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DIRECTOR'S MESSAGE

"Civil Service is not just a job; it is an opportunity, to do your bit for society and to contribute to nation-building. It is an opportunity to realise your potential and make a meaningful contribution in the emancipation of masses."

Mr. Dilip Kumar
Director, Vajirao IAS Academy

Good Civil Servants ensure efficient and smooth governance. They are the backbone of the country and they have the power to make a difference in people's life.

We have set up extremely tough targets for ourselves. Now a day's, most of the students are well aware and focused about their aim. They just need a streak of guidance. We feel that we have done our bit in providing that blue streak of guidance and we are honoured to be a reason of smile on certain lips, proud to be your teacher, friend and guide.

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1.1 Proposal for a National Media Council in India

Syllabus: Polity & Governance [GS 2]

Context:

A National Media Council in India may be able to do the same by recognising working journalists, freelance reporters, camerapersons, and technicians, as in the case of statutory bodies such as the Bar Council of India or the Institute of Chartered Accountants of India.

The Current Credential Crisis:

- **Recognition Gaps:** Government recognition criteria often exclude local journalists and stringers.
- **Digital Misinformation:** Social media spreads unverified, biased and sensational content, raising concerns about journalistic credibility and accountability.

Role & Function of a National Media Council:

A unified statutory body could bring order to the profession through structured reform:

- **Inclusive Recognition:** The council could have an official registration system and issue universal credentials to all working journalists, freelance writers, camerapersons and technical support staff.
- **Standardized Qualifications:** In the same way as medical or legal professions could have a minimum set of educational or professional qualifications (journalism and mass communication degree or diploma) for formal licensing, it could be established.
- **Protection of Field Personnel:** A national protocol can be created on a national level to ensure that police or authorities do not impede the work of bona fide and media personnel with verified identity cards.
- **Ethics and Accountability:** A new, stronger Press Council of India, as opposed to the existing one that has limited enforcement, would have the power to punish fake news, paid news and deliberate disinformation, without compromising press freedom.

Current Regulatory Void & Pressing Challenges:

A. Institutional Weakness of the PCI

- Limited Jurisdiction: Press Council of India (PCI) has been set up under the Press Council Act 1978 and is only controlling the print media.
- Punitive Powers are missing: The PCI is a "moral watchdog. It has no power to fines, revoke licenses or to initiate criminal action against unethical practices in newspapers; it can only chide and censure.

B. The Crisis of Credentialing and Inclusion

- Outdated Accreditation Criteria: Present accreditation by Press Information Bureau (PIB) or state public relations department gives undue advantage to mainstream, big business media houses.
- Exclusion of Ground Staff: Regional stringers, independent freelance journalists, camerapersons and technicians who are at the greatest risk to operating are systematically excluded from getting formal state recognition and legal protection.

C. Rise of the Digital Wild West

- Misinformation Pandemic: The democratization of digital media has resulted in a vast amount of unverified reportage, sensationalism and fake news.
- Ambiguity in Identity: If there is no formal defining body, there is no legal separation between a trained and ethical investigative journalist, and an unverified social media content creator.

Proposed Structure & Mandate of a National Media Council (NMC):

A statutory National Media Council should be modeled after the BCI and ICAI to institutionalize the media profession:

A. Unified Statutory Recognition

- Universal Registry: The NMC would keep a national register that would be used to register and provide uniform credentials to all journalists working in media (print, electronic, digital, technical support etc.) in the country and also to freelance journalists.
- Minimum Qualifications: It may require a minimum educational or professional qualification (such as a recognised degree/diploma in journalism or other comparable amount of field experience) to gain a formal license to practice.

B. Ethics, Accountability, and Enforcement

- Codified Ethical Guidelines: The council would enforce a strict, uniform code of ethics covering conflict of interest, paid news, and privacy invasion.
- Punitive Jurisdiction: The NMC would have quasi-judicial authority to impose fines, suspension of licenses, or debarment of repeat offenders who have been convicted for hate speech and/or manufactured disinformation, as opposed to the PCI.

C. Social Security and Field Protection

- Institutional Safety Nets: The council would provide a legal buffer, so that there was no arbitrary state action or police harassment against field staff with verified credentials.
- Welfare Schemes: It would make insurance, pension schemes and hazard pay for those working in conflict zones formal.

Way Forward:

A National Media Council (NMC) should be independent of the executive to balance media regulation with Article 19(1)(a) (freedom of speech). It should include retired judges, senior editors, technical experts and civil society members to protect journalists, ensure accountability and reduce political and corporate influence.

Source: The Hindu

1.2 Scalable Solution for Anaemia in India

Syllabus: Health & Governance [GS 2]

Context:

Double Fortified Salt (DFS), enriched with both iodine and iron, represents a highly scalable, cost-effective, and sustainable food fortification strategy to combat India's persistent public health challenge of iron-deficiency anaemia. By leveraging the universal consumption of common salt, DFS seamlessly delivers essential micronutrients to the most vulnerable populations without requiring behavioral changes.

Context & the Challenge of Anaemia:

Anaemia remains a persistent public health crisis in India, heavily driven by iron deficiency. It is a health condition that impacts more than 50% of the Indian women and almost three-fourths of children. The impact of this goes beyond the individual, including the following:

- High rates of maternal mortality
- Children's cognitive and brain development is impaired.
- Routine poor nutrition from one generation to the next.
- Decreased physical stamina and work productivity leading to significant economic losses

While the central government's 7X7X7 Anaemia Mukt Bharat (AMB) strategy provides a multi-pronged framework (spanning screening, treatment, supplementation, and behavior change), traditional pharmacological iron supplementation suffers from poor long-term adherence and low health-seeking behavior.

What is Double Fortified Salt (DFS)?

Double Fortified Salt (DFS) is common edible salt fortified with two essential micronutrients: iodine and iron.

- **The Mechanism:** Early technological challenges (e.g., the iron reacting chemically with the iodine; the iron causing the salt to turn a different color) have been overcome through micro-encapsulation (e.g., the FEF being coated with a layer of soy stearene). It enables both the minerals to remain stable in tropical storage conditions, and the food to maintain its taste, colour and texture.
- **Approved Formulations:** The Food Safety and Standards Authority of India (FSSAI) has approved formulations using iron sources such as encapsulated ferrous fumarate or ferrous sulphate.
- **Cost Economics:** DFS is exceptionally affordable, estimated at just ₹14 to ₹20 per person annually.

Why Salt is an Ideal Vehicle for Fortification?

