Prelims Exam Topics

PM WANI

Context

The Department of Telecommunications (DoT) has introduced major consumer-centric upgrades to the PM-WANI framework to improve public Wi-Fi accessibility, simplify multi-device logins, and drive nationwide digital inclusion.

About PM WANI

- **Prime Minister's Wi-Fi Access Network Interface (PM-WANI)** is a distributed, unbundled architecture launched under the Digital India initiative to proliferate affordable, public broadband internet across the country.
- **Core Ecosystem Components**:
    - **Public Data Office (PDO):** Establish, maintain, and operate the physical Wi-Fi access points (hotspots), similar to local PCO booths.
    - **Public Data Office Aggregator (PDOA):** Performs authorization and accounting functions, aggregating multiple PDOs.
    - **App Provider:** Registers users and discovers PM-WANI compliant hotspots nearby to facilitate the connection.
    - **Central Registry:** Maintained by C-DOT to register and verify all ecosystem stakeholders.

Recent Updates

- QR-Based Laptop Login
- Sachet-Style Internet Plans: Hotspot operators are advised to offer hyper-flexible, short-duration data packs of 15, 30, and 60 minutes.
- Standardized Hotspot Names (SSIDs): Mandates uniform network nomenclature with distinct "PMWANI" branding.

INDIAN PRIME MINISTER SHOWCASES INDIA'S TRIBAL HERITAGE THROUGH DIPLOMATIC GIFTS

Context

The Indian Prime Minister presented world leaders with curated diplomatic gifts highlighting India's diverse tribal craftsmanship, traditional handlooms, and heritage agriculture on the global stage.

About the Tribal Heritages

Tribal Heritage	State of Origin	Associated Tribal Community	Key Features
Gond Painting	Madhya Pradesh	Gond Tribe	Traditional tribal art using intricate dot-and-line patterns with vibrant natural colours; themes revolve around folklore, forests, animals, and nature worship.
Muga Silk	Assam	Indigenous weaving communities	GI-tagged wild silk produced from the *Antheraea assamensis* silkworm; known for its natural golden sheen, durability, and cultural significance in Assamese attire.
Shirui Lily Stole	Manipur	Tangkhul Naga Tribe	Handcrafted textile inspired by the rare Shirui Lily (*Lilium mackliniae*), the State Flower of Manipur; reflects tribal weaving traditions and floral motifs.
Chak-Hao (Black Rice)	Manipur	Tribal hill communities	GI-tagged aromatic glutinous rice rich in anthocyanin antioxidants, giving it a deep black-purple pigment; valued for nutritional and cultural importance.

CARBON-FREE SANDWICH MOLECULE

Context

Researchers from IIT Madras and IISc Bengaluru have created the world's first completely carbon-free "sandwich" molecule, published in the journal Science. It replicates the structure of ferrocene.

About Ferrocene

- Ferrocene (discovered in the **1950s**) is a "sandwich" molecule where a single **iron atom** sits between **two flat carbon rings**.
- For 70+ years, scientists debated whether such stable sandwich structures were **unique to carbon rings**, or if other elements could replicate them.

About World's First Carbon free Sandwich Molecule

- The Indian team replaced **every component** of ferrocene:
    - Center Atom: Osmium replaces Iron.
    - Flanking Rings: Flat, boron-based rings replace the traditional carbon rings.
- **Significance**
    - **Stronger bonds** than ferrocene, making it more structurally robust
    - Opens doors to **novel advanced materials**
    - Potential future use in **drug delivery, electronics, and batteries**

INDIA'S FIRST GEOTHERMAL POWER PROJECT

Context

ONGC received approval for extension of the MoU to establish India's first geothermal power project in Puga Valley, Ladakh.

About the Project

- **Location:** 1-MWe pilot geothermal power plant in Puga Valley.
- **Tripartite MoU:** Agreement signed between Ladakh administration, LAHDC Leh and ONGC Energy Centre.
- **Commercial Development:** DPR will be prepared for large-scale geothermal exploitation.
- **Chumathang Expansion:** Further geothermal surveys planned in Chumathang region.

