy:** Measures like traceability can lead to mass surveillance, raising concerns under the right to privacy recognized in the Puttaswamy judgment.

GLOBAL PRACTISES

China:

- Operates the world's most advanced censorship system, popularly called the **"Great Firewall."**
- Blocks major global platforms (X, Facebook, YouTube) and replaces them with **state-regulated domestic alternatives**.
- Introduced **"Minor Mode"** with time limits, curated content, and restricted exposure for children.

Russia:

- The "Sovereign Internet Law" allows the state to **control internet traffic within national borders**.
- ISPs must install Deep Packet Inspection (DPI) tools enabling selective blocking without full shutdowns.
- After the 2022 Ukraine conflict, widespread blocking of **independent media and dissenting voices**.
- Platforms like Instagram and Facebook were banned outright after Meta was legally designated as an "extremist organization.

Turkey:

- Turkey's **2022 "Disinformation Law"** criminalizes the public dissemination of false or misleading information that is likely to disturb public order or create fear or panic, with penalties of up to three years' imprisonment.
- Turkey enacted laws which require **foreign social media platform**s with over 1 million daily users to **open local offices, appoint legal representatives, and comply with content takedown requests within 48 hours.** Failure to comply results in penalties, including fines, advertising bans, and severe bandwidth reductions

WAY FORWARD

- **Balance between Rights and Regulation:** Online censorship must strike a balance between protecting national interests and preserving the fundamental right to free speech.
- **Transparency and Accountability:** Government should publish detailed reasons for blocking orders and create accessible public databases to enhance trust.
- **Judicial and Independent Oversight:** Independent review bodies or stronger judicial scrutiny can prevent misuse of censorship powers.
- **Reforming Legal Frameworks:** Laws should be updated to remove vague provisions and align with constitutional principles and global best practices.
- **Privacy and Encryption:** Regulations must respect the right to privacy and avoid weakening encryption under the guise of traceability.
- **Platform Responsibility with Safeguards:** Intermediaries should adopt transparent content moderation policies while ensuring due process and user rights.
- **Digital Literacy and Self-Regulation:** Educating citizens to critically evaluate online content can reduce dependence on state censorship.

CONCLUSION

Online censorship in India reflects the **delicate balance between safeguarding national security, public order, and societal values, while upholding the fundamental right to free speech.** Ensuring transparency, judicial oversight, platform accountability, and digital literacy is crucial to maintain a free yet responsible digital ecosystem.

SAMPLE QUESTION

Q) Critically analyse the need for online censorship in India in the context of national security, public order, and freedom of speech.
(10 marks) (150 words)

INDIAN REGIONAL NAVIGATION SATELLITE SYSTEM (IRNSS) - NAVIC

Syllabus: GS II - Science and technology

PYQ MAPPING

Q) *Launched on 25th December, 2021, James Webb Space Telescope has been much in the news since then. What are its unique features which make it superior to its predecessor Space Telescopes? What are the key goals of this mission? What potential benefits does it hold for the human race?* ***(2022)***

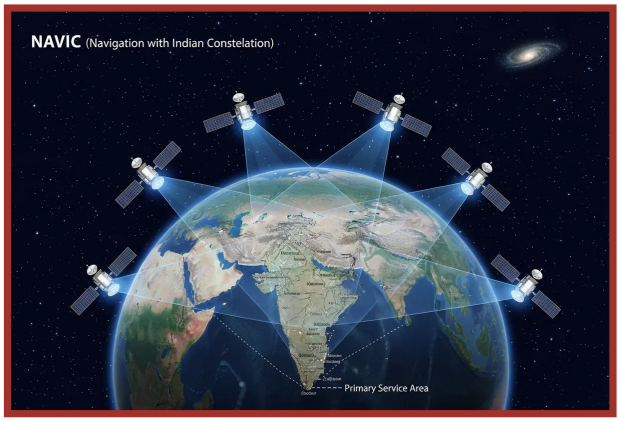
Q) *India has achieved remarkable successes in unmanned space missions including the Chandrayaan and Mars Orbiter Mission, but has not ventured into manned space missions, both in terms of technology and logistics? Explain critically.* ***(2017)***

WHY IN NEWS

- Indian Space Research Organisation (ISRO)'s **NavIC (Navigation with Indian Constellation)** system is in crisis as only **three satellites remain functional** for Position, Navigation and Timing (PNT) services.
- The failure of the **atomic clock in IRNSS-1F (March 2026)** has reduced the constellation below the **minimum requirement of four satellites**, affecting its operational capability.

INTRODUCTION

- NavIC is India's **indigenous regional navigation satellite system**, developed by ISRO to provide accurate **Position, Navigation, and Timing (PNT)** services over India and surrounding regions. It was conceived after the **Kargil War (1999)**, when denial of GPS data by the U.S. highlighted the need for **strategic autonomy in navigation**. The constellation originally consisted of **IRNSS satellites (first generation)** using foreign atomic clocks, later replaced by **NVS series (second generation)** with indigenous clocks.
- However, **frequent satellite failures, atomic clock issues, and slow replacement launches** have led to a **degraded constellation**, putting the system's reliability and future in question.



SHORT TAKES

➢ **PNT Services (Positioning, Navigation, and Timing)**
- PNT services refer to the ability of satellite systems to **determine location, guide movement, and provide precise timing**, which are essential for military operations, transportation, and communication networks.

➢ **Atomic Clock**
- An atomic clock is a **highly precise timekeeping device in satellites** that ensures accurate timing of signals, which is crucial because even tiny timing errors can lead to large navigation inaccuracies.