- **Universal consumption:** Salt is consumed almost universally in India and in fairly consistent amounts by all income groups, irrespective of location.
- **Built-in Infrastructure:** The India's Universal Salt Iodisation (USI) scheme is a public health milestone that covers approximately 95% of

Indian households. This established manufacturing and distribution system is capitalized on by DFS.

- **Passive Compliance:** DFS does not involve changing any behaviors that need to be done in your daily routine; it only involves integrating into your daily cooking routine.

Evidence of Efficacy & Scale:

- **Population Coverage:** DFS is already targeted to an estimated 76 million people in a limited number of States via Government safety-net programs.
- **Pilot & Trial Data:**
  - Global reviews indicate DFS can reduce anaemia by up to 21%.
  - The significant improvements in hemoglobin levels and the decline in iron deficiency have been confirmed in regional trials in Bengaluru, Darjeeling, Punjab and in school meal programs in Tamil Nadu and Bihar.
  - The implementation of DFS at a large scale, for instance, in Uttar Pradesh, Madhya Pradesh, Gujarat is a good example of its cultural acceptability and logistical feasibility.

Challenges & Limitations:

- **Not a Standalone Silver Bullet:** DFS is a solution to iron and iodine deficiencies, but anaemia in India is multifactorial due to Vitamin B12, Folic Acid & Zinc deficiencies as well as chronic infections and hemoglobinopathies (e.g. sickle cell disease, thalassemia).
- **Supply Chain & Procurement Gaps:** Ensure strict quality control to maintain uniformity of iron production, avoiding segregation and degradation, during rainy season.
- **Targeted vs. Open Market Availability:** Social safety nets are available for vulnerable groups, but wider open market retail availability and consumer awareness is uneven.

Way Forward & Policy:

- **Integration into Safety Nets:** Compulsory or increase the scope of coverage for DFS in state social safety programmes such as PDS, MDMS and Anganwadi (Integrated Child Development Services) services.
- **Behavior Change Communication (BCC):** Use CHWs – ASHAs and Anganwadi workers – to share information about the two-way benefits of iron and iodine with households, leveraging materials created by partners such as Nutrition International.
- **Regulatory Compliance:** Ensure that the FSSAI standards are adhered by all the private and public salt manufacturers so that the salt products can withstand the storage period and are bioavailable.
- **Holistic Convergence:** Pair DFS distribution with broader micronutrient supplementation, deworming drives, and sanitation improvements under the Anaemia Mukt Bharat.

Source: The Hindu

1.3 India-New Zealand New Trade Ties

Syllabus: IR [GS 2]

Context:

Economic and strategic partnership between India and New Zealand is set on major upgrading mode. The proposed Free Trade Agreement (FTA) and Comprehensive Economic Cooperation Agreement (CECA) is a paradigm shift. It moves from the traditional diplomatic cordiality to a strong institutionalised partnership characterized by a strong trade and investment dimension and professional mobility.

Key Pillars of the India-New Zealand FTA:

1. Merchandise Trade & Market Access

- Zero Duty Access for India: New Zealand provides 100% duty concession on all tariff lines with India, which opens strong export opportunities to labour-intensive industries like textiles, apparel, leather, footwear, gems and engineering goods etc.
- India's Tariff Rationalisation: India has granted duty concessions on ~70% of its tariff lines (i.e. duty elimination/reductions on ~95% of New Zealand's export lines by value).
- Protection of Sensitive Sectors: India has kept dairy, sugar, edible oils, chickpeas, onions and certain farm goods in the negative/exclusion lists to protect the domestic livelihoods and smallholder farmers.

2. Investment Commitments

- Capital Inflow: New Zealand will invest $20 billion directly in the Indian economy over the next 15 years.
- Priority Sectors: Inflows will concentrate on manufacturing, Agri-Logistics, Clean technology, Start-ups, Infrastructure, which will support the goals of Make in India and Viksit Bharat 2047.

3. Services, Talent & Professional Mobility

- Skilled Professional Visa Quota: New Zealand established a dedicated pathway offering 5,000 Temporary Employment Entry visas (valid up to 3 years) for skilled Indian occupations in STEM, IT, engineering, healthcare, and education.
- Student and Youth Mobility: Abolition of student visa age caps for students and extension of post-study work rights for STEM, Master's and PhD scholars (3-4 years for students) and 1,000 annual visas for Working Holiday Scheme (18-30 years).
- Healthcare & AYUSH Recognition: Support for the trade of traditional medicine systems (AYUSH) that put India on the map as a wellness hub.

4. Agricultural Productivity Partnership

- Technology Transfer: Institutional cooperation, Centres of Excellence, for further enhancing productivity in kiwifruit farming, apple farming and apiculture (honey production), improving cold chain management and production of the Indian farmers.

Strategic & Economic Significance:

- **Indo-Pacific Engagement:** India's economic engagement with the Indo-Pacific region and Oceania economies, besides Australia-India ECTA.

- **Supply Chain Diversification:** Helps both nations reduce strategic trade dependencies on singular large markets such as China.
- **MSME and Artisan Promotion:** Simplifies non-tariff barriers, mutual standards and organic certification, bringing Indian small businesses into world supply chains.

Key Challenges:

- **Effective FTA Utilisation:** India historically underutilised trade agreements due to compliance hurdles, documentation burdens, and high Rules of Origin (ROO) standards.
- **Non-Tariff Barriers (NTBs):** New Zealand's stringent Sanitary and phytosanitary (SPS) standards could pose barriers to Indian agricultural exports.
- **Geopolitical Balancing:** Balancing different multilateral priorities, including New Zealand's role in the Five Eyes intelligence alliance.

Way Forward:

- **Targeted Market Intelligence:** Industry bodies such as FICCI should help prepare and implement regulatory and distribution mechanisms for Indian exporters.
- **FDI Pipeline Monitoring:** Set up a separate FDI pipeline monitoring cell to translate the promised $20 billion into concrete FDI initiatives.
- **Services Mutual Recognition:** Expedite Mutual Recognition Agreements (MRAs) for nursing, architecture, accounting, and engineering degrees to capitalise on the mobility provisions fully.

Source: The Hindu

1.4 Strengthening Social Security for Unorganised & Gig Workers

Syllabus: Governance [GS 2]

Context:

One year after the implementation of the Code on Social Security, the Union Labour Ministry has officially constituted the National Social Security Board for Unorganised Workers and the National Social Security Board for Gig and Platform Workers. While the establishment of these boards is a critical milestone in formalising social welfare for vulnerable workforces, structural concerns regarding their centralisation and lack of inclusive representation threaten to dilute their effectiveness.