Puga Valley

- **Location:** Situated in eastern Ladakh at an altitude above 14,000 feet.
- **Geothermal Belt:** Lies within the tectonically active Himalayan geothermal belt.
- **Hot Springs:** Region is known for sulphur-rich hot springs and geothermal manifestations.
- **High Temperature Reservoir:** Test wells recorded temperatures above 200°C at shallow depths.

India's Status in Geothermal Energy

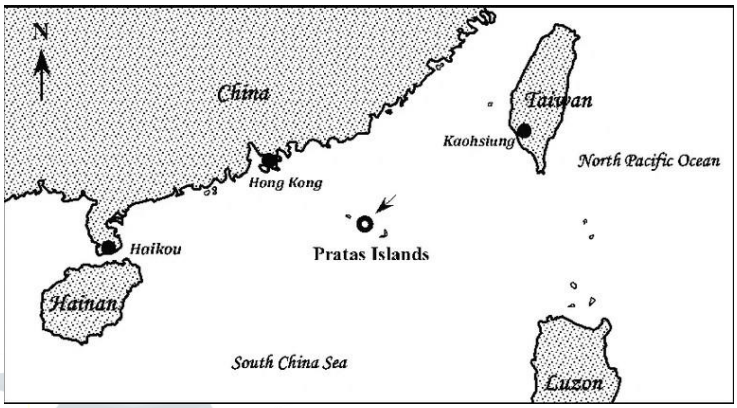
- **Large Potential:** India has estimated geothermal potential of nearly 10,000 MW.
- **Geothermal Sites:** Geological Survey of India identified around 350 geothermal spring locations.
- **Major Locations: Puga and Chumathang (Ladakh), Manikaran (Himachal Pradesh), Cambay Basin (Gujarat) and Tattapani (Chhattisgarh).**
    - **SONATA Belt:** Son-Narmada-Tapti region is an important geothermal province.
- **No Commercial Plant:** India currently lacks a large-scale operational geothermal power plant

PRATAS ISLANDS

Context

A Chinese coast guard vessel recently left waters near the Pratas Islands after a tense standoff with Taiwan's Coast Guard in the South China Sea.

About Pratas Islands



- **Alternative Name:** Also known as Dongsha Islands.
- **Location:** Situated in the northern South China Sea, southeast of Hong Kong and southwest of Taiwan.
- **Administration:** Governed and controlled by Taiwan.
- **Neighbouring Waters:** Located near major maritime routes connecting East Asia and Southeast Asia.
- **Strategic Importance:** Important for maritime surveillance and control in the South China Sea.
- **Dispute:** Claimed by China and administered by Taiwan.

Disputed Islands in South CHina Sea

Disputed Territory / Island	Location in South China Sea	Claimants	Present Control
Spratly Islands	Central South China Sea	China, Taiwan, Vietnam, Philippines, Malaysia, Brunei	Multiple claimants occupy different features
Paracel Islands	Northern South China Sea	China, Vietnam, Taiwan	China
Scarborough Shoal	Western South China Sea near Philippines	China, Philippines	China
Natuna Waters	Southern South China Sea near Indonesia	China's Nine-Dash Line overlaps with Indonesia's EEZ	Indonesia

ULTRA-LOW TEMPERATURE MEASUREMENT

Context

Recent advances in cold atom physics and Bose-Einstein Condensate (BEC) experiments have highlighted techniques for measuring ultra-low temperatures.

Measurement at Ultra-Low Temperature

- **Scale:** Ultra-low temperatures are measured in Kelvin (K), where 0 K represents absolute zero.
    - 0 K is equivalent to –273.15°C, representing minimum possible thermal motion of atoms.
- **Measurement Challenge:**
    - **Conventional Limitation:** Mercury and semiconductor thermometers become ineffective at extremely low temperatures.
    - **Property Changes:** Physical and electrical properties of measuring materials change significantly near absolute zero.
    - **Quantum Effects:** Atoms begin exhibiting quantum mechanical behaviour at ultra-low temperatures.
- **Cold Atom Physics:** Branch of physics studying atoms cooled close to absolute zero.

