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VIDHVATH IAS KAS ACADEMY & STUDY CENTRE

DAILY CURRENT AFFAIRS

FOR UPSC CIVIL SERVICE EXAMINATION

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1. Special Intensive Revision (SIR) of Electoral Rolls 2026

The Election Commission of India (ECI) has directed Chief Electoral Officers in 22 States and Union Territories (UTs) to conclude preparatory activities for the **Special Intensive Revision (SIR)** of voter lists, scheduled to commence in **April 2026**. This large-scale exercise aims to synchronize electoral data following significant demographic shifts and the upcoming 2027 Population Census.

Key Summary Points

- **Scope and Coverage:** The SIR will be conducted in 22 regions, including major states like Maharashtra, Punjab, Haryana, Karnataka, and Telangana, as well as several North-Eastern states and UTs like Delhi and Jammu & Kashmir.
- **Core Objective:** Unlike routine annual updates, the SIR involves a comprehensive **door-to-door verification** to eliminate "ghost voters," remove deceased or migrated entries, and enroll first-time voters (18+).
- **Legacy Linkage:** A critical component involves mapping current voters with the electoral rolls of **2002-2004** (the last time a full SIR was conducted) to establish a "legacy" and ensure the integrity of the database.
- **Resource Management:** The ECI is coordinating with Census authorities as both the SIR and the **House Listing Phase of Census 2027** are slated to begin in April. Both rely on the same pool of human resources, primarily government school teachers.
- **Preparatory Milestones:** States must finalize the training of **Booth Level Officers (BLOs)**, rationalization of polling stations, and logistics for field verification before the April deadline.



Constitutional & Legal Provisions

- **Article 324:** Vests the "superintendence, direction, and control" of the preparation of electoral rolls and the conduct of elections in the Election Commission of India.
- **Article 326:** Guarantees **Universal Adult Suffrage**, stipulating that every citizen aged 18 or above is entitled to be registered as a voter unless disqualified by law.
- **Representation of the People Act (RPA), 1950:**
 - **Section 21:** Empowers the ECI to direct a special revision of the electoral roll for any constituency or part thereof at any time, for reasons recorded in writing.
 - **Section 13B:** Provides for the appointment of **Booth Level Officers (BLOs)** to assist in the preparation and revision of rolls.
- **Registration of Electors Rules, 1960:** Prescribes the procedure for registration, including the forms for addition (**Form 6**), deletion (**Form 7**), and correction (**Form 8**).

Key Definitions

- **Special Intensive Revision (SIR):** A thorough, house-to-house verification process conducted to rebuild the electoral register from scratch or refine it deeply, typically used when the list has not been extensively updated for over a decade.



- **Booth Level Officer (BLO):** A grass-roots level officer (usually a local government employee) who acts as the ECI's representative for a specific polling area, responsible for field verification of voter data.
- **Qualifying Date:** The date (typically 1st January, April, July, or October) on which a citizen must have reached the age of 18 to be eligible for enrollment in the voter list.

UPSC Relevance & Conclusion

Relevance: For the Civil Services Exam, this topic falls under **GS Paper-II (Polity & Governance)** and **Preliminary Exam (Indian Polity)**. It touches upon "Constitutional Bodies," "Electoral Reforms," and "Administrative Coordination." Understanding the intersection of the Census and Electoral Rolls is vital for questions on federalism and administrative efficiency.

Conclusion: The Special Intensive Revision 2026 is a vital step toward ensuring **electoral integrity** and the "one person, one vote" principle. By addressing long-standing inaccuracies and coordinating with the Census machinery, the ECI seeks to modernize India's democratic infrastructure while navigating the logistical challenge of mobilizing nearly 30 lakh personnel for dual national duties.

2. India's Accession to Pax Silica: Strategic Technology Alliance

India is scheduled to formally join **Pax Silica**, a US-led strategic alliance, on Friday, February 20, 2026. The formalization is expected during the **India AI Impact Summit** in New Delhi. This move signifies a pivotal shift in India's economic security policy, aiming to integrate into a "trusted" global supply chain for high-end technology and critical resources.

Key Summary Points

- **Strategic Objective:** Pax Silica is designed to build a secure, innovation-driven ecosystem across the entire **AI value chain**, encompassing everything from raw materials and critical minerals to advanced semiconductor infrastructure.
- **Geopolitical Significance:** By joining a US-led framework while maintaining its **BRICS membership**, India is practicing a "multi-aligned" strategy to secure its technological future and reduce dependence on non-aligned or adversarial nations.
- **Supply Chain Resilience:** The alliance prioritizes the creation of reliable supply chains for **critical minerals** (like lithium and cobalt) and semiconductors, countering the current global concentration of processing and manufacturing in China.
- **Economic Security:** The "Pax Silica Declaration" recognizes that economic security is national security, focusing on shared security interests and **AI-powered prosperity** among member states.
- **Resource Integration:** India brings one of the world's largest tech markets and a massive talent pool to the group, which currently includes nations like **Japan, South Korea, Singapore, the UK, and the UAE**.





Constitutional & Legal Provisions

- **Article 51 (Directive Principles):** Mandates the State to promote international peace and security and maintain just and honourable relations between nations, providing the constitutional basis for joining such strategic alliances.
- **Entry 10 & 13, Union List (7th Schedule):** Gives the Central Government exclusive power over "Foreign Affairs" and "Participation in international conferences/agreements," allowing New Delhi to sign the Pax Silica Declaration.
- **The Mines and Minerals (Development and Regulation) Act, 1957:** Recently amended to encourage the exploration of **critical and deep-seated minerals**, aligning domestic law with the alliance's goal of mineral security.
- **India Semiconductor Mission (ISM):** A specialized business division within Digital India Corporation that oversees the \$10 billion incentive plan to establish a domestic semiconductor ecosystem.

Key Definitions

- **Pax Silica:** Derived from the Latin *Pax* (peace/stability) and *Silica* (the material for silicon chips). It refers to a US-led coalition aimed at establishing a stable, western-anchored technological order.
- **Critical Minerals:** Naturally occurring elements (e.g., Rare Earth Elements, Lithium, Gallium) that are essential to modern technology, including smartphones, EV batteries, and defense systems, and have high supply risk.
- **Technology Stack:** The layers of technology required to run an application, which in the context of Pax Silica includes minerals, energy, hardware (chips), and software (AI models).

