Current Affairs

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February 2026

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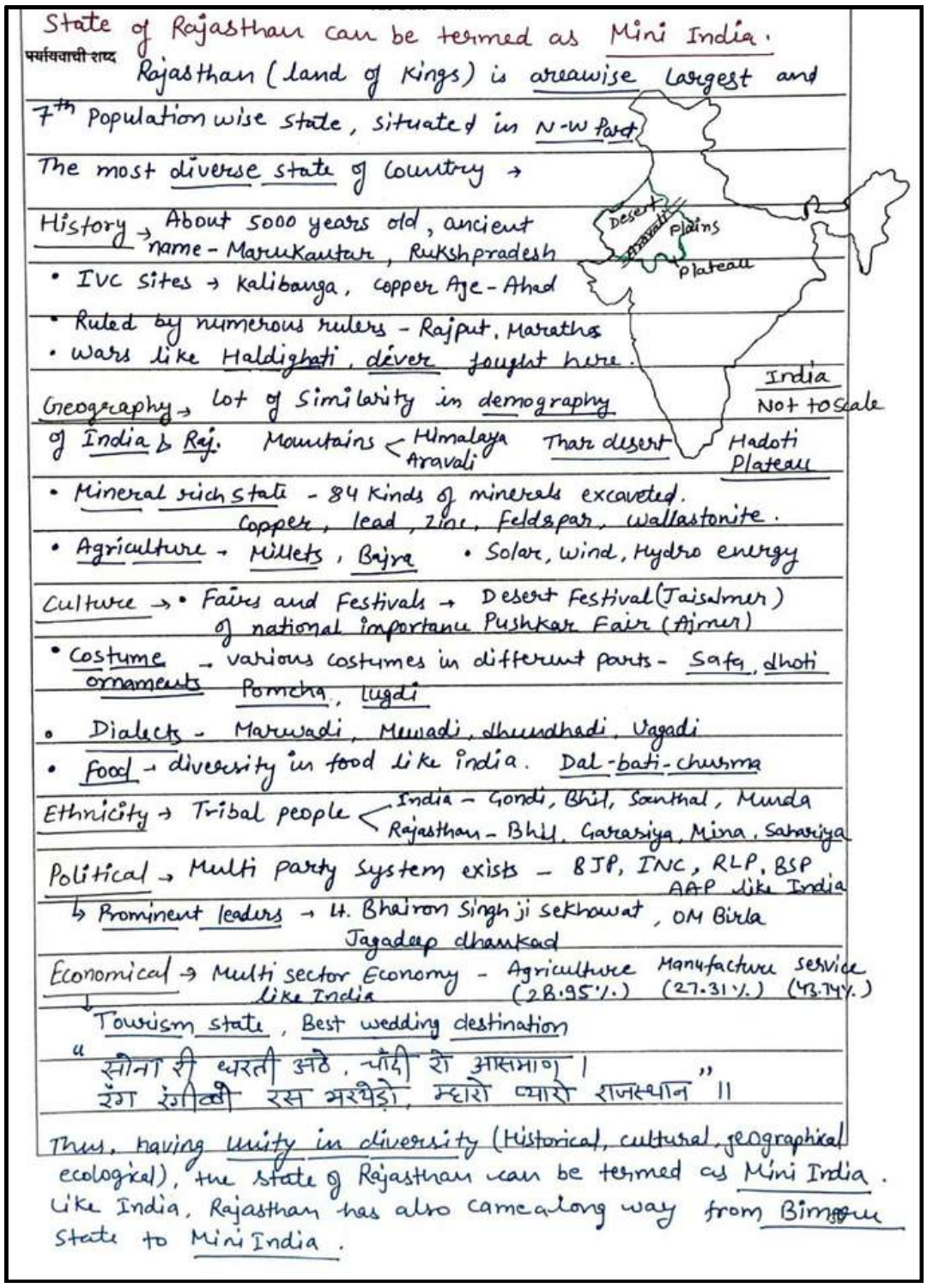


State of Rajasthan can be termed as Mini India.

पर्यायवाची शब्द

Rajasthan (land of Kings) is areawise Largest and 7th Population wise state, situated in N-W Part

The most diverse state of Country →

History → About 5000 years old, ancient name - Marukantar, Rukshpradesh
- IVC sites → Kalibanga, copper Age - Ahad
- Ruled by numerous rulers - Rajput, Marathas
- Wars like Haldighati, dever fought here.

Geography → lot of Similarity in demography of India & Raj. Mountains < Himalaya, Aravali; Thar desert; Hadoti Plateau

India Not to scale — Desert, Aravali, Plains, Plateau

- Mineral rich stati - 84 Kinds of minerals excavated. Copper, lead, Zinc, Feldspar, Wallastonite.
- Agriculture → Millets, Bajra
- Solar, wind, Hydro energy

Culture →
- Fairs and Festivals → Desert Festival (Jaisalmer) of national importance Pushkar Fair (Ajmer)
- Costume → various costumes in different parts - Safa, dhoti ornaments Pomcha, Lugdi
- Dialects - Marwadi, Mewadi, Dhundhadi, Vagadi
- Food - diversity in food like India. Dal-bati-churma

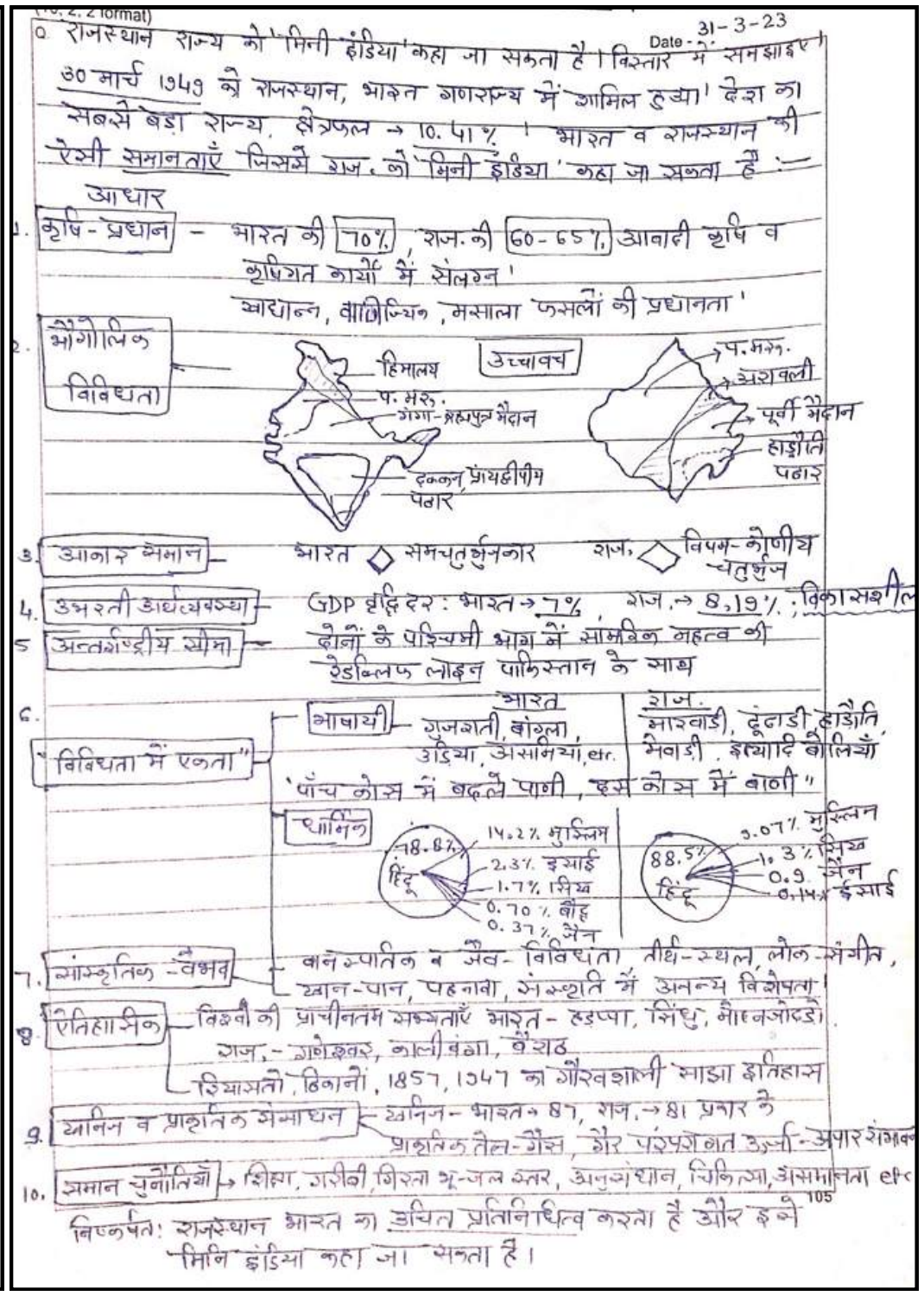
Ethnicity → Tribal people < India - Gondi, Bhil, Santhal, Munda; Rajasthan - Bhil, Garasiya, Mina, Sahariya

Political → Multi party System exists - BJP, INC, RLP, BSP AAP like India
↳ Prominent leaders → 11. Bhairon Singh ji sekhawat, OM Birla, Jagadeep dhankad

Economical → Multi sector Economy - Agriculture (28.95%) Manufacture (27.31%) service like India (43.74%)
↳ Tourism state, Best wedding destination

"सोना री धरती अठे, चाँदी रो आसमाण।
रंग रंगीली रस भरयेड़ो, म्हारो प्यारो राजस्थान" ॥

Thus, having unity in diversity (Historical, cultural, geographical ecological), the state of Rajasthan can be termed as Mini India. Like India, Rajasthan has also came along way from Bimaru State to Mini India.



Q. राजस्थान राज्य को 'मिनी इंडिया' कहा जा सकता है। विस्तार में समझाइए।

Date - 31-3-23

30 मार्च 1949 को राजस्थान, भारत गणराज्य में शामिल हुआ। देश का सबसे बड़ा राज्य, क्षेत्रफल → 10.41%। भारत व राजस्थान की ऐसी समानताएँ जिससे राज. को 'मिनी इंडिया' कहा जा सकता है :—

1. कृषि - प्रधान — आधार — भारत की 70%, राज. की 60-65% आबादी कृषि व कृषिगत कार्यों में संलग्न। चावल, बाजरा, मसाला फसलों की प्रधानता।
2. भौगोलिक विविधता — उच्चावच: हिमालय, प.मरु., गंगा-ब्रह्मपुत्र मैदान, दक्कन प्रायद्वीपीय पठार, अरावली, पूर्वी मैदान, हाड़ौती पठार
3. आकार में समान — भारत ◇ समचतुर्भुजनुमा; राज. ◇ विषम-कोणीय चतुर्भुज
4. उभरती अर्थव्यवस्था — GDP वृद्धि दर: भारत → 7%, राज. → 8.19%; विकासशील
5. अन्तर्राष्ट्रीय सीमा — दोनों के पश्चिमी भाग में सामरिक महत्व की रेडक्लिफ लाइन पाकिस्तान के साथ
6. "विविधता में एकता" — भाषायी: भारत — गुजराती, बांग्ला, उड़िया, असमिया, etc. | राज. — मारवाड़ी, ढूंढाड़ी, हाड़ौती, मेवाड़ी, इत्यादि बोलियाँ। "पाँच कोस में बदले पानी, दस कोस में बानी"
   धार्मिक: भारत — हिंदू 78.8%, मुस्लिम 14.2%, ईसाई 2.3%, सिख 1.7%, बौद्ध 0.70%, जैन 0.37%; राज. — हिंदू 88.5%, मुस्लिम 9.07%, सिख 1.3%, जैन 0.9%, ईसाई 0.14%
7. सांस्कृतिक वैभव — वनस्पतिक व जैव-विविधता, तीर्थ-स्थल, लोक-संगीत, खान-पान, पहनावा, संस्कृति में अनन्य विशेषता
8. ऐतिहासिक — विश्व की प्राचीनतम सभ्यताएँ भारत - हड़प्पा, सिंधु, मोहनजोदड़ो। राज. - गणेश्वर, कालीबंगा, बैराठ। शिवाजी, ठिकानों, 1857, 1947 का गौरवशाली साझा इतिहास
9. खनिज व प्राकृतिक संसाधन — खनिज - भारत → 87, राज. → 81 प्रकार के प्राकृतिक तेल-गैस, गैर परंपरागत ऊर्जा - अपार संभावना
10. समान चुनौतियाँ → शिक्षा, गरीबी, गिरता भू-जल स्तर, अनुसंधान, चिकित्सा, असमानता etc

निष्कर्षतः राजस्थान भारत का उचित प्रतिनिधित्व करता है और इसे मिनि इंडिया कहा जा सकता है।

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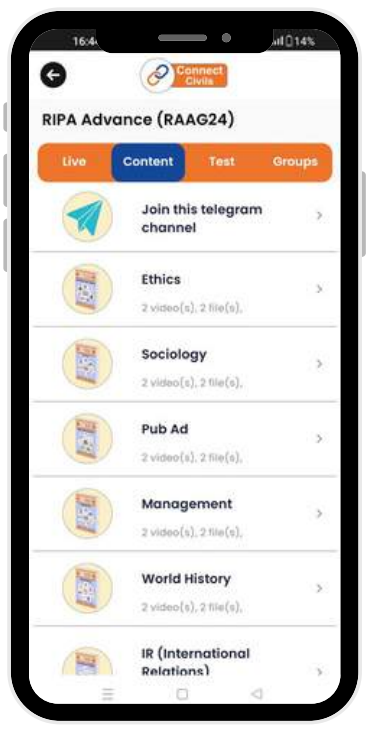

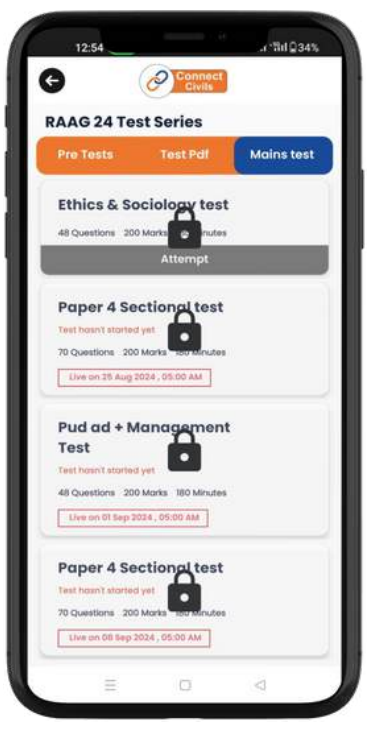

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Polity

Topic 1 - Right to Menstrual Health as a Fundamental Right

Syllabus	Paper III | Polity and Constitution | Fundamental Rights
Context	The **Supreme Court (Dr. Jaya Thakur vs Union of India)** recognised **menstrual health as a Fundamental Right under Article 21**, directing all schools to provide free sanitary pads and proper sanitation facilities.
What is it?	❖ **Menstrual Health = Part of Right to Life & Dignity (Art. 21).** ❖ Menstruation is a **biological reality**, not a ground for exclusion or absenteeism. ❖ Providing pads & toilets is a **constitutional duty**, not charity. ❖ Objective → **Dignity, privacy, equality & uninterrupted education** for girls.
Constitutional Basis	❖ **Article 21 – Right to Life & Dignity:** Lack of facilities = humiliation & loss of dignity. ❖ **Article 14 – Equality:** Menstrual barriers create gender inequality. ❖ **Article 21A – Right to Education:** Menstrual poverty cannot force school drop-outs.
Key Directions of the Supreme Court	❖ **Free sanitary pads:** Govt & private schools → Classes 6–12; biodegradable standard. ❖ **Gender-segregated toilets:** Functional, with water supply, soap, and disability-friendly. ❖ **MHM Corners:** Spare uniforms, disposal bags, emergency kits. ❖ **Accountability:** Annual DEO inspections; non-compliant private schools → de-recognition.
Significance / Importance	❖ **Educational continuity:** Reduces 2–5 days of monthly absenteeism. ❖ **Human dignity:** Removes stigma & hesitation in seeking help. ❖ **Health benefits:** Prevents RTIs from unsafe alternatives. ❖ **Gender equality:** Removes biology-based disadvantage. ❖ **Environmental sustainability:** Push for biodegradable pads → less plastic waste.
Implementation Challenges	❖ **Maintenance gap:** Toilets are built but lack water/locks/cleanliness. ❖ **Social stigma:** Cultural taboos restrict discussion & use. ❖ **Supply chain issues:** Pad stock-outs in remote/tribal areas. ❖ **Gender sensitivity:** Male staff awareness gaps → embarrassment. ❖ **Disposal problems:** Lack of bins/incinerators → unsafe flushing.

Way Forward	❖ **Curriculum integration:** Menstrual education for all genders. ❖ **Vending machines & incinerators:** Privacy + safe disposal. ❖ **Community engagement:** ASHAs/Anganwadi outreach to parents. ❖ **Digital monitoring:** Real-time stock & inspection portals. ❖ **Local SHG production:** Affordable biodegradable pad supply.
Conclusion	The verdict transforms **menstruation from a private hygiene issue to a constitutional right**, aiming to ensure that **a girl's period never interrupts her education or dignity**. Effective infrastructure and social acceptance will determine real success.

Topic 2 - Supreme Court Stays UGC Equity Regulations 2026

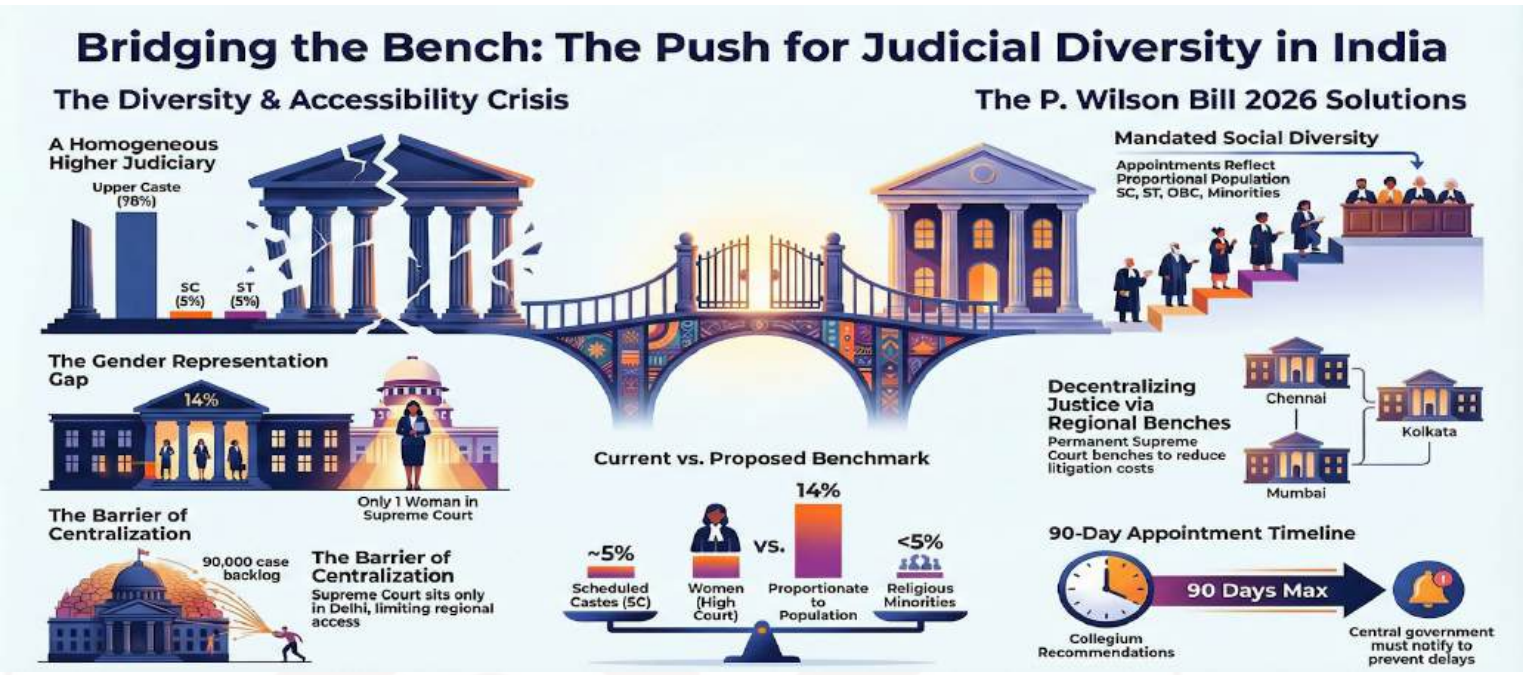
Syllabus	Paper III | Polity and Governance
Context	The **Supreme Court stayed the UGC (Promotion of Equity in Higher Education Institutions) Regulations, 2026**, directing continuation of the **2012 guidelines** due to concerns of vagueness and possible social division.
What is the issue?	❖ UGC attempted to **replace the 2012 advisory equity rules** with **strict, enforceable 2026 regulations**. ❖ Aim → curb caste discrimination after incidents like Rohith Vemula & Payal Tadvi cases. ❖ Backlash due to **over-criminalisation, vague terms, and exclusion concerns**.
Key Features of 2026 Regulations	❖ **Separate discrimination definitions:** General vs caste-based (SC/ST/OBC specific). ❖ **Mandatory infrastructure:** Equal Opportunity Centres, Equity Ambassadors & Squads. ❖ **Strict timelines:** 24-hour complaint response, 15-day investigation. ❖ **Punitive action:** De-recognition, grant withdrawal, UGC scheme ban. ❖ **Direct accountability:** The Head of Institution is personally liable. ❖ **24×7 support:** Equity helpline + online complaint portal.
Arguments in Favor (Pro-Equity)	❖ **Constitutional Mandate:** Directly operationalizes Articles 14, 15, 17, and 21, ensuring dignity and equal opportunity for marginalized groups. ❖ **Rising Grievances:** Addresses a documented surge in campus discrimination; formal complaints rose from **173 in 2019-20** to **378 in 2023-24**. ❖ **Prevention of Extremes:** Seeks to prevent student suicides (e.g., Rohith Vemula case) by providing confidential, fast-track reporting. ❖ **Leveling the Playing Field:** Argues that "Equity" is not a zero-sum game but a necessary correction for historical disadvantages.