➢ **GNSS (Global Navigation Satellite Systems)**
- GNSS refers to **satellite constellations like GPS, Galileo, and NavIC** that provide global or regional positioning, navigation, and timing services to users on Earth.
  - **Global Navigation Satellite Systems (GNSS)**
    - United States: Global Positioning System (GPS)
    - Russia: GLONASS (GLObalnaya NAvigatsionnaya Sputnikovaya Sistema)
    - European Union: Galileo
    - China: BeiDou
  - **Regional Navigation Systems**
    - India: NavIC (IRNSS)
    - Japan: Quasi-Zenith Satellite System (QZSS)

➢ **L1 Band**
- The L1 band is a **standard radio frequency used by global navigation systems**, enabling interoperability so that devices can receive signals from multiple satellite systems for better accuracy and wider usability.

NAVIC: FEATURES, PERFORMANCE AND DEVELOPMENTS

The **Indian Regional Navigation Satellite System (IRNSS)**, or **NavIC**, developed by the Indian Space Research Organisation, is India's indigenous navigation system providing accurate positioning over India and up to **1,500 km beyond (Primary Service Area)**. It also extends coverage to a wider region between **30°S–50°N and 30°E–130°E**, known as the **Extended Service Area**.

NavIC Services and Key Features

- NavIC provides two types of services catering to different users. The **Standard Positioning Service (SPS)** is open to civilians and supports general navigation needs, while the **Restricted Service (RS)** is an encrypted signal meant for authorised users, mainly for strategic and defence purposes. The system is designed to ensure **positioning accuracy better than 20 metres within its primary service area**.
- NavIC offers **high accuracy of around 5–10 metres across India**, which may extend to about **20 metres up to 1,500 km beyond**.
- Its use of **dual frequencies (L and S bands)**, which helps minimise atmospheric errors and improves precision.
    - This also enables **better signal reliability in challenging environments** such as dense forests, urban areas with tall buildings, and mountainous regions where conventional navigation signals tend to weaken.

NavIC Constellation Performance

- **Launch and Development:**
    - The NavIC constellation was built through multiple launches using the **Polar Satellite Launch Vehicle**, but slow replacement of satellites compared to their degradation has weakened its performance.
- **First Generation – IRNSS Series (2013–2018):**
    - This phase included satellites **IRNSS-1A to 1G**, along with **IRNSS-1I (replacement satellite)**.
    - The system faced a major setback when **IRNSS-1H (2017)** failed to reach orbit due to a **heat shield separation failure**, necessitating the launch of **IRNSS-1I in 2018**.
    - Many are now **approaching or exceeding their 10-year design life**, leading to reduced reliability and service disruptions.
- **Second Generation – NVS Series:**
    - To address earlier shortcomings, ISRO introduced the NVS series, comprising **NVS-01, NVS-02**, and planned satellites (**NVS-03, 04, 05**).
    - These satellites incorporate **indigenously developed rubidium atomic clocks**, have an **extended mission life of 12 years**, and transmit an additional **L1 frequency** along with L5 and S bands.
    - The L1 signal enhances **interoperability with global systems like GPS** and enables usage in **low-power devices such as smartphones and wearables**.
- **Current Status of NVS Satellites:**
    - **NVS-01 (2023)** is successfully operational and marks a technological upgrade.
    - However, **NVS-02 (2025)** encountered issues in reaching its designated orbit, indicating that **technical and operational challenges persist even in the second generation**.
- **Present Operational Condition:**
    - Following failures such as the **atomic clock issue in IRNSS-1F**, only **four satellites (IRNSS-1B, 1C, 1I, and NVS-01)** are currently capable of providing positioning services.
    - This is just the **minimum requirement for navigation**, highlighting that the constellation is **fragile, overstretched, and at risk of further degradation** if timely replacements are not ensured.

Applications of NavIC

- **Multi-mode Navigation:** Used for terrestrial, aerial, and marine navigation across sectors
- **Disaster Management:** Assists in emergency response, search and rescue, and early warning systems
- **Transport & Logistics:** Enables vehicle tracking and efficient fleet management
- **Consumer Devices:** Integrated into smartphones, wearables, and other smart devices
- **Timing Services:** Provides precise timing for sectors like telecom, banking, and power
- **Mapping & Surveying:** Supports geodetic data collection and mapping activities
- **User Navigation:** Offers navigation assistance for drivers, trekkers, and travellers

ISSUES AND FAILURES IN NAVIC SATELLITE SYSTEM

Recent Setback Failure of IRNSS-1F:

- **IRNSS-1F (2016)** stopped providing navigation services in **March 2026** after its **last functional atomic clock failed**
- The satellite had already completed its **10-year design life**, meaning it was operating at the edge of reliability
- With this failure, NavIC fell **below the minimum requirement of 4 satellites** needed for positioning
- **Implication** Navigation accuracy and service continuity are at risk.

Importance and Failure of Atomic Clocks:

- **Atomic clocks** are ultra-precise timekeeping devices used to calculate **signal travel time from satellite to receiver**
- Accurate timing is essential for determining **exact position on Earth**
- **Problem in NavIC**
  - Many first-generation satellites used **imported rubidium clocks**, which have shown **high failure rates**
  - At least **6 satellites have suffered atomic clock failures**
- **Impact**
  - Even tiny timing errors can lead to **massive location inaccuracies**, making satellites unusable for navigation

Declining Satellite Availability:

- Out of **11 satellites launched**
  - Only a **few are fully operational for PNT (Position, Navigation, Timing)**
  - Some are used only for **limited functions (like messaging)**
  - One satellite has been **decommissioned after end-of-life**
  - Two satellites **failed to reach their intended orbit**
- This has resulted in a **shrinking and inefficient constellation**

Orbit-Related Failures:

- Certain satellites failed not due to hardware but due to **post-launch orbital issues**
  - **IRNSS-1H (2017)** failed due to launch anomaly
  - **NVS-02 (2025)** unable to move to its **final operational orbit**
- After launch, satellites must **adjust their orbit (orbit-raising)** to reach the correct position
- Failure in onboard systems (like engine or valves) makes the satellite **partially or fully unusable**

Launch Vehicle Constraints:

- The Polar Satellite Launch Vehicle, the main launcher for NavIC satellites, has faced **recent anomalies and failures (2025–26)**
- This has
  - **Delayed new satellite launches**
  - Slowed down replacement of failing satellites
- **The gap between satellite failure and replacement is widening.**

IMPORTANCE OF NAVIC FOR INDIA

Strategic and Defence Autonomy:

- NavIC provides **secure and encrypted services (Restricted Service)** for the military, reducing dependence on foreign systems like GPS, which may be unreliable during conflicts.