Conclusion & UPSC Relevance

Conclusion: India's entry into Pax Silica marks its transition from a passive consumer to an active architect of the global technology order. By aligning with high-trust partners, India seeks to insulate its digital economy from geopolitical shocks while accelerating its domestic "Make in India" goals in semiconductors and AI.

UPSC Relevance: * **GS Paper II (International Relations):** Bilateral and multilateral groupings involving India; Effect of policies of developed countries on India's interests.

- **GS Paper III (Economy & Science):** Supply chain resilience; Indigenization of technology (Semiconductors/AI); Infrastructure.
- **Prelims:** Mapping of critical mineral deposits; Functions of ECI (linked context); Definitions of emerging tech alliances.

3. Merger of PFC and REC: Strategic Restructuring in the Power Sector

The Ministry of Power has initiated the formal process to merge state-run Power Finance Corp. (PFC) and its subsidiary, REC Ltd. This move follows the Union Budget 2026 announcement aimed at consolidating India's premier power sector lenders to streamline financing for the country's ambitious energy transition.

Core Summary of the Merger Process

- **Dual-Panel Framework:** The Ministry has established a **Working Group** to handle technical modalities (personnel, pay parity, and tech integration) and a **High-Level Committee** (chaired by PFC/REC heads and Joint Secretary) to oversee the broad restructuring.



- **Operational Integration:** The working group is tasked with harmonizing human resources, including inter-se seniority and promotion matters, alongside functional restructuring of reporting lines.
- **Financial Magnitude:** The combined entity will manage a massive loan book exceeding **₹11 trillion** (as of FY25), positioning it as a dominant force in NBFC-led infrastructure financing.
- **Strategic Objective:** The merger aims to create a "Power Sector Behemoth" to better manage large-scale funding for India's shift toward renewable energy and grid modernization.
- **Regulatory Oversight:** The panels will monitor progress on approvals from regulatory authorities (such as RBI and SEBI) and resolve inter-entity conflicts to ensure a seamless transition.
- **Background:** This is the final step in a process that began in 2019 when PFC acquired a 52.63% stake in REC, making the latter a subsidiary.

Key Definitions

- **NBFC-IFC (Infrastructure Finance Company):** Both PFC and REC are categorized as Non-Banking Financial Companies with IFC status, allowing them higher exposure limits in the infrastructure sector.
- **Maharatna Status:** Both entities hold "Maharatna" CPSE status, granting them significant financial autonomy and the power to invest up to ₹5,000 crore in a single project without prior government approval.
- **Inter-se Seniority:** The relative seniority between employees of two merging organizations, which is a critical factor in avoiding legal disputes during HR integration.



Constitutional and Legal Provisions

- **Companies Act, 2013:** The merger must comply with **Section 230-232**, which governs the compromise, arrangement, and amalgamation of companies.
- **SEBI (LODR) Regulations, 2015:** As listed entities, both must adhere to the Listing Obligations and Disclosure Requirements regarding material events and shareholder protections.
- **RBI Act, 1934:** Since both are NBFCs, the merger requires the "No Objection Certificate" (NOC) and oversight from the Reserve Bank of India to ensure financial stability.
- **Article 298:** The Union Government's executive power to carry on trade or business and acquire property, which underpins the disinvestment and restructuring of CPSEs.

Additional Key Points

- **Development Finance Institution (DFI) Context:** Despite the merger, the Finance Ministry previously rejected DFI status for PFC, meaning the entity must continue to raise funds from the market without the specific sovereign backing or tax-free bond privileges typical of a DFI.
- **Energy Transition Catalyst:** The merger is specifically timed to support the **COP26/COP28** commitments, where India requires an estimated \$10 trillion in investment to reach Net Zero by 2070.



Conclusion

The merger of PFC and REC is more than a corporate consolidation; it is a strategic realignment of India's financial architecture. By pooling resources and eliminating internal competition, the government aims to lower the cost of borrowing for power projects. However, the success of this transition hinges on how effectively the newly formed panels resolve the "personnel integration" challenges, which have historically been the Achilles' heel of PSU mergers.

UPSC Relevance

- **General Studies II:** Statutory, regulatory, and various quasi-judicial bodies; Government policies and interventions for development.
- **General Studies III:** Indian Economy and issues relating to planning, mobilization of resources, and growth; Infrastructure (Energy); Investment models.
- **Prelims Focus:** Maharatna/Navratna criteria, role of NBFCs in India, and the functions of the Ministry of Power.

4. IMF Analysis: China's Economic Imbalances and Global Spillovers

The International Monetary Fund (IMF), in its **February 2026 Article IV Consultation** report, has cautioned that China's current economic model is increasingly unsustainable. The Fund highlights a critical disconnect where over-reliance on exports and state-led investment is creating domestic inefficiencies and distorting global trade.

Key Summary of IMF Findings

- **Shift to Consumption:** The IMF identified transitioning to a **consumption-led growth model** as China's "overarching priority." The current model, reliant on heavy investment and exports, is leading to "waste at home and damage abroad."
- **External Imbalances:** China's current account surplus (estimated at **3.3% of GDP** in 2025) has triggered "adverse spillovers" for trading partners. This is exacerbated by a real depreciation of the **Renminbi (undervalued by approximately 16%)**, which makes Chinese exports hyper-competitive at the cost of global producers.
- **Deflationary Pressures:** Weak domestic demand—fueled by a protracted **property sector slump** and an inadequate social safety net—has kept inflation near 0%. The IMF warned that persistent deflation risks a "downward spiral" in consumer confidence.
- **Fiscal Reorientation:** The report urges Beijing to pivot fiscal spending away from industrial subsidies and infrastructure toward **social protection** (healthcare, pensions, and unemployment benefits) to reduce "precautionary savings" by households.
- **Structural Reforms:** Recommendations include reforming the **Hukou (household registration)** system to grant urban status to 200 million rural migrants, which alone could boost the consumption-to-GDP ratio significantly.
- **Growth Outlook:** While the economy grew by 5% in 2025, the IMF projects a slowdown to **4.5% in 2026**, citing demographic shifts (aging labor force) and diminishing returns on investment.





Key Definitions

- **Article IV Consultation:** An annual review by the IMF where staff visit a member country to assess economic and financial policies.
- **Current Account Surplus:** A situation where the value of a country's exports of goods and services is greater than the value of its imports.
- **Involution (Neijuan):** A term used in the report to describe "excessive price competition" in China where entities over-invest and compete intensely without achieving significant technological or economic progress.
- **Hukou System:** A Chinese legal document that records a household's residency, often restricting rural migrants' access to urban social services.