	❖ **Structured Accountability:** Standardizes grievance redressal nationwide, making institutions legally responsible for student safety.
Arguments Against (Critics & Legal Concerns)	❖ **Subjectivity & Vagueness:** The rules focus on the *impact* of an action rather than the *intent*, which critics argue allows for perception-based complaints without objective proof. ❖ **Reverse Discrimination:** By defining caste discrimination only against SC/ST/OBC groups, critics argue that the rules ignore the potential victimization of General Category students. ❖ **Lack of Deterrents for Abuse:** There are currently no specified penalties for filing false or malicious complaints. ❖ **Bureaucratic Overreach:** Small institutions may struggle with the financial and staffing costs of 24/7 helplines and dedicated "Equity Squads." ❖ **Campus Polarization:** Fears that "Equity Ambassadors" could lead to a culture of surveillance and identity-based division rather than academic unity.
Way Forward	❖ **Inclusive redrafting:** Universal discrimination definition. ❖ **Expert committee review:** Academicians + jurists for clarity. ❖ **Anti-misuse safeguards:** Penalties for false complaints. ❖ **Holistic protection:** Include ragging, regional & cultural bias. ❖ **Sensitisation focus:** Orientation & empathy programs over only punishment.
Conclusion	The stay signals that **equity laws must balance protection with inclusiveness and clarity**, ensuring campus safety without deepening social divisions.
India's key initiatives to dismantle caste-based barriers in the education sector	**Constitutional & Legislative Safeguards** ❖ **Article 15:** Empowers the State to create "special provisions" (reservations) for SC/ST students in both public and private educational institutions. ❖ **Article 46:** A Directive Principle that mandates the State to protect marginalized groups from social injustice and exploitation. ❖ **SC/ST (Prevention of Atrocities) Act, 1989:** A powerful legal deterrent that criminalizes blocking educational access or publicly insulting SC/ST members. **Financial & Academic Support Schemes** ❖ **SHRESHTA:** Offers meritorious SC students seats in high-quality private residential schools to bridge the gap between government and elite private schooling. ❖ **National Fellowship (SC/ST):** Provides direct financial aid to M.Phil and Ph.D. scholars, fostering academic independence and reducing reliance on faculty-controlled grants. ❖ **Top Class Education Scheme:** Offers full funding for SC/ST students admitted to premier institutes (e.g., IITs, IIMs) to ensure cost is not a barrier to excellence. ❖ **PM-AJAY:** Focuses on infrastructure, specifically building hostels to ensure SC students have safe housing, which improves retention rates and reduces social

	isolation.

Topic 3 - The Need for Diversity in the Higher Judiciary	
Syllabus	Governance
Context	The debate surrounding the inclusivity of the Indian legal system has been reignited by the introduction of a **Private Member's Bill** in the Rajya Sabha: the **Constitution (Amendment) Bill, 2026**. Introduced by MP P. Wilson, the Bill seeks to mandate social diversity in the higher judiciary and establish regional benches of the Supreme Court to democratize access to justice.
Current Landscape: Data and Statistics	The Indian higher judiciary (Supreme Court and High Courts) currently faces a significant representation gap across caste, gender, and regional lines: ❖ **Caste Imbalance:** Between 2018 and 2024, approximately **78%** of High Court judges belonged to upper castes. Scheduled Castes (SCs) and Scheduled Tribes (STs) accounted for only about **5% each**. ❖ **Gender Gap:** As of August 2024, women constitute only **14%** of High Court judges. In the Supreme Court, there is currently only **one sitting woman judge** (Justice B.V. Nagarathna). ❖ **Minority Representation:** Religious minorities account for **less than 5%** of judicial appointments in the higher judiciary over the last six years. ❖ **Geographical Concentration:** Lawyers practicing in Delhi have a disproportionate advantage in elevations to the Supreme Court, while regional talent remains underrepresented.
Key Provisions of the Amendment Bill, 2026	The Bill proposes three transformative shifts in the judicial appointment process: ❖ Mandatory Social Diversity: It seeks to ensure that appointments to the SC and HCs include representation for SCs, STs, OBCs, minorities, and women in proportion to their population. ❖ Regional Benches of the SC: It mandates the creation of permanent regional benches in Kolkata, Mumbai, and Chennai, alongside the main Constitution Bench in New Delhi. ❖ Strict Timelines: It sets a 90-day limit for the Central Government to notify Collegium recommendations, aiming to prevent "pocket vetoes" and administrative delays.
Why Diversity Matters: The Multi-Dimensional Need	❖ **Enhanced Public Trust:** A bench that reflects the social fabric of the nation enhances the perceived legitimacy of the courts. The elevation of Justice B.R. Gavai is often cited as a milestone in boosting faith among marginalized communities.

- **Inclusivity in Legal Interpretation:** Judges bring their "lived experiences" to the bench. Women judges, for instance, often provide greater sensitivity in gender-sensitization matters and domestic violence cases.
- **Correcting Historical Under-representation:** Structured inclusion is required to overcome systemic barriers that have prevented a woman from becoming Chief Justice of India for over seven decades.
- **Democratization of the Bar:** Visible role models at the top motivate first-generation lawyers and those from backward classes to pursue judicial careers.



Challenges and Structural Barriers

- **Opacity of the Collegium:** The current system (born from the **Second and Third Judges Cases**) lacks a formal, transparent mechanism for ensuring diversity, often relying on the discretion of senior judges.
- **The "Old Boys' Club" Mentality:** Informal networks and patriarchal norms frequently favor established legal dynasties, creating a "funnel effect" that filters out diverse candidates.
- **Lack of Formal Quotas:** Unlike the lower judiciary, which follows state-level reservations, the higher judiciary has no constitutional mandate for quotas, making diversity an incidental rather than a mandatory goal.
- **Logistical Pendency:** With over **90,000 cases pending** in the Supreme Court (January 2026), the lack of regional benches forces litigants from distant states like Tamil Nadu or the Northeast to incur massive costs, effectively denying "equitable access."

Constitutional and Legal Framework

Article	Subject Matter	Significance for Reform
Article 124	SC Judge Appointments	Currently interpreted via the **Collegium system**.
Article 130	Seat of the Supreme Court	Provides the CJI power to appoint regional seats with Presidential approval.

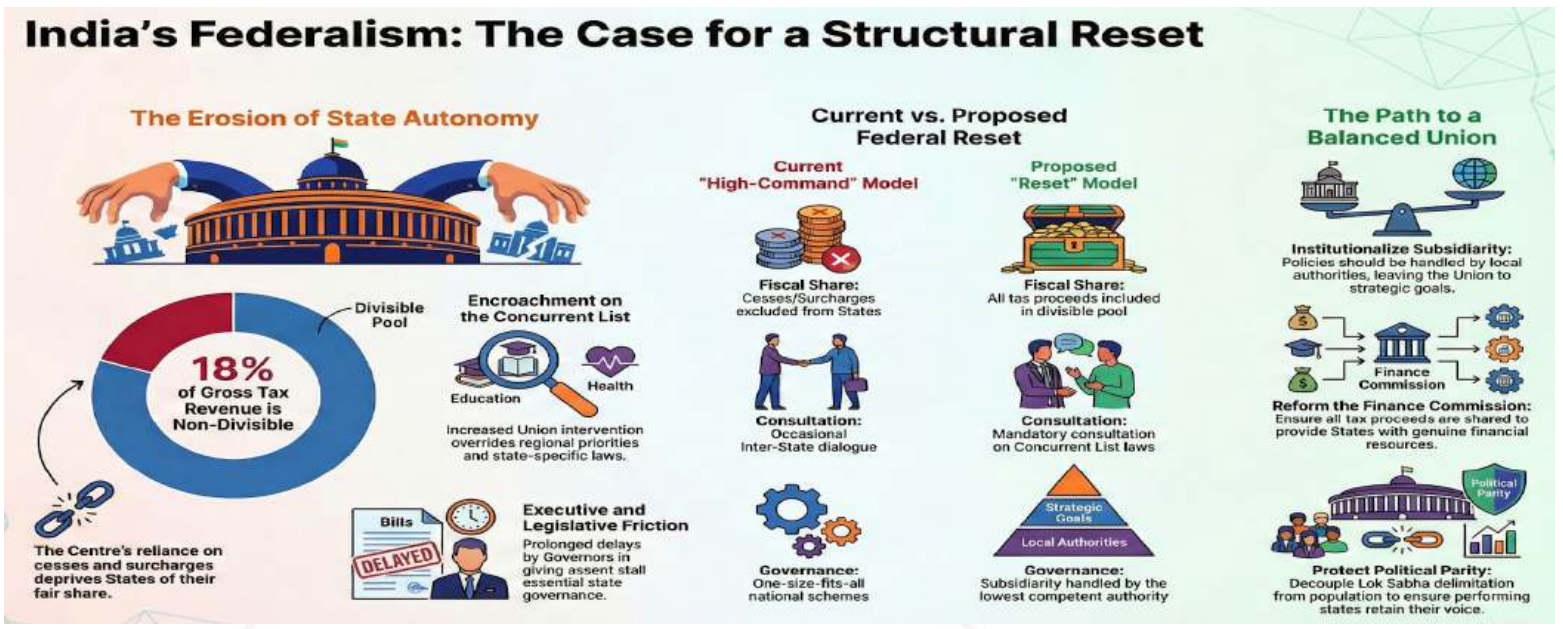
Article 217	HC Judge Appointments	Governs the consultation between the CJI, the Governor, and the Chief Justice of HC.

Way Ahead	❖ **Institutionalizing Diversity Metrics:** Demographic diversity should be formally included in the **Memorandum of Procedure (MoP)** for judicial appointments. ❖ **Decentralizing Justice:** Setting up regional benches as per the **Law Commission's recommendations** to reduce the burden on the Delhi bench and lower litigation costs for the poor. ❖ **Transparent Selection (NJAC 2.0):** There is a growing call to revive a modified **National Judicial Appointments Commission** that balances judicial independence with a broad-based selection committee including civil society. ❖ **Mentorship Pipelines:** Creating formal programs to identify and mentor high-potential lawyers from marginalized backgrounds early in their careers.
Conclusion	The pursuit of judicial diversity is not a compromise on merit; rather, it is the fulfillment of a constitutional promise. A diverse judiciary enriches legal jurisprudence with the collective wisdom of India's varied social realities. By addressing structural biases and implementing the reforms suggested in the P. Wilson Bill, India can ensure that its "temples of justice" are truly representative of the people they serve.

Topic 4 - India's Federalism

Syllabus	Paper III | Polity/Federalism
Context	The **Justice Kurian Joseph Committee Report (Part I)**, commissioned by Tamil Nadu, calls for a "structural reset" of Indian federalism. It aims to restore state autonomy by curbing the Union's expanded, centralized role, arguing that the post-Partition centralization is outdated for a diverse democracy.
Current Constitutional Architecture	India's federalism is often described as **"Quasi-Federal,"** characterized by a dual polity but with a strong "Union" tilt. ❖ **Article 1:** Defines India as a **"Union of States,"** implying an indissoluble unity where states are essential constituent units, not mere administrative appendages. ❖ **The Seventh Schedule:** Demarcates power via the **Union List** (97 subjects), **State List** (66 subjects), and **Concurrent List** (47 subjects). Under **Article 254**, Union law prevails in case of conflict on concurrent subjects. ❖ **Basic Structure Doctrine:** In **S.R. Bommai vs. Union of India (1994)**, the Supreme Court declared federalism part of the Constitution's "Basic Structure," protecting it from arbitrary legislative or executive erosion.

❖ **Fiscal Federalism:** Under **Article 280**, a **Finance Commission** is mandated every five years to recommend the distribution of tax proceeds to correct vertical and horizontal imbalances.



The Need for a Structural Reset	The demand for a reset stems from a perceived distortion of the original constitutional balance through "persistent overreach" by the Union. ❖ **Erosion of Fiscal Autonomy** ➢ States manage significant expenditure responsibilities (Health, Education, Policing) but possess limited taxation powers. ➢ **Cess and Surcharge Trap:** The Union increasingly relies on cesses and surcharges (rising to **~18% of gross tax revenue** by 2025), which are excluded from the divisible pool under **Article 270**, depriving states of their fair share. ➢ **GST Constraints:** While GST simplified trade, it significantly reduced states' independent fiscal maneuverability. ❖ **Encroachment on the Concurrent List** ➢ The Union has increasingly used national policies (e.g., **NEP 2020**) and subordinate legislation to override state-specific priorities in education, health, and agriculture. ➢ **Executive Overlap:** Central ministries now duplicate functions traditionally assigned to states, creating regulatory complexity and diminishing local accountability. ❖ **Crisis of the Gubernatorial Office** ➢ The role of the **Governor** has evolved into a point of friction. Prolonged delays in giving **assent to Bills** in states like Kerala and Tamil Nadu (2024–25) have hindered state legislative functioning and forced repeated judicial interventions. ❖ **Centralized Digital & Scheme Templates** ➢ **CSS Micromanagement:** Centrally Sponsored Schemes (CSS) often impose "one-size-fits-all" templates. For example, rigid fund-use norms in **MGNREGS** can limit drought-specific adaptations in states like Rajasthan or Tamil Nadu.

	➢ **Digital Mandates:** Centralized digital architectures sometimes bypass state administrative structures, leading to exclusion errors in remote regions.
Challenges Associated with the Reset	❖ **Delimitation 2026:** Southern states fear a loss of political representation if Lok Sabha seats are reallocated solely based on population, essentially penalizing states that successfully implemented family planning. ❖ **National Security Overlap:** The expansion of Central agencies' jurisdiction (e.g., **BSF jurisdiction** in Punjab) often overlaps with the state's "Law and Order" mandate, leading to friction. ❖ **Capacity Paradox:** The Union justifies intervention by citing a lack of state "capacity," yet persistent intervention prevents states from developing their own institutional competence.
Strategic Recommendations: The Way Forward	The objective of a reset is to align **authority with accountability** at the level closest to the citizen. ❖ **Finance Commission Reform:** Expand the divisible pool to include all cesses and surcharges to provide states with untied financial resources. ❖ **Revitalize the Inter-State Council (Article 263):** Transform it into a mandatory consultative body for all legislation pertaining to the Concurrent List. ❖ **Institutionalize Subsidiarity:** Adopt the principle that policy should be handled by the lowest competent authority, leaving the Union to focus on strategic national goals (Defense, Foreign Policy, Railways). ❖ **Governor Reform:** Implement the **Sarkaria and Punchhi Commission** recommendations to limit discretionary powers and set a strict timeframe for Bill assent. ❖ **Protect Political Parity:** Decouple delimitation from mere population numbers to ensure that performing states retain their voice in the Union.
Conclusion	As K. Santhanam observed, **"Authority is most effective when exercised closest to knowledge and accountability."** A structural reset is not a demand for a weaker Union, but for a "right-sized" one that trusts its constituent units. By transitioning from "high-command federalism" to a partnership-based enterprise, India can sustain its diverse identity while enhancing governance efficiency for the **Viksit Bharat 2047** vision.

IR

Topic 1 - India–USA Trade Deal	
Syllabus	Paper III | International Relations
Context	India and the USA concluded a major trade reset in Feb 2026, cutting tariffs and ending prolonged trade friction while deepening strategic–economic alignment.
What is it?	❖ **Bilateral Trade Reset:** A reciprocal agreement announced by both leaders to **de-escalate 2025 trade tensions**. ❖ **Core Idea:** Lower tariffs + market access for India **in exchange for energy, technology, and agriculture purchase commitments** to the US.
Key Features	❖ **Tariff Cut:** Effective US tariffs on Indian goods **50% → ~18%**. ❖ **Removal of Penalty Duties:** Extra **25% punitive levy scrapped**. ❖ **Energy Pivot:** India to **diversify oil sourcing** toward the US/others, reducing over-reliance on discounted suppliers. ❖ **Purchase Commitment: ~$500 billion multi-year imports** of US energy, agriculture, coal, and technology. ❖ **Reciprocal Access:** India to **gradually reduce tariffs / NTBs** on select US industrial goods. ❖ **Sector Safeguards: Dairy & staple crops excluded** to protect domestic farmers. ❖ **Tech & Nuclear Cooperation:** Expanded access for US firms in **data centres & civil nuclear** segments. ❖ **Preferential Rate:** India's **18% tariff** is better than many regional competitors (~19–20%).
Significance	❖ **Export Revival:** Restores competitiveness for **textiles, leather, gems & jewellery, and marine goods**. ❖ **Strategic Alignment:** Strengthens **Indo-Pacific partnership** and supply-chain de-risking from China. ❖ **Market Stability:** Reduced uncertainty → **currency & equity market support**. ❖ **FDI Boost:** Data centres, clean energy, and high-tech manufacturing are likely to attract **US investments**. ❖ **Supply-Chain Role:** Positions India as a **lower-tariff alternative hub** for global firms.
Key Challenges	❖ **Strategic Autonomy:** Energy diversification may **strain legacy defence–energy ties** with other partners. ❖ **Domestic Backlash: Farmer & MSME concerns** over import competition. ❖ **Zero-Tariff Risk:** Rapid duty cuts could **outprice small manufacturers**.