Composition of the Newly Formed Boards:

The new Code has led to a system of administration where much of the control is in the hands of the Union Government:

- **Common Leadership:** Both national boards are headed by the Union Ministry of Labour & Employment.
- **Board for Unorganised Sector Workers:** Comprises 40 members entirely nominated by the Union Government. This comprises of seven representatives of workers in unorganised sector and of seven representatives of their employers.
- **Board for Gig and Platform Workers:** Has 22 members, including five representatives from each of the tech aggregators and gig workers, and government officials.

The Problem of Centralisation:

- While the establishment of these boards is an essential milestone, labour economists and policy analysts argue that their structural framework is heavily centralised, which could dilute their grassroots effectiveness.
- The two boards are fully supervised by the central executive. The Union Minister of Labour and Employment is the ex-officio Chairman and the Union Labour Secretary is Vice-Chairman. The power to frame schemes, allocate funds, and finalise regulations are currently at the ministerial level, and this has raised concerns that the boards are not making decisions but are acting as advisory panels. This hierarchical structure has the potential to form a bureaucratic choke point, thus delaying the delivery of pressing welfare services to flexible and dynamic workforces.

Key Concerns & Challenges:

- **Structural Over-Centralisation:** The executive authority of both boards is in the hands of the central executive. This centralisation of power is limiting regional flexibility and could mean that the welfare system takes time to respond to the hyper-local issues that each of the many worker groups in the country will face.
- **Dilution of Cooperative Federalism:** Labour is in the Concurrent List (List III) of Seventh Schedule of the Constitution of India. A successful social security framework relies heavily on collaborative actions between the Centre and state executives. But the current cast is not representative,

however, in terms of meaningful presence of state governments including those of opposition parties. Because state machineries handle the ground-level implementation of labour laws, ignoring their input risks policy friction.

- **Exclusion of Opposition-Led Trade Unions:** The nomination process has sidelined major Central Trade Unions associated with opposition parties. Without these highly skilled and longstanding labour groups, there is a key missing element to provide checks and balances, leaving the boards exposed to a policy making process that is top down and non-consensual.

Significance of the Move for the Indian Economy:

The operationalisation of the boards has great strategic value:

- **Vast Demographic Impact:** The unorganised sector absorbs over 80–90% of India's total workforce.
- **Rising Gig Ecosystem:** Driven by digital transformation, the gig and platform economy has become a major source of urban employment, demanding modern regulatory frameworks that traditional labour laws failed to provide.
- **Baseline Protection:** It sets up the legal framework to provide millions of precarious workers with a life insurance, an accident cover, health benefits and old-age crutches.

Way Forward:

The following changes are needed to move from a "suboptimal" framework to an inclusive and highly productive welfare model:

- **De-centralise Policy Design:** Strengthen State Social Security Boards with independence in terms of finances and administrative operations, based on the migration and employment situation in the region.
- **Ensure Democratic Representation:** Rebuild the nomination process to involve a broad range of Central Trade Unions and stakeholders from state level and to make the boards truly tripartite deliberative bodies.
- **Institutional Streamlining:** Improve the process of registering workers through means such as the e-Shram portal and transparently connect them to the funds available on the boards to ensure smooth and hassle-free delivery of benefits.

Source: The Hindu

2.1 Protecting Banks from Cyberterrorism

Syllabus: Internal Security [GS 2]

Context:

Prime Minister Narendra Modi expressed the need to safeguard the financial institutions from cyber criminals and cyber terrorists and mentioned that nowadays modern warfare is not limited to the battlefield and also targets national economy. The Prime Minister, delivering the keynote address at the opening of the Reserve Bank of India's (RBI) new Data Centre and Cybersecurity Training Institute in Bhubaneswar, Odisha, with a greenfield investment of ₹169 crore, spoke about the increased importance of protecting the digital banking backbone from growing asymmetric threats.

Background & Core Message:

- **Economic Warfare as Asymmetric Combat:** Warfare is not confined to geographical boundaries anymore and the disruption of the economy of a nation can affect the nation's sovereign economy.
- **Shift from Inclusion to Resilience:** The previous decade centered on financial inclusion (banking the unbanked via Jan Dhan accounts); the upcoming decade must prioritize making the financial ecosystem secure, robust, and technologically resilient.
- **Institutional Upgrade:** Outdated systems, legacy security protocols, and obsolete tools cannot combat modern threats, necessitating advanced data centers and a workforce trained in next-generation computing.

Why Financial Institutions are Vulnerable to Cyber Terrorism:

- **Critical Information Infrastructure (CII):** Banking networks host mission-critical payment channels like RTGS, NEFT, and Unified Payments Interface (UPI). The interruption of these networks risks the loss of liquidity, supply chains and public trust.
- **Systemic Interconnectedness:** The interconnections of FinTech APIs, third party payment aggregators and cloud infrastructures increase the attack surface, introducing cascade risks to the whole of the economy.
- **State-Sponsored Actors & Hacktivism:** Hostile non-state actors and state-sponsored syndicates employ Distributed Denial of Service (DDoS), ransomware, and supply-chain exploits to inflict targeted economic shocks.
- **Emerging Technologies:** The malicious use of generative AI, automated vulnerability discovery, and deepfakes to bypass KYC frameworks has outpaced traditional rule-based defenses.

Institutional & Regulatory Framework in India:

India has several layers of regulations and operations, which serve as protection for the financial infrastructure:

- **RBI's Cyber Security Framework:** Required all scheduled commercial banks to prepare Cyber Crisis Management Plans (CCMP), keep on carrying out regular gap assessments, and report any unusual security incidents within 2 to 6 hours.
- **CSITE & CSIRT-Fin:** The RBI operates the Cyber Security and Information Technology Examination (CSITE) cell, alongside the dedicated Computer Security Incident Response Team for the Financial Sector (CSIRT-Fin), which coordinates incident responses.
- **NCIIPC & CERT-In:** National Critical Information Infrastructure Protection Centre has identified core banking networks as protected systems under Section 70A of the Information Technology Act, 2000 and collabs with CERT-In for real time sharing of telemetry details.
- **New RBI Facilities (Bhubaneswar):** Houses critical payment settlement backup systems while conducting applied research work in quantum cryptography, enterprise computing and AI based threat modelling.