Reliable and Accurate Navigation:

- It offers **high accuracy (5–10 m in India)** in all weather conditions and uses **dual frequencies (L5 & S bands)**, ensuring better precision than many global systems.
- Unlike global systems controlled by other countries (GPS, GLONASS, BeiDou), NavIC is **fully under Indian control**, ensuring **continuous and secure service availability**.

Wide Civilian Applications:

- Supports **transport, disaster management, fleet tracking, and mobile-based navigation**, contributing to economic efficiency and public services.

Technological Self-Reliance:

- Promotes indigenous development of **satellites, atomic clocks, and navigation technology**, aligning with Atmanirbhar Bharat.

Control over Critical Infrastructure:

- Provides **precise timing services** essential for telecom, banking, and power sectors, ensuring national control over key systems.

Future Expansion Goal:

- India aims to **expand NavIC from a regional to a global system**, increasing its strategic and commercial significance.

MAJOR CONCERNS DUE TO NAVIC SETBACK

Strategic & Defence Concerns:

- Reduced operational satellites weaken **secure military navigation (Restricted Service)**, affecting logistics, missile guidance, and operational planning; increases reliance on foreign systems like GPS.

Technological & Reliability Issues:

- Frequent **atomic clock failures**, ageing satellites, and orbital issues highlight **weak system reliability** and gaps in indigenous technology maturity.

Operational & Infrastructure Challenges:

- With fewer than the required satellites, the constellation is **fragile**, leading to **disrupted Position, Navigation and Timing (PNT) services** for both civilian and strategic users.

Economic & Commercial Impact:

- Limited functionality reduces **industry confidence**, affecting adoption in **smartphones, transport, logistics, and IoT ecosystem**, thereby slowing economic benefits.

Governance & Institutional Gaps:

- Absence of a dedicated navigation authority (like GPS Directorate) and overburdening of Indian Space Research Organisation lead to **poor coordination, slow replacement, and policy inefficiencies**.

WAY FORWARD FOR STRENGTHENING NAVIC

Establish a Dedicated NavIC/GNSS Authority:

- India currently lacks a specialised body to manage navigation systems. Creating an independent authority (on lines of GPS Directorate or EUSPA) would ensure **focused governance, better coordination, and long-term planning**.

Enact a Comprehensive Space Law:

- The absence of a clear legal framework leads to **regulatory gaps and ambiguity in roles**.
- A space law would define responsibilities of government, private players, and agencies, while ensuring **accountability, data security, and efficient management** of critical systems like NavIC.

Accelerate Satellite Launch Rate:

- The major issue is that **satellites are failing faster than they are being replaced**. Increasing launch frequency through improved scheduling, additional launch vehicles, and better mission planning is essential to **maintain minimum constellation strength and continuity of services**.

Strengthen Indigenous Technology:

- Failures in imported components like atomic clocks highlight the need for **self-reliance**. India must invest in:
  - Reliable **indigenous atomic clocks**
  - Advanced **navigation payloads**
  - Improved **launch vehicle systems**

Enhance Public-Private Partnerships (PPP):

- Greater involvement of private players can improve **innovation, manufacturing, and scalability**. Startups and industry can contribute to **satellite production, chipsets, receivers, and applications**, accelerating ecosystem development.

Ensure Redundancy and System Resilience:

- Future satellites should have **more backup systems (extra atomic clocks, fail-safe mechanisms)** to prevent complete failure.
- Additionally, designing a constellation with **extra satellites beyond minimum requirement** will ensure uninterrupted services even if some satellites fail.

CONCLUSION

NavIC represents a critical pillar of India's **strategic autonomy, technological self-reliance, and digital infrastructure**. However, recent setbacks such as **atomic clock failures, ageing satellites, and slow replacement cycles** have exposed structural weaknesses in India's navigation ecosystem. If not addressed urgently, these issues could undermine both **defence preparedness and civilian applications**.

SAMPLE QUESTION

Q) "India's NavIC system is crucial for strategic autonomy but faces multiple technological and institutional challenges." Discuss the importance of NavIC for India and examine the issues affecting its performance. Suggest measures to strengthen the system.
(15 marks) (250 words)

SEX EDUCATION IN ACADEMIA

Syllabus: GS II - Issues relating to development and management of Social Sector

PYQ MAPPING

Q) *The National Commission for Protection of Child Rights has to address the challenges faced by children in the digital era. Examine the existing policies and suggest measures the Commission can initiate to tackle the issue* ***(2025)***

Q) *National Education Policy 2020 is in conformity with the Sustainable Development Goal-4 (2030). It intends to restructure and reorient the education system in India. Critically examine the statement.* ***(2020)***

WHY IN NEWS

A recent article in ***The Hindu*** by Annika Strauss of the University of Münster and Sudarshan R. Kotta of IIT Palakkad argues that stigma around sexuality, intimacy, and mental health fuels silence and psychological distress, drawing on their classroom experiences as fellows of the German Academic Exchange Service.