	❖ **Import Bill Pressure:** Costlier energy sourcing may **widen the Current Account Deficit (CAD)**. ❖ **Non-Tariff Barriers: SPS/TBT standards** in the US can still restrict Indian exports.
Way Forward	❖ **Legal Finalisation:** Convert the joint statement into a **binding treaty with clear schedules**. ❖ **Infrastructure Upgrade: LNG terminals, ports, logistics** to handle higher energy trade. ❖ **Trade Diversification:** Parallel FTAs with the **EU, UK, and Gulf** to avoid single-market dependence. ❖ **MSME Transition Support: Tech upgradation, credit, export incentives**. ❖ **Standards Monitoring:** Bilateral mechanism to check **backdoor protectionism via SPS/TBT**.
Conclusion	The 2026 India–US trade pact secures **lower tariffs and export relief** while trading off energy and market-access concessions. Long-term gains will hinge on **protecting farmers/MSMEs, managing import costs, and diversifying trade partners** alongside deeper strategic cooperation.
India-US Tariff Evolution and Trade Relations	**Background of Tariff Evolution** The transition to a stabilized **18% tariff** followed a period of intense "transactional diplomacy" in 2025: ❖ **The "Tariff King" Response:** In mid-2025, the US matched India's average duties by imposing a **25% reciprocal tariff** on Indian goods. ❖ **Russian Oil Friction:** Due to India's continued purchase of Russian crude, the US added a **25% punitive extra duty** in August 2025, briefly totaling **50%**. ❖ **Strategic Regional Leverage: Operation Sindoor (May 2025):** India launched high-precision tri-service strikes against terror launchpads in Pakistan (Muridke, Bahawalpur, and PoK) following the Pahalgam terror attack. ➢ **Ceasefire Link:** The US utilized trade/tariff leverage to push for a ceasefire and regional stability during the crisis. ❖ **India's De-escalation Measures: Tariff Slashes:** India proactively cut duties on US luxury goods (heavy motorcycles, bourbon) in the 2025 Union Budget. ➢ **SHANTI Act, 2025:** Passed to modernize nuclear laws, repeal the Atomic Energy Act (1962), and allow private/foreign participation in the nuclear sector.
India-US Trade Relations (FY25 Snapshot)	The partnership reached historic highs despite diplomatic tensions: ❖ **Trade Volume:** Bilateral trade hit a record **USD 132 billion** (up from USD 119.71 billion in FY24). ❖ **Trade Surplus:** India maintained a surplus of **USD 40.82 billion**. ❖ **Investment:** The US remains the 3rd largest investor in India (cumulative FDI: **USD 70.65 billion**). **Key Trade Commodities**

India's Imports from the US	India's Exports to the US
Mineral fuels and oils	Electrical machinery
Precious stones and metals	Pharmaceuticals (Generics)
Nuclear reactors and machinery	Iron and steel articles
Electrical equipment	Machinery and appliances

Strategic Initiatives: COMPACT & Mission 500

Launched in 2025, the **US-India COMPACT** (Catalyzing Opportunities for Military Partnership, Accelerated Commerce & Technology) sets the roadmap for the next decade:

- **Mission 500:** A target to more than double bilateral trade to **USD 500 billion by 2030**.
- **Interim Trade Deal (Feb 2026):** Establishes an **18% reciprocal tariff** and offers preferential access for Indian generic drugs, aircraft parts, and auto components.
- **Defense Co-production:** Under the Major Defense Partnership (2025-2035), initiatives include co-producing **Javelin missiles** and **Stryker vehicles**.

Topic 2 - India–France Special Global Strategic Partnership

Syllabus	Paper III | IR/Bilateral Relations
Context	In February 2026, the India-France relationship was elevated to a **"Special Global Strategic Partnership,"** moving beyond a buyer-seller dynamic to a comprehensive alliance for global security, technological sovereignty, and innovation, guided by the **Horizon 2047 Roadmap**. This landmark was set during French President Emmanuel Macron's visit to India for the launch of the **2026 India-France Year of Innovation** and the **AI Impact Summit**.
Historical Foundations of Trust	The relationship is anchored in a shared commitment to **Strategic Autonomy** and a multipolar world order: - **1998:** France was the first Western power to sign a Strategic Partnership with India and notably refused to impose sanctions after India's nuclear tests. - **2008:** France became the first country to sign a civil nuclear agreement with India following the NSG waiver. - **Horizon 2047:** Adopted in 2023, this roadmap celebrates 25 years of partnership and charts the course for the next quarter-century.

Key Outcomes of the 2026 Visit

Sector	Key Initiatives & Agreements

Defense	Finalized procurement of **26 Rafale-Marine jets**; Inaugurated the **H125 Final Assembly Line** (Tata-Airbus)—India's first private helicopter facility.
Nuclear Energy	Commitment to co-develop **Small Modular Reactors (SMRs)**; France lauded India's **SHANTI Act, 2025**, which allows private investment in nuclear power.
AI & Innovation	Launch of the **India-France Innovation Network**; Joint research center involving **AIIMS Delhi** and the **Paris Brain Institute** for AI in healthcare.
Space	Expanding cooperation in human spaceflight and the **TRISHNA Mission**; India to participate in the 2026 International Space Summit.
Mobility	Targeting **30,000 Indian students** in France by 2030; Introduced a 6-month pilot for **visa-free transit** for Indians through French airports.

Strategic Pillars of Cooperation

❖ **Defense and Security Industrialization**

➢ France has emerged as India's **second-largest arms supplier**. The focus has shifted toward the **Defense Industrial Roadmap**, emphasizing co-development (e.g., Safran-HAL jet engines) rather than just off-the-shelf purchases.

➢ Regular tri-service exercises—**Shakti (Army), Varuna (Navy), and Garuda (Air Force)**—ensure high levels of interoperability.

❖ **Indo-Pacific Synergy**

Both nations view the Indo-Pacific as a "free, open, and rules-based" zone. Collaboration is channeled through:

➢ **Indo-Pacific Oceans Initiative (IPOI):** Joint efforts in maritime security and blue economy.

➢ **Trilateral Formats:** Engaging with partners like **Australia and the UAE** to stabilize the region.

➢ **Multilateral and Climate Leadership**

➢ France remains a steadfast supporter of **India's permanent membership in the UNSC**. Together, they lead the **International Solar Alliance (ISA)** and have collaborated on the **BBNJ Treaty** (Marine Biodiversity) and the **United Nations Ocean Conference**.

Critical Challenges and Concerns

❖ **Geopolitical Divergences:** Differing nuances on global conflicts, such as the **Ukraine war**, require careful diplomatic balancing.

❖ **Trade Barriers:** Long-standing hurdles in the **India-EU FTA**, including Sanitary and Phytosanitary (SPS) measures and strict EU data regulations (GDPR) versus India's DPDP Act, 2023.

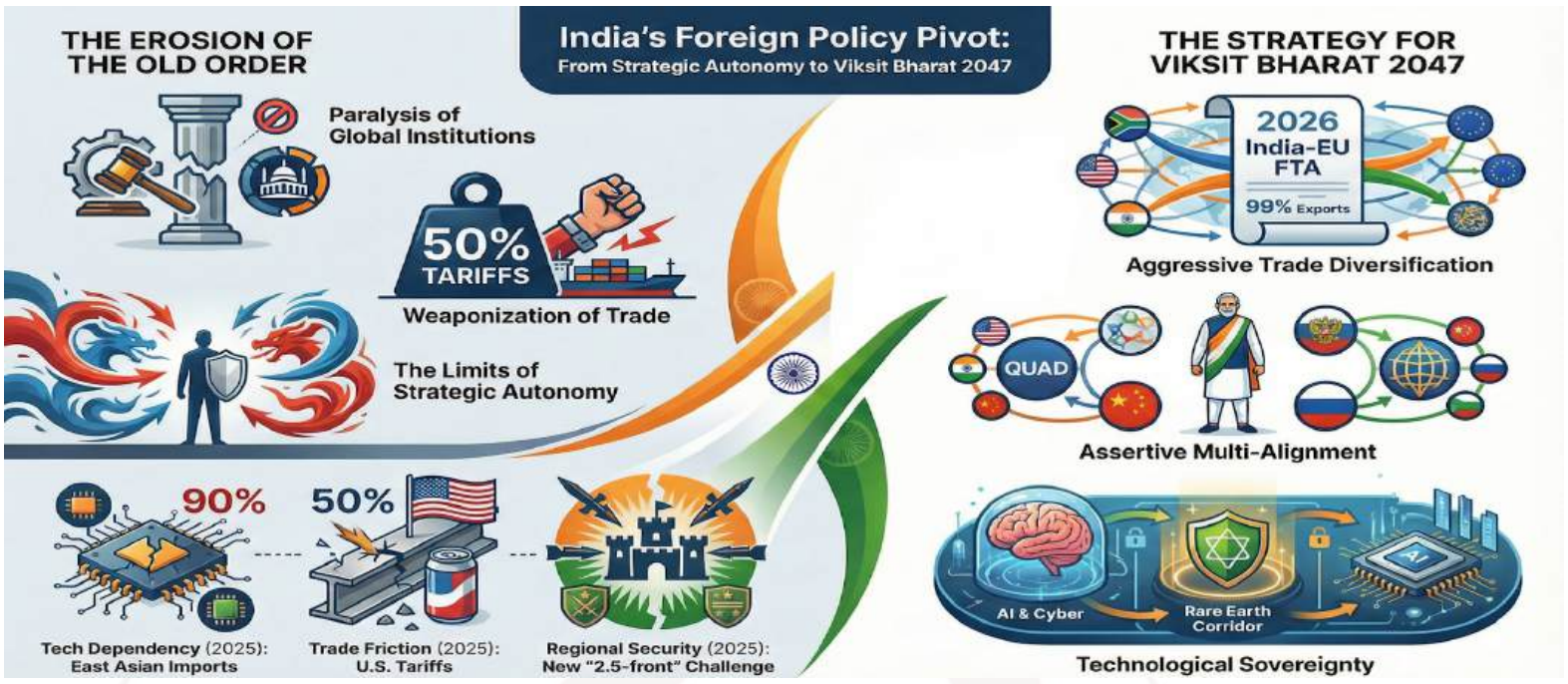
	❖ **Implementation Gaps:** Technical and liability issues continue to delay flagship projects like the **Jaitapur Nuclear Power Plant**. ❖ **Regional Volatility:** Instability in the Middle East poses a direct threat to the **India-Middle East-Europe Economic Corridor (IMEC)**.
Way Forward: Strengthening the "Third Pole."	To realize the full potential of the Special Global Strategic Partnership, both nations should: ❖ **Operationalize IMEC:** Prioritize ministerial dialogues to turn the connectivity corridor into a physical reality. ❖ **Technological Democratization:** Work together to bridge the global AI divide, ensuring the Global South has access to "safe and trustworthy" AI. ❖ **Critical Mineral Cooperation:** Launch joint investments in critical minerals and advanced materials essential for the green transition. ❖ **Cultural Diplomacy:** Establish the **Swami Vivekananda Cultural Centre** in Paris and deepen cooperation on heritage projects like the **National Maritime Heritage Complex** at Lothal.
Conclusion	The elevation to a **Special Global Strategic Partnership** signifies a move beyond traditional buyer-seller dynamics toward a collaborative alliance. By aligning their respective "Atmanirbhar Bharat" and "Horizon 2047" visions, India and France are positioning themselves as the twin pillars of a stable, multipolar world, ensuring that their strategic autonomy serves as a force for global good.

Topic 3 - Reframing India’s Foreign Policy

Syllabus	**Paper III | IR**
Context	Prime Minister Narendra Modi recently told Parliament that India's foreign policy is shifting from the long-held doctrine of **Strategic Autonomy** (tactical neutrality) to a more assertive, interest-driven approach to global engagement.
The Erosion of the Rules-Based Multilateral Order	The primary driver for this reframing is the collapse of post-1945 institutions, which no longer serve India's developmental or security needs: ❖ **Institutional Paralysis:** The **UNSC** is deadlocked by veto-player rivalries, while the **WTO** faces a terminal crisis due to the blockade of its dispute settlement mechanism. ❖ **The Rise of Transactional Diplomacy:** Shared liberal values are being replaced by "America First" or "China-centric" transactionalism. ➢ *Example:* The U.S. exit from the **International Solar Alliance (ISA)** and the **WHO** (2025–26) underscores a global retreat from public goods. ❖ **Weaponization of Interdependence:** Control over semiconductors, SWIFT networks, and energy flows is now used as a tool of coercion.

➢ *Example:* In 2025, 50% U.S. tariffs on Indian steel were explicitly linked to India's purchase of Russian oil.

❖ **China's Institutional Capture:** Beijing now leads four of 15 UN specialized agencies, using its influence to skew global standards in digital governance and infrastructure.



The Limits of Traditional Strategic Autonomy	Strategic autonomy, a product of the Cold War, faces modern obsolescence in a hyper-connected world: ❖ **The Swing State Trap:** Western allies no longer view India's autonomy as a constant but as a "swing state" variable that must be incentivized to join their bloc. ❖ **Technological Exclusion:** In a world of "Chip Wars," neutrality can lead to exclusion from critical technology supply chains. ➢ *Example:* India's **90% dependence** on East Asian semiconductors (2025 data) limits its ability to set Indo-Pacific tech norms. ❖ **The 2.5 Front Challenge:** The proposed **Bangladesh-Pakistan mutual defense agreement (2025)** and China's maritime encirclement in the Indian Ocean Region (IOR) have made "balancing" more precarious than ever.

India's Evolution: A Multi-Vector Approach

Era	Core Doctrine	Key Characteristic
1947–1964	**Idealism & Non-Alignment**	Sovereignty through neutrality; Panchsheel.
1964–1991	**Security Realism**	Regional stability: 1971 Indo-Soviet Treaty.
1991–2014	**Economic Diplomacy**	Look East Policy; LPG reforms; 2008 Civil Nuclear Deal.
2014–Present	**Assertive Multi-Alignment**	Issue-based choices: "Vishwa Bandhu" (Global Friend).

Reframing the Strategy: Refocusing on Viksit Bharat	India is adopting a proactive stance defined by four strategic pillars: ❖ **Technological Sovereignty as Sovereignty:** Future power is defined by AI, cyber, and space. India is shifting from a "rule-taker" to a "rule-maker." ➢ *Initiative:* The 2026 **AI Impact Summit** in New Delhi and the **India-Russia GLONASS/NavIC agreement** represent a move toward non-Western digital and navigation ecosystems. ❖ **Aggressive Trade Diversification** To bypass U.S. tariff volatility, India is pursuing "The Mother of All Deals." ➢ *Success:* The **India-EU FTA (Jan 2026)** created the world's largest free trade zone, covering 99% of India's export trade. ➢ *Strategy:* Prioritizing **"Friend-shoring"** via the **Supply Chain Resilience Initiative (SCRI)** to de-risk from China. ❖ **Leadership of the Global South:** India has institutionalized its role as a "stabilizing pole" by inducting the **African Union into the G20** and exporting its **Digital Public Infrastructure (DPI)** as a global public good. ❖ **D. Neighborhood Pragmatism:** Reframing relations with Pakistan and Bangladesh as foreign policy challenges rather than existential security crises to ensure domestic focus remains on economic growth. ➢ *Example:* Using energy diplomacy and investment to stabilize regional interests.
Key Challenges Ahead	❖ **The China Asymmetry:** A massive trade deficit and dependency on Chinese rare earths (essential for missile programs) remain a critical vulnerability. ❖ **Expectation-Responsibility Gap:** As India rises, the world expects definitive stands on global conflicts, testing the limits of "De-hyphenated Diplomacy." ❖ **Infrastructure "Lock-in":** Managing the "transactional" nature of trade, where major powers demand concessions first before providing market access.
Conclusion	India’s foreign policy is undergoing its most significant transformation since 1991. By shifting from a defensive posture of strategic autonomy to an assertive **Viksit Bharat 2047** vision, New Delhi aims to navigate a fragmenting world. India no longer seeks to balance between blocs merely but to emerge as an independent **"Third Pole"**—a stabilizer that bridges the polarized West and the Global South.

Topic 4 - India–EU Free Trade Agreement	
Syllabus	Paper III | IR/Bilateral Relations
Context	India and the EU concluded a long-pending FTA at the 16th India–EU Summit, ending two decades of negotiations and creating a major strategic economic corridor.
What is it?	❖ **Comprehensive trade pact** → tariff reduction on goods, liberalised services, and higher investment flows. ❖ Covers **~25% of global GDP** and **~⅓ of world trade**.

	❖ Target → **Double bilateral trade by 2032(Current is approximately 136.54 billion (INR 11.5 Lakh Crore) in 2024–25)** and create stable, rules-based supply chains.
Key Features	❖ **Tariff elimination:** ➢ EU → Duty-free access to **99%+ Indian exports**. ➢ India → Phased tariff cuts on **~92–97% EU goods**. ❖ **Labour-intensive sectors:** Zero duties on textiles, leather, gems, jewellery, and marine products (~USD 33 bn exports). ❖ **Automobile liberalisation:** Quota-based reduced duties for EU luxury cars (110% → ~10%) with domestic safeguards. ❖ **Services & mobility:** Access to **144 EU sub-sectors** (IT, finance, education); easier visas for professionals & intra-corporate transfers. ❖ **Sustainability / CBAM:** Technical cooperation to help Indian MSMEs meet EU green norms. ❖ **Agricultural carve-outs:** Dairy, cereals, and poultry are excluded to protect farmers.
Challenges	❖ **Non-Tariff Barriers:** Strict EU SPS and quality standards for agri-exports. ❖ **Regulatory alignment:** Data privacy, digital trade, AI norms gap. ❖ **IPR pressures:** EU push for data exclusivity may affect generic pharma. ❖ **CBAM costs:** Steel & cement industries face higher carbon-compliance expenses. ❖ **MSME sensitivity:** Competition from advanced EU products/services.

Advantages

For India	For EU
Export boost: Access to a 450-million-consumer EU market.	**Market access:** Entry into the fast-growing Indian middle class.
Talent mobility: Easier work/study pathways for professionals & students.	**Supply-chain security:** China-plus-one diversification.
Trade diversification: Reduces dependence on the US/China.	**Investment certainty:** Stable legal framework for EU firms.
Rural gains: Better access to tea, coffee, spices, and marine goods.	**Cost savings:** Estimated **€4 bn annual duty savings**.

Conclusion	India–EU FTA marks a major shift toward a **multipolar, resilient trade order**, expanding cooperation beyond goods into technology, mobility, and green standards while supporting India's long-term growth vision.