About Bose-Einstein Condensate (BEC)

- **Definition:** Exotic state of matter formed when bosonic atoms are cooled to temperatures extremely close to absolute zero.
- **Bosons and Fermions:** Atoms are broadly classified into fermions and bosons; bosons can occupy the same quantum state together which the fermions cannot.
    - Bosons are named after Satyendra Nath Bose who theoretically predicted their statistical behaviour in 1924.
    - In BEC, large number of atoms behave collectively as a single quantum entity.
- **Experimental Achievement:** First achieved experimentally in 1995 using ultra-cold rubidium atoms.
- **Nobel Prize:** Eric A. Cornell, Wolfgang Ketterle and Carl E. Wieman received the 2001 Nobel Prize in Physics for BEC experiments.
    - They achieved temperatures around 20 nanoKelvin (nK), where 1 nK = 10^{-9} Kelvin near 0 K
- **Applications:** Used in quantum computing, precision sensing, atomic clocks and quantum mechanics research.

SIDBI MSME INITIATIVES

Context

Finance Minister Nirmala Sitharaman launched new SIDBI initiatives to strengthen MSMEs and rural enterprises.

Key Initiatives

- **MachFin Mart:** Digital marketplace enabling MSMEs to access machinery with transparent pricing and technology support.
- **RRB Co-Lending Portal:** Enhances SIDBI partnership with Regional Rural Banks for rural MSME financing.
- **MoRE Programme:** Cluster-based support for modernisation of 10,000 rural and artisanal enterprises.

Significance

- **Technology Adoption:** Encourages MSME modernisation and productivity enhancement.
- **Financial Inclusion:** Expands institutional credit access in underserved rural regions

Mains Exam Topics

FINANCE COMMISSION TRANSFERS AND EQUITY ISSUE

Context

Consultations for the 16th Finance Commission have revived disputes over tax devolution, amid persistent regional inequalities and demands for equitable redistribution.

Finance commission at the centre of Fiscal federalism

- **Constitutional Balancing:** The Finance Commission functions as the constitutional mechanism that balances fiscal powers between the Union and the States while addressing regional disparities in development.
- **Vertical Devolution**: Although the 15th Finance Commission retained 41% tax devolution to States, the increasing use of cesses and surcharges by the Centre has reduced the actual transferable pool available to States.
- **Equity–Efficiency Conflict:** Redistributive criteria such as income distance favour poorer States, whereas economically advanced southern States argue that such formulas penalise fiscal prudence and demographic success.
- **Fiscal Dependence:** GST implementation, rising debt burdens, and strict fiscal deficit norms have increased States' dependence on Finance Commission transfers for maintaining expenditure commitments.
- **Centralised Spending Patterns:** The expansion of Centrally Sponsored Schemes has reduced fiscal autonomy by compelling States to allocate matching resources toward centrally determined priorities.

Structural Weaknesses in Fiscal Transfers

- **Shrinking Divisible Pool**: Cesses and surcharges now constitute a substantial share of gross tax revenues and remain outside the divisible pool, reducing the effective fiscal share of States.
- **Limited Fiscal Decentralisation:** Significant non-tax revenues, including proceeds from natural resources, asset monetisation, and RBI surplus transfers, remain concentrated with the Centre.
- **GST-Induced Constraints:** Post-GST fiscal restructuring weakened States' independent taxation capacity and reduced flexibility in revenue generation.
- **Borrowing Restrictions**: States face stringent fiscal discipline and borrowing norms despite expanding developmental and welfare obligations.

- **Cost-Sharing Burden:** Revised funding structures in schemes such as MGNREGA have increased the expenditure responsibilities of States through higher cost-sharing requirements.
- **Demand for Greater Devolution:** Several States have demanded an increase in vertical devolution to 50% in response to declining fiscal space and growing expenditure pressures.

Interstate Equity Dynamics

- **Evolving Distribution Criteria:** Frequent changes in the weight assigned to devolution indicators across successive Finance Commissions have generated uncertainty among States.
- **Income Distance Debate:** States have questioned the excessive reliance on income distance and advocated adjustments for purchasing power and regional cost variations.
- **Redistributional Shift**: The collective share of Bihar, Madhya Pradesh, Uttar Pradesh, and West Bengal increased significantly under revised 16th Finance Commission calculations.
- **Declining Southern Share:** The fiscal share of Andhra Pradesh, Telangana, Karnataka, Kerala, and Tamil Nadu declined sharply, intensifying concerns regarding regional imbalance.
- **Incentive Distortion:** Excessive dependence on unconditional equalisation transfers may weaken incentives for tax mobilisation and fiscal discipline among recipient States.