Key Challenges in Financial Cyber Defence:

- **Legacy Systems:** Outdated core banking systems are used by the regional rural banks and cooperative banks, which do not have automated security patching.
- **Talent Deficit:** A lack of specialised security engineers with the skills to perform an offensive security and digital forensics approach.
- **Jurisdictional Hurdles:** Cross-border anonymity makes tracking, attributing, and prosecuting foreign cyberterror cells legally complex.
- **Human Vector:** Social engineering and credential theft remain common entry points for unauthorised access.

Way Forward:

- **Implement Zero-Trust Architecture:** Move away from perimeter defenses and towards continuous authentication and micro-segmentation throughout core banking workflows.
- **Quantum-Resilient Systems:** Prepare payment and clearing protocols for post-quantum cryptography to prevent decryption attacks against long-term stored records.
- **Public-Private Threat Sharing:** Set up an intelligence-sharing mechanism between banks, non-banking financial companies (NBFCs), telecom service providers and intelligence agencies.
- **Global Norms on Cyber Terrorism:** India has called for an international framework at the UN or G20 level to coordinate efforts to combat cyber-attack, deepfakes and cross-border cyber crimes.

Source: The Hindu

UPSC Practice Question:

Q. Discuss the challenges of cyberterrorism to India's financial security and suggest measures to address them.

2.2 Soil Health Crisis in India: Reforming Fertiliser Subsidies

Syllabus: Agriculture [GS 3]

Context:

The soil health problem in India is increasing with the imbalanced use of fertilisers, excessive fertiliser usage and deteriorating soil health. The subsidy for fertiliser in 2026-27 is at ₹1.71 lakh crore. Structural changes in the fertiliser policy are needed, as disruption to the Strait of Hormuz could push up international fertiliser and energy prices, adding to the subsidy burden.

Understanding the Nutrient-Based Subsidy (NBS) Scheme:

Introduced in April 2010, the NBS scheme provides subsidies on phosphatic and potassic (P&K) fertilisers according to their nutrient content.

- **Objective:** To encourage the use of fertiliser in a balanced and sustainable manner, while enhancing soil fertility.
- **Coverage:** Fertilisers such as diammonium phosphate (DAP) and muriate of potash (MOP).
- **Key difference:** The main nitrogenous fertilizer, urea, is not part of the NBS, and can be bought at an official price.

Why has the Scheme Underperformed?

- The relatively low, controlled price of urea encourages excessive use, while non-urea fertiliser prices are more exposed to market fluctuations.
- Between 2010–11 and 2024–25, the price of DAP reportedly nearly tripled, while that of MOP increased approximately sixfold. By contrast, the cost of nitrogen in the urea increased about 1%.
- Consequently, farmers have stronger financial incentives to apply nitrogen than to maintain a balanced supply of essential nutrients.

Extent of Nutrient Imbalance in India:

According to an Indian Council for Research on International Economic Relations (ICRIER) analysis:

- **Nutrient imbalance:** The nitrogen-phosphorus-potash (N:P:K) application ratio is approximately 10.5:4.1:1, against a recommended ratio of 2.8:1.5:1.
- **Excess nitrogen:** National nitrogen use has shifted from below recommended levels to above them.
- **Potash deficiency:** The estimated potash deficit has widened from 48% to 72%.
- **Regional disparity:** Punjab is getting around ten times the amount of nitrogen subsidy per hectare than Kerala.
- These trends underscore the transition from input-driven agriculture to a balanced nutrient management strategy.

Major Impacts of Poor Soil Health:

A. Agricultural Productivity

- Continuous nutrient imbalance reduces soil fertility and can undermine long-term crop productivity.
- Low organic carbon decreases soil's water and nutrient holding capacity.

B. Environmental Degradation

- Excess nitrogen can escape as nitrous oxide, a potent greenhouse gas.
- Excessive chemical input can affect soil ecosystems and nitrate leaching pollutes the groundwater.

C. Human Health

- Nitrate-contaminated drinking water can cause methemoglobinemia, commonly called blue baby syndrome.
- Micronutrient-deficient soils can contribute to deficiencies in the food produced from them.

D. Fiscal Sustainability

- Excessive dependence on subsidised fertilisers increases government expenditure.
- Depending on imports means India is vulnerable to price fluctuations and geopolitical events in the international market.

Four Measures to Improve Soil Health:

- **Improve the Subsidy on Fertiliser:** Switching to a nutrient neutral subsidy or direct benefit transfer (DBT) without favouring N. Integrating urea into NBS may also be useful to address price distortions.
- **Strengthen PM-PRANAM:** Improve the PM Programme for Restoration, Awareness Generation, Nourishment and Amelioration of Mother Earth (PM-PRANAM) by effectively incentivising states to reduce excessive chemical fertiliser use and promote balanced nutrient management.
- **Encourage Use of Fertilisers Efficiently:** Redirect potential subsidy savings to drip irrigation, fertigation, customised fertilisers, coated fertilizers, biofertilisers and nano-fertilisers.
- **Follow the 4R principle:** Promote use of the correct source, correct rate, correct timing and correct placement of fertiliser. Further improvements in nutrient management can be achieved through soil testing and crop rotation, and increased cultivation of pulses.

Obstacles to reform implementation:

- **Tenant farmers:** Land records often fail to identify the actual cultivator.
- **Digital inclusion:** Accurate records, data protection and grievance-redressal mechanisms are needed for transfers based on AgriStack.
- **Import dependence:** India remains vulnerable to international potash supply disruptions.
- **Farmer resistance:** A sudden cost change of fertiliser or the payment of subsidy would make farming more expensive.
- Hence, the reforms must be slow, clear and backed by farmer awareness and extension efforts.

Way Forward:

- India must transition from a fertiliser-consumption-based support system to a soil-health-oriented agricultural policy. The rationalisation of subsidies,

increase in self-sufficiency of fertiliser production, variety diversification of imports, expansion of the use of organic nutrient management, and diversification of crops are among the priorities.

- Conclusions: Sustainable agriculture needs more fertiliser, but more balanced application of nutrients, a healthy soil and effective public investments. To achieve sustainable agricultural production, food security, and environmental sustainability, fertiliser subsidies need reform.

Source: **The Hindu**

UPSC Practice Question:

Q. "India's fertiliser subsidy policy must balance farmers' interests with soil health and fiscal sustainability." Discuss. (150 words, 10 marks)

2.3 Cabinet Secretary of India: Powers, Functions & Limitations

Syllabus: Polity [GS 2]

Context:

Recently, the Cabinet Secretariat rejected the complaints of two Election Commissioners against an IAS officer who was working in the Election Commission of India (ECI), citing the need to ensure the independence of the Commission. The episode emphasizes the duties of the Cabinet Secretary and the extent of his power.