Economy

Topic 1 - 16th Finance Commission Report

Syllabus	Indian Economy | Centre-State Finance
Context	The 16th Finance Commission (2026–31) report was tabled in Parliament along with the Union Budget 2026, retaining **41% tax devolution to States** and introducing new horizontal distribution criteria with a sharper focus on GDP contribution and fiscal discipline.
What is it?	❖ **Finance Commission:** Constitutional body under **Article 280** that recommends **tax devolution & grants** between the Centre and States. ❖ **16th FC Tenure: 2026–2031** → aims to balance **fiscal federalism, growth incentives, and debt sustainability**. ❖ Core focus → **stable vertical share + revised horizontal formula + streamlined grants**.
Vertical Devolution – Share of States	❖ **States' Share: 41% of the divisible pool** retained (same as 15th FC). ❖ **Divisible Pool:** Gross central taxes **minus cesses, surcharges & collection costs**. ❖ **Impact:** Ensures **predictability & fiscal stability** for states; strengthens cooperative federalism.
Horizontal Devolution – New Formula (Among States)	❖ **Key Criteria & Weights (16th FC):** ➢ **Income Distance – 42.5%** → slight reduction; based on **per-capita GSDP gap** with top 3 states. ➢ **Population (2011) – 17.5%** → increased weight. ➢ **Demographic Performance – 10%** → now based on **population growth (1971–2011)**. ➢ **Area – 10%** → reduced weight. ➢ **Forest & Ecology – 10%** → includes **open forests + increase in forest cover (2015–23)**. ➢ **Contribution to GDP – 10% → new parameter** rewarding economic size (√GSDP). ➢ **Tax Effort – 0% → dropped** entirely. ❖ **Essence:** Blend of **equity (income distance)** + **efficiency (GDP weight)** + **ecology & demographics**.
Grants-in-Aid (Total ≈ ₹9.47 Lakh Crore)	❖ **Local Body Grants – ₹7.91 Lakh Cr** ➢ **Rural Bodies:** ₹4.35 Lakh Cr ➢ **Urban Bodies:** ₹3.56 Lakh Cr ➢ **Structure: 80% Basic (50% tied to water/sanitation)** + **20% Performance**. ➢ **Urban Add-Ons:**

	○ **Special Infrastructure Grant – ₹56,100 Cr** → wastewater management (10–40 lakh cities). ○ **Urbanisation Premium – ₹10,000 Cr** → peri-urban merger & transition planning. ➢ **Conditionalities:** Timely **State Finance Commissions, audited accounts, and proper constitution** of local bodies. ❖ **Disaster Management Grants – ₹1.55 Lakh Cr** ➢ For the **State Disaster Response Fund (SDRF)/State Disaster Mitigation Fund (SDMF)** corpus. ➢ **Cost Sharing: 90:10** (NE & Himalayan) | **75:25** (others). ❖ *Note:* **Revenue deficit, sector-specific & state-specific grants discontinued** → simplification.
Fiscal Roadmap & Debt Management	❖ **Centre Fiscal Deficit Target: 3.5% of GDP by 2030-31**. ❖ **State's Fiscal Deficit Cap: 3% of GSDP**. ❖ **Off-Budget Borrowings: To be discontinued**; uniform expanded debt definition. ❖ **Combined Public Debt:** Projected decline **77.3% → 73.1% of GDP (2026-31)**.
Power Sector & Subsidy Reforms	❖ **DISCOM Privatisation Push** + **Special Purpose Vehicles (SPV) for warehousing legacy debt**. ❖ **Central Capital Assistance:** Linked to the completion of privatisation. ❖ **Subsidy Rationalisation:** Clear exclusion criteria, **end-of-budget financing**, uniform accounting standards.
Public Sector Enterprise (PSE) Reforms	❖ **Close/Review 308 inactive State PSEs**. ❖ **State Disinvestment Policies** for underperformers. ❖ **Loss-Making PSEs:** Cabinet decision mandatory → **closure/privatisation / strategic retention**.

Topic 2 - Industrial Corridors of India	
Syllabus	Paper I | Economy | Industry
Context	The **Union Budget 2026-27** has further accelerated this vision by announcing the **Integrated East Coast Industrial Corridor** (with a key node at Durgapur) and allocating **₹3,000 crore** to the National Industrial Corridor Development and Implementation Trust (NICDIT).
Current Landscape and Progress	India is currently developing **11 Industrial Corridors** under the **National Industrial Corridor Development Programme (NICDP)**, coordinated via the **PM GatiShakti** framework. ❖ **Investment & Impact:** Phase-I projects alone have attracted over **₹2.02 lakh crore** in investments.

	❖ **Employment:** 12 recently approved projects aim to create approximately **1 million direct jobs**. ❖ **Infrastructure Status:** 4 Phase-I smart cities are completed, with 4 more nearing completion, featuring "plug-and-play" facilities and "walk-to-work" ecosystems.
Major Industrial Corridors	❖ **Delhi–Mumbai Industrial Corridor (DMIC)** ❖ **Chennai–Bengaluru Industrial Corridor (CBIC)** ❖ **Amritsar–Kolkata Industrial Corridor (AKIC)** ❖ **Visakhapatnam–Chennai Industrial Corridor (VCIC)** ❖ **Bengaluru–Mumbai Industrial Corridor (BMIC)** ❖ **Extension of CBIC to Kochi (ECKC)** ❖ **Hyderabad–Nagpur Industrial Corridor (HNIC)** ❖ **Hyderabad–Warangal Industrial Corridor (HWIC)** ❖ **Hyderabad–Bengaluru Industrial Corridor (HBIC)** ❖ **Odisha Economic Corridor (OEC)** ❖ **Delhi–Nagpur Industrial Corridor (DNIC)**
Strategic Features and Significance	❖ **Operational Efficiency & Logistics** ➢ By integrating with **Dedicated Freight Corridors (DFCs)**, these zones drastically reduce the time and cost of moving freight. ➢ The "plug-and-play" model allows businesses to move from "investment to production" with minimal regulatory lead time. ❖ **Factors Influencing Location** The corridors are placed based on a scientific assessment of sectoral drivers: ➢ **Primary Sector:** Proximity to mineral-rich zones (OEC) and fertile agro-belts (AKIC). ➢ **Secondary Sector:** Access to deep-water ports for export-oriented manufacturing (VCIC, ECKC). ➢ **Tertiary Sector:** Connecting technology and knowledge hubs to foster R&D and services (HBIC, CBIC). ❖ **Sustainable Urbanization** ➢ These corridors promote **Low-Carbon Cities (LCCs)**. ➢ They are designed with transit-oriented development, mandatory renewable energy integration, and waste recycling systems, ensuring that industrial growth does not come at an environmental cost. 

Challenges in Implementation	❖ **Land Acquisition:** Negotiating fair compensation and rehabilitating displaced populations remains a complex hurdle. ❖ **Inter-State Coordination:** Many corridors span multiple states, requiring high levels of synchronized policy and infrastructure standards. ❖ **Global Competition:** Competing with established manufacturing hubs in Vietnam and Mexico requires constant improvement in the "Ease of Doing Business." ❖ **Last-Mile Connectivity:** While trunk infrastructure is robust, connecting smaller industrial clusters to the main corridor remains a work in progress.
Government Institutional Framework	❖ **NICDC:** The **National Industrial Corridor Development Corporation** acts as the apex body for coordinating and implementing the programme. ❖ **Special Economic Zones (SEZs):** Embedded within corridors, these offer tax incentives and regulatory advantages to attract Foreign Direct Investment (FDI). ❖ **PM GatiShakti:** Ensures that various ministries (Railways, Shipping, Roadways) work in a synchronized "break-silo" approach.
Conclusion	The shift from isolated industrial pockets to integrated, multi-modal corridors marks a watershed moment in India's economic geography. By aligning regional strengths with global standards, these corridors are not merely transport routes but the nervous system of **Viksit Bharat @ 2047**. They are essential for boosting India's share in global value chains and ensuring balanced regional development.

Topic 3 - Circular Economy in Agriculture: Transforming Waste into Wealth

Syllabus	Paper I | Economy/Agriculture
Context	The Government of India recently highlighted the progress of the **"Waste-to-Wealth"** mission, the **GOBARdhan scheme** has covered over 50% of India's districts.
Introduction	India's agricultural sector produces approximately **350 million tonnes of waste annually**, much of which is either underutilized or burnt, causing severe environmental degradation. Transitioning to a **Circular Economy**—a regenerative system that replaces the "take-make-dispose" model with the **6 Rs (Reduce, Reuse, Recycle, Refurbish, Recover, and Repair)**—is essential. This paradigm shift aims to convert residues into bio-energy, bio-fertilizers, and high-value industrial inputs, driving India toward a **$2 trillion circular market** and 10 million green jobs by 2050.
The Need for Circularity in Agriculture	❖ **Rural Income Diversification:** Converting waste into wealth creates new revenue streams. For instance, processing 50% of wet waste via bio-methanation can contribute **₹2,460 crore annually** to the rural economy. ❖ **Energy Sovereignty:** Agricultural residues hold the potential to generate over **18,000 MW of power**, significantly reducing the carbon footprint of coal-based grids.

	❖ **Soil Health Restoration:** Reintegrating organic matter reduces the "chemical debt" of soils. Bio-slurry and **Biochar** restore soil carbon levels and water retention. ❖ **Climate Mitigation:** Preventing open stubble burning and landfilling reduces massive methane and CO_2 emissions, directly supporting India's **Net Zero 2070** target.

Key Government Initiatives

Initiative	Focus Area	Key Achievement (as of 2026)
GOBARdhan Scheme	Converts cattle dung and food waste into Compressed Biogas (CBG) and manure.	Covered **51.4% of districts**; 979 operational plants.
CRM Scheme	Curbs stubble burning via in-situ and ex-situ management.	Distributed **3.24 lakh machines**; 42,000+ Custom Hiring Centres (CHCs).
AIF (Agri Infra Fund)	Finances post-harvest management and organic input production.	**₹66,310 crore sanctioned**; 545 organic input projects funded.
Biomass Co-firing	Mandates 5–7% agro-residue use in coal power plants.	Current usage at **1.62 MMT** (Target: 38.55 MMT).
AHIDF	Supports livestock waste-to-wealth and dairy processing.	**₹15,000 crore corpus** for scientific byproduct management.

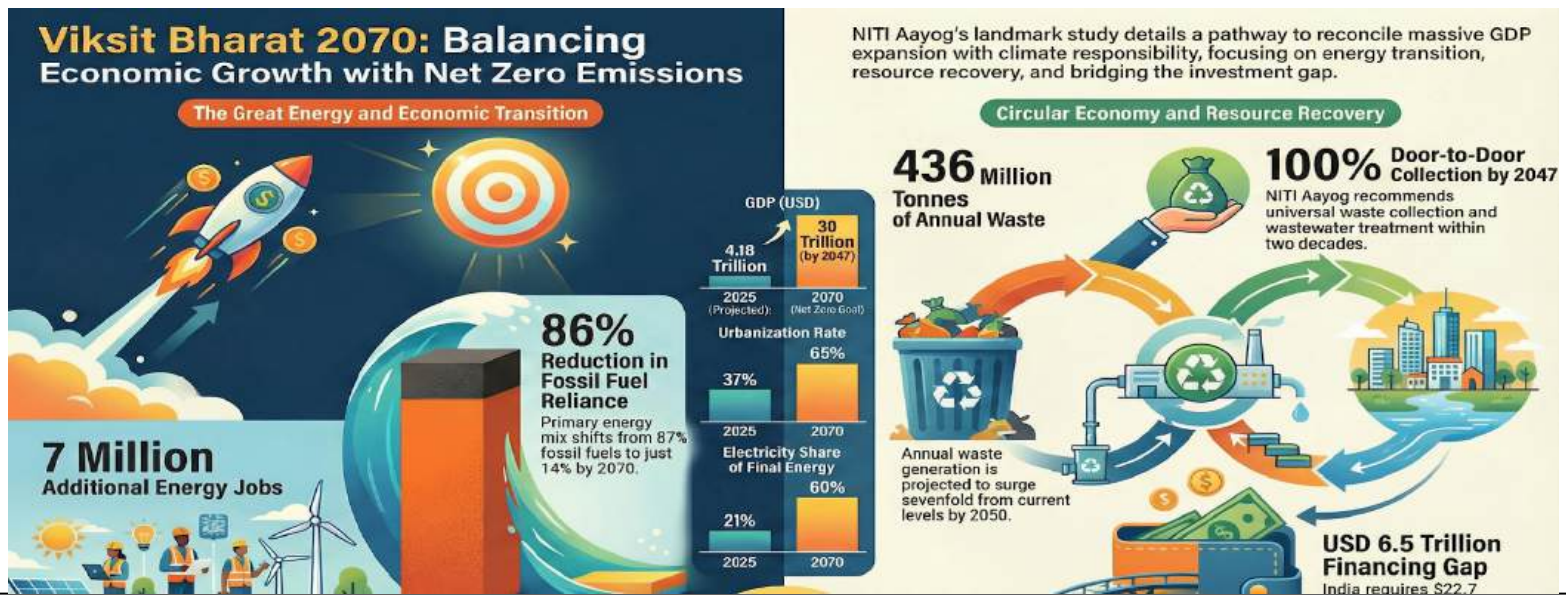
Challenges in Implementation	❖ **Logistical Complexity:** The dispersed, seasonal nature of 350 million tonnes of waste makes aggregation and transport economically infeasible for smallholders. ❖ **High Capital Entry Barrier:** Despite subsidies, the initial cost of biogas plants or high-tech machinery remains a hurdle for marginal farmers. ❖ **Market Imbalances:** Organic fertilizers struggle to compete with **highly subsidized chemical urea**, making waste-to-wealth plants financially fragile. ❖ **Technology-Skill Gap:** Limited technical know-how in rural areas regarding precision farming and the deployment of modular reactors for local power. ❖ **Behavioral Inertia:** Deep-rooted practices like quick land clearing via fire are preferred over machinery due to perceived labor and time advantages.

Way Forward: Strengthening the Framework	❖ **Outcome-Based Monitoring:** Shift from tracking "funds released" to measurable indicators like actual reduction in stubble burning and total biomass utilized. ❖ **Policy Parity:** Grant organic manure and bio-fertilizers similar distribution support and subsidies as chemical fertilizers under the **Fertiliser Control Order**. ❖ **Incentivizing Carbon Credits:** Integrate small-scale farmers into global carbon markets for verified sequestration through Biochar and Biogas production. ❖ **Decentralized Hubs:** Empower **Farmer-Producer Organizations (FPOs)** to manage "Bio-CNG clusters" and secure local supply chains for biomass pellets. ❖ **R&D in Bio-Innovation:** Invest in fast-acting microbes for in-situ decomposition and national boiler compatibility standards for biomass co-firing.
Conclusion	A circular economy in agriculture is not mere "waste management" but a **rural transformation engine**. By successfully scaling the "Waste-to-Wealth" paradigm, India can secure its food systems, empower its farmers, and convert 350 million tonnes of environmental liability into a cornerstone for **Viksit Bharat 2047**.

Topic 4 - Scenarios Towards Viksit Bharat 2047 & Net Zero 2070

Syllabus	Paper I | Indian Economy |Green Economy
Context	NITI Aayog has released a landmark 11-volume integrated modelling study outlining how India can become a USD 30 trillion economy by 2047 while achieving Net Zero emissions by 2070.
What is the Study?	❖ India's first **government-led integrated modelling exercise** aligning growth with decarbonisation. ❖ Prepared by **10 Inter-Ministerial Working Groups** over 18 months. ❖ Uses two scenarios: ➢ **Current Policy Scenario (CPS)** ➢ **Net Zero Scenario (NZS)** aligned with the 2070 commitment. ❖ Anchored in: ➢ UNFCCC principles of **equity & climate justice** ➢ India's **Long-Term Low Emission Development Strategy (LT-LEDS), 2022** ❖ **Core Objective:** Decouple economic growth from GHG emissions while ensuring energy security and inclusive development.
Macro-Economic & Social Trajectory	❖ **GDP Resilience:** Projected rise from **USD 4.18 trillion (2025)** to **USD 30 trillion (2047)**. The Net Zero path has a marginal impact on GDP (±0.5%). ❖ **Urbanization Surge:** Urban population will rise to **65% by 2070**. ➢ *Critical Risk:* 86% of the 2070 building floor space is **yet to be built**, necessitating immediate green standards to avoid "carbon lock-in."

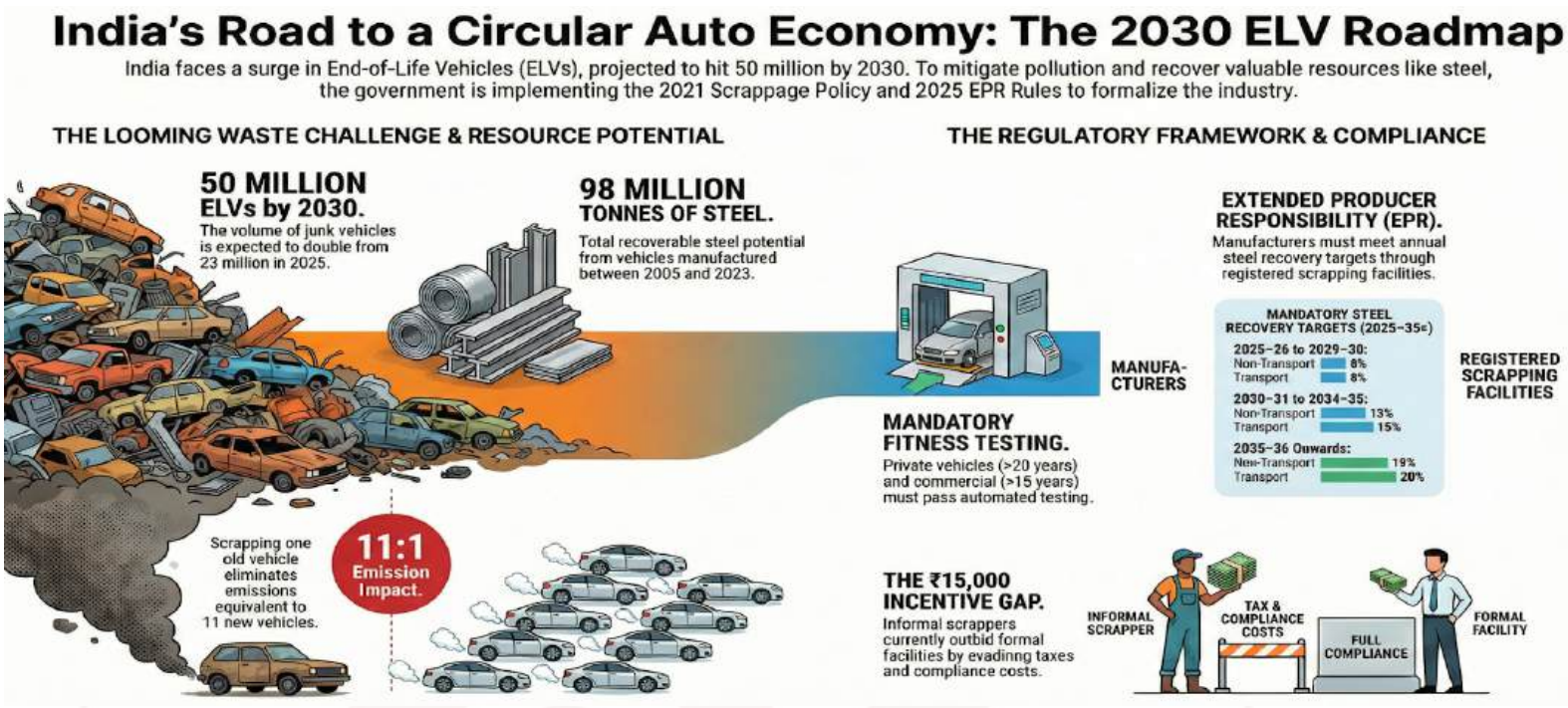
	❖ **Employment Dynamics:** Net Zero paths generate **7 million additional jobs** in energy by 2050, but **17 million workers** in fossil-linked manufacturing face structural disruption.
The Energy Transition Backbone	❖ **Electrification:** Electricity's share in final energy demand will surge from **21% (2025) to 60% (2070)**. ❖ **Power Mix Transformation:** * **Renewables:** Scaling from 164 GW to over **6,000 GW**. ➢ **Nuclear:** Scaling from 8 GW to over **300 GW** for baseload power. ➢ **Fossil Fuels:** Share in primary energy mix to drop from **87% to just 14%** by 2070.
Waste Sector: From Liability to Resource Economy	The waste sector is the **4th largest contributor** to India's emissions, with a **226% growth** in GHGs since 1994. ❖ **Current Burden:** India generates **1.7 lakh tonnes of MSW daily**; e-waste value recovery is only **18%**. ❖ **The Projection:** Waste volumes will jump from 62 MMT today to **436 MMT by 2050**. ❖ **Strategic Interventions:** ➢ **Methane Mitigation:** Tapping the **40-60% organic content** in Indian waste through large-scale bio-methanation to prevent landfill fires. ➢ **Circular Recovery:** Processing 50% of wet waste could contribute **₹2,460 crore annually**. ➢ **New Waste Streams:** A ninefold rise in **Lithium-ion battery waste** requires specialized formal recycling ecosystems.
Critical Challenges & Constraints	❖ **The Financing Gap:** Achieving Net Zero requires **USD 22.7 trillion** by 2070. Current investment is **USD 135bn/year**; India needs **USD 500bn/year**. ❖ **Mineral Security:** Moving from "fuel dependence" to "mineral dependence." Demand for **Critical Energy Transition Minerals (CETMs)** like Lithium, Cobalt, and Nickel will rise by **51%**. ❖ **Resource Conflict: 75% of renewable capacity** is clustered in water-stressed states, creating a land-water-energy nexus problem. ❖ **Nascent Technology:** Reliance on unproven technologies at scale, such as **CCUS (Carbon Capture)** and **Small Modular Nuclear Reactors**.