Constitutional & Legal Context

- **IMF Articles of Agreement (Article IV):** Under this article, member countries agree to collaborate with the Fund to ensure exchange rate stability and avoid "competitive exchange depreciation."
- **15th Five-Year Plan (2026-2030):** China's primary economic roadmap, which the IMF suggests must align with these structural rebalancing goals.
- **Special Drawing Rights (SDR):** Since 2016, the Renminbi has been part of the IMF's SDR basket, implying a commitment to transparency and market-oriented exchange rates.

Global and Indian Implications

- **Trade Protectionism:** China's "export-first" strategy often leads to anti-dumping duties and tariffs by partners like the EU and USA to protect domestic manufacturing.
- **Impact on India:** As India seeks to expand its manufacturing base via **PLI Schemes**, "dumping" of low-cost Chinese goods (especially in steel and chemicals) remains a major challenge. However, a rebalanced Chinese economy could open a massive market for Indian agricultural and service exports.

Conclusion

The IMF's assessment underscores that China's "growth-at-all-costs" era, powered by debt and exports, is hitting a wall. For the global economy to remain healthy, the world's second-largest economy must empower its own consumers rather than just its factories. Beijing's "brave choice" to reform social safety nets will determine whether it can avoid a "lost decade" similar to Japan's 1990s experience.

UPSC Relevance

- **GS Paper II:** International relations; Effect of policies of developed/developing countries on India's interests; Important International institutions (IMF).
- **GS Paper III:** Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment; Global Trade and Supply Chains.
- **Prelims Focus:** Article IV Consultations, SDR basket components, Current Account Deficit vs. Surplus, and the impact of Renminbi valuation on the Rupee.



5. U.S.-Iran Nuclear Diplomacy: Renewed Brinkmanship in 2026

In early 2026, the geopolitical landscape of West Asia has returned to a state of high-stakes friction.

Following a series of U.S. and Israeli military strikes on Iranian nuclear sites in mid-2025, President Donald Trump has initiated a dual-track strategy: a massive military build-up in the Persian Gulf coupled with indirect diplomatic talks in Oman and Switzerland to secure a "new and stronger" nuclear deal.

Core Summary of Current Developments

- **Indirect Negotiations:** Two rounds of indirect talks—first in **Muscat (February 6)** and then in **Geneva (February 17, 2026)**—have been held through Omani mediation. While "guiding principles" for a framework have been discussed, significant gaps remain regarding uranium enrichment levels and sanctions relief.
- **Maximum Pressure 2.0:** The Trump administration has coupled diplomacy with the largest U.S. air and naval build-up in the region since 2003, including the deployment of the **USS Abraham Lincoln** and **USS Gerald Ford** carrier strike groups to signal that military options remain "on the table."
- **Expansion of Demands:** Unlike the 2015 JCPOA, Washington is now insisting on a "structural containment" model that includes permanent halts to enrichment, the dismantling of ballistic missile infrastructure, and the cessation of support for regional proxies.
- **Iranian Red Lines:** Tehran, while weakened by domestic protests and the 2025 strikes, maintains that its missile program is non-negotiable and has warned that any further aggression will lead to retaliatory strikes on U.S. military facilities across the Gulf.
- **Regional Anxiety:** Gulf powers (Saudi Arabia, UAE, Qatar), despite their historical rivalry with Iran, are actively lobbying against military escalation to protect their multi-billion dollar economic diversification projects and regional stability.
- **The "Oman Channel":** Oman continues its historical role as the primary "interlocutor," facilitating messages between U.S. Special Envoy Steve Witkoff and Iranian Foreign Minister Abbas Araghchi in separate rooms.



Key Definitions

- **JCPOA (Joint Comprehensive Plan of Action):** The 2015 landmark deal between Iran and the P5+1 (USA, UK, France, Russia, China, and Germany) that traded sanctions relief for verified limits on Iran's nuclear program.
- **Breakout Time:** The time required for a country to produce enough weapons-grade highly enriched uranium for one nuclear explosive device.
- **Kinetic Capacity:** The actual physical ability of a military force to strike back using missiles, drones, or naval assets.
- **Snapback Mechanism:** A provision in the original JCPOA (expiring in late 2026) that allows any participant to unilaterally restore UN sanctions if Iran violates the agreement.



Constitutional & Legal Provisions

- **Nuclear Non-Proliferation Treaty (NPT):** Iran is a signatory, and its right to peaceful nuclear energy is protected under **Article IV**, though the U.S. argues its enrichment activities exceed "peaceful" requirements.
- **U.S. Executive Orders:** The current "Maximum Pressure" campaign is enforced via executive orders (e.g., **EO 13846**) that impose secondary sanctions on third-party nations trading with Iran's energy or banking sectors.
- **Atomic Energy Act (USA):** Governs how the U.S. enters into nuclear cooperation agreements (Section 123) and provides the framework for presidential oversight of nuclear diplomacy.

Strategic Stakes for India

- **The Chabahar Dilemma:** India has fulfilled its **\$120 million** commitment for port equipment but faces a looming **April 26, 2026** deadline when its current U.S. sanctions waiver expires. Operations at the Shahid Beheshti terminal are being scaled back to shield Indian officials from U.S. penalties.
- **Tariff Threats:** In January 2026, the U.S. threatened a **25% tariff** on any country maintaining trade ties with Iran, directly endangering India's high-value agricultural exports (like Basmati rice) and its \$86 billion trade surplus with the U.S.
- **Energy Security:** With Iran once being India's top oil supplier, the continued "zeroing out" of Iranian crude under U.S. pressure forces India to rely on more expensive or logistically complex alternatives, impacting its current account deficit.

Conclusion

The 2026 U.S.-Iran crisis represents a critical juncture where "coercive diplomacy" is being tested to its limit. For President Trump, the goal is a legacy-defining "Trump Deal" that succeeds where the JCPOA allegedly failed. For Iran, the survival of the regime amidst internal unrest and external military threats is the priority. For the rest of the world, particularly India, the primary concern is preventing a regional conflagration that would disrupt the global energy supply and the vital shipping lanes of the Strait of Hormuz.

UPSC Relevance

- **GS Paper II:** International Relations; Effect of policies and politics of developed and developing countries on India's interests; Bilateral, regional and global groupings and agreements involving India.
- **GS Paper III:** Security challenges and their management in border areas; Infrastructure (Ports); Energy security.
- **Prelims Focus:** Geography of West Asia (Strait of Hormuz, Muscat, Chabahar), P5+1 composition, NPT provisions, and the role of Oman in international mediation.