Public Service Delivery Gaps

- **Regional Spending Disparities**: Large differences persist in per capita health and education expenditure despite decades of fiscal redistribution.
- **Administrative Capacity Deficit**: Fiscally weaker States often lack institutional and administrative capacity to effectively absorb and utilise transferred resources.
- **Input-Oriented Allocation:** Fiscal transfers remain heavily tied to expenditure inputs rather than measurable service quality or governance outcomes.
- **Rigid Conditional Funding:** Uniform Centrally Sponsored Scheme guidelines restrict States from adapting expenditure according to regional developmental requirements.
- **Revenue Expenditure Bias**: A substantial portion of devolved funds is absorbed by salaries, pensions, and recurring expenditures, leaving limited capital for infrastructure creation.
- **Differential Delivery Costs**: Variations in terrain, population density, and infrastructure deficits increase the cost of delivering comparable public services across States.
- **Weak Outcome Orientation**: Existing transfer frameworks prioritise redistribution over measurable improvements in governance efficiency and service delivery outcomes.

Fifteenth Finance Commission Reforms

- **Retention of State Share:** The 15th Finance Commission retained the States' share in central taxes at 41%.
- **Rationalisation of Grants:** Revenue deficit grants, sector-specific grants, and State-specific grants were discontinued under the revised framework.
- **Fiscal Consolidation Measures:** States were advised to curb off-budget borrowings, integrate liabilities into formal budgets, and maintain fiscal deficits below 3% of GSDP.
- **Devolution Weightage Structure:** The Commission assigned major weight to income distance, population, forest cover, demographic performance, and GDP contribution.
- **Square-Root GSDP Formula**: The adoption of square-root transformation of GSDP shares reduced the relative advantage of economically stronger States.
- **Reduced Share of Advanced States**: Maharashtra, Tamil Nadu, and Karnataka witnessed notable reductions in their overall devolution shares.
- **Gains for Smaller States**: Several smaller and fiscally weaker States received comparatively larger allocations under the revised formula.

Alternative Devolution Models

- **GDP-Based Weightage:** Increasing the weight assigned to GDP contribution could significantly raise the fiscal share of economically advanced States.
- **Equal Weight Framework:** An equal-weight allocation formula would further improve the share of industrialised and high-performing States.
- **Actual GSDP Criterion:** Using actual GSDP shares instead of square-root transformation would substantially benefit major contributor States.
- **Fiscal Implications:** Alternative formulas could generate significant annual fiscal gains for States such as Maharashtra, Karnataka, and Tamil Nadu.

Equity and Efficiency Paradigm

- **Redistributive Justice:** The equity principle seeks to reduce regional disparities through fiscal support to economically weaker States.
- **Performance Incentivisation**: The efficiency principle rewards States demonstrating stronger tax effort, demographic management, and fiscal prudence.
- **Political Economy Concerns**: States with larger parliamentary representation are often perceived to receive higher transfers despite weaker fiscal performance indicators.

- **Delimitation Anxiety:** Southern States fear that demographic success could reduce political representation while fiscal redistribution continues to favour populous States.
- **Cooperative Federalism Challenge:** Future Finance Commissions must balance redistributive justice with performance-linked incentives to sustain both equity and federal trust.

AGEING POPULATION IN INDIA & ELDERLY CARE

Context

Kerala has set up India's first dedicated Department for the Welfare of Elderly People, signalling a proactive response to India's rapidly ageing demography.