Strategic Recommendations: The Way Forward	❖ **Waste Sector Reform** ➢ **Universal Collection:** 100% door-to-door collection and wastewater treatment by 2047. ➢ **Policy Shifts:** Ban the pyrolysis of imported used tyres; mandate recycled-content standards. ➢ **Integration:** Formalize the informal sector; leverage **Mission LiFE** to make source segregation a *Jan Andolan* (People's Movement). ❖ **Economy-Wide Transitions** ➢ **Avoid–Shift–Improve:** Avoid unnecessary demand, shift to low-carbon modes (Rail over Road), and improve efficiency (Green Buildings). ➢ **Climate Finance:** Establish a **National Green Finance Institution** and a unified climate finance taxonomy. ➢ **Resilient Supply Chains:** Empower institutions like **KABIL** for overseas mineral asset acquisition and enhance domestic refining. ➢ **Just Transition:** Utilize **District Mineral Foundations (DMF)** and the **Skill India Mission** to reskill workers in the over 150 coal-dependent districts.
Conclusion	The NITI Aayog study clarifies that India's Net Zero transition is a **strategic developmental opportunity** rather than a climate burden. By viewing waste as **"embodied energy"** and bridging structural gaps through technology and circularity, India can secure its material supply chains and pioneer a new **"Indian Development Model"** for the Global South.

Topic 5 - Enhancing the Circular Economy of ELVs in India Report

Syllabus	Paper I | Indian Economy
Context	NITI Aayog's report warns that India's End-of-Life Vehicles (ELVs) stock may double to ~50 million by 2030, creating major pollution, safety, and waste-management risks while also offering large steel-recovery potential.
Definition and Objective	❖ **ELVs:** Vehicles deemed unfit for the road, invalidly registered, or voluntarily declared as waste by their owners. ❖ **Core Focus:** To ensure the **scientific dismantling and recycling** of these vehicles. This is crucial for recovering valuable materials like steel and reducing the severe environmental risks associated with hazardous, informal scrapping practices.
Current Trends and Statistics	❖ **Surging ELV Numbers:** The volume of End-of-Life Vehicles is expected to nearly double, rising from **23 million in 2025** to an estimated **50 million by 2030**. ❖ **Severe Pollution Gap:** Older BS-I compliant vehicles are significantly more polluting, emitting approximately **8 times the pollutants** compared to modern BS-VI standard vehicles. ❖ **Major Steel Recovery Potential:** The total potential steel that could be recovered

	from vehicles manufactured between 2005 and 2023 is estimated at a massive **98 million tonnes**.
Infrastructure Deficit and Informal Dominance	❖ **Infrastructure Shortfall (Authorized Test Stations - ATS):** There is a critical need for about **500 ATS by 2027**. However, as of 2025, only **156 are operational**. ❖ **Dominance of the Informal Sector:** The unorganized sector currently handles a disproportionately large volume, processing **2–3 lakh ELVs per year**, significantly outweighing the **~72,000 ELVs** managed by formal Registered Vehicle Scrapping Facilities (RVSFs) in FY25. 
Regulatory Measures & Incentives	❖ **Voluntary Scrappage Policy (2021):** Mandates fitness testing for private vehicles older than 20 years and commercial vehicles older than 15 years to promote fleet modernization. ❖ **Motor Vehicles (RVSF) Rules, 2021:** Establishes the legal structure for Registered Vehicle Scrapping Facilities (RVSFs) and introduces the Certificate of Deposit (CoD) as a key mechanism. ❖ **Extended Producer Responsibility (EPR) Rules, 2025:** Places a recovery obligation on Original Equipment Manufacturers (OEMs), requiring them to meet targets (e.g., 8% initially) for the recovery of materials like steel from scrapped vehicles. ❖ **Mandatory Automated Testing (2024):** All transport vehicle fitness certifications must be conducted exclusively through Automated Testing Stations (ATS). ❖ **SASCI Support:** The Central government has allocated over ₹2,000 crore under the Special Assistance to States for Capital Expenditure (SASCI) for developing scrapping and ATS infrastructure.
Operational Challenges	❖ **Competition from the Informal Sector:** The price difference, primarily due to informal players avoiding GST and compliance costs, allows them to outbid RVSFs. This drives vehicle owners to the unorganized market for quick cash. ❖ **Infrastructure Imbalance:** There is a significant concentration of ATS and RVSFs in a few states, leading to poor access in regions like the North-East and hill states.

	❖ **Administrative Bottlenecks:** The de-registration process remains heavily dependent on paperwork, causing delays and resulting in "ghost vehicles" that are still technically active on the VAHAN database. ❖ **Viability of RVSFs:** High initial capital expenditure coupled with low vehicle inflow results in poor financial sustainability, with RVSFs operating at less than 20% capacity utilization. ❖ **Integrity of Testing:** The system faces issues with some ATS facilities issuing fitness certificates without conducting a genuine vehicle inspection, thereby compromising road safety.
NITI Aayog Recommendations	❖ **Infrastructure Expansion:** ➢ Establish at least **one Authorized Testing Station (ATS)** in every district. ➢ Set up Public Sector Undertaking (PSU)-led Registered Vehicle Scrapping Facilities (RVSFs) in areas where private profitability is low. ❖ **Formalizing the Informal Sector:** ➢ Integrate the sector with **Udyam Assist**. ➢ Waive legacy liabilities to encourage formalization. ❖ **Enhancing Environmental Responsibility (EPR):** ➢ Significantly raise steel recovery targets, aiming for **approximately 35% by 2035**. ❖ **Digital and Regulatory Reforms:** ➢ Mandate **Aadhaar-linked ownership transfer** for transparency. ➢ Make a valid **Certificate of Deposit (CoD)** a prerequisite for vehicle de-registration. ❖ **Incentivizing Scrappage:** ➢ Introduce a **carbon credit mechanism** for formal scrapping, providing an additional value of **around ₹2,000 per vehicle**.
Conclusion	India's ELV challenge is both an environmental risk and a circular-economy opportunity. Bridging the formal–informal price gap, expanding ATS/RVSF infrastructure, and enforcing digital de-registration can unlock massive steel recovery and pollution reduction.

Topic 6 - Illegal Mining Crisis	
Syllabus	Paper I | Indian Economy | Industry
Context	Illegal rat-hole coal mining in Meghalaya resurfaced after a deadly explosion, highlighting **weak enforcement, labour exploitation, and environmental damage** despite long-standing bans.
What is it?	❖ **Illegal Mining:** Extraction **without a licence/clearance** or in violation of court bans.

	❖ **Rat-Hole Mining:** A primitive method using **3–4 ft narrow tunnels or vertical pits**; highly unsafe and unscientific. ❖ **Legal Status: NGT ban (2014)** + SC upholds, yet continues due to **high low-ash coal demand**.
Key Trends	❖ **Frequent Accidents:** Multiple incidents in East Jaintia Hills within months. ❖ **Scale of Extraction: ~6 million tonnes of coal/year** estimated illegally in Meghalaya. ❖ **Surveillance Gap: ~80%+ satellite alerts (MSS)** reportedly see weak follow-up. ❖ **Vulnerable Workforce:** Migrant labourers paid **₹1,500–2,000/day** for hazardous work. ❖ **Ban Violations: Tens of thousands of illegal pits** are still estimated to be active.
Implications	❖ **Human Casualties:** Tunnel collapses, gas explosions, and flooding deaths. ❖ **Environmental Damage: Acid mine drainage**, river toxicity, and biodiversity loss. ❖ **Revenue Loss:** Royalties/taxes evaded → **large fiscal leakage**. ❖ **Criminal Networks:** Coal mafias, intimidation of activists, law-and-order issues. ❖ **Ecological Instability: Land subsidence, deforestation**, and soil erosion in hotspots.
Key Challenges	❖ **Politico-Criminal Nexus:** Local influence blocks strict action. ❖ **Difficult Terrain:** Forested, remote hills limit real-time monitoring. ❖ **Livelihood Dependence:** Higher wages than in agriculture sustain local support. ❖ **Weak Tech Enforcement: MSS alerts → slow ground verification**. ❖ **Legal Ambiguity:** Old-stock claims used to mask fresh illegal coal.
Government Steps	❖ **Mining Surveillance System (MSS):** Satellite-based detection of unauthorized mining. ❖ **MMDR Amendments (Proposed):** Stricter penalties, higher accountability. ❖ **Judicial Committees:** Monitoring of illegal transport & restoration. ❖ **Ex Gratia Relief:** Immediate compensation to victims' families after accidents.
Way Forward	❖ **Satellite-to-Action Rule:** Time-bound police response to MSS alerts. ❖ **Scientific Mining Transition:** Regulated, safety-compliant extraction where permitted. ❖ **Alternative Livelihoods: Tourism, bio-economy, skill programs** to reduce coal dependence. ❖ **Digital Tracking: GPS trucks, smart weighbridges, e-transit passes** for coal movement. ❖ **Special Mining Courts:** Fast-track trials to deter mafias and repeat offenders.
Conclusion	Illegal mining persists due to **economic incentives, weak local enforcement, and livelihood dependence** despite legal bans. A mix of **technology-driven monitoring,**

	strict accountability, and viable alternative employment is essential to replace hazardous rat-hole practices with safe and sustainable resource governance.

History

Topic 1 - AI for Culture and Languages

Syllabus	Paper I | Art & Culture
Context	India is institutionalizing Artificial Intelligence (AI) to transform its vast cultural heritage into accessible digital assets. By shifting from **static preservation** to **active participation**, national platforms are leveraging AI as "Technology for Humanity" to bridge the digital and linguistic divide, ensuring heritage becomes a living asset for all.

AI-Driven National Ecosystem: Key Platforms

Initiative	Focus Area	Key Impact
BHASHINI	National Translation Mission	AI-led voice and text services in 22 Scheduled languages; powered the **Kumbh Sah'AI'yak** chatbot.
Gyan Bharatam	Manuscript Heritage	National mission (2024–31) to digitize **44 lakh+ manuscripts** and create a National Digital Repository.
Adi Vaani	Tribal Languages	Preserves oral traditions and scripts for languages like **Santali, Bhili, and Gondi**.
Anuvadini	Education/Technical	AICTE tool for translating technical and academic textbooks into regional languages.
Technology Development for Indian Languages (TDIL)	Standardization	Develops core OCR, machine translation, and handwriting recognition for Indian scripts.

Role of AI in Conservation and Empowerment

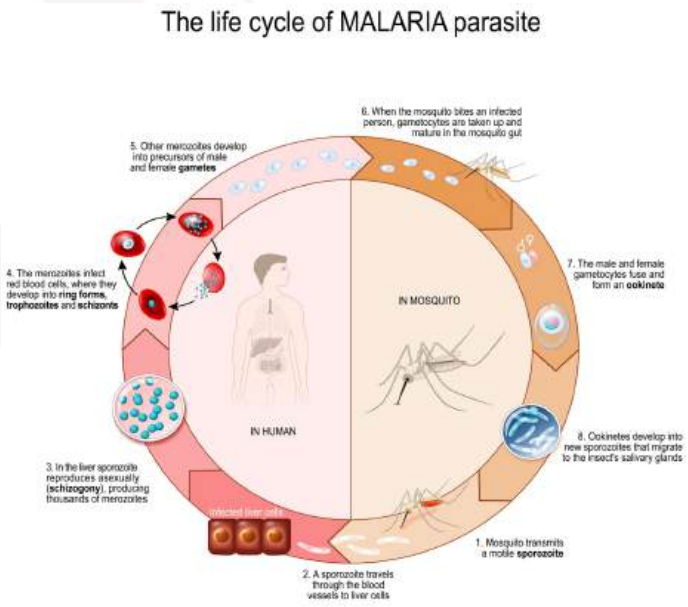
- ❖ **Discovery & Decipherment:** AI enables high-speed scanning and intelligent cataloging of fragile manuscripts. The **Gyan-Setu** challenge specifically focuses on AI-led restoration of ancient works.
- ❖ **Democratization of Access:** Real-time speech-to-text translation removes literacy barriers.
  - ➢ *Example:* PM Modi's Hindi speech at **Kashi Tamil Sangamam 2.0** was translated instantly into Tamil via BHASHINI.
- ❖ **Revitalizing Oral Traditions:** AI transcribes community narratives for languages lacking a script, ensuring tribal folklore survives in the digital era.
- ❖ **Artisan Integration:** AI tools allow craftspeople to present **GI-tagged products** in global multilingual catalogs, bypassing intermediaries and enhancing livelihoods.

Critical Challenges	❖ **Low-Resource Data:** Languages like **Kui and Garo** lack the massive digital text corpora required to train accurate Large Language Models (LLMs). ❖ **Digital Divide:** Limited connectivity and digital literacy in tribal belts hinder the use of sophisticated AI platforms. ❖ **Authenticity Risks:** Digitization raises concerns regarding the ownership of traditional knowledge and the potential misuse of indigenous designs. ❖ **Infrastructure Gaps:** High compute requirements for AI necessitate a shift toward **offline-capable models** for remote heritage sites.
Way Forward	❖ **Language as DPI:** Expand the "Language Layer" so the private sector can build inclusive apps upon open-source government models. ❖ **Community-Led AI:** Involve tribal elders and linguists to ensure AI models capture **contextual nuances** and idiomatic expressions. ❖ **Offline Access:** Develop low-bandwidth, decentralized AI solutions for the "last-mile" cultural worker. ❖ **Global Leadership:** Export India's scalable multilingual AI models to other linguistically diverse nations in the Global South.
Conclusion	Through missions like **BHASHINI** and **Gyan Bharatam**, India is positioning AI as the guardian of its civilizational identity. By aligning technological progress with social empowerment, the nation ensures its rich heritage remains vibrant and accessible in the digital age.

Science and Technology

Topic 1 - Elimination of Malaria in India

Syllabus	Paper II | Science | Biology | Health
Context	India has achieved a major public-health milestone with an 80%+ fall in malaria cases and deaths between 2015 and 2023, and 160 districts reporting zero indigenous cases for three consecutive years.
What is it?	❖ **Malaria elimination:** Interruption of local transmission → **zero indigenous cases** of all human malaria parasites in a defined area. ❖ **Different from eradication:** Eradication refers to the **permanent absence of the disease globally** (zero global incidence).
Key Trends and Data in Malaria Reduction	Significant progress has been made in combating malaria, evidenced by the following key trends: ❖ **Sharp Decline in Cases:** Malaria cases have fallen dramatically, from 11.69 lakh in 2015 to approximately 2.27 lakh in 2023, marking an **80.5% reduction**. ❖ **Reduced Mortality:** Deaths due to malaria have dropped by about **78%**, with only **83 recorded fatalities in 2023**. ❖ **Increased Surveillance:** The Annual Blood Examination Rate (ABER) has increased from 9.58 (2015) to 11.62 (2023). This indicates **enhanced testing and surveillance efforts** despite the decrease in overall cases. ❖ **Dominant Species and Relapse Risk:** Approximately **40% of cases are now attributed to *Plasmodium vivax***, a species that poses a relapse risk due to its dormant liver stage. ❖ **Geographic Concentration:** Over **85% of cases** are concentrated in a few states, primarily **Odisha, Chhattisgarh, Jharkhand, and West Bengal**. ❖ **Zero Transmission Districts:** A total of **160 districts** across 23 States/Union Territories have successfully maintained **zero indigenous malaria transmission** between 2022 and 2024.
Challenges	❖ **Relapse of *P. vivax*:** The presence of a dormant liver stage can cause recurring infections even without a new mosquito bite. ❖ **Emerging Drug Resistance:** Partial resistance to **Artemisinin-based**



Combination Therapies (ACTs) is increasingly observed, particularly in eastern and northeastern border regions.

- **Importation of Cases:** States nearing elimination are vulnerable to imported cases from high-burden areas due to migration.
- **Urban Transmission: Anopheles stephensi** mosquitoes are driving urban malaria by breeding in domestic water sources like tanks, wells, and construction sites.
- **Insecticide Resistance:** Mosquitoes are developing survival mechanisms against **synthetic pyrethroids**, necessitating the deployment of more expensive, dual-insecticide nets.

Key Initiatives

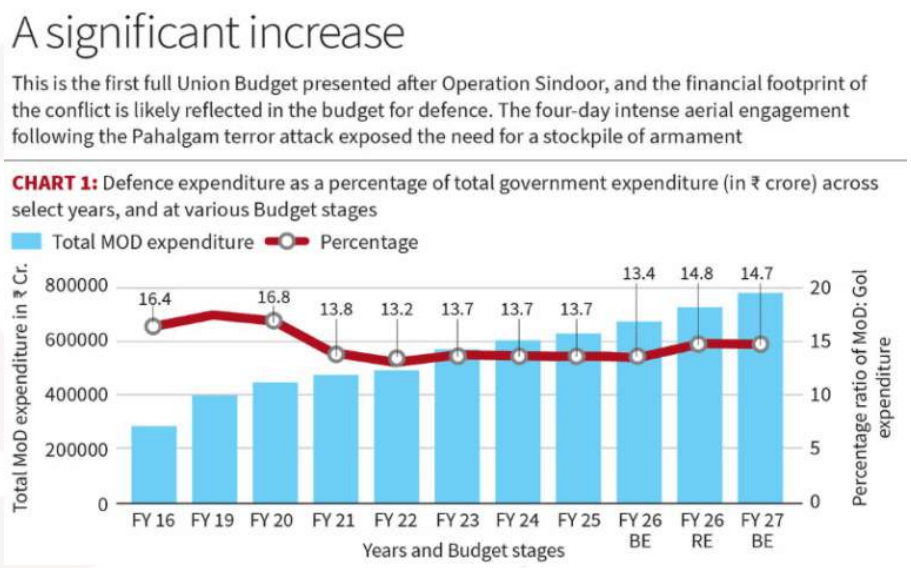
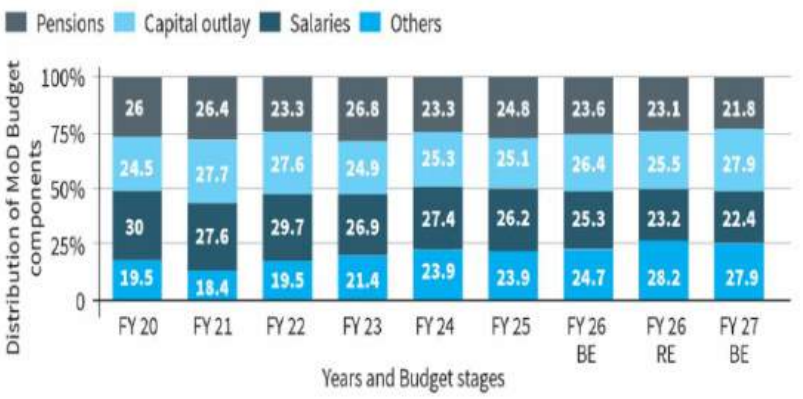
India	Global
National Framework for Malaria Elimination (2016–2030): State categorisation based on transmission intensity.	**WHO Global Technical Strategy (GTS):** 90% reduction in incidence & mortality by 2030.
National Strategic Plan (2023–27): 3Ts – Test, Treat, Track; target zero indigenous cases.	**WHO E-2025 Initiative:** Support to near-elimination countries.
Integrated Vector Management: LLIN distribution + **Indoor Residual Spraying** in tribal/forest belts.	**Malaria Vaccines: RTS, S & R21** rollout in Africa marking preventive shift.
MERA India (ICMR): Operational research, innovation, drug/vector studies.	