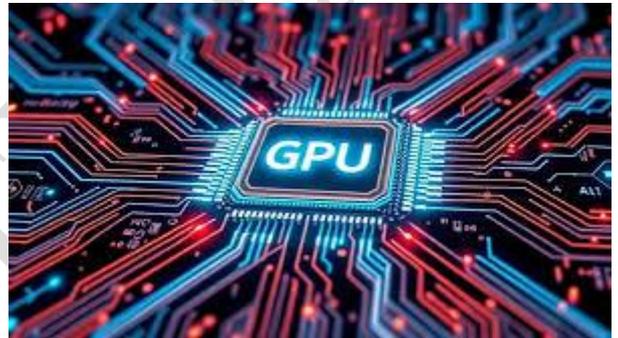
6. GPU Technology: The Engine of the Modern Digital Economy

Originally developed in 1999 to enhance video game visuals, the Graphics Processing Unit (GPU) has evolved into the foundational infrastructure for the global artificial intelligence (AI) revolution. As of February 2026, GPUs are no longer just "gaming chips" but are strategic national assets central to sovereign AI and high-performance computing.



Core Summary of GPU Evolution and Utility

- **Parallel Architecture:** Unlike the Central Processing Unit (CPU), which handles complex tasks sequentially (one after another), a GPU contains thousands of smaller, specialized cores designed to handle many simple calculations simultaneously.
- **From Pixels to Parameters:** GPUs excel at "number-crunching" for millions of pixels on a screen. This same mathematical capability is now used to process billions of "parameters" in neural networks, making GPUs indispensable for training Large Language Models (LLMs).
- **The Rendering Pipeline:** The GPU operates through a four-stage process—Vertex Processing (positioning), Rasterisation (converting geometry to pixels), Shading (adding color/light), and Writing to Frame Buffer (final image display).
- **Memory Bandwidth:** High-end GPUs utilize specialized Video RAM (VRAM) and high-speed connections to prevent data bottlenecks, ensuring that the massive volume of data required for AI and 3D graphics can be moved at near-instantaneous speeds.
- **Market Dominance:** As of early 2026, Nvidia maintains a near-monopoly with approximately **90% market share** in data-center GPUs, largely due to its proprietary **CUDA software ecosystem**, which makes it difficult for developers to switch to competitors like AMD or Intel.
- **Sustainability Challenges:** Training a single large neural network can consume energy equivalent to running a home air conditioner for several hours daily, raising critical questions about the environmental footprint of the AI industry.



Key Definitions

- **CUDA (Compute Unified Device Architecture):** Nvidia's proprietary software platform that allows developers to use GPUs for general-purpose mathematical processing beyond graphics.
- **Tensor Cores:** Specialized hardware within modern GPUs designed specifically to accelerate the matrix multiplication required for deep learning.
- **Die:** The actual flat piece of silicon on which the GPU's circuits are etched.
- **Hukou System Analog (The Parallelism Metaphor):** If a CPU is like a single expert teacher grading one paper at a time, a GPU is like 1,000 students each grading one page of the school's exams simultaneously.

Constitutional & Legal Provisions

- **Competition Act, 2002 (India):** Relevant in the context of global investigations into GPU "bundling." **Section 3** (Anti-competitive agreements) and **Section 4** (Abuse of dominant position) empower the Competition Commission of India (CCI) to investigate if a firm uses its market power to exclude rivals or lock-in customers.
- **IT Act, 2000:** Governs the legal framework for the digital economy in India, though it is currently being replaced by the **Digital India Act (2026)** to address emerging technologies like AI and semiconductor security.



- **EU Antitrust Laws (Articles 101 & 102 TFEU):** Currently being invoked by European regulators to investigate whether dominant GPU makers are using "product tying" (forcing software with hardware) to stifle competition.

India's Semiconductor Strategy (Semicon 2.0)

- **IndiaAI Mission:** In February 2026, the government announced an expansion of the national compute pool, aiming to add **20,000 more GPUs** to the existing 38,000 to support domestic startups.
- **Indigenous Design:** Under **Semiconductor 2.0**, India is shifting focus from just "assembly" to "designing" full-stack Indian IP, including RISC-V based processors to reduce reliance on global proprietary architectures.

Conclusion

The transition of GPUs from "discretionary" components to "core infrastructure" marks the beginning of the Fifth Industrial Revolution. While the technological leaps are unprecedented, the concentration of market power and the escalating energy demands present significant regulatory and environmental hurdles. For India, achieving "Sovereign AI" requires not just the procurement of thousands of GPUs but the development of indigenous chip-design capabilities to ensure long-term strategic autonomy.

UPSC Relevance

- **GS Paper III:** Science and Technology- developments and their applications and effects in everyday life; Awareness in the fields of IT, Computers, Robotics, and AI.
- **GS Paper III:** Infrastructure: Energy (Data center energy consumption); Economy (Monopolies and market dominance).
- **GS Paper II:** Bilateral, regional and global groupings and agreements (India-U.S. Trade Framework 2026 regarding tech products).
- **Prelims Focus:** Difference between CPU, GPU, and TPU; CUDA ecosystem; India's Semiconductor Mission (ISM) targets; and global antitrust regulatory bodies.

7. India-Switzerland Strategic Partnership: R&D and High-Tech Cooperation

On February 19, 2026, India's Union Minister for Commerce and Industry, Piyush Goyal, met with the President of the Swiss Confederation, Guy Parmelin, in New Delhi. The high-level dialogue focused on leveraging the **India-EFTA Trade and Economic Partnership Agreement (TEPA)** to transition from a trade-based relationship to one centered on deep technological integration and innovation.

Key Summary of Bilateral Cooperation

- **Focus on Advanced Therapeutics:** India called for deeper collaboration in biotechnology, specialty pharmaceuticals, and advanced therapeutics, moving beyond the traditional exchange of generic medicines.
- **Investment Targets:** The discussions aimed at operationalizing the TEPA mandate, which carries a legally binding ambition for EFTA nations to facilitate **\$100 billion in investments** into India over 15 years, potentially creating 1 million jobs.
- **Niche Technology Integration:** Minister Goyal encouraged Swiss investment in sectors where Switzerland holds global leadership, such as precision engineering, health sciences, and renewable energy.