INTRODUCTION

Sex education in Indian academia remains a critical yet controversial subject, reflecting a **tension between traditional social norms and the need for scientific, rights-based knowledge**. Providing students with comprehensive sexual and reproductive health education is essential for promoting informed decision-making, safety, and gender equality.

CURRENT STATUS

- **Lack of Mandatory Comprehensive Curriculum:**
  - There is ***no uniform, compulsory national policy*** on comprehensive sexuality education (CSE) in Indian schools.
  - Topics are often limited to reproductive biology and menstrual hygiene rather than holistic sexuality education.
- **State-Level Variation and Opposition:**
  - Several states like Gujarat, Madhya Pradesh, Maharashtra, and Chhattisgarh have banned or refused implementation of formal sex education programs, citing cultural concerns.
- **Programmatic Attempts:**
  - Government initiatives such as the **Adolescent Education Programme (AEP)** and school health programmes under Ayushman Bharat include elements of sexual and reproductive health education but are inconsistently implemented.

IMPORTANCE

- **Public Health and Safety:** Comprehensive sex education equips students with scientifically **accurate information about sexual and reproductive health,** helping reduce unplanned pregnancies, sexually transmitted infections (STIs), and unsafe behaviours.
- **Informed Decision-Making:** It fosters healthy attitudes, beliefs, and skills thereby enabling young people to make **responsible choices** about relationships, consent, privacy, and safety.
- **Consent and Respect:** Education about consent and bodily autonomy directly **addresses high rates of sexual violence and abuse**, by teaching respect for self and others.
- **Mental and Emotional Well-Being:** Beyond physical health, sexuality education supports emotional and social well-being which is **crucial for adolescent identity formation and confidence.**
- **Countering Misinformation:** In the absence of formal education, youths often rely on peers or the internet for information, leading to myths and risky behaviours and structured education fills this "information vacuum".

KEY CASELAWS

- **Just Rights for Children Alliance & Anr. v. S. Harish & Ors. (2024) :**
  - The Supreme Court held that **viewing, storing, or possessing material involving children in sexual activity is an offence under the POCSO Act and IT Act**, overturning a lenient High Court ruling.
  - It also **emphasised the need for comprehensive health and sex education** and recommended constituting an **Expert Committee** to design age-appropriate sex education.
  - The Court **rejected the misconception that sex education is a "Western concept"** incompatible with Indian values, noting that such beliefs have led some states to ban it, hindering effective implementation.

Kaavya Mukherjee Saha v. Union of India (2025):

- The Supreme Court **issued notices to the Centre, NCERT, and six states** after hearing the PIL seeking inclusion of **transgender-inclusive Comprehensive Sexuality Education (CSE)** in school curricula and textbooks nationwide.

CHALLENGES AND BARRIERS

- **Cultural and Social Stigma:** Sex remains a **taboo subject in many communities,** discouraging open discussion amongst families, teachers, and students.
- **Political and Institutional Resistance:** Political pressures and conservative voices often frame sex education as **"against traditional values,"** leading to bans or dilution of programmes.
- **Teacher Preparedness and Training Gaps:** Many educators **lack the training, confidence, or sensitivity** to teach sexuality topics effectively, often resulting in reluctance or avoidance.
- **Institutional Discrimination:** Sexual minorities face **systemic discrimination and inadequate support in universities** due to epistemic and ethical gaps in professional training.
- **Curriculum Ambiguity:** National policies like NEP-2020 emphasize holistic education, but *lack explicit, mandated sex education content* ,leading to inconsistent classroom delivery.

SUCCESSFUL MODELS

The Netherlands:

- Programs like **Lentekriebels ("Spring Fever") introduce sex education in primary school from age 4,** teaching children about body awareness, consent, boundaries, and emotions, while biology and reproduction are taught later.

Sweden:

- Sweden made sex education **compulsory in schools in 1955** and its curriculum today is integrated across subjects to teach not just biology but also **gender equality, relationships, consent, media literacy and sexual rights**, reflecting a rights-based, inclusive approach.

Scotland:

- Became the **first country in the world to embed LGBT-inclusive education across the entire school curriculum**, integrating themes of **sexual orientation, gender identity, diverse families, and equality into everyday lessons.**

WAY FORWARD

- **Curriculum Integration:**
  - Include **age-appropriate, comprehensive, gender- and sexuality-inclusive content** in school and university curricula to foster awareness from early stages.
  - Embed **structured sex education modules** across school levels under NEP-2020 with defined learning outcomes, rather than ad hoc or optional sessions.
- **Teacher Training:** Equip educators with skills to handle sensitive topics, promote safe spaces, and address marginalisation effectively.
- **Safe and Accountable Learning Spaces:** Encourage **participatory learning methods, group discussions, and reflective exercises** to facilitate trust and engagement.
- **Monitoring and Evaluation:** Establish robust mechanisms to **assess the effectiveness of programmes, gather feedback, and adapt content based on learner needs** and outcomes.
- **Community and Parental Engagement:** Involve parents and community leaders to dispel myths, reduce stigma, and build support systems for students.
- **Policy and Legal Support:** Implement Supreme Court guidelines and create institutional policies ensuring support for LGBTQ+ students and those facing discrimination.
- **Inclusive and Accessible Outreach:** Expand digital resources, multilingual content, and school–community partnerships to ensure equitable reach across regions and socioeconomic groups.

CONCLUSION

Implementing **structured, culturally sensitive, and accessible sex education in schools and colleges** can empower young people, reduce health risks, and foster a safer, more equitable society. Without consistent policy, teacher training, and community support, India risks perpetuating misinformation, stigma, and preventable harm among its youth.