Way Forward

- **Strengthen Surveillance:** Implement case-based investigation as a core tool, focusing on zero- and near-zero transmission districts.
- **Ensure Mandatory Reporting:** Integrate the private healthcare sector into the mandatory case notification system.
- **Promote Inter-sectoral Cooperation:** Achieve coordinated efforts across urban planning, sanitation, and water management.
- **Foster Community Participation:** Utilize **Behaviour Change Communication** (BCC) to encourage community-level larval control and proper net usage.
- **Advance Research & Innovation:** Prioritize the development of dual-insecticide nets and strengthen field research led by the **Malaria Elimination Research Alliance** (MERA).

Conclusion

India’s malaria trajectory shows a strong decline and expanding zero-transmission zones, but sustaining gains and eliminating residual tribal and urban hotspots will decide the final success toward a malaria-free decade.

Topic 2 - Increased Capital Spending for the Defence Sector	
Syllabus	Science & Technology | Defence Technology
Context	India announced a **15.2% hike in defence budget for FY2026–27** after Operation Sindoor, signalling a shift toward modernization, self-reliance, and rapid capability building amid rising geopolitical tensions.
What is it?	❖ **Capital Spending / Capital Outlay:** Budget portion used for **modernisation & asset creation** → fighter jets, ships, submarines, missiles, tech systems. ❖ **Strategic Pivot:** Move from **manpower-heavy spending** → **technology-intensive capability building**. ❖ **FY27 Capital Outlay: ~₹2.19 lakh crore** (≈8% rise YoY).
Key Budget Data	❖ **Total Defence Allocation: ₹7.85 lakh crore** → highest among all ministries. ❖ **Modernisation Push:** Capital acquisition up ~**22%**. ❖ **Domestic Procurement Target: 75% reserved for Indian industry** (~₹1.39 lakh crore). ❖ **BRO Allocation: ₹7,394 crore** for tunnels, bridges, and border roads. ❖ **DRDO R&D Budget: ₹29,100 crore** for next-gen tech, indigenous innovation. ❖ **Customs Duty Waiver:** Raw materials for the aircraft/MRO sector made cheaper → boost to the **domestic aerospace ecosystem**. 
Why is defense capital spending increasing?	❖ **War Reserve Replenishment:** Replace **ammunition & precision munitions** depleted in recent conflicts. ❖ **Two-Front Deterrence:** Simultaneous readiness against **the China–Pakistan threat spectrum**. ❖ **Maritime Security (IOR):** Strengthen **submarine & surface fleet** to monitor sea lanes and choke points. ❖ **Technological Superiority:** Investment in **AI, cyber, drones, space warfare, and EW systems**. 

	❖ **Border Connectivity: All-weather infrastructure** for faster troop and logistics mobilisation.
Key Challenges	❖ **Structural Imbalance: Salaries + pensions** consume a large share; pensions ~**₹1.7 lakh crore**. ❖ **Absorption Capacity:** Domestic firms face **execution delays & fragmented planning**. ❖ **Import Dependence:** High-end subsystems (e.g., **aero-engines, sensors**) are still foreign-sourced. ❖ **Project Delays:** Long gestation in submarines, aircraft, indigenous platforms → **capability gaps**. ❖ **Low GDP Ratio:** Defence spend ~**2% of GDP**, below the recommended **2.5–3%** for a two-front scenario.
Way Forward	❖ **Institutionalise Fast-Track Procurement:** Make emergency buying norms **permanent for critical tech**. ❖ **Theaterisation & Jointness:** Integrated commands, **resource pooling among services**. ❖ **IP-Led Indigenous Design:** Own **core technologies & patents**, not just assembly. ❖ **Defence Exports Push:** Target **₹35,000 crore+ annual exports** via modular, scalable systems. ❖ **MSME Integration:** Build **domestic supply chains** for electronics, sensors, spares, and drones.
Conclusion	India's FY2026–27 defence capital push reflects a **readiness + self-reliance dual strategy**, but real success will depend on **timely indigenous delivery, reduced import dependence, and structural reforms** that convert higher allocation into real combat capability.

Environment & Geography

Topic 1 - World Bank – A Breath of Change Report

Topic	Paper II | Environment | Air Pollution
Context	The World Bank's 2025 report flags that nearly **1 billion people** in the Indo-Gangetic Plains–Himalayan Foothills (IGP-HF) breathe the world's most polluted air, demanding urgent **transboundary cooperation**.
What is it?	❖ World Bank's **strategic solutions report** on regional air pollution in the **IGP-HF airshed**. ❖ Covers **13 jurisdictions** across **India, Pakistan, Nepal, Bangladesh & Bhutan**. ❖ Proposes **"4Is Framework" → Information, Incentives, Institutions, Infrastructure**. ❖ Focus → Move from **diagnosis to an actionable regional roadmap**.
Key Data	❖ **Health burden: ~1 million premature deaths/year** in IGP-HF. ❖ **Economic loss:** Pollution damage ≈ **10% of the regional GDP annually**. ❖ **Life expectancy: >3 years reduction** due to $PM_{2.5}$ exposure. ❖ **Student exposure: 81% public-school children** breathe hazardous $PM_{2.5}$ (>35 $\mu g/m^3$). ❖ **External pollution share: 50%+ $PM_{2.5}$** in many cities originates **outside local boundaries**. ❖ **Regional dominance:** $PM_{2.5}$ levels **8–20× WHO guidelines**. ❖ **Transboundary example:** Nepal Terai → **~68% pollution imported**. ❖ **Target: "35 by 35"** → align with the WHO interim clean-air standard.
Causes of Transboundary Pollution	❖ **Geography & topography:** Himalayas trap pollutants → winter smog & inversion layers. ❖ **Wind patterns:** North-westerly winds carry particulates across borders. ❖ **Secondary particles:** SO_2 & ammonia travel long distances → form $PM_{2.5}$ elsewhere. ❖ **Crop residue burning:** Seasonal stubble fires create regional haze crises. ❖ **Industrial clusters:** Thermal plants & MSME belts disperse emissions widely.
Initiatives Taken	❖ **Kathmandu Roadmap (2022):** Regional science-policy coordination. ❖ **Thimphu Outcome (2024):** Adoption of **"35 by 35"** clean-air vision. ❖ **Malé Declaration:** Non-binding regional monitoring & cooperation platform. ❖ **India – NCAP:** PM_{10} reduction mission across **130+ cities**. ❖ **Market pilots: Surat ETS** – world's first particulate emissions trading system.
Challenges	❖ **Institutional fragmentation:** Overlapping ministries → siloed action.

	❖ **Funding gaps:** Dependence on volatile donor financing. ❖ **Weak enforcement:** Understaffed pollution control boards. ❖ **Data blind spots:** Rural areas lack monitoring networks. ❖ **Economic barriers:** High compliance costs for MSMEs & farmers.
Way Forward – 4Is Model	❖ **Information:** Expand real-time monitors, satellite & GeoAI pollution mapping. ❖ **Incentives:** Redirect fossil-fuel/fertilizer subsidies to EVs, clean tech. ❖ **Institutions:** Dedicated Clean Air Acts + permanent regional secretariat. ❖ **Infrastructure:** Regional power grids, EV charging, and common industrial boilers. ❖ **Market tools:** Scale **ETS**, pollution taxes & green finance mechanisms.
Conclusion	Air pollution in the IGP-HF is a **shared regional crisis**, not a single-nation issue. Achieving the **"35 by 35"** target through coordinated policies, financing, and enforcement can convert a public-health emergency into **low-carbon, sustainable growth** for nearly one billion people.

Topic 2 - Global Climate Governance	
Syllabus	Environment | Climate Change
Context	Post-**COP30 (Belém, Brazil)** discourse shifted toward *"Global Mutirão"* (collective effort), but criticism persists due to **weak binding commitments, finance gaps, and implicit 1.5°C overshoot acceptance.**
What is it?	❖ **Climate Governance:** Network of **international treaties + domestic laws + institutions** (e.g., UNFCCC) to **mitigate GHG emissions** and **adapt to climate impacts**. ❖ Focus → coordination of **NDCs, finance, technology transfer, and accountability**.
Current Global Architecture	❖ **Dual-Track System:** CMP (Kyoto Protocol) + CMA (Paris Agreement) → diplomatic continuity but **no mandatory end-targets**. ❖ **Consensus Veto:** ~200 nations → each has veto power → **diluted final texts**. ❖ **Global Mutirão (COP30): Voluntary, people-centric, multi-stakeholder** cooperation over strict state obligations. ❖ **Enhanced Transparency Framework (ETF):** Stronger **MRV (Measurement-Reporting-Verification)** of NDCs.
Key Trends	❖ **Record Emissions:** ~57.4 $GtCO_2e$ (2024) → highest ever. ❖ **Temperature Path:** Current policies → **~2.8°C warming** vs 1.5°C target. ❖ **Finance Gap:** Needed **$2.4–3 trillion/year** vs much lower pledges. ❖ **Adaptation Deficit:** Only **~$32 billion (2022)** directed to adaptation. ❖ **India:** Among the highest absolute emission rises in the G20.

Key Challenges	❖ **Implementation Gap:** Ambitious pledges, weak timelines & funding. ❖ **Growth vs Sustainability:** Infrastructure & jobs often override ecology. ❖ **Coal Dependence:** Base-load energy security vs decarbonisation. ❖ **Urban Vulnerability:** Heat islands, flooding, weak resilience planning. ❖ **Political Short-termism:** Disaster response > long-term climate reform.
Major Initiatives	❖ **Tropical Forests Forever Facility (TFFF):** Proposed **$125B forest preservation fund**. ❖ **Loss & Damage Fund:** Financial relief for climate-hit nations operationalised. ❖ **Global Implementation Accelerator (GIA):** Voluntary technical alignment to 1.5°C. ❖ **PM Surya Ghar Yojana (India):** Rooftop solar push for **10 million households**.
Way Forward	❖ **Legally Binding Roadmaps:** Time-bound fossil-fuel phase-down. ❖ **Climate Finance Reform:** Low-interest, long-tenure green loans. ❖ **Sub-National Governance:** Cities & states lead adaptation. ❖ **Nature-Based Solutions:** Blue-green infrastructure, urban forests, mangroves. ❖ **Universal Climate Insurance:** Protect farmers & coastal populations.
Conclusion	Global climate governance shows **more forums but rising emissions**, reflecting a gap between diplomacy and delivery. Bridging **finance, binding commitments, and ecosystem protection** are critical as the **1.5°C window narrows rapidly.**

Topic 3 - Wetlands as a National Public Good

Syllabus	Paper III | Environment & Biodiversity
Context	India marked **World Wetlands Day** by adding **two new Ramsar sites**—Patna Bird Sanctuary (UP) and Chhari-Dhand (Gujarat) - taking the national total to **98**, highlighting wetlands as shared ecological assets.
What is it?	❖ **Wetlands:** Land areas **saturated or flooded with water** permanently/seasonally (marshes, lakes, mangroves, floodplains). ❖ **National Public Good:** Provide **non-excludable & non-rival benefits** → flood control, water purification, biodiversity, climate buffering. ❖ Act as **ecotones** → transition zones between terrestrial and aquatic ecosystems.
Key Characteristics	❖ **Hydrology:** Water present at/near the soil surface for part of the year. ❖ **Hydric Soils:** Oxygen-poor soils formed under prolonged saturation. ❖ **Hydrophytes:** Water-adapted vegetation (mangroves, reeds, lotus). ❖ **Buffer Function:** Absorb shocks between **dry land ↔ deep water systems**.
Key Data in India	❖ **Ramsar Sites: 98 sites (2026)** → highest in South Asia. ❖ **Area Coverage: ~5% of India's land** (~15.9 million hectares).

	❖ **Wetland Loss: ~40% decline** in three decades due to urbanisation & land conversion. ❖ **Leading State: Tamil Nadu – 20 Ramsar sites**.
Why Wetlands Matter (Public Good Value)	❖ **Flood Mitigation:** Natural sponges absorb excess runoff. ❖ **Water Purification:** Filter **nitrogen, phosphorus, heavy metals, and sewage**. ❖ **Climate Regulation: Carbon sinks + bio-shields** against cyclones/storm surges. ❖ **Livelihood Support:** Fisheries, fodder, agriculture, tourism. ❖ **Biodiversity Hotspots:** Habitat for **migratory birds, endangered fauna, and aquatic life**.
Key Challenges	❖ **Urban Encroachment:** Real-estate filling & infrastructure expansion. ❖ **Pollution & Dumping:** Sewage inflow, industrial effluents, solid waste. ❖ **Hydrological Disruption:** Dams, sand mining, diversion of feeder channels. ❖ **Invasive Species:** Water hyacinth, alien grasses are choking water bodies. ❖ **Climate Change:** Sea-level rise, salinity intrusion, extreme cyclones, and glacial melt.
Way Forward	❖ **Legal Notification & Demarcation:** Public GIS maps, boundary protection. ❖ **Watershed-Scale Governance:** Integrate wetlands into **river-basin planning**. ❖ **Capacity Building:** Train managers in **GIS, hydrology, and community restoration**. ❖ **Traditional Knowledge Integration:** Local water systems, indigenous practices. ❖ **Nature-Based Urban Planning:** Use wetlands as **flood buffers & green infrastructure** instead of concrete drainage.
Conclusion	Wetlands function as **ecological infrastructure for water security, climate resilience, and biodiversity**, and safeguarding them as **national public goods** is essential for sustainable urban and rural futures.

Ramsar Sites in Rajasthan

Name	District	Area (Hectares)	Wetland Type	Recognition Year
Menar Wetland	Udaipur	463.40		2025
Siliserh Lake	Alwar	315.97		2025
Keoladeo National Park	Bharatpur	2873.00	Natural (Inland)	1981
Sambhar Lake	Ajmer	24000.00	Natural (Inland)	1990
Khichan	Phalodi	54.19		2025

SMA, SBL and Ethics

Topic 1 - Cybercrime and the Crisis of Global Governance	
Syllabus	Paper III | Law | Science & Technology/Cybersecurity
Context	India's decision not to sign the 2024 UN Convention against Cybercrime highlights growing fractures between global cyber norms and national sovereignty, exposing gaps in international digital governance.
Definition and Scope	❖ **What it is:** The growing disparity between globally accepted cybersecurity standards (e.g., safe AI, data protection, child safety) and their inconsistent, fragmented implementation by individual nations. ❖ **Resulting Order:** This leads to a **polycentric digital environment** characterized by multiple, often conflicting, regional and bilateral cyber regulations.
Key Threats and Data Points	❖ **Escalating Incidents:** Cyber incidents in India have more than doubled, soaring from 10.29 lakh in 2022 to 22.68 lakh in 2024. ❖ **AI as a Force Multiplier:** Attacks are becoming sophisticated through AI-powered tools, including deepfakes, automated phishing, and generative malware. ❖ **Ransomware Shift:** Ransomware has evolved to employ multi-stage extortion and psychological pressure, with Small and Medium Enterprises (SMEs) becoming a primary target. ❖ **Financial Impact:** Cyber fraud losses reached approximately ₹1,000 crore per month in the first half of 2025, posing a potential annual risk of up to **~0.7% of GDP**. ❖ **Identity-Centric Exploits:** Threats are increasingly focused on identity, with credential theft and deepfakes successfully circumventing traditional biometrics and perimeter security measures.
UN Convention against Cybercrime (Hanoi Convention) – Key Provisions	❖ **Universal criminalisation:** Common legal definitions for ransomware, online fraud, and intimate-image abuse. ❖ **Electronic evidence sharing:** Faster cross-border digital evidence requests. ❖ **24×7 cooperation network:** Real-time investigative and asset-recovery support. ❖ **Human-rights clauses:** Privacy and dignity safeguards, though dependent on domestic laws. ❖ **Child-protection focus:** First global treaty targeting online child sexual exploitation specifically.

Major Global Initiatives	❖ **Budapest Convention (2001):** Widely used cybercrime framework; criticised for limited inclusivity of major powers. ❖ **G7 Hiroshima AI Process:** Global standards for safe generative AI development. ❖ **UN Global Digital Compact:** Human-centric, secure digital future agenda. ❖ **Cyber Initiative Tokyo 2025:** Focus on AI-age critical-infrastructure security and deterrence.
Challenges	❖ **Legal and Enforcement Disparity:** Despite a global consensus on cybersecurity principles, the actual implementation and enforcement vary significantly due to diverse domestic laws and practical gaps. ❖ **Sovereignty and Data Control:** A major obstacle is the reluctance of states to allow external oversight or control over their citizens' data, particularly during criminal investigations, raising institutional sovereignty concerns. ❖ **Supply Chain Risk:** Organizational security is increasingly threatened by vulnerabilities in third-party vendor systems, making supply-chain breaches a top risk. ❖ **Human Rights Implications:** Overly broad definitions of cybercrimes present a risk of political misuse and potential violations of human rights. ❖ **Financial System Weaknesses:** Cross-border financial fraud is facilitated by loopholes such as the use of 'ghost SIMs', inadequate Know Your Customer (KYC) procedures, and security gaps in digital banking.
Way Forward for India	❖ **Strengthening Technical Expertise:** There is a need to build capacity in key areas, including cyber law, the security aspects of Artificial Intelligence (AI), and advanced digital forensics. ❖ **Modernizing Domestic Regulations:** The existing **National Cyber Security Policy** must be updated to address emerging risks posed by technologies like AI, the Internet of Things (IoT), and quantum computing. ❖ **Adopting Zero-Trust Security:** India should transition from traditional Virtual Private Network (VPN)-based models to Zero-Trust Network Access (ZTNA) to mitigate credential misuse and strengthen its security posture. ❖ **Fostering Public–Private Collaboration:** Leveraging private sector expertise and AI-powered tools is essential for advanced threat detection and efficient cyber forensics. ❖ **Establishing Localized Response Units:** Creating **District-level cyber units**, linked directly with **CERT-In** (Indian Computer Emergency Response Team), will ensure a faster, more localized response and enhance citizen protection.
Conclusion	India’s cyber challenge lies in balancing **institutional autonomy with global cooperation** in a borderless digital ecosystem. Without strong domestic enforcement and technical capacity, global norms remain symbolic. Converting

	international principles into a robust national cyber infrastructure will determine India's leadership in the emerging digital order.