Status of the Elderly Population in India

Indicator	Data
Elderly population (60+)- National	10.1% of total population (2021)
Elderly population (60+)-Kerala	16.9% (India's most rapidly ageing state)
Total Fertility Rate (Kerala)	1.35 — below replacement level of 2.1
Elderly sex ratio (projected by 2026)	1,060 women per 1,000 men (feminisation of ageing)
Elderly with chronic illness	75% suffer from at least one chronic disease (LASI)
Projected elderly by 2050	~34.7 crore (significant policy challenge)

Need for Elderly Care in India

- **Harnessing the "Silver Dividend":** Senior citizens possess immense professional experience, institutional memory, and cultural wisdom. Ensuring their healthy and active participation in society can transform them into valuable contributors through mentorship, community guidance, and part-time economic engagement.
- **Strengthening Intergenerational Bonds**: Elderly citizens play a vital role in preserving cultural continuity and transmitting moral values across generations. In traditional joint families, grandparents often provide emotional support, stability, and ethical guidance to younger members.
- **Promoting Social Stability:** The social experience and cultural maturity of older generations help reduce intolerance, social fragmentation, and violent tendencies within society.

- **Reducing Burden on Working-Age Population**: In the absence of institutional elder-care infrastructure such as assisted living facilities, trained caregivers, and day-care centres, caregiving responsibilities largely fall upon family members.
- **Moral and Ethical Responsibility**: Providing care to the elderly represents society's obligation towards individuals who have contributed physically, emotionally, socially, and economically throughout their lives.
- **Constitutional Commitment:** Article 41 of the Indian Constitution directs the State to ensure public assistance in cases of old age, sickness, and disability. Elderly care therefore forms part of the constitutional vision of social welfare.

Challenges Faced by the Elderly Population

- **Social Isolation and Neglect**: Urbanisation, nuclear families, migration, and changing social values have increasingly weakened traditional support structures, leading to neglect of elderly citizens.
- **Elder Abuse:** Senior citizens often face physical, emotional, financial, and psychological abuse. Emotional neglect and verbal humiliation significantly affect their dignity and mental well-being.
- **Caste-Based Vulnerabilities:** Lower-caste elderly individuals frequently continue working in old age due to financial necessity, while upper-caste seniors may experience loss of identity and self-worth because of declining occupational opportunities.
- **Feminisation of Ageing**: Ageing in India has become increasingly feminised. More than half of elderly women are widows, making them vulnerable to economic dependence, social exclusion, property deprivation, and gender-based discrimination.
- **Absence of Adequate Social Security:** Nearly 90% of India's workforce operates in the informal sector, limiting access to pensions and retirement benefits for a majority of citizens.
- **Weak Pension Support:** Government pension expenditure remains limited. Existing schemes such as the Indira Gandhi National Old Age Pension Scheme are often criticised for inadequate financial support.
- **Housing and Basic Amenities:** Many elderly individuals lack age-friendly housing, accessible infrastructure, and essential amenities suitable for their physical needs.
- **Burden of Chronic Diseases**: Data from the Longitudinal Ageing Study in India (LASI) indicates that nearly three-fourths of senior citizens suffer from at least one chronic disease such as diabetes, hypertension, arthritis, or cardiovascular disorders.

- **Mental Health Issues**: Depression, anxiety, dementia, and Alzheimer's disease affect a significant proportion of elderly citizens. Social stigma and lack of trained geriatric specialists aggravate the problem.

Government Initiatives for Elderly Care

Scheme / Policy	Key Provisions
Maintenance & Welfare of Parents & Senior Citizens Act, 2007	Mandates old age homes per district; penal provisions for non-maintenance; property revocation on neglect
National Policy for Older Persons (2011)	Income security, home care, health insurance, age-friendly environments
Pradhan Mantri Vaya Vandana Yojana	Assured pension/return scheme for senior citizens' income security
Rashtriya Vayoshri Yojana	Physical aids and assisted-living devices for BPL senior citizens
SAGE Initiative	Promotes innovative products and services for elderly care
SAMPANN Project	Online pension processing system for telecom pensioners
SACRED Portal	Job opportunities for citizens above 60 years
National Council for Senior Citizens	Advisory body to Central and State Governments on senior welfare

Way Forward

- **Formalising Caregiving Economy**: India must recognise caregiving as a formal economic activity by improving working conditions, training, and social recognition for caregivers.
- **Pension Reforms**: Old-age pensions should be revised regularly and linked with inflation to ensure basic dignity and livelihood security.
- **Strengthening Geriatric Healthcare:** Dedicated geriatric departments and specialised healthcare infrastructure should be established in all medical institutions.