Who is the Cabinet Secretary?

The Cabinet Secretary, who heads the Cabinet Secretariat and is considered the senior-most civil service officer of India. It works under the coordination of the Prime Minister and oversees the activities of Union ministries and departments.

Evolution of the Office:

- The office has grown out of the administrative structure of British India.
  - 1861: The 1861 Indian Councils Act led to the concept of the portfolio system, where members of the Governor-General's Council dealt with specific aspects of governance.
  - 1946: Cabinet Secretariat renamed from Executive Council Secretariat.
  - 1950: Following independence, the Secretariat became a body assisting in the process of collective decision-making and coordination within ministries. N. R. Pillai was the first Cabinet Secretary of independent India.
- As time went on, its responsibilities grew to include the running of government policy and the keeping of an eye on Cabinet decisions.

What are the Cabinet Secretary's responsibility?

- **Co-ordination among Ministries:** The Cabinet Secretary facilitates the settlement of disagreements among Ministries and Departments, especially when there is an overlap in policies and/or responsibilities.
- **Cabinet support:** The Secretariat draws up agendas, keeps minutes, informs the Cabinet about its decisions and tracks their implementation.
- **Administration of government business rules:** The Cabinet Secretariat administers two of the important sets of rules related to the administration of government business, to be mentioned as follows:
  - The Rules of the Transactions of Business, 1961, which define the manner in which government business is to be transacted and matters that require a higher level of approval.
  - Allocation of Business Rules, 1961, allocates the responsibilities among the Union ministries and departments.
- **Civil service administration:** The Cabinet Secretary leads the Civil Services Board and takes part in the empanelment and appointment of high-ranking civil servants. These processes are carried out in accordance with

procedures and do not leave the Cabinet Secretary with unlimited powers of appointment.

- **Crisis management and Centre–State coordination:** The office supports the coordination of responses to large-scale crises and enables cooperation between the Union government and state governments. The Cabinet Secretary is also the Chairman of the Conference of Chief Secretaries of States.
- **Administrative reforms:** The office provides assistance in the improvement of government procedures, administrative efficiency, and coordination between different departments.

What are the limits of the Cabinet Secretary's powers?

- **Regulated by rules:** The office has to operate under the law and government regulations and administrative rules.
- **No automatic or blanket disciplinary jurisdiction**: Disciplinary action against a civil servant is subject to the provisions of the service rules and the conditions of his or her appointment, and the competent authority.
- **Respect for constitutional bodies:** The Cabinet Secretary must exercise caution in dealing with institutions with powers and independence guaranteed by the Constitution.
- **No power to circumvent statutory requirements or constitutional provisions:** The office cannot ignore statutory requirements or constitutional provisions by virtue of its administrative status.

The Election Commission Controversy:

- Election Commissioners wrote a letter to the Cabinet Secretary asking for his intervention for the removal of Maneesh Garg from IAS service from the ECI.
- Their grievances were over a work allocation order by Garg, who had been assigned additional administrative duties to the commission.
- The Cabinet Secretariat accepted the letters but did not say it would take any action because it might be considered as an interference in the functioning of an independent constitutional body. It also pointed out that the complaints were made by the commissioners individually and not as a formal complaint by the Commission itself.
- The Cabinet Secretary had referred it to the DoPT, which is to be placed on record for future personnel-related decisions.
- The episode emphasizes the difference between administration of civil servants and institutional independence of the ECI. A complaint is not proof of misconduct, and the reporting of a complaint does not imply that the complaint has been acted upon.

Why is the office importance?

- **Administrative coherence:** Assists in minimising inter-ministerial conflict.
- **Policy implementation:** Tracks key Cabinet decisions and helps to resolve administrative challenges.
- **Institutional balance:** Supports executive functioning and adheres to constitutional and legal limits.

Way Forward:

- **Communicate accountability:** Make clear who is responsible so that there are no conflicting responsibilities.
- **Uphold institutional autonomy:** Do not allow administrative coordination to interfere with constitutional bodies.
- **Maintain procedural fairness:** Review complaints against officers under service rules.
- **Enhance transparency:** Keep clear records of decisions taken by staff and administrative personnel.
- **Enhance coordination:** Improve coordination between the Union ministries and state governments.

Conclusion:

The Cabinet Secretary plays a crucial role in the coordination and operations of the Indian administrative system, yet the position does not grant him absolute authority. It is subject to law, established procedure, and constitutional principles. This episode of the ECI highlights the importance of managing the civil service effectively while preserving its independence.

Source: **The Indian Express**

Mains PYQ:

Q. "The growth of the cabinet system has practically resulted in the marginalisation of parliamentary supremacy." Elucidate. (2024)

2.4 India Calls Pakistan a 'Form 47 Government'

Syllabus: IR [GS 2]

Context:

During international discussions, India has described Pakistan as a "Form 47 government" because it doubts the political leadership of Pakistan. It is a term coined during the general elections of 2024 in Pakistan, when there were allegations of manipulation of the electoral results and discrepancies between the preliminary results and the results at the polling stations.

Key Highlights:

India told the UN Special Rapporteur on Minority Issues that Pakistan was trying to create a false impression of India. India's first secretary Raghoo Puri attacked Pakistan's allegations against India, accusing them of being the handiwork of the Pakistan Army and claiming that the Pakistani government was a "Form 47 government".

What is Form 47 in Pakistan?

The Election Commission of Pakistan provides various types of documentation and declarations of election results. Forms 45 and 47 came to play a significant role in the feuds that raged during the 2024 general elections.

- **Form 45:** Result of Count: This is used to show the votes counted at a particular polling station. It contains candidate-wise polls and other information regarding polling. The form is signed by the presiding officer with polling representatives present, and copies are intended to be publicly displayed.
- **Form 47:** Provisional Consolidated Statement of Results: This is a form that lists preliminary information at the constituency level based on the polling-station results, prepared by the Returning Officer. It contains the votes received by candidates and some other important people.
- **Forms 48 & 49:** These are used to record later phases of the results process, such as consolidated and final official results.
- Form 45 is the basic record of votes counted at the polling station, and Form 47 is used to aggregate the votes for a constituency. The disparities between the two can thus lead to questions regarding the transparency and correctness of counting.