Topic 2 - Safeguarding Women at Work

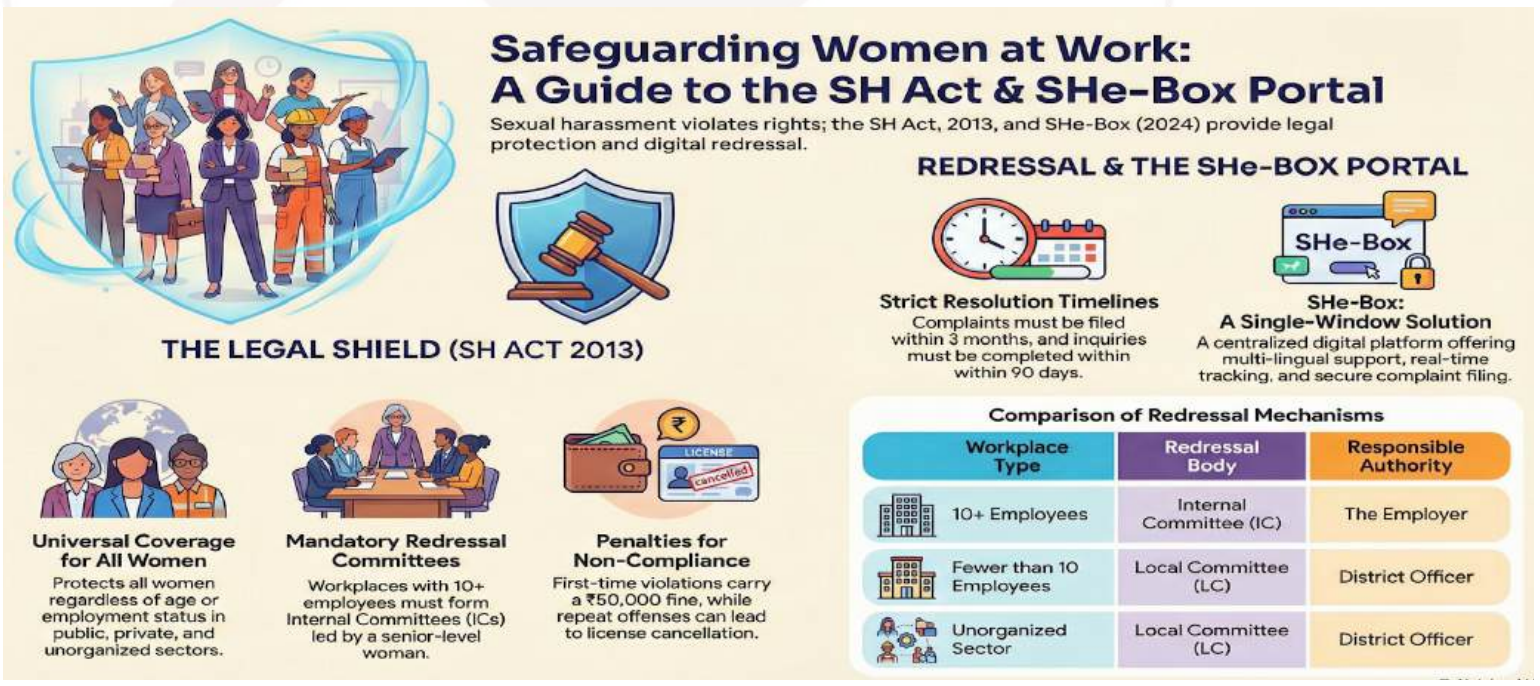
Syllabus	Paper III | Law | Laws related to Womens
Context	The Ministry of Women and Child Development (MoWCD) recently organized a **National Conference on Safety of Women at Workplace** to strengthen the implementation of the **Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 (SH Act)**.
Status of Women in the Indian Workforce (Data & Trends)	❖ **Rising Participation:** Net female payroll additions reached **4.42 lakh** in July 2025, necessitating robust formal safety mechanisms. ❖ **Underreporting Paradox:** Despite legislative shields, nearly **two-thirds** of harassment incidents go unreported due to fear of professional retaliation or social stigma. ❖ **The "Harassment Tax":** 2026 studies indicate women are willing to forgo nearly **19% of potential wages** for a safer workplace, representing a massive hidden economic drain. ❖ **Compliance Gap:** While large firms have Internal Committees (ICs), **53% of HR professionals** still struggle with the procedural nuances of the Act.

The SH Act, 2013: Statutory Framework

The Act is a comprehensive legal shield covering all women - regular, temporary, ad-hoc, interns, or apprentices - across formal and informal sectors.

Feature	Provision
Internal Committee (IC)	Mandatory for every branch/office with **10 or more employees**. Must be headed by a woman.
Local Committee (LC)	Constituted at the District level for firms with **less than 10 employees** and the unorganized sector.
Redressal Pathways	**Conciliation** (no financial settlement allowed) or **Inquiry** (to be completed within 90 days).
Penalties	Fines up to ₹50,000; repeated violations lead to **cancellation of business licenses**.

Need for Safeguarding Women at Workplace	❖ **Constitutional Obligation:** Protection of dignity under **Articles 14, 15, and 21**. The Supreme Court (e.g., *Aurealiano Fernandes v. State of Goa*) ruled that lapses in POSH enforcement are constitutional violations.

	❖ **Economic Imperative (Viksit Bharat 2047):** Achieving the target of **70% female labor force participation** is impossible without safety. Concerns over safety are a primary driver for the declining LFPR in certain urban pockets. ❖ **Talent Retention:** Harassment is a major cause of mid-career attrition. In the tech sector (2025-26), biased redressal was cited as a primary reason for women exiting the workforce entirely. ❖ **Mental Well-being:** Harassment leads to psychological trauma; initiatives like **Project Stree Manoraksha** (2025) now link workplace safety with mental health support.
Critical Challenges & Bottlenecks	❖ **The Unorganized Sector Gap:** 90% of India's female workforce (domestic help, agriculture) remains outside the formal IC ambit. Over **70% of domestic workers** are unaware of Local Committees (LCs). ❖ **Trust Deficit:** According to the **NARI 2025 Report**, 75% of women express a lack of faith in the finality or fairness of the legal process. ❖ **Digital & Awareness Divide:** Portals like SHe-Box are effective for the "laptop class" but inaccessible to rural women with low digital literacy. ❖ **The "Retaliation" Standalone:** Secondary harassment—social shunning or professional sabotage after filing a complaint—remains difficult to prove. ❖ **Procedural Malpractice:** Many ICs are criticized for "informal handling," pressuring victims into illegal "mutual conciliation" to protect corporate reputation. 
Recent Initiatives to Strengthen Enforcement	❖ **SHe-Box Portal (2024 Revamp):** A centralized, multi-lingual digital platform for filing and tracking complaints across all sectors. ❖ **Mandatory Disclosure:** Amendments to the **Company (Account) Rules** require firms to disclose the number of POSH cases in their annual Board Reports. ❖ **National Workplace Safety Pledge (2026):** A MoWCD initiative to foster a "Zero-Tolerance" culture across government and private sectors.

	❖ **Hybrid Work Adaptation:** Updating POSH norms to explicitly cover **"digital workspaces"** (Zoom, Slack, WhatsApp), reflecting the post-pandemic remote work reality.
Way Forward	❖ **Strengthening LCs:** State governments must ensure Local Committees are well-funded and publicized at every Panchayat and District office. ❖ **Incentivizing Compliance:** Linking government contracts and "Safe City" project funds to a firm's verified "Safe Workplace" rating on the SHe-Box portal. ❖ **Gender-Neutral Expansion:** Increasingly, legal experts advocate for making POSH gender-neutral to protect all employees, including transgender individuals. ❖ **Universal Training:** Moving from one-time onboarding videos to **periodic, trauma-informed sensitization** workshops for all employees.
Conclusion	While the SH Act 2013 and the SHe-Box portal provide a robust legal and digital architecture, the transition to a truly safe workforce requires proactive employer engagement and strict judicial oversight. Safeguarding women is not merely a legal mandate but a prerequisite for India's journey toward inclusive and sustainable economic growth.

Topic 3 - Infertility in India	
Syllabus	Paper I | Sociology/Demography & Associated Issues
Context	Infertility is emerging as a **major public-health and demographic concern** in India, with rising urban stress, lifestyle disorders, and delayed parenthood affecting both men and women.
What is it?	❖ **Infertility:** Inability to conceive after **12 months of regular unprotected intercourse**. ❖ **Gender-neutral issue:** ~**Equal male & female factors**; rising recognition of **male infertility & mental-health linkage**.
Key Trends	❖ **Prevalence:** ~**15–20% couples** (~30 million) affected. ❖ **Falling TFR:** India's **Total Fertility Rate ≈ 1.9** (below replacement 2.1). ❖ **Male Factor: 40–50% cases** are linked to sperm quality decline, toxins, and stress. ❖ **Urban–Rural Divide:** ➢ Urban → higher **primary infertility**. ➢ Rural → higher **secondary infertility** (untreated infections). ❖ **IVF Expansion:** The fertility-treatment market is rapidly growing due to medical dependence.
Major Causes	❖ **Delayed Parenthood:** Career & financial priorities push pregnancies beyond biological prime.

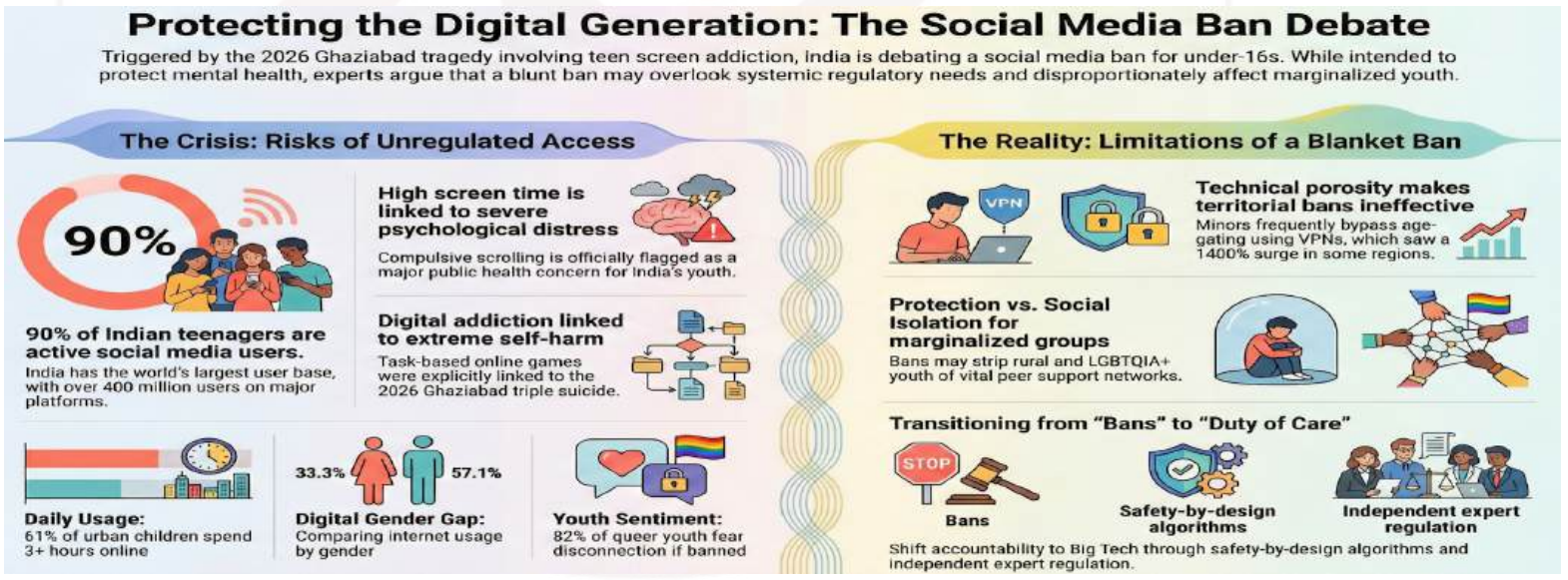
	❖ **Environmental Pollution:** Endocrine-disrupting chemicals, poor air quality affect hormones & sperm motility. ❖ **Lifestyle Disorders: Obesity, PCOS, sedentary habits**, processed diets. ❖ **Chronic Stress & Mental Health:** High cortisol disrupts ovulation & spermatogenesis. ❖ **Untreated Infections:** STIs, PID, tuberculosis, causing tubal blockages, especially in rural areas.
Challenges	❖ **Social Stigma:** Women disproportionately blamed; ostracisation & identity stress. ❖ **High Treatment Cost: IVF ₹1.5–3 lakh/cycle**; minimal insurance coverage. ❖ **Male Silence:** Patriarchal norms delay semen testing. ❖ **Psychological Feedback Loop:** Stress of infertility further reduces conception probability. ❖ **Regulatory Gaps:** Unregulated ART clinics in Tier-II/III cities, misleading success rates.
Government Initiatives	❖ **ART & Surrogacy Regulation Acts:** Mandatory clinic registration, donor protection norms. ❖ **Mental Health Expansion:** Budget focus on regional mental-health institutes. ❖ **Project Sanjivini:** Grass-roots reproductive awareness campaigns. ❖ **National ART Registry:** Digital tracking of clinic outcomes & transparency.
Way Ahead	❖ **Mental-Health Integration:** Mandatory counselling in fertility treatment. ❖ **Insurance Inclusion:** Partial ART/IVF coverage under health policies. ❖ **Workplace Sensitivity:** Fertility leave, egg-freezing support. ❖ **Male-Centric Awareness:** Destigmatise male infertility testing. ❖ **Community Education:** ASHA-led campaigns treating infertility as a medical issue.
Conclusion	Infertility in India reflects a mix of **biological, social, and psychological factors** rather than a single gender problem. A **holistic approach combining medical care, mental-health support, affordability, and social awareness** is essential to protect demographic balance and individual dignity.

Topic 4 - Rising Digital Addiction & Mental Health Problems	
Syllabus	Paper I | Sociology/Population & Associated Issues
Context	The **Economic Survey 2025–26** flags rising **digital addiction and screen-linked mental health issues** as a growing public-health and productivity risk for India.
What is it?	❖ **Digital addiction:** Persistent, compulsive, or excessive digital device/online use causing **psychological distress & functional impairment**. ❖ **Impacts:**

	➢ **Mental:** Anxiety, depression, low self-esteem, cyberbullying stress. ➢ **Physical:** Sleep debt, sedentary lifestyle, "tech-neck". ➢ **Cognitive/Social:** Reduced attention span, weaker offline relationships.
Key Trends	❖ **Internet reach:** ~**250 million (2014) → ~970 million (2024)** connections. ❖ **Screen time:** Indians spent **~1 lakh crore hours on smartphones (2024)**. ❖ **Education vs social media: 57%** teens use phones for study vs **76%** for social media (ASER 2024). ❖ **High-risk group: 15–24 years,** most vulnerable to gaming/social-media addiction. ❖ **Digital economy paradox: ~74% of national income** linked to the digital economy vs rising behavioural health risks. ❖ **Health transition:** Traditional indicators improving, but **lifestyle & mental disorders rising**.
Key Causes	❖ **Dopamine-driven algorithms:** Infinite scroll, autoplay maximise engagement. ❖ **Pandemic legacy:** Online schooling/socialisation normalised high screen time. ❖ **Cheap data & 5G:** Ultra-low data prices → HD streaming & gaming surge. ❖ **Gaming & gambling apps:** Real-money incentives increase compulsive use. ❖ **Urban isolation:** Weak community networks → higher digital dependency.
Challenges	❖ **Data gap:** No nationwide prevalence survey on digital addiction. ❖ **Bypassing controls:** VPNs/fake IDs defeat parental or age limits. ❖ **Corporate resistance:** Tech platforms oppose strict regulation. ❖ **Behaviour normalisation:** Excessive screen use seen as "modern lifestyle". ❖ **Specialist shortage:** Few tech-addiction clinics; rural access is minimal.
Way Forward	❖ **Network safeguards:** ISP-level family data caps; education vs recreation quotas. ❖ **Age regulations:** Mandatory verification; limits for social media/gaming. ❖ **Digital wellness curriculum:** Screen-time literacy, cyber safety, mental health. ❖ **Offline ecosystems:** Youth hubs, sports, compulsory physical activity in schools. ❖ **Tele-MANAS expansion:** From crisis support to preventive digital-behaviour counselling.
Conclusion	India must shift from **digital access → digital wellness** to protect its demographic dividend. Balanced regulation, mental-health investment, and stronger offline social ecosystems are key to ensuring technology remains an **enabler, not an addiction**.

Topic 5 - Social Media Ban for Minors	
Syllabus	Paper I | Sociology/Vulnerable Section
Context	The **Ghaziabad triple suicide** - linked to screen addiction and task-based online gaming - has reignited the debate on banning social media for minors under 16.

The Indian Landscape: Data and Trends	❖ **The Scale:** India is a global "digital lab" with over **400 million users** each on Instagram and Facebook. ❖ **Mental Health Warning:** The **Economic Survey 2025-26** officially classified "compulsive scrolling" as a major public health concern for the 15–24 age group. ❖ **Gender Gap:** A stark divide exists - only **33.3% of women** have internet access compared to **57.1% of men**. Restrictions often exacerbate this, as patriarchal families tend to police girls' devices more strictly. ❖ **Digital Debt:** Urban children spend an average of **3–6 hours daily** online, which the Chief Economic Adviser noted is eroding cognitive attention spans and sleep cycles.
The Case for a Ban: Need for "State Paternalism"	❖ **Combating Lethal Addiction:** Protecting children from algorithm-driven "rabbit holes" that promote self-harm. ➢ *Example:* The **Ghaziabad victims** were obsessed with a Korean "love task" game they felt psychologically unable to quit. ❖ **Prevention of Cyber-Grooming:** Restricting access to unmoderated spaces where AI can be weaponized. ➢ *Example:* 2026 reports highlighted **AI chatbots** leading to unsolicited sexualized interactions with minors. ❖ **Institutional Responsibility:** Shifting the burden of age verification from overwhelmed parents to multi-billion-dollar tech firms.



Comparative Global Models

Country	Model Type	Key Mechanism	Consequence of Non-Compliance
Australia	**Strict Minimum Age**	Bans most platforms for children under 16.	Fines up to **$50 million** for platforms.
Spain	**Criminal Liability**	Bans under-16 use with a focus on executive accountability.	Potential **criminal charges** for tech leadership.
Singapore	**Gateway Regulation**	Regulates **App Stores** to enforce strict age ratings.	Restricted app visibility and download blocks.

France	**Parental Consent**	Requires "digital at 15" (parental permission below 15).	Account suspension if consent is not verified.

Challenges and Counter-Arguments	❖ **Technical Porosity:** Adolescents are often more tech-savvy than regulators; bans often lead to mass migration to **VPNs** or unmonitored spaces like **Telegram** and the **Dark Web**. ❖ **Surveillance Risks:** Enforcing the **DPDP Act** via Aadhaar-linked logins risks creating a mass surveillance framework for minors. ❖ **Loss of Support Systems:** For **marginalized youth** (Queer or differently-abled), social media is often the only space for community support, absent in their physical environments. ❖ **Democratic Deficit:** Policies are frequently made *for* young people without *consulting* them, leading to a "protection-participation" conflict.
Way Forward	India must shift from "censorship" to "accountability" through: ❖ **Statutory Duty of Care:** Legally compel Big Tech to re-engineer algorithms to remove addictive loops. ❖ **Independent Regulator:** Create an expert body for digital safety rather than relying on the MeitY bureaucracy. ❖ **Localized Research:** Fund longitudinal studies on social media's impact across **caste, class, and region**. ❖ **Digital Literacy:** Integrate "Media Hygiene" into school curricula to empower children rather than just restricting them.
Conclusion	A social media ban offers a "comforting illusion of control" but fails to address the underlying technical architecture that drives harm. Success lies in creating a **regulated media ecology** where Big Tech adopts a "Safety-by-Design" approach while fostering the digital rights and literacy of the next generation.

Topic 6 - Corruption Perceptions Index (CPI) 2025

Syllabus	Paper II | Administrative Ethics | Corruption
Context	**Transparency International (TI)** recently released the **Corruption Perceptions Index (CPI) 2025**, which evaluates 182 nations based on perceived public sector corruption. India climbed to the **91st position** (up from 96th in 2024) with a score of **39/100**. While the five-place rise is a positive trend, India remains in the "struggling" category, below the global average of 42.
Global Landscape: Trends in 2025	❖ **Democratic Advantage:** The report highlights a clear link between institutional strength and integrity; democracies average a score of **71**, whereas authoritarian regimes score significantly lower at **32**.

	❖ **Regional Volatility:** The Asia-Pacific saw slow progress, with **Gen Z-led protests** in Nepal and Indonesia reflecting public impatience with unaccountable leadership. ❖ **Top Performers:** Denmark (89) and Finland continue to lead, while **Somalia (9)** remains at the bottom.