SAMPLE QUESTION

Q)"Comprehensive sex education is essential for promoting health and gender equality in India." Discuss.
(10 marks) (150 words)

WEEKLY DOSSIERS

CHENNAI'S MICROPLASTIC PROBLEM: A HIDDEN ECOLOGICAL RISK

A recent study along Chennai's coast highlights that **even low levels of microplastics, especially nylon fibres can pose significant ecological risks**, challenging the assumption that lesser quantity means lesser impact.

Issue: Why the Problem is Bigger Than It Looks

- **Quality over quantity**: Though microplastic levels are relatively low, the dominance of **nylon fibres (highly persistent and toxic)** increases ecological risk.
- **Invisible but persistent pollution**: Small-sized particles (<1000 µm) are not easily visible but remain in the ecosystem for long durations.
- **Inadequate assessment methods**: Traditional focus on **abundance alone ignores polymer type, shape, and toxicity**.
- **Early-stage warning**: Indicates a **growing problem in rapidly urbanising coastal regions** like Chennai.

Ecological Risks of Microplastics in Beach Sediments

- **Threat to benthic organisms**: Sand-dwelling organisms ingest fibres, causing **physical injury and digestive blockage**.
- **Toxicity and bioaccumulation**: Microplastics release chemicals and absorb pollutants, entering the **marine food chain**.
- **Habitat alteration**: Fibre-shaped plastics modify **sediment structure and microbial ecosystems**.
- **Food chain disruption**: Impacts extend from plankton to fish and birds, affecting **biodiversity and ecosystem stability**.
- **Human health linkage**: Contaminated seafood may lead to **inflammation, hormonal imbalance, and immune effects**.

Key Drivers

- **Fishing activities** (synthetic nets and ropes shedding fibres)
- **Urban sewage and stormwater runoff**
- **Synthetic textiles releasing microfibres**
- **Tourism and coastal plastic waste**

Way Forward

- **Strengthen waste management**: Prevent plastic leakage into coastal ecosystems through better segregation and recycling.
- **Promote sustainable fishing**: Encourage recycling and biodegradable alternatives for fishing gear.
- **Improve monitoring systems**: Shift from **quantity-based to risk-based assessments** of microplastics.
- **Technological interventions**: Upgrade wastewater treatment and develop microfibre filters.
- **Awareness and policy action**: Promote responsible consumption and enforce plastic regulations effectively.

Conclusion

Chennai's case shows that **microplastic pollution is not just about how much, but what kind**. Acting at this early stage provides a crucial opportunity to prevent long-term ecological degradation and protect coastal and human health.

AGRI-PHOTOVOLTAICS (AGRIPV): TURNING FARMS INTO DUAL-PURPOSE POWERHOUSES

India aims to achieve **300 GW solar capacity by 2030 and net-zero by 2070**, but faces land constraints; **AgriPV (agriculture + solar integration)** offers a solution by enabling dual land use.

What is AgriPV?

- Integration of **solar panels with crop cultivation on the same land**
- Panels mounted **above or between crops** to allow farming and power generation simultaneously
- Supported under schemes like **PM-KUSUM** for decentralised solarisation

Why AgriPV is Important for India

- **Addresses land-use conflict**: Balances solar expansion with food security needs
- **Enhances farmer income**: Revenue from electricity + agriculture

- **Supports energy transition**: Promotes decentralised renewable energy
- **Water-use efficiency**: Partial shading reduces evapotranspiration
- **Climate resilience**: Protects crops from heat, hail, and extreme weather

Key Issues / Challenges

- **High initial costs**: Elevated structures and specialised designs are expensive
- **Uncertain crop response**: Improper design may reduce yields
- **Regulatory gaps**: Lack of clarity on land use, tariffs, and grid connectivity
- **Institutional barriers**: Ownership and revenue-sharing issues between farmers and developers
- **Limited large-scale adoption**: Currently confined to pilot projects (~50 installations)

Way Forward

- **Policy push**: Launch a dedicated **National AgriPV Mission** under PM-KUSUM 2.0 with viability gap funding
- **Standardisation**: Develop region-specific models for crops, panel design, and spacing
- **Financial support**: Provide easy credit, subsidies, and promote FPO-based models
- **Regulatory clarity**: Simplify land-use norms, grid access, and tariff mechanisms
- **Capacity building**: Train farmers and promote awareness on agriPV benefits

Conclusion

AgriPV represents a **win-win solution** for India's energy and agriculture sectors by enabling **"more crop per drop and more power per acre."** With the right policy and institutional support, it can transform farms into sustainable engines of growth while advancing India's climate goals.

RIVER RESTORATION: GLOBAL LESSONS FOR SUSTAINABLE WATER MANAGEMENT

On **World Water Day**, global river restoration efforts highlight that **water is a finite resource** and showcase how community-led and policy-driven initiatives can revive degraded rivers.

Issue: Degradation of River Ecosystems

- **Industrial pollution & sewage discharge** have turned many rivers into "biologically dead" systems.
- **Urbanisation and concretisation** disrupt natural river flows and ecosystems.
- **Encroachment and disconnection from society** reduce public ownership and conservation efforts.
- **Plastic and solid waste pollution** severely impacts river health, especially in developing countries.