Why did Form 47 become Controversial?

The general elections in Pakistan took place in February 2024, amidst allegations of electoral interference. The controversy swelled in the run-up to the reporting and aggregation of results by political parties.

- **Allegations of discrepancies**
  - Former Prime Minister Imran Khan's Pakistan Tehreek-e-Insaf (PTI) claimed that the results had been fabricated. The party argued that the results in the Form 47 documents were not in agreement with some of the Form 47 figures.

- PTI has also complained that in certain cases it had not been furnished with a copy of Form 45 by its polling agents, which questioned the transparency of the process. The allegations became very important issues regarding the outcome of the elections.

- **Dispute over the number of seats**
  - Imran Khan and PTI said that the polling-station results did not reflect the PTI's overall victory as seen in the provisional results of the constituencies.
  - According to Khan, the figures in Form 45 show the PTI has won 170 seats. But in the controversy, the numbers on Form 47 revealed that 92 seats of the National Assembly were won by independent candidates from PTI. The party symbol was not contestable by the party itself, and the candidates contested as independent candidates after a ruling by the courts.
  - These were all part of a larger controversy over the accuracy of the official results with respect to voters' selections.
- **Formation of a coalition government**
  - In turn, the Pakistan Muslim League-Nawaz (PML-N) and the Pakistan Peoples Party (PPP) entered into an alliance, with Shehbaz Sharif as PM.
  - The political controversy has been further heightened by the formation of the government amidst allegations of electoral manipulation and claims of the influence of the military. Pakistan's Army has been deeply involved in the country's political affairs over the years, but its influence on the 2024 election is a topic of debate.
  - It was appealed to the court after the election. As reported, the Sindh HC has disposed of approximately 50 petitions challenging provisional results in February 2024.

Why does India use the Term?

- In India, the term "Form 47 government" is used as a political slur against Pakistan's government. The allegation is related to the electoral mandate not being reflected in the 2024 election results.
- India's argument is that Pakistan must solve its own political and constitutional issues before berating India over the issue of Jammu and Kashmir and minority rights.
- It is also a rhetorical hint to the supposed influence of Pakistan's military on the political institutions of the country. India is trying to test Pakistan's credibility if it makes allegations against India at any international forum by invoking it.
- This expression is a political and not a constitutional or legal term. The claims about the elections need to be separated from the facts found by qualified authorities.

What does the Controversy Reveal?

The problem of the Form 47 is symptomatic of a number of issues and larger questions about democratic institutions and electoral credibility.

- **Electoral transparency:** Polling-station results should be published in a timely manner to ensure that political parties and voters can verify the results at the polling-station level.

- **Civil-military relations:** Concerns have been raised regarding the independence of civilian institutions due to allegations of military influence.
- Political legitimacy is not the same as the government's legal structure, but it is related to political acceptance of the electoral mandate.
- **Diplomatic ties between India and Pakistan:** Domestic political issues often end up playing a role in diplomatic talks between the two nations.

Way Forward:

- To boost public trust, the election process should be transparent, and results of polling stations should be made available; discrepancies should be investigated in a transparent manner, and complaints should be addressed by following the legal process.
- Greater independent oversight, regular provision of electoral information and prompt judicial oversight would help minimise electoral disputes. But the way for India and Pakistan to respond to the allegations is through verifiable evidence and not political rhetoric, which would certainly help to foster more constructive diplomacy.

Conclusion:

"Form 47 government" is a political tag that Pakistan's tainted electoral results gave birth to, and India has been using it to doubt the leadership abilities of Pakistan. The point of contention is the discrepancy between the results of the polling stations and provisional results for the constituencies. It has a broader relevance in the context of electoral transparency, institutional trust and democratic legitimacy.

Source: The Indian Express

2.5 Agrivoltaics in India

Syllabus: Agriculture [GS 3]

Context:

India is exploring agrivoltaics, an integrated approach of co-location of solar power generation and agriculture practices on the same land. This method may help to satisfy the demand for more land use for renewable energy sources, while providing farmers with space for their crop cultivation and extra revenue.

Key Highlights:

- The government has announced plans to introduce agri-photovoltaics (PV) under the second phase of Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyaan (PM-KUSUM), a flagship scheme to promote solar energy in agriculture.
- According to the Union Minister for New and Renewable Energy, the potential for agrivoltaics in India is about 30% of the country's total cropland area of 160 million hectares.

What is Agrivoltaics?

- Agrivoltaics or agri-photovoltaics (APV) is the combination of solar PV for electricity production over an agricultural field that allows both the production of electricity and agricultural production.
- Agrivoltaic systems utilize a vertical design that allows for the cultivation of crops underneath the solar panels, as opposed to traditional solar farms.
- The design of the system can be planned based on the height of the crops, farm machinery requirements, local climate, and availability of sunlight.

Potential Benefits of Agrivoltaics in India:

- **Better use of land**
  - India requires land for providing more solar power capacity generation, but large-scale solar parks may compete with agriculture and other land uses. One way to mitigate this tension would be to enable a single plot to be used for food production and electricity generation through agrivoltaics.
- **Additional income to farmers**
  - Electricity generation is a source of income for farmers, as is leasing land or forming partnerships with renewable energy producers. This can help to diversify incomes and decrease the need for crop prices and rain.
  - But the impact would be contingent on the project costs, tariff rates for electricity, project ownership structures, and the distribution of income to farmers.
- **Providing support for clean energy**
  - Agrivoltaics could be one way of helping India increase renewable electricity generation without having to decommission all of the land used for solar energy generation.

  - Depending on the grid connectivity and project design, it can also enable decentralised power generation in the vicinity of farms and rural settlements.
- **Potential benefits for crops**
  - Under certain circumstances, solar panels can help reduce direct sunlight and soil temperatures. They may decrease the rate of evaporation and help to maintain soil moisture, especially in hot and dry areas.
  - Some shade-tolerant crops can do well in these systems. The benefits, on the other hand, depend on the crop type, arrangement of the panels, climate, and the amount of shading.

Can Agrivoltaics Reduce Crop Yields?

- Agrivoltaics alone does not offer protection of agricultural productivity. Its success is dependent on the balance of sunlight for crops and space for solar panels.
  - Less sunlight: If there is not enough sunlight getting to the panels, they may not be able to perform photosynthesis as well, which can affect the yield.
  - Crop-specific responses: Leafy vegetables and some shade-tolerant crops might be more tolerant.
  - Microclimate changes: Shade can provide some reduction in heat stress and water loss, but overshade may have an impact on crop growth and development.
  - Low or poorly spaced structures may prevent tractors, irrigation systems, and harvesting equipment from functioning.
  - Increased up-front expenses: The initial setup costs for elevated panels and robust mounting systems can be higher compared to traditional ground-mounted solar panels.
- Hence, selection and design of the panel are important. Agrivoltaics should be implemented on a large scale after field tests in various agro-climatic zones.