India's Performance: Regional Comparison

Country	Score (out of 100)	Rank
Bhutan	71	18
China	43	76
India	**39**	**91**
Pakistan	28	136
Bangladesh	24	150

Drivers of Corruption in India	❖ **Bureaucratic Red Tape:** Over-regulation creates "gatekeeping" opportunities for petty bribery. ❖ **Weak Whistleblower Safety:** Despite laws, investigative journalists reporting on local mafias face harassment. ❖ **Political Funding Opacity:** The influence of anonymous corporate donations sustains a "quid pro quo" ecosystem.
Consequences of Systemic Corruption	❖ **Erosion of Social Trust:** Acts as a **"regressive tax"** on the poor, diverting funds from essential services like healthcare and education. ❖ **Democratic Backsliding:** Enables "State Capture," where policies are designed to serve elite interests rather than the public good. ❖ **Deterrence to Investment:** Increases the "cost of doing business," deterring Foreign Direct Investment (FDI) and hampering economic stability. ❖ **Climate Vulnerability:** Facilitates the misappropriation of climate adaptation funds, worsening the impact of environmental disasters on marginalized groups.
Institutional & Policy Measures Taken	❖ **Digitalization (DPI):** Transitioning to e-governance and **Direct Benefit Transfer (DBT)** to eliminate middlemen and human interface. ❖ **Legislative Action:** The **Prevention of Corruption (Amendment) Act 2024** introduced provisions for the forfeiture of assets acquired through graft. ❖ **CVC Reforms:** Empowering the Central Vigilance Commission with AI-powered forensic tools to detect suspicious financial patterns. ❖ **Social Audit Mechanisms:** Mandatory social audits in schemes like MGNREGS to ensure community-level transparency and accountability.
Key Challenges	❖ **Judicial Backlog:** Cases from the 2010s are still pending in 2025, drastically reducing the "deterrent effect" of the law.

	❖ **Technological Misuse:** Criminals use **Deepfakes** and encrypted platforms for "Digital Arrest" scams and sophisticated financial fraud. ❖ **Informal Economy:** A vast, unorganized sector makes it easier to hide illicit transactions and "Black Money" stashes. ❖ **Cross-Border Recovery:** Significant legal hurdles in tracing and repatriating funds stashed in offshore tax havens. ❖ **Weak Local Oversight:** While central agencies are robust, village and municipal bodies are often "captured" by local elites, suppressing complaints at the source.
Way Forward	❖ **Institutional Independence:** Granting greater autonomy and fixed tenures to heads of investigative agencies (CBI, ED). ❖ **Fast-Track Courts:** Establishing dedicated courts to conclude corruption trials within a strict **1-year timeframe**. ❖ **Political Finance Reform:** Implementing a transparent, public-funded election model to reduce corporate influence. ❖ **Education & Ethics:** Incorporating "Integrity and Ethics" as a mandatory part of school and civil service training to shift the cultural mindset.
Conclusion	India’s rise to the 91st rank indicates incremental progress, but a score of 39 warns that systemic corruption remains a heavy drag on growth. Moving forward, the focus must shift from digital "quick fixes" to substantive enforcement and the protection of those who speak truth to power.

Topic 7 - Bridging the Governance Divide

Syllabus	Paper II | Administrative Ethics
Context	The proposal for an **Indian Scientific Service (ISS)** has gained significant momentum following the **Economic Survey 2025-26** and recent deliberations by the Empowered Technology Group. As India transitions toward a "Deep-Tech" and "AI-first" governance model, the traditional generalist administrative framework is facing an institutional mismatch with the technical complexities of the 21st century.
What is the Indian Scientific Service (ISS)?	The ISS is envisioned as a **permanent, All-India specialized cadre** of scientists and technocrats designed to work alongside the Indian Administrative Service (IAS). ❖ **Technical Integration:** Unlike the generalist approach, the ISS would embed scientific expertise directly into the decision-making hierarchy of ministries. ❖ **Distinct Service Rules:** It would operate under rules that prioritize **scientific integrity, peer review, and evidence-based reasoning** over traditional administrative neutrality and procedural compliance. ❖ **Professional Continuity:** It provides a structured career path for researchers, allowing for long-term policy foresight that transcends the typical three-year tenure of administrative rotations.

The Imperative for Reform: Why Now?	❖ **Complexity of Modern Governance** ➢ Modern policymaking increasingly involves sectors like **Quantum Computing, Biotechnology, and Semiconductors**. Generalist administrators often lack the granular technical depth required to regulate these "frontier" technologies. ➢ *Example:* Drafting the **Digital India Act 2025** required a sophisticated understanding of algorithmic bias and neural architectures that standard administrative training does not cover. ❖ **Bridging the "Valley of Death"** ➢ India excels in laboratory research (TRL 1-3) but struggles to translate it into market-ready products (TRL 7-9). ➢ *Example:* Despite leadership in **Green Hydrogen** research, industrial scaling has been hampered by fragmented technical oversight. ❖ **Institutional Protection of Integrity** ➢ Current service rules (CCS Conduct Rules 1964) often penalize scientists for presenting data that contradicts official policy. ➢ *Example:* During recent **Himalayan ecological crises**, scientists faced hurdles in officially recording environmental warnings that challenged large-scale infrastructure projects. ❖ **Global Technological Diplomacy** ➢ To lead in global standards (G2G certifications), India needs **Scientist-Diplomats** who can negotiate complex supply chains. ➢ *Example:* Semiconductor negotiations with the US/EU require an understanding of lithography and material sciences at a granular level.

India's Science & Tech Landscape (2025-26)

Indicator	Current Status	The ISS Advantage
Global Innovation Index	**38th Rank** (leading lower-middle-income group)	Can drive India into the top 20 by streamlining R&D-to-Market.
GERD (R&D Spend)	**0.64% of GDP** (US: 3.48%, S. Korea: 4.91%)	Specialized cadres can better justify and manage higher R&D outlays.
Patent Filing	**6th Globally** (applications doubled since 2020)	Specialized oversight to protect and monetize intellectual property.

Critical Challenges in Implementation	❖ **Generalist vs. Specialist Friction:** Integration may trigger turf wars over seniority and authority between the IAS and the proposed ISS. ❖ **Lateral Entry Resistance:** Bringing in high-caliber scientists at mid-career levels often faces systemic pushback from established service associations. ❖ **Salary Parity:** Attracting top-tier talent from the private sector or Silicon Valley is difficult given standard government pay scales.

	❖ **Defining Boundaries:** A delicate balance is required to determine where scientific advice ends and political/economic policy begins.
Global Best Practices	❖ **United Kingdom:** The **Government Science & Engineering Profession (GSEP)** cadre ensures that every ministry's Chief Scientific Adviser has a structured team of specialists. ❖ **United States:** Formal **Scientific Integrity Policies** protect federal scientists from political interference, ensuring data is not altered for political convenience. ❖ **France & Japan:** Maintain dedicated scientific cadres that ensure transparent and independent technical input in national planning.
The Way Forward	❖ **Pilot Cadres:** Launch the service in high-impact sectors like the **Indian Environmental & Ecological Service** and the **Indian Public Health Service**. ❖ **Structural Safeguards:** Legally mandate that technical assessments and risk evaluations be part of the **official permanent record**. ❖ **Dynamic Incentives:** Implement performance-linked pay and market-competitive salaries for the ISS to mitigate "brain drain" to global tech giants. ❖ **Collaborative Training:** Conduct joint foundation programs at the **LBSNAA (Mussoorie)** for IAS and ISS officers to foster a "Whole-of-Government" approach. ❖ **Financial Autonomy:** Empower ISS officers with **NIDHI-style grants** to fund high-risk, indigenous research without multi-layered bureaucratic approvals.
Conclusion	The creation of an Indian Scientific Service is the vital "missing link" in India's transition from a colonial administrative state to a modern, technology-driven power. By institutionalizing expertise and protecting professional integrity, India can ensure that its journey toward **Viksit Bharat 2047** is built on a foundation of scientific soundness and future-proof policy resilience.

Topic 8 - Digital Media Ethics	
Syllabus	Paper II | Administrative Ethics
Context	The **Uttarakhand High Court** recently issued a landmark warning to digital creators and journalists, asserting that the "fourth pillar of democracy" cannot operate in a regulatory vacuum. With the rise of "trial by media" on social platforms, the court emphasized that digital operations must strictly adhere to a **Code of Ethics** to avoid criminal liability for defamation or extortion.
The Digital Landscape in India (2026)	The scale of India's digital consumption makes ethical oversight a matter of national security:

- **User Base:** India has crossed **1.03 billion internet users**, with over **800 million** active on social media.
- **The Trust Deficit:** According to the **2025 Reuters Digital News Report**, only **36%** of Indian users trust the media, primarily due to the proliferation of "clickbait" and unverified "breaking news."
- **Synthetically Generated Information (SGI):** The **IT Amendment Rules 2026** now mandate the labeling of AI-generated content to combat the ethical crisis of **Deepfakes**.

Regulatory Framework: Laws Governing Digital Media

The digital ecosystem in India is governed by a multi-layered legal architecture:

Regulation	Core Mandate
IT Rules, 2021	Mandates a three-tier grievance redressal mechanism and adherence to the Norms of Journalistic Conduct.
IT Amendment Rules, 2026	Compresses the "takedown window" for defamatory content from **36 hours to 3 hours**.
DPDP Act, 2023	Ensures data privacy, mandates parental consent for minors, and prohibits targeted ads for children.
BNS (Bharatiya Nyaya Sanhita)	Provides the legal basis for criminal prosecution in cases of digital defamation and organized extortion.

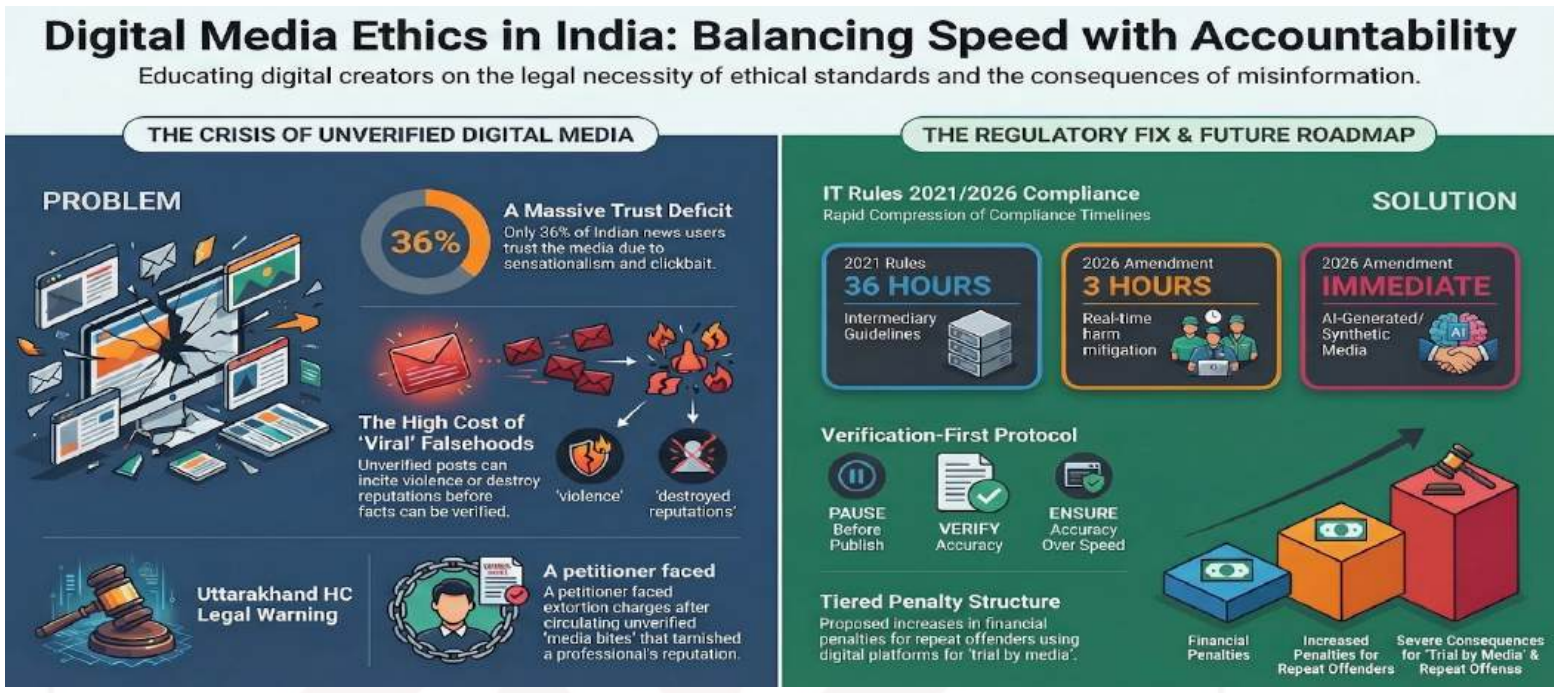
The Necessity of an Ethical Code

- **Prevention of Character Assassination:** Digital speed often outpaces the truth. In the **Uttarakhand HC case**, a viral post led to the suspension of a bank manager based on a complaint that had already been withdrawn.
- **Curbing Viral Misinformation:** Unverified rumors, such as the false death reports of veteran actor **Dharmendra** in 2025, cause mass public distress.
- **Maintaining Public Order:** Mislabeled content can incite real-world violence.
  - ➢ *Example:* In late 2025, videos from **Myanmar** were unethically circulated as **Manipur violence**, threatening communal harmony before being debunked.
- **Protecting Vulnerable Groups:** Ethics prevent the secondary victimization of minors. The **Arunachal Press Club** (2025) had to apologize for unethically interviewing a minor abuse victim.
- **Democratic Integrity:** Ensuring voters receive facts rather than paid "exit polls" or propaganda during the **2025-26 State Elections**.

Critical Challenges in Implementation

- **The "Clicks" Economy:** Ad-driven models reward sensationalism. Digital paparazzi frequently leak sensitive footage (e.g., hospital videos) to maximize engagement.

	❖ **Ghost Portals & Anonymity:** Many outlets operate without a physical address or registered editor, making it difficult for law enforcement to serve notices to **WhatsApp-based news groups**. ❖ **The Speed-Accuracy Trade-off:** The pressure to "break" a story leads to the bypassing of fact-checking. ❖ **Algorithmic Bias:** Engagement-based ranking often suppresses marginalized voices while amplifying polarising content. ❖ **Weak Self-Regulation:** The Supreme Court (2025) characterized existing fines as "toothless," as the profit from sensationalism far outweighs the legal penalty.



Way Forward: Strengthening the Fourth Pillar	❖ **Mandatory Registration:** All digital news publishers must register with the **Ministry of Information and Broadcasting (MIB)** to ensure a formal grievance trail. ❖ **Verification-First Protocol:** Implementing a "pause before publish" policy for content involving private individuals or criminal allegations. ❖ **AI-Labeling & Watermarking:** Strict enforcement of the **2026 IT Rules** to distinguish between genuine footage and synthetic media. ❖ **Tiered Penalty Structure:** Escalating financial penalties for repeat offenders to make "unethical journalism" economically unviable. ❖ **Digital Literacy (Jan Andolan):** Educating citizens to identify "ghost news" and report unethical content to the **NCPCR** or **MIB**.
Conclusion	As the Uttarakhand High Court observed, **"Freedom of speech is not a license for character assassination."** For digital media to remain a credible pillar of democracy, it must harmonize its unprecedented technological speed with the timeless virtues of accuracy, fairness, and restraint.

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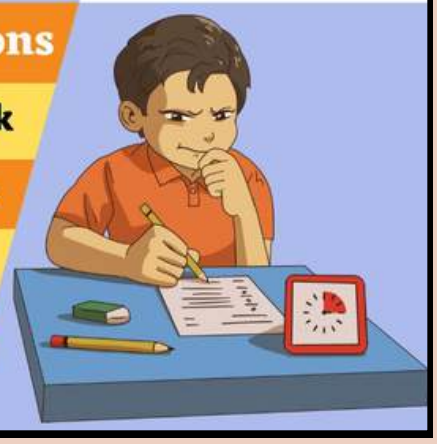

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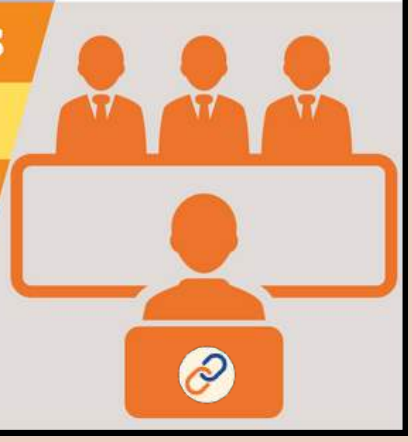

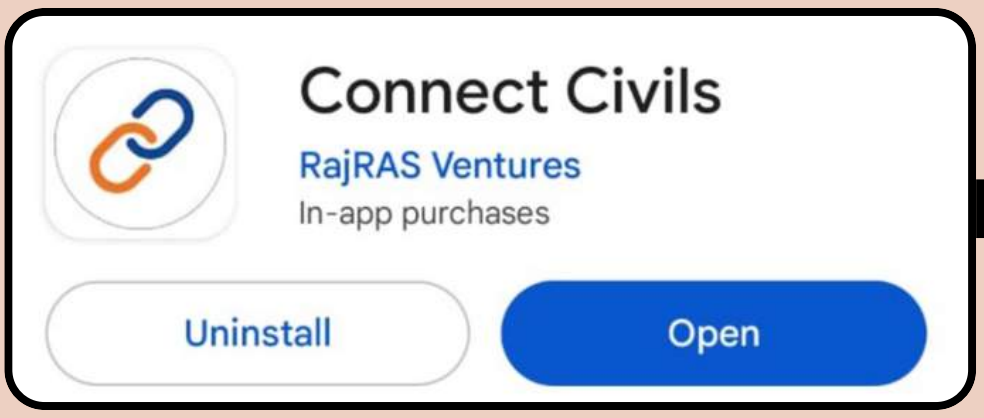

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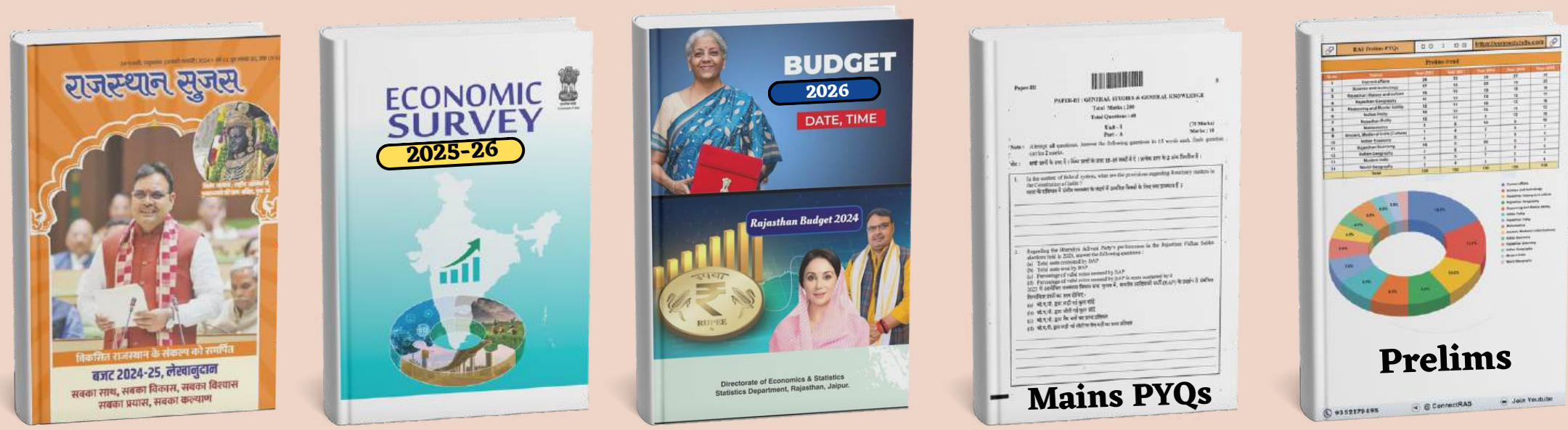

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