Key River Restoration Models (Global Best Practices)

- **Nature-based Solutions – Chicago River (USA)**
  - Use of **floating wetlands (Wild Mile)** to naturally filter pollutants
  - Reintroduction of species like **mussels for bio-filtration**
  - Community participation (River Rangers)
- **Community Activism – Los Angeles River (USA)**
  - Citizen-led movement (FoLAR) to reclaim a **concretised river**
  - Focus on **habitat restoration and public engagement**
  - Led to large-scale government-backed restoration projects
- **Policy & Infrastructure – Thames River (UK)**
  - Strong **sewage treatment systems and environmental laws**
  - Continuous monitoring and oxygenation (Thames Bubblers)
  - Transformation from **"biologically dead" to thriving ecosystem**
- **Grassroots Action – Pasig River (Philippines)**
  - "River Warriors" removing **daily solid waste manually**
  - Government-supported community action
  - Prevents marine pollution at source
- **Integrated Community Model – Bronx River (USA)**
  - Multi-stakeholder collaboration (NGOs, govt, citizens)
  - Focus on **waste removal + ecological restoration + public access**
  - Creation of greenways and awareness programmes

Key Insights for India

- **Community participation is crucial** alongside government action
- **Nature-based solutions** can complement technological interventions
- **Long-term policy commitment** is essential (not one-time cleanups)
- **Urban rivers need reconnection with people** to ensure sustainability
- **Integrated approach** (ecology, economy and society) works best

Way Forward

- **Strengthen river governance**: Basin-level management authorities with clear accountability
- **Enhance sewage treatment**: Universal coverage and strict enforcement
- **Promote nature-based solutions**: Wetlands, bio-filtration, riverfront ecology restoration
- **Encourage community participation**: Citizen groups, local stewardship models
- **Control solid waste**: Prevent plastic leakage through better waste systems
- **Urban planning reforms**: Avoid concretisation and restore natural river flows

Conclusion

Global experiences show that **river restoration is possible with sustained effort, community involvement, and strong policy support**. For India, integrating these lessons can transform polluted rivers into **ecological and socio-economic assets**, ensuring long-term water security.

BEYOND VERDICTS: KEY JUDICIAL INTERVENTIONS

Lt. Col. Pooja Pal Case: Gender Equality in Armed Forces

- In the case of **Lt. Col. Pooja Pal & Ors. v. Union of India**, the Supreme Court directed the grant of **Permanent Commission** and **pensionary benefits** to eligible women officers in the armed forces, reinforcing its earlier judgment in the **Babita Puniya case (2020)**.
- The Court upheld that women officers under the **Short Service Commission (SSC)**, initially appointed for **10 years (extendable up to 14 years)**, must be given equal opportunities, including eligibility for **command positions**.
- It recognized the presence of **systemic discrimination**, noting that denial of Permanent Commission was rooted in **institutional bias** and **structural inequality**. Further, the Court highlighted flaws in the **evaluation system**, particularly the assessment of **Annual Confidential Reports (ACRs)** and **cut-off criteria**, and directed reforms to ensure fairness in future selections.

Undertrial Detention & Right to Liberty: Supreme Court

- The Supreme Court granted **bail** to an accused after nearly **two years of undertrial custody**, observing that **"incarceration without trial amounts to punishment."**
- In *Pardeep Kumar v. State of Punjab (2026)*, the Court noted that despite the prosecution listing **23 witnesses**, none had been examined and the **trial had not even commenced**, making further detention unjustified.
- The judgment reaffirmed that prolonged custody violates the **Right to Speedy Trial under Article 21**, and courts must safeguard **personal liberty**. However, the Court also clarified that **delay alone is not a "trump card" for bail**, and factors like the **nature and gravity of offences** must also be considered.

AI-Generated Fake Judgments: Supreme Court Concern

- The Supreme Court has flagged the growing **menace of citing AI-generated fake judgments**, noting that the problem is **rampant not only in India but globally**.
- In ***Heart and Soul Entertainment Ltd. v. Deepak (2026),*** the Court cautioned litigants and lawyers to **exercise**

due diligence while using AI tools, as reliance on **non-existent case laws** wastes **judicial time** and hampers the **administration of justice**.

- The issue arose after the **Bombay High Court** found that submissions included a **fake AI-generated citation**, leading to criticism and imposition of **costs**. While the Supreme Court expunged certain remarks, it emphasized that **AI can aid research but must be carefully verified**, warning that irresponsible use could attract **strict action** and undermine the **credibility of legal proceedings**.

Doctrine of Necessity & Judicial Recusal

- Recently, the **Chief Justice of India (CJI)** recused himself from hearing petitions challenging the **CEC and Other Election Commissioners Act, 2023** to avoid **conflict of interest**.
- This situation highlights the importance of the **Doctrine of Necessity**, which states that if **all judges are conflicted**, the case must still be heard to ensure **continuity of justice** and prevent **institutional paralysis**.
- The doctrine allows otherwise disqualified judges to decide a case in exceptional circumstances. It has been applied in cases like **Supreme Court Advocates-on-Record Association v. Union of India (2015)**.

SC Status & Religious Conversion: Supreme Court View

- The Supreme Court has held that **Scheduled Caste (SC) status** is restricted to **Hindus, Sikhs, and Buddhists** under the **Constitution (Scheduled Castes) Order, 1950**.
- The Court observed that **conversion** to any other religion results in the **immediate loss of SC status**, regardless of one's birth.
- It emphasized the principle of **mutual exclusivity**, stating that a person cannot **profess another religion** and simultaneously claim the benefits of SC status. At the same time, the Court distinguished this from **Scheduled Tribe (ST) status**, which is **not religion-based** and depends on the **continuity of tribal identity** and **community acceptance**.

ETHICS - CASE STUDY

Q) Arun is a senior officer in the Public Works Department (PWD) of a state. He is responsible for approving contracts related to road construction projects. During the evaluation of tenders, he discovers that a particular contractor, who is politically well-connected, has been consistently winning bids despite quoting higher prices and having a poor track record. Upon closer scrutiny, Arun finds evidence suggesting a nexus between some department officials and the contractor, involving kickbacks and manipulation of tender processes. When he raises concerns, his immediate superior advises him to ignore the issue, hinting that such practices are "common" and resisting them could lead to his transfer or career stagnation. Meanwhile, delaying approval of the tender may slow down important infrastructure projects, affecting public welfare. Arun is now faced with the dilemma of either going along with the corrupt system or taking a stand against it at personal and professional risk.