Role of PM-KUSUM:

- The Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan encourages the use of solar energy in agriculture, such as solar-powered irrigation pumps and decentralised renewable power generation.
- The second phase of agrivoltaics could pave the way for integration of solar infrastructure with agricultural activity. The model can be especially pertinent in areas where farmers have adequate land and can engage in electricity generation without compromising their main livelihood.
- To implement it successfully, there would need to be clear delineation of ownership of the project, payment of farmers for their work, crop protection, electricity purchase, and maintenance.

Challenges to Wider Adoption:

- **High capital costs:** Projects can cost more due to the need for elevated structures and equipment.
- **Limited local evidence:** To test the performance of crops under panels, it can be tested under Indian soil, rainfall, and temperature conditions.

- **Asymmetrical benefits:** Small and marginal farmers may lack the funds to implement projects or enter into beneficial deals with developers.
- **Connectivity to the grid:** Power generation needs to have reliable connections and viable power-purchase deals.
- **Land and contract issues:** Contracts need to safeguard farmers' rights to growing crops, and the solar project should not slowly take over the land from where food was being grown.

Way Forward:

- India should start with pilot projects across various agro-climatic regions and share information on the yield of each crop, water consumption, electricity generation, and farmer income. Designs should be tailored to local rather than national crops.
- Small farmers can benefit from better access through government support, including affordable financing, technical support, and clear power-purchase agreements. Additionally, projects should include measures to avoid losing agricultural productivity and to ensure that farmers receive equitable benefits.

Way Forward:

Agrivoltaics is a solution to enable India to achieve both food production and clean energy generation in the same land area. This requires appropriate crop selection, well-planned panel structures, and farmers' economic returns. If developed through local trials and adequate protection of livelihoods, it may prove to be a useful part of the Indian renewable energy revolution without negatively impacting farmers' livelihoods.

Source: The Indian Express

Mains PYQ:

Q. Describe the various Technology Missions initiated in Indian agriculture and examine their role in food security. (Answer in 150 words) (2026)

2.6 E100 Fuel in India

Syllabus: Economy [GS 3]

Context:

The Centre has changed the Central Motor Vehicles Rules, 1989 to permit specially designed flex-fuel vehicles to be registered for operation on fuels that have up to 100% ethanol content (E100).

What has changed under the New Rule?

- The amendment includes additional types of fuels for which vehicles can be certified.
    - E20: A fuel made up of 20% ethanol and 80% petrol.
    - E85: Fuel that contains up to 85% ethanol, as specified in the fuel specification.
    - E100: This is nearly pure ethanol, which is used for vehicles that can run on it.
- A car that has been tested for use with E20 petrol can NOT 'just' use E85 or E100 fuel! High-ethanol fuels can only be used in compatible engines, fuel systems and electronic controls.
- The amendment also affects some provisions on vehicle classification, such as increasing light petrol and diesel vehicles' weight from 3,000 kg to 3,500 kg.

What are Flex-Fuel Vehicles?

- Flex fuel vehicles can run on petrol, ethanol, or a combination of petrol and ethanol (in any proportion the manufacturer specifies).
- Petrol is used to be refined from crude oil, and ethanol is an alcohol derived by the fermentation of plant sugars or starches. Sugarcane and grains are vital feedstocks in India. However, ethanol can be manufactured from agricultural residues and other sources of biomass.
- Flex-fuel vehicles are built with a range of special fuel delivery systems and electronic controls that take into account the variations in ethanol and petrol properties.

Will Cars Run Safely on E100?

- If the car is built and approved to be fueled by nearly 100% ethanol, the engine will operate on nearly pure ethanol. Three of these are of special significance.
    - Ethanol: Less energy per litre of fuel. The engine in general requires more fuel to produce the same energy. The US Department of Energy estimates that E100 has approximately 30% less energy per gallon than petrol, potentially decreasing the distance that can be covered per litre.
    - Fuel-system materials: Ethanol may cause reactions with some metals, plastics, rubber seals, and more. Fuel pumps, pipes, injectors and seals should be compatible with high ethanol levels.

  - Electronic controls: Sensors and the engine control unit need to be adjusted to accommodate the fuel. Correct calibration is also needed for proper starting and operation in various temperature conditions.
- Ethanol is also high in octane and has good anti-knock properties. Engines that are specifically designed for ethanol can benefit from this property.

Why Blend Ethanol with Petrol?

- **Easier transition:** Most current vehicles and fuel infrastructure are based on petrol. The introduction of ethanol blends allows a slow, measured move to alternatives, while not replacing the entire vehicle fleet.
- **Lower dependence on imported oil:** India is highly dependent on imported crude oil. Frequent use of domestically produced ethanol for some of the petrol usage helps to decrease imported fossil fuel consumption and enhances energy security.
- **Support to farmers and industry:** Ethanol production opens up a market for sugarcane, grains, and agricultural residues. It can create further economic opportunities for the farmers and biofuel industry.
- But benefits are tied to production costs, feedstock availability, ethanol fuel price, and environmental impacts of ethanol production.

What are the Concerns?

- **Mileage and running costs**
  - This is because ethanol has less energy per litre than petrol. With higher ethanol levels, vehicles can thus provide lower km/l. The total expenses of operating a vehicle are influenced by fuel costs, the efficiency of the vehicle, and the amount of mileage that can be saved.
- **Vehicle compatibility**
  - The materials and/or calibration of a conventional petrol vehicle might not be suitable for high-ethanol fuels. An unapproved fuel may cause damage to parts or adversely influence the performance of the engine. The manufacturer's fuel requirements should be adhered to by the vehicle owner.
- **Water and land requirements**
  - Bio-ethanol production depends on agricultural land and water for agriculture. For instance, sugar cane production is a water-intensive process. As yields increase, there could be competition between fuel, food, and other farm activities.
  - Some of these pressures could be mitigated with ethanol from agricultural residues, but the environmental impacts of producing this ethanol will be dependent on the method used to collect and process the feedstock.
- **Environmental trade-offs**
  - Although ethanol can help eliminate fossil fuel use, it is not a pollutant-free fuel. The overall GHG benefits rely on cultivation, fertiliser usage, processing energy, transportation, and land use changes.
  - However, switching from petrol to ethanol does not necessarily lead to lower lifecycle emissions in all scenarios.