- **Regulatory Harmonization:** Both nations committed to strengthening regulatory cooperation to streamline drug development cycles and ensure faster market access for innovative medical solutions.
- **Gateway to Europe:** Switzerland is positioned as a critical gateway for "Make in India" products to integrate into European value chains, specifically in the high-tech and pharmaceutical segments.
- **Academic-Industry Linkage:** A renewed emphasis was placed on the **Indo-Swiss Joint Research Programme (ISJRP)** to foster collaboration between Swiss innovation labs and Indian digital implementation hubs.



Key Definitions

- **Specialty Pharmaceuticals:** High-cost, high-complexity drugs used to treat chronic or rare conditions (e.g., cancer, multiple sclerosis), requiring specialized handling and administration.
- **Advanced Therapeutics:** High-end medical treatments including gene therapy, cell therapy, and tissue-engineered products that offer personalized medical solutions.
- **EFTA (European Free Trade Association):** An intergovernmental organization comprising Iceland, Liechtenstein, Norway, and Switzerland, operating parallel to the European Union.
- **Invest India EFTA Desk:** A dedicated facilitation mechanism designed as a single-window platform for businesses from EFTA nations to navigate the Indian investment landscape.

Constitutional & Legal Provisions

- **Article 51 (Directive Principles):** Encourages the state to promote international peace, security, and maintain just and honorable relations between nations, providing the constitutional basis for FTAs.
- **Trade and Economic Partnership Agreement (TEPA):** A comprehensive trade deal operationalized in October 2025. It is India's first FTA with a developed European bloc that includes legally binding investment commitments.
- **Intellectual Property Rights (IPR) Chapter:** TEPA includes specific provisions on data protection and patent safeguards, balancing the interests of Swiss innovators with India's role as the "Pharmacy of the World."
- **Biological Diversity Act, 2002:** Relevant for R&D in biotechnology, governing the access to biological resources and ensuring equitable sharing of benefits from their use.

Additional Key Points: The "One Health" Initiative

A significant byproduct of the 2026 meeting is the expansion of the **Indo-Swiss Joint Research Programme (ISJRP)**. In February 2026, a new call for proposals was launched focusing on the **"One Health" framework**, which recognizes the interconnection between people, animals, plants, and their shared environment. This initiative aims to tackle zoonotic diseases and antimicrobial resistance through joint R&D projects funded by India's DBT (Department of Biotechnology) and the Swiss National Science Foundation.



Conclusion

The India-Switzerland partnership is undergoing a qualitative shift. While gold and machinery remain significant in trade volume, the future of the relationship lies in the "Lab-to-Market" pipeline. By combining Switzerland's high-end precision research with India's massive digital data pools and manufacturing scale, the two nations are creating a new blueprint for North-South technological cooperation. However, the realization of the \$100 billion investment target will depend heavily on the effectiveness of regulatory alignment and the ease of doing business at the grassroots level in India.

UPSC Relevance

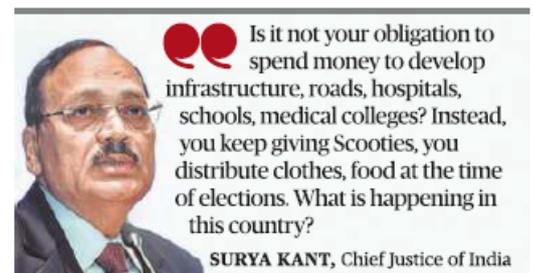
- **GS Paper II:** Bilateral, regional and global groupings and agreements involving India; Effect of policies and politics of developed and developing countries on India's interests.
- **GS Paper III:** Science and Technology- developments and their applications and effects in everyday life; Achievement of Indians in science & technology; Indigenization of technology.
- **Prelims Focus:** EFTA member countries, TEPA's investment targets, the "One Health" concept, and the role of the Department of Biotechnology (DBT) in international R&D.

8. Judicial Scrutiny of Freebies: Balancing Welfarism and Fiscal Prudence

On February 19, 2026, a three-judge Bench of the Supreme Court, led by **Chief Justice of India (CJI) Surya Kant**, raised serious concerns over the "indiscriminate" distribution of freebies by State governments. The court questioned whether such "largesse" amounts to an "appeasement policy" that ignores the financial health of the public exchequer and hampers long-term national development.

Core Legal and Fiscal Concerns

- **Indiscriminate Distribution:** The Court criticized the lack of distinction between the "haves" and "have-nots," noting that affluent sections often benefit from freebies (like free electricity) intended for the marginalized.
- **Fiscal Deficit vs. Largesse:** CJI Kant pointed out that even revenue-deficit States continue to splurge on items like scooties, clothes, and food near elections, leaving insufficient funds for infrastructure, roads, and hospitals.
- **Impact on Work Culture:** The Bench warned that direct cash transfers and excessive free services could erode the nation's work culture and reduce individual motivation to earn a dignified livelihood.
- **Budgetary Transparency:** Justice Joymalya Bagchi suggested that all such expenditures must be transparently reflected in budget proposals and justified as "planned expenditure" rather than post-tariff interventions.
- **Electricity Sector Stress:** The observations arose during a challenge by TNPDC against **Rule 23 of the Electricity (Amendment) Rules, 2024**, which mandates that tariffs must be cost-reflective to prevent unsustainable revenue gaps.
- **Universal Principle:** The Court reiterated a fundamental economic principle: those who can afford a facility must pay for it to ensure the financial viability of public utilities.





Key Definitions

- **Freebies:** Public welfare measures provided free of charge, often as short-term electoral promises (e.g., free gadgets, debt waivers), distinguished from long-term welfarism.
- **Welfarism:** Sustained state efforts to build human capital through essential services like education, healthcare, and food security (PDS).
- **Rule 23 (Electricity Rules, 2024):** A regulation requiring that the gap between a utility's approved revenue requirement and its actual revenue from tariffs must not exceed **3%**, ensuring fiscal discipline in the power sector.
- **Revenue Deficit:** A situation where the government's net realized revenue is less than its total estimated expenditures.

Constitutional & Legal Framework

- **Directive Principles of State Policy (DPSP): Articles 38 and 39** mandate the State to secure a social order for the promotion of public welfare and ensure equitable distribution of resources.
- **Article 21 (Right to Life):** The Court clarified that providing education and healthcare is a fundamental duty under the right to a dignified life, distinguishable from "irrational largesse."
- **Article 282:** Grants the Union or a State the power to make grants for any public purpose, even if not within their respective legislative domains, though this is often debated in the context of freebies.
- **Subramaniam Balaji vs. Govt. of Tamil Nadu (2013):** A previous ruling where the SC held that promises in election manifestos do not amount to "corrupt practice" under the RPA, 1951, though the current Bench is revisiting the fiscal implications of this logic.