1. What are the **ethical issues and dilemmas** involved in this case?
2. What options are available to Arun? Evaluate their pros and cons.
3. What course of action should he adopt? Justify with ethical reasoning.
4. Suggest systemic reforms to **reduce corruption in public procurement**.

ETHICS - EXAMPLES

1. **Ethics in Education**: Pragati Chaswal's SowGood initiative, started in 2017 in Delhi, has reached over 78,000 students across 28 schools in Delhi, NCR, Uttar Pradesh, Haryana, and Gujarat, integrating a structured three-year curriculum that combines farming with subjects like science and mathematics.
2. **Social Responsibility:** In Piplodi village in Rajasthan, after a school roof collapse killed seven children and disrupted education for nearly 90 tribal families, farmer Mor Singh gave his home within two days so 50–75 children could continue studying.Now living in a temporary hut, his act ensured continuity in education and led to ₹2 lakh aid for him and ₹1.8 crore for rebuilding the school.
3. **Compassion**: In Tamil Nadu, Sristi Foundation, founded in 2013 by psychologist Karthikeyan Ganesan, supports 80+ residents with intellectual disabilities through farming, dairy, and vocational work, enabling them to earn, contribute, and live with dignity.
4. **Resilience**: After losing his ₹40 crore company WittyFeed overnight due to reliance on third-party platforms, Vinay Singhal returned to Haryana and launched STAGE in 2019, a first-of-its-kind OTT platform focused on local dialects like Haryanvi and Rajasthani, now hosting 400+ hours of content and over 2.25 lakh subscribers. Overcoming initial setbacks, STAGE now supports 2,000+ local artists.
5. **Accountability**: Atyeti Research in collaboration with Sahya Digital Conservation Foundation has launched MLATrack.com, India's first database to track the interventions of 140 MLAs in the Kerala Legislative Assembly from 2021–2026, including attendance, debates, and constituency details.The platform records 68,000+ questions across 16 sessions and serves as a neutral public database without ranking MLA performance.
6. **Environmental Ethics**: In Maharashtra, Ramesh Kharmale, a former Army officer, and his family dug 70 contour trenches storing up to 16 million litres of rainwater annually, planted 450+ trees and developed an Oxygen Park with ponds and native vegetation in Junnar. They involve local youth and over 400 schools in environmental education, conduct forest fire prevention and assist in wildlife protection.
7. **Empowerment**: In Barmer, Rajasthan, Ruma Devi started with one second-hand sewing machine and grew her initiative through Gramin Vikas Evam Chetna Sansthan (GVCS) to 22,000 women across 75 villages, helping them produce and sell traditional embroidery and handicrafts, gain independent income, and earn recognition like the Nari Shakti Puraskar.

MODEL ESSAY

"Technological progress is like an axe in the hands of a pathological criminal"

Introduction

- Quote by Albert Einstein
- Underscores the dual-edged nature of technological advancement — immensely powerful, yet potentially catastrophic if misused.

Positives of Technology

- **Remote Healthcare (Telemedicine)**: In 2024 there were about **116 million online doctor consultations worldwide**, almost double than 2019.
- **Online Education Platforms**: Platforms such as Coursera, edX and Khan Academy enable students to learn new skills and access university-level courses from anywhere.
- **Global Communication**:Instant messaging and video calls (e.g., WhatsApp, Zoom) breaks geographical barriers.
- **Green Energy Technology**: Solar panels and electric vehicles (e.g., Tesla EVs) reduce carbon emissions and promote sustainability

Risks of Technology

- **Cybercrime & AI Scams**: Hackers use **AI tools and deepfakes** to steal data, money, and identities.
- **Social Media Misinformation**: False content spreads rapidly, causing panic or conflict. ***Eg:*** During India–Pakistan tensions, misleading videos nearly escalated conflict.
- **Political Manipulation**: AI and social media amplify fake narratives affecting elections and public opinion.
- **Digital Divide:** Unequal access to technology creates **educational and economic disparities**
- **Dependency & Reduced Skills:** Over-reliance on technology reduces **critical thinking, memory, and problem-solving skills** among users.
- **Surveillance & Privacy Threats:** Technology enables **mass surveillance**, tracking individuals' behavior, location, and personal data without consent.

Way Forward

- **Regulate AI & Deepfakes:** Penalise harmful AI use. ***Eg:*** **Italy's AI law** criminalises fraudulent deepfakes and mandates AI transparency.
- **Promote Digital Literacy:** Educate citizens to spot scams and misinformation. ***Eg:*** **India's Digital Citizen Summit** trains people to verify online content and avoid cyber fraud.
- **Detecting Misinformation with AI:** Identify false content before it spreads. *Eg:* **Vastav.AI** flags deepfake videos and audio in India.
- **Education & Skills for Safe Tech Use:** Teach responsible technology use. *Eg:* **IITs in India** offer courses on AI ethics and cybersecurity.

Conclusion

- While technology powers human progress, its misuse can magnify harm at unprecedented scales.
- Responsible innovation, ethical leadership, and vigilant regulation — ensure technological progress remains a force for societal good rather than destruction.

Sample Quotes

- Liberty is the right to do what the law permits- Montesquieu
- Poverty is the parent of revolution and crime.- Aristotle
- The greatest obstacle to discovery is not ignorance- it is the illusion of knowledge- Daniel J. Boorstin

MAINS JOT DOWN

GS I: *INDIAN SOCIETY*

- India records the highest number of youth suicides globally, with about 41% of all suicides involving individuals under **30 as per NCRB 2022**, reflecting a serious social and economic challenge.
- High youth unemployment compared to the overall rate, widespread mental health issues among young adults, and relationship problems such as family conflicts and marital stress are major contributors.
- Deep rooted cultural norms including patriarchy further increase vulnerability, especially for women. Factors like academic pressure, financial stress, social discrimination, and lack of effective support systems also add to the crisis.