- **Adopting Innovative Models**: India can adapt initiatives like Switzerland's "Time Bank" system, where younger individuals earn future care credits by assisting senior citizens.
- **Promoting the Silver Economy:** The government should encourage startups and private enterprises developing elderly-friendly technologies, assistive devices, and specialised living facilities.
- **Public-Private Partnerships:** Private healthcare institutions should be incentivised to establish geriatric care centres, especially in rural and semi-urban regions.
- **Addressing Feminisation of Ageing:** Policies should prioritise elderly women by ensuring property rights, survivor pensions, healthcare access, and protection from exploitation.
- **Rationalising Subsidies and Investments:** Ageing States may need to rationalise subsidies to accommodate rising pension liabilities, while younger States should focus on investing in human capital development.

INDIA'S RISING FERTILISER IMPORT BILL AMID WEST ASIA CONFLICT

Context

Fertiliser imports are becoming a major economic and strategic concern for India due to rising geopolitical tensions in West Asia, supply disruptions, and currency depreciation.

Current Status of Fertiliser Imports in India

- **Fertiliser import bill:**
  - $24.16 billion (2021–22)
  - $33.42 billion (2022–23 record high)
  - $21.07 billion (2023–24)
  - $20.92 billion (2024–25)
  - $27.17 billion projected (2025–26)
- **Imports in 2025–26:**
  - 28.2 million tonnes (mt) of fertilisers Including:
    - 11.2 mt urea
    - 6.4 mt DAP
    - 3.7 mt MOP

Reasons for Rising Import Bill

- **Rising International Prices:** Global fertiliser prices have increased significantly because of conflicts in Russia-Ukraine and West Asia. Energy price volatility has further raised manufacturing and transportation costs.
- **Rupee Depreciation Increasing Costs:** Since fertiliser trade occurs largely in US dollars, depreciation of the rupee raises import costs even when quantities remain unchanged.
- **Rupee weakened from around ₹85.2/$ to nearly ₹95.2/$:** This increases the landed cost of fertilisers and ultimately raises subsidy expenditure borne by the government.

Why Fertiliser Imports Matter for India

- **Food Security:** Fertilisers are essential for maintaining agricultural productivity and ensuring food security for India's large population. Any shortage can directly affect crop yields and food prices.
- **Agricultural Growth:** India's intensive farming system depends heavily on chemical fertilisers to sustain high productivity levels.
- **Price Stability:** Subsidised fertilisers help reduce input costs for farmers and prevent a sharp rise in food inflation. Lower cultivation costs also support the Public Distribution System (PDS).

Challenges in India's Fertiliser Sector

- **Geopolitical Vulnerability:** Conflicts in West Asia and the Russia-Ukraine war have disrupted shipping routes, energy supplies, and fertiliser trade flows globally.
    - Strategic chokepoints such as the Strait of Hormuz remain vulnerable, increasing risks of supply disruptions and price spikes.
- **Excessive Import Dependence:** India's overdependence on imports for fertilisers and raw materials creates long-term strategic and economic vulnerabilities.
- **Rising Subsidy Burden:** Higher import prices increase the government's fertiliser subsidy expenditure because retail prices for farmers remain controlled.
- **Currency Risks:** A weakening rupee makes imports costlier even if international prices remain stable. This creates additional uncertainty in subsidy planning and budgeting.
- **Supply Chain Disruptions:** Global shipping disruptions, freight cost increases, and export restrictions by producing countries can delay fertiliser availability during critical sowing seasons.

Government Initiatives in the Fertiliser Sector

- **Nutrient Subsidy:** Nutrient-Based Subsidy (NBS) scheme provides fixed support for P&K fertilisers, promoting balanced nutrient use.
- **ONOF Scheme**: One Nation One Fertiliser standardises branding under 'Bharat' for

transparency and quality.