UPSC Relevance

- **GS Paper II:** Constitution of India; Welfare schemes for vulnerable sections; Separation of powers between various organs; Role of the Judiciary.
- **GS Paper III:** Indian Economy and issues relating to mobilization of resources; Government Budgeting; Infrastructure (Energy); Fiscal policy and debt sustainability.
- **Prelims Focus:** DPSP (Articles 38-41), Electricity Act 2003, Difference between Revenue and Capital expenditure, and the "Cost-Reflective Tariff" concept.

Conclusion

The Supreme Court's intervention signals a shift toward "fiscal constitutionalism." While the judiciary recognizes the State's duty to extend a "helping hand" to the poor, it emphasizes that "appeasement" through taxpayers' money at the cost of schools and hospitals is a regressive path. The challenge lies in defining a clear legal boundary between essential "Welfare" and populist "Freebies" to ensure that India's journey toward a \$10 trillion economy is not derailed by short-term electoral math.

9. India-France AI Partnership: Integrating Innovation with Humanity

On February 19, 2026, French President Emmanuel Macron addressed the **AI Impact Summit** in New Delhi, emphasizing a shared Indo-French vision of "Technology with Humanity." Highlighting the urgency of inclusive digital growth amidst global tensions, the two nations committed to building a framework for "Sovereign AI" that prioritizes ethical innovation, responsibility, and the protection of vulnerable citizens.



Key Pillars of the India-France AI Cooperation

- **Human-Centric AI Framework:** President Macron called for directing digital tools toward an inclusive approach, focusing on "bridging rather than dividing." The framework aims to combine rapid innovation with accountability to ensure AI serves as a force for good.
- **Sovereign AI Vision:** Both nations are collaborating to develop "Sovereign AI" stacks—domestic infrastructure, data, and models—to reduce reliance on dominant foreign tech ecosystems and ensure strategic autonomy in critical decision-making.
- **Child Safety and Digital Regulation:** In a landmark proposal, Macron invited India to join a global initiative to protect children from digital abuse, including France's plan to ban social networks for children under 15, a move India is now set to support.
- **G7 and Global Leadership:** As the 2026 G7 Chair, France intends to use its presidency to foster an inclusive AI vision, with India as a key ally in shaping global "rules of the game" based on the rule of law and science.
- **Praise for India's Digital Public Infrastructure (DPI):** Macron lauded the **India Stack** (Aadhaar, UPI, and Digital Health IDs) as a "civilizational story," noting how it brought 1.4 billion people into the formal digital economy.
- **Bilateral Acceleration:** The summit coincides with the **2026 India-France Year of Innovation**, marking a shift from theoretical "action" to measurable "impact" in sectors like healthcare, energy, and agriculture.

Key Definitions

- **Sovereign AI:** A nation's capability to produce and govern AI using its own domestic infrastructure, data, and workforce, ensuring national security and cultural relevance.
- **India Stack:** A set of open APIs and digital public goods that allow governments and businesses to utilize a unique digital ID, payments, and data exchange at scale.
- **Social Media Age-Gating:** Legal mechanisms to verify a user's age and restrict access to social platforms for minors (e.g., the proposed under-15 ban) to prevent digital abuse.
- **Inclusive AI:** Technological design that ensures equitable access and benefits for all sections of society, regardless of geography or socioeconomic status.



Constitutional & Legal Provisions

- **Article 51 (Directive Principles):** Mandates the State to promote international peace and maintain just relations, underpinning India's strategic partnership with France.
- **Digital Personal Data Protection Act (DPDP), 2023:** India's primary legal framework for data privacy, which aligns with European GDPR principles and forms the basis for bilateral data-sharing agreements.
- **India-EFTA TEPA (2025-26):** While primarily economic, this agreement facilitates the high-tech investment flow necessary to build the physical infrastructure for Sovereign AI.



- **UN Charter and Rule of Law:** Macron emphasized that AI rules must be built upon the "core shared values" of democracy and international law to prevent technological hegemony.

Additional Key Points: The "Sovereign AI" Ecosystem

In early 2026, India's **IndiaAI Mission** achieved a milestone by deploying **38,000 government-funded GPUs** to support startups. Simultaneously, French firms like **Bull (Atos Group)** are setting up R&D labs in Bengaluru to co-develop sustainable, high-performance computing systems. This "Sovereign Stack" is designed to prioritize "Invisible AI"—using technology for climate modeling, aircraft simulation, and healthcare rather than just consumer-facing chatbots.

Conclusion

The partnership between India and France is evolving into a "Special Global Strategic Partnership" that transcends traditional defense ties. By championing "Technology with Humanity," New Delhi and Paris are offering the world a "third way"—an alternative to the purely market-driven or state-surveillance models of AI. The success of this vision depends on how effectively these nations can regulate the "black box" of AI while maintaining an environment that fosters breakneck innovation.

UPSC Relevance

- **GS Paper II:** International Relations; Bilateral, regional and global groupings and agreements involving India; Effect of policies of developed countries on India's interests.
- **GS Paper III:** Science and Technology; Awareness in the fields of IT, AI, and Computers; Indigenization of technology; Cyber security and digital sovereignty.
- **Prelims Focus:** India-France Year of Innovation (2026), Components of India Stack, G7 Presidency (2026), and the definition of Sovereign AI.

10. Regulatory Oversight of UPI Autopay: Addressing Unintended Debts

In February 2026, the Reserve Bank of India (RBI) directed the National Payments Corporation of India (NPCI) to investigate a significant rise in user complaints regarding **UPI Autopay**. The central bank's intervention follows reports of "involuntary" payment mandates and systemic difficulties in canceling recurring subscriptions, raising concerns over consumer protection in India's digital payment ecosystem.

Core Issues and Regulatory Action

- **Rise in Involuntary Mandates:** Users have reported being unaware that routine one-time payments were triggering recurring "autopay" mandates, often due to misleading interface designs or "nudges" by merchants.
- **Cancellation Bottlenecks:** A major friction point identified is the difficulty in terminating active mandates. Many users mistakenly believed that deleting a service application would stop bank-level debits, which is not the case.
- **Design Ambiguity vs. Fraud:** NPCI's internal assessment suggests that the primary issue is "design gaps" rather than systemic fraud. Features like "UPI Collect" and "Autopay" have reduced payment friction to a point where explicit user consent is often obscured.
- **Mandate Interoperability (Dec 2025):** To counter these issues, a new rule effective from **December 31, 2025**, mandates that all UPI apps must allow users to view and manage *all* their active mandates in one place, regardless of the app used to create them.