GS II: *HEALTH*

- India has recorded significant progress in tackling tuberculosis, with new cases declining by 21% and deaths reducing by 25% between 2015 and 2024.
- However, as highlighted in the World TB Report 2025, the country still bears the highest global burden of the disease, accounting for about 25% of total TB cases.

GS II: *GOVERNMENT POLICIES AND INTERVENTIONS*

- The revised Mutual Credit Guarantee Scheme for MSMEs (2025) is a central sector initiative to ease credit access, offering a **60% credit guarantee** through the National Credit Guarantee Trustee Company Limited for loans up to **₹100 crore** mainly for machinery and equipment.
- **Key highlights** include expansion to **service sector MSMEs**, reduction of the **equipment cost requirement to 60%** of project cost, and a **fixed guarantee tenure of 10 years**. The scheme also introduces **special support for exporters**, including dedicated loan provisions.

- India's largest pregnancy cohort study involving 12,000 women under the **GARBH-INi initiative** aims to develop indigenous AI driven solutions to tackle preterm births.
- Supported by the **Department of Biotechnology**, it is a flagship programme focused on reducing adverse pregnancy outcomes.
- The initiative has also created a national biorepository and the GARBH-INi DRISHTI data sharing platform to support wider research access. Established in 2015 at Gurugram Civil Hospital, it is among the largest pregnancy cohorts in South Asia.

GS III: *DEFENCE*

- **Exercise Lamitiye** is a **biennial** India **Seychelles** military exercise conducted since 2001 in Seychelles.
- The 2026 edition saw the participation of INS Trikand and marked a major shift as it became the first tri services exercise involving the **Army Navy and Air Force.**

GS III: *INDIAN ECONOMY*

- India's push to achieve **1.5 billion tonnes of annual coal production by FY2030** under the Coal Logistics Policy and Plan (2024) reflects its strategic priority to secure a stable energy base.
- With coal accounting for nearly **74%** of electricity generation, it remains crucial for reliable base-load power, especially amid uncertainties in alternative sources like natural gas, uranium, and renewables. Enhanced coal availability will also sustain key sectors such as power, steel, and cement, which underpin industrial growth and infrastructure development.
- At the same time, reducing dependence on imports will help conserve foreign exchange and strengthen the current account balance.

- The Government of India has restored the rates and value caps under the **Remission of Duties and Taxes on Exported Products scheme** for all eligible exports.
- Launched in 2021 through an amendment to the Foreign Trade Policy 2015 to 20, the scheme replaced MEIS after it was found inconsistent with WTO norms.
- It aims to refund embedded taxes and duties incurred during the production and distribution of export goods that are not covered under other mechanisms. The scheme is administered by the Department of Revenue under the Ministry of Finance.

GS III: *ENVIRONMENT*

- The **UN World Water Development Report 2026**, released by UN Water on the theme **"Water and Gender,"** highlights that achieving universal water security under SDG 6 is not possible without addressing gender inequality under SDG 5.
- It points out that 2.1 billion people still lack access to safe drinking water and 3.4 billion lack proper sanitation.
- The burden falls disproportionately on women and girls, who are the primary water collectors and spend over 250 million hours daily on this task, restricting their opportunities for education and income.

GS III: *SCIENCE & TECHNOLOGY*

- Indian startup **Agnikul Cosmos** has successfully test fired the **Agnite engine**, marking a major milestone in private space technology.
- It is the world's largest single piece 3D printed booster engine and, along with Agnilet, forms Agnikul's semi cryogenic engine series.
- Made using Inconel, a high performance alloy capable of withstanding extreme temperatures, the engine is designed to power the booster stage of the Agnibaan launch vehicle.

GS III: *AGRICULTURE*

- The **World Economic Forum's AI4AI Initiative,** launched in 2021, aims to transform **agriculture** by bringing together public and private stakeholders to scale impactful agri tech solutions and strengthen global food systems.
- It focuses on improving inclusivity for smallholder farmers, promoting sustainability, and enhancing efficiency by reducing losses and waste.
- The initiative has been implemented in Indian states such as Uttar Pradesh, Maharashtra, Telangana, and Madhya Pradesh between 2021 and 2024.

CHERRYPICKS OF THE WEEK

ORANGE ECONOMY:

- A also known as the creative economy, encompasses economic activities that rely on creativity, innovation, cultural expression, and intellectual property, rather than conventional manufacturing or industrial production.

SUPERCONDUCTIVITY

- It is a phenomenon in which certain materials can conduct direct current without any energy loss when cooled below a specific critical temperature called Tc, which is the point at which the material becomes superconducting.

NALGONDA TECHNIQUE

- It is a simple and cost effective method developed by NEERI to remove excess fluoride from drinking water.
- It involves adding aluminium salts, lime, and bleaching powder to fluoridated water, followed by processes like mixing, flocculation, sedimentation, filtration, and disinfection. It is recommended by the Government of India for defluoridation of drinking water.

ANTIPROTONS

- They are antimatter counterparts of protons, having the same mass and spin but an opposite negative charge.
- They were first identified by Emilio Segrè and Owen Chamberlain, who received the Nobel Prize in Physics in 1959.
- Studying them helps address the matter antimatter mystery, as the Big Bang should have created equal amounts of both, yet the universe is dominated by matter.

INFRASTRUCTURE INVESTMENT TRUSTS

- They are investment vehicles similar to mutual funds that allow investors to invest in infrastructure assets. They pool funds, are listed on stock exchanges, and distribute income from sources like tolls, rents, interest, and dividends. Investments are made directly or through SPVs, and they are regulated by SEBI under the 2014 regulations.