- **Nano Fertilisers:** Promotes nano urea, nano DAP, and neem-coated urea for efficient nutrient use.
- **Digital Platforms:** iFMS (Integrated Fertiliser Management System) and mFMS (Mobile Fertiliser Management System) track fertiliser supply and enable real-time access for farmers.
- **PM-PRANAM Scheme:** Aimed at reducing the use of chemical fertilisers and encouraging balanced nutrient application.

Way Forward

- **Diversification of Import Sources:** India should diversify fertiliser imports across multiple countries to reduce geopolitical and supply chain risks.
- **Strengthening Domestic Manufacturing:** Greater investment is needed in urea plants, phosphatic fertilisers, and alternative fertiliser technologies.
- **Promotion of Balanced Nutrient Use:** Excessive dependence on urea must be reduced through Soil Health Cards, precision farming, fertigation, and micronutrient management.
- **Strategic Fertiliser Reserves:** India should maintain strategic reserves of key fertilisers and raw materials to manage temporary global disruptions.

Conclusion

"The future of Indian agriculture depends not only on food production, but also on securing the inputs that make production possible."

RUPEE DEPRECIATION

Context

The Indian rupee has recently fallen past the **96-per-dollar mark, hitting a new record low.** The rupee has declined by nearly **5.2% against the dollar since the Iran-US conflict began in late February.**

Factors responsible for weakening of the Rupee against Dollar

Domestic Factors

- **Widening Current Account Deficit (CAD):** The structural gap between India's imports and exports has expanded significantly. Beyond the massive energy bill, high international prices for other essential commodities have bloated India's overall import costs.
- **Foreign Capital Outflows (FII & FPI Sell-offs):** With better returns available in the US and high valuations in Indian equity markets, FPIs and FIIs have become major net sellers. As foreign investors withdraw billions of dollars from Indian stocks and government securities (G-Secs) and

send the money back to the US, they sell Rupees to buy Dollars, which puts further pressure on the Rupee to weaken.

- **Importers Are Buying Dollars in Advance:** Indian companies dependent on imported goods and raw materials have increasingly started securing dollars in advance to protect themselves against further currency depreciation.
- **Limited Export Competitiveness:** While sectors like IT and pharma can benefit from a weaker rupee, the overall benefit is limited because many Indian exports rely on imported components, which have become more expensive.
- **Inflation & Growth Headwinds:** Even though the long-term growth outlook remains strong, but, the slower near-term GDP growth & very low inflation level have acted as negative economic indicators, dampening investor confidence in Rupee's short term stability.

External & Global Factors

- **India-USA Trade Tensions & Tariffs:** USA is India's one of the top trading partners. However, the imposition of a 50% tariff on Indian goods by the Trump administration has severely impacted the export competitiveness of Indian goods & has increased the market risk perception.
- **Geopolitical Tensions:** Wars, conflicts (e.g. Russia-Ukraine, US-Iran War), or global crises trigger risk-off sentiment, pushing investors toward the dollar. Geopolitical conflicts in the Middle East and supply-chain anxieties around the Strait of Hormuz have pushed Brent crude oil prices past the $100–$110 per barrel mark.
- **High Crude Oil Prices & Import Dependence:** India imports almost 80-85% of its crude oil, thus, it is highly vulnerable to global energy spikes.
- **Strengthening of USA Dollar:** Despite the US Fed Reserve beginning its rate-cut cycle, the US Dollar has maintained persistent strength, reflecting its status as global reserve currency & a safe haven asset during a period of geopolitical uncertainty.

Monetary Policy Factors

- **US Federal Reserve's Monetary Policy:** The US Federal Reserve's decision to increase interest rates makes USD-denominated assets more attractive to investors. This leads to capital outflows from emerging markets like India, further weakening the rupee.
- **RBI's Stance:** The RBI has chosen a Neutral Policy Stance & kept the repo rate unchanged for most part of the year 2025 – prioritizing domestic liquidity management & growth over an aggressive defense of the Rupee.

Consequences of weakening of the Rupee

Impact on Consumers

- **Inflationary Pressure (Imported Inflation):** As the INR weakens, the Oil Marketing Cos. have to pay more Rupees for the same barrel of oil. This increased cost is eventually passed on to the consumers through higher prices for petrol, diesel, and natural gas. This high fuel cost then triggers a cascading effect.
- **Rising Cost of Living:** The price of other key imports, such as electronics, gold, industrial chemicals, and fertilisers, also rise – intensifying the inflationary pressure & eroding the purchasing power & savings of the average household.