- **Portability and Control:** Users now have the right to "port" or move their mandates from one UPI app to another. NPCI has strictly prohibited the use of cashbacks or pop-ups to influence these user-driven migrations.
- **Non-Peak Execution:** To reduce system load and improve success rates, recurring debits are now restricted to non-peak hours (avoiding 10:00 AM–1:00 PM and 5:00 PM–9:30 PM), with a cap of four total execution attempts.



Key Definitions

- **UPI Autopay:** A feature launched in 2020 that allows users to automate recurring payments (subscriptions, bills, EMIs) through a one-time UPI PIN authentication.
- **TPAP (Third-Party Application Provider):** Entities like Google Pay, PhonePe, and Amazon Pay that provide the user interface for UPI transactions but do not hold the bank accounts directly.
- **Mandate Portability:** The ability for a consumer to transfer a recurring payment instruction from one UPI service provider to another without needing to re-register with the merchant.
- **Additional Factor of Authentication (AFA):** A security requirement (like a PIN or OTP) for transactions; currently, UPI Autopay allows transactions up to ₹15,000 (and ₹1 lakh for specific categories like insurance) without AFA for subsequent debits.

Constitutional & Legal Provisions

- **Payment and Settlement Systems Act, 2007:** The primary legislation under which the RBI regulates and supervises payment systems in India. **Section 18** empowers the RBI to issue guidelines to system providers.
- **Consumer Protection Act, 2019:** Relevant in cases of "unfair trade practices," where digital interfaces are designed to trick consumers into recurring financial commitments (often termed "dark patterns").
- **Reserve Bank - Integrated Ombudsman Scheme, 2021:** Provides a "One Nation One Ombudsman" mechanism for cost-free redressal of complaints related to digital payment deficiencies.
- **Digital Personal Data Protection (DPDP) Act, 2023:** Governs how payment apps must obtain "explicit and informed consent" before processing user data for mandate creation.

Conclusion

The rapid growth of UPI Autopay—now processing nearly **1 billion transactions monthly**—has outpaced user awareness and interface transparency. The RBI's "nudge" to the NPCI signifies a transition from a phase of "adoption at all costs" to one of "responsible innovation." While the new interoperability rules provide the necessary tools for user control, the ultimate success of these reforms will depend on how strictly "dark patterns" in merchant apps are penalized to ensure that digital convenience does not come at the cost of financial autonomy.



UPSC Relevance

- **GS Paper III:** Indian Economy; Mobilization of resources; E-technology in the aid of farmers (for KCC/Insurance autopay); Internal security (cyber-financial frauds).
- **GS Paper II:** Statutory, regulatory and various quasi-judicial bodies; Government policies and interventions for development.
- **Prelims Focus:** Role of NPCI (a section 8 company), UPI 2.0 features, e-mandate limits set by RBI, and the difference between TPAPs and PSP Banks.

11. Diplomatic Calibration: India Condemns West Bank Settlement Expansion

On February 18, 2026, India joined over 100 United Nations member states in signing a joint statement strongly condemning Israel's recent decisions to expand its control over the occupied West Bank. The statement, read out by Palestinian Ambassador Riyad Mansour, signals a critical diplomatic calibration by New Delhi, reaffirming its traditional "Two-State" stance despite burgeoning strategic ties with Tel Aviv.

Core Summary of the UN Joint Statement

- **Condemnation of Unilateralism:** India joined a coalition including Arab nations, BRICS members, the EU, and all permanent UNSC members (except the U.S.) to condemn Israel's "unilateral measures" aimed at expanding its presence in the West Bank.
- **Rejection of Annexation:** The statement explicitly rejects any "de facto annexation" of Palestinian territories, emphasizing that such moves violate international law and the Fourth Geneva Convention.
- **Demographic Integrity:** Signatories reiterated their rejection of all measures designed to alter the "demographic composition, character, and status" of the Palestinian territories occupied since 1967, including East Jerusalem.
- **Timing and Context:** India initially skipped a joint appearance on February 17, likely due to Prime Minister Narendra Modi's upcoming state visit to Israel (February 25-26). However, New Delhi signed the document late on Wednesday, just before the deadline.
- **International Consensus:** The statement followed the Israeli cabinet's February 2026 decision to implement land registration in "Area C" for the first time since 1967, a move experts call a "mega land grab."
- **Support for Two-State Solution:** The declaration reaffirms the 1967 lines as the only viable basis for a sovereign, independent Palestinian state living side-by-side with Israel.



Key Definitions

- **Area C:** Under the Oslo Accords, this comprises approximately **60%** of the West Bank where Israel maintains full civil and security control.
- **De Facto Annexation:** The administrative and legislative steps taken by an occupying power to integrate territory into its own state without a formal declaration of annexation.
- **Settlement Watch:** A monitoring process by NGOs (like Peace Now) and international bodies to track the expansion of housing units and infrastructure in occupied territories.



- **Knesset:** The unicameral national legislature of Israel, which PM Modi is expected to address during his 2026 visit.

Constitutional & Legal Provisions

- **Article 51 (DPSP):** The Indian Constitution mandates the State to "promote international peace and security" and "foster respect for international law," providing the foundation for India's principled stand on Palestine.
- **UNSC Resolution 2334 (2016):** Explicitly states that Israel's settlement activity constitutes a "flagrant violation" of international law and has "no legal validity."
- **ICJ Advisory Opinion (July 2024):** The International Court of Justice ruled that Israel's occupation of the West Bank and East Jerusalem is unlawful and must be brought to an end "as rapidly as possible."
- **Article 49 of the Fourth Geneva Convention:** Prohibits an occupying power from transferring parts of its own civilian population into the territory it occupies.

Strategic De-hyphenation in 2026

While India has intensified its "Strategic Partnership" with Israel—evidenced by the **₹3.25 lakh crore Rafale jet deal** and cooperation in cybersecurity—it continues to practice "**De-hyphenation.**" This means India treats its relationship with Israel and Palestine as independent and on their own merits. By signing the statement, New Delhi signals that its support for Israel's security does not equate to an endorsement of its settlement policy.

Conclusion

India's decision to sign the UN statement, after a brief delay, underscores the "tightrope walk" of its Middle East policy. While PM Modi's upcoming visit to Israel aims to solidify an "enormously powerful alliance" in defense and technology, New Delhi remains unwilling to abandon its historical consensus on international law. For India, a stable West Asia is critical for the success of the **India-Middle East-Europe Economic Corridor (IMEC)**, making any destabilizing annexation in the West Bank a direct threat to its long-term economic interests.

UPSC Relevance

- **GS Paper II:** India and its neighborhood- relations; Bilateral, regional and global groupings and agreements involving India; Effect of policies of developed and developing countries on India's interests.
- **GS Paper I:** History of the world: Middle East conflicts and the Palestinian issue.
- **Prelims Focus:** Geography of the West Bank (Area A, B, C), 1967 borders (Green Line), Oslo Accords, and the role of the UN Special Rapporteur on Palestinian territories.

12. Breakthrough in Aqueous Zinc-Ion Batteries: Sustainable Grid Storage

On February 19, 2026, researchers from the **Centre for Nano and Soft Matter Sciences (CeNS)**, Bengaluru—an autonomous institute under the Department of Science and Technology (DST)—announced a significant breakthrough in battery technology. By synthesizing a novel cathode material, the team has addressed the long-standing instability issues of **Aqueous Zinc-Ion Batteries (AZIBs)**, making them a formidable alternative to lithium-ion systems for large-scale renewable energy storage.

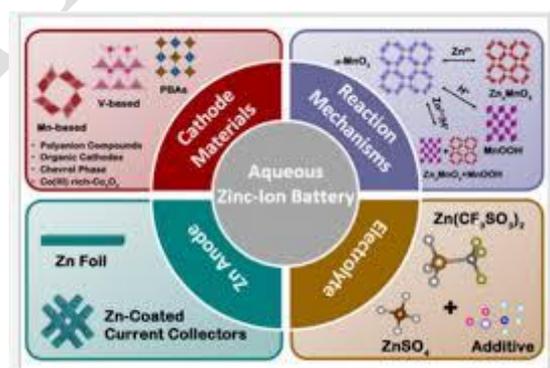


Key Summary of the Technological Breakthrough

- **Novel Cathode Material:** The researchers synthesized **sulfur vacancy-induced 1T-phase Molybdenum Disulfide (1T-MoS₂)**. Unlike the standard semiconducting 2H phase, this "metallic-phase" material offers higher surface area and superior conductivity.
- **Overcoming Structural Bottlenecks:** By inducing sulfur vacancies (defects) into the MoS₂ nanoflakes, the team created active sites that facilitate faster zinc-ion insertion and extraction, significantly enhancing charge storage capacity.
- **Operational Optimization:** A critical finding was the identification of the "**Electrochemical Potential Window**" (0.2V to 1.3V). Operating within this specific voltage range prevents the degradation of the electrolyte and ensures the battery remains stable over long periods.
- **High Performance Metrics:** The prototype retained **97.91%** of its capacity even after **500 continuous charge-discharge cycles**. It demonstrated a **Coulombic efficiency of 99.7%**, indicating nearly perfect reversibility with minimal energy loss.
- **Safety and Cost-Efficiency:** AZIBs use water-based electrolytes, which are non-flammable and significantly safer than the organic electrolytes used in Lithium-ion batteries. Furthermore, zinc is more abundant and cheaper than lithium or cobalt.
- **Grid-Scale Application:** The material's ability to store intermittent energy from solar and wind sources reliably makes it ideal for India's goal of achieving **500 GW** of non-fossil fuel capacity by 2030.

Key Definitions

- **Aqueous Zinc-Ion Battery (AZIB):** A type of rechargeable battery that uses water-based electrolytes and zinc as an anode, prized for being eco-friendly and safe from thermal runaway (fire risks).
- **1T-Phase Molybdenum Disulfide (1T-MoS₂):** A specific structural arrangement of MoS₂ that behaves like a metal (conducting electricity) rather than a semiconductor, allowing for much faster electron transport.
- **Coulombic Efficiency:** The ratio of the total charge extracted from the battery to the total charge put into the battery during a full cycle. Higher efficiency means less energy is lost as heat or side reactions.
- **Hydrothermal Method:** A technique for synthesizing crystals from high-temperature aqueous solutions at high vapor pressures; used here to create the precise "sulfur-deficient" nanoflakes.



Constitutional & Legal Provisions

- **Article 51A(g):** Fundamental Duty to protect and improve the natural environment. Indigenous green technologies like AZIBs align with this constitutional mandate.
- **National Programme on Advanced Chemistry Cell (ACC) Battery Storage:** A Production Linked Incentive (PLI) scheme by the Ministry of Heavy Industries aimed at making India self-reliant in battery manufacturing.
- **National Green Hydrogen Mission:** While distinct, the grid-storage capability of ZIBs complements the storage needs of green hydrogen production units.



- **Draft National Resource Efficiency Policy (2019):** Promotes the recycling of materials like zinc, emphasizing a "circular economy" which is easier to achieve with zinc than with complex lithium-cobalt chemistries.

Additional Keypoints: Strategic Importance

The dependency on the "**Lithium Triangle**" (Argentina, Bolivia, Chile) and China for battery raw materials poses a geopolitical risk to India's energy transition. Zinc, however, is abundantly available domestically (India is one of the world's leading producers of zinc). Success in AZIB technology ensures "**Atmanirbharta**" (**Self-reliance**) in energy storage infrastructure, reducing the import bill and shielding the domestic EV and grid markets from global supply chain shocks.

Conclusion

The CeNS breakthrough transforms Zinc-ion batteries from a laboratory curiosity into a commercially viable technology for grid-scale storage. By solving the cathode stability problem through "defect engineering," Indian scientists have paved the way for a safer, cheaper, and greener energy future. As India moves toward "Net Zero" by 2070, such indigenous innovations in **Deep Tech** will be the backbone of its sustainable development strategy.

UPSC Relevance

- **GS Paper III:** Science and Technology- developments and their applications and effects in everyday life; Indigenization of technology; Environmental pollution and degradation.
- **GS Paper III:** Infrastructure: Energy (Grid storage and Renewable Energy integration).
- **Prelims Focus:** Difference between Zinc-ion and Lithium-ion batteries, role of DST/CeNS, 1T-MoS₂ properties, and the concept of Coulombic efficiency.