Impact on Corporates (External Debt)

- **Increase in Debt Servicing Cost:** The Indian Corporates who have taken ECBs denominated in USD & have not fully hedged their exposure, face a major risk. A weaker rupee means that a company has to pay more INR for the USD-denominated debt.
- **Divergent Fortunes:** The corporate sector witnesses a divergence – while the export-oriented cos. see higher profits, the import-dependent cos. & highly indebted cos. face significant financial strain.

Macroeconomic Impact

- **Worsening Trade Deficit & Pressure on Reserves:** The RBI often intervenes (spot intervention) in the forex market to prevent excessive depreciation of the Rupee. The RBI sells USD to absorb the excessive Rupee liquidity. However, it leads to reduction in the national reserve buffer.
- **Capital Flight:** Withdrawal of funds by FPI & FIIs is one the causes for the weakening of the INR. If the Rupee continues to weaken, it could signal greater macroeconomic instability which may increase the rate of capital flight from India – creating a self-perpetuating cycle of depreciation.
- **Higher Subsidy Burden: G**overnment spending on fuel and fertilizer subsidies rises sharply when import costs increase, worsening the fiscal deficit.

How India is responding to the weakening of the Rupee

- **Direct and Indirect Forex Interventions:** The RBI's first line of defense has been selling US dollars from India's foreign exchange reserves, which have declined to around $697 billion from over $720 billion before the recent crisis . The RBI has asked state-owned oil refiners (the largest buyers of dollars) to curb their spot market purchases and instead use a dedicated foreign currency credit line, effectively reducing immediate demand on the rupee.
- **Curbing Speculation and Volatility:** To prevent excessive speculation from driving the rupee's fall, the RBI has also tightened regulations. This includes imposing a mandatory daily limit of $100

million on Authorised Dealers' Net Open Position (NOP) to limit excessive currency market positioning.

- **Attracting Foreign Capital: T**o increase the supply of dollars, authorities are looking to attract more foreign investment. This includes potentially reviving special deposit schemes for Non-Resident Indians (NRIs). Policymakers are working to make Indian G-Secs more lucrative for global institutional investors.
- **Permitting Fuel Price Increase:** To improve its fiscal situation, India has allowed small increases in domestic fuel prices. By aligning fuel prices with the high global crude oil prices of $110–$120 per barrel, the government aims to reduce the losses faced by State-run Oil Marketing Companies (OMCs), which are struggling with costly crude oil imports and a weak Rupee.

Way Forward

Strengthen Domestic Macro-fundamentals

- **Energy Security:** Aggressive domestic oil & gas exploration (Vedanta's $5 bn commitment), scaling ethanol blending (E20 target achieved), expanding renewable energy. India must prioritize domestic exploration blocks and completely optimize its Strategic Petroleum Reserves (SPR) to store oil when prices see temporary dips.
- **Reduce Import Dependence:** Boost domestic production of electronics, chemicals, and capital goods to cut imports.
    - Contain fiscal and current account deficits through better tax mobilisation, rationalised subsidies, and export diversification so external financing needs remain credible.

Manage External Vulnerability

- **Expand Rupee Vostro Accounts:** India needs to accelerate its bilateral trade mechanism—paying for oil, gas, and commodities in Indian Rupees (INR) or localized currency swaps with major trade partners like Russia, the UAE, and alternative non-Western energy suppliers.
- **Internationalizing the UPI-RuPay Stack:** Forging deeper cross-border payment links shrinks the need for US Dollars in retail, tourism, and remittance corridors.
- **Forex Reserves:** Maintain adequate forex reserves and flexible exchange rates so the RBI can smooth volatility without defending unsustainable levels, reassuring markets about India's shock-absorbing capacity.
- **Upgrade Export Competitiveness:** Upgrade export competitiveness with reforms in logistics, trade facilitation, skilling, and industrial policy, focusing on high-value manufacturing and services instead of low-margin commodities.