Way Forward:

- India must roll out flex-fuel technology with strict fuel quality standards, vehicle certification, and awareness campaigns. The manufacturers need to ensure that the vehicle is compatible with the fuels it is authorised to use.
- Efficient ethanol production, such as using agricultural residues, should also be encouraged, and water usage, food security, and life-cycle emissions should be evaluated. The transition to fuel pricing and availability should be feasible for consumers.

Conclusion:

E100 rule establishes a regulatory route for cars that are able to run on nearly pure ethanol. While it can help achieve energy security and promote India's biofuel sector, its viability will rely on compatibility with vehicles, availability of biofuels, cost-effectiveness, and environmental protection measures. The important thing for the consumers is that E100 is just for vehicles that have been specifically designed and approved for E100.

Source: **The Indian Express**

Mains PYQ:

Q. "Access to affordable, reliable, sustainable and modern energy is the sine qua non to achieve Sustainable Development Goals (SDGs)".Comment on the progress made in India in this regard. (2018)

2.7 SC Special Leave Petitions

Syllabus: Polity [GS 2]

Context:

The Supreme Court of India has been grappling with a massive backlog of cases, despite its strength being increased from 34 to 38 judges. The figures in the source indicate that there is over 96,000 cases still awaiting before the Court.

Key Highlights:

- The increasing number of Special Leave Petitions (SLPs) is one of the primary reasons behind this burden.
- The petitions are filed with the Supreme Court to allow an appeal from cases that are decided by the lower courts and tribunals, at the discretion of the Supreme Court. This strength, however, is criticised by some as putting undue strain on the Court and its constitutional mandate.

How Special Leave Petitions Work?

- The Supreme Court of India has the power under the Constitution to grant special leave to appeal against judgments, decrees, determinations, sentences or orders passed by courts and tribunals in India except in cases provided by the Constitution.
    - Discretionary power: The Supreme Court does not have to hear all SLPs filed before the Supreme Court.
    - Exceptional remedy: SLPs were meant to come into effect in exceptional circumstances, such as where there is a serious injustice or an important legal issue.
    - Broad scope: An SLP is not an ordinary appeal that can be brought under any of the specific legislation, but the first step requires the Court to determine whether the case deserves its attention.
- SLPs have taken the place of the previous dominant category of cases—domestic lawsuits. Some estimates suggest that they represent approximately 80% of all fresh filings.

Why are SLPs Increasing the Court's Burden?

- **Routine appeals reach the Supreme Court**
    - The discretionary remedy is being more frequently invoked to set aside numerous decisions made by lower courts, some of which might not involve significant constitutional issues.
    - The source mentions the case of an Uttar Pradesh Power Corporation Assistant Engineer named Sunil Kumar. He filed a petition before the Supreme Court under SLP after the Allahabad High Court rejected his plea with regard to the criminal proceedings in connection with an altercation during his work time. In 2023, his appeal was granted by the Supreme Court, which termed the allegations as "trivial".
    - The case shows how a relatively insignificant issue can eat up the time of the nation's Supreme Court.

- **Broad discretion creates uncertainty**
  - The Supreme Court has a fair degree of discretion to intervene as per Article 136. But where admission criteria are not consistently applied, the distinction between an exceptional case and a routine appeal is not always easy to draw.
  - In an instance where the petition does not involve a significant constitutional issue, the Court may grant a Petition for Correction of an Individual Wrong in order to correct an individual injustice. This is beneficial to litigants, but also increases the workload for the Court.
- **More judges do not automatically reduce pendency**
  - More judges can increase disposal capacity, but may not necessarily address the intake of new cases into the system.
  - The Court's continued willingness to accept many more SLPs could result in more cases being filed and occupying more court docket. Thus, attention is required to both case disposal and practices of case admission to reduce pendency.

How do Other Countries Filter Appeals?

- Other top courts tend to have tougher criteria for cases to get a full hearing.
  - The United States Supreme Court receives thousands of petitions each year, but only hears a handful, typically about 70-80 cases per term.
  - In the United Kingdom: The Supreme Court of the United Kingdom must obtain permission to appeal in the majority of instances. It is reported that it has approved 45 applications out of 207 in 2025-26.
- These systems show how selective admission can maintain the capacity of an apex court to be focused on issues of wider legal importance. But their forms and methods of judiciary are different from those of India and thus cannot be replicated.

Can Sticker SLP Filters Reduce Pendency?

- The Supreme Court could narrow its admission agenda by adopting clearer criteria for admissions.
- Some of the following may be used as criteria:
  - Significant doubts about the meaning of the Constitution.
  - Different rulings of the High Courts on key issues of law.
  - Real or apparent injustice in procedure.
  - Public interest issues and/or issues that seek to clarify legal principles.
- Such criteria would have to maintain the Court's power to intervene in the case of "extraordinary circumstances" such as grave individual injustice.
- In earlier proceedings, the Supreme Court has discussed the necessity of guidance in the context of admissions to SLP. In 2010, a judgment cautioned that if the Court did not have any broad guidelines, the working of the Court would be difficult and asked for a Constitution Bench to look into the problem. A subsequent Constitution Bench rejected the scope of the Court's discretion and considered that limitations would be counter to the interests of justice.
- This is the central conflict: many people may be entitled to relief, but too strict criteria may lead to less caseload.

Way Forward:

- Reform should be directed at ensuring that the Supreme Court does not become overloaded with work, but that access to justice is not compromised.
- Provide clear rules: The Court may establish clear guidelines for admission of SLPs, but still have discretion for exceptional cases.
- Enhance quality of lower courts: If trial courts and High Courts provided better quality, consistency, and timeliness of decisions, this would help to reduce the number of appeals.
- Enhance case management: Case categorisation, early scrutiny and efficient listing could help the court prioritize matters for urgent intervention.
- Review institutional reform: The introduction of a regional bench or the better distinction between constitutional and appellate functions could be looked at in a well-informed legal and institutional discussion.

Conclusion:

- Special Leave Petitions are an important constitutional protection mechanism, but have unfortunately been given a wide berth, leading to a huge pendency before the Supreme Court. Unless the number of new filings and admissions levels off, the problem is unlikely to be solved by strengthening the judiciary.
- The issue is balancing individual injustice with the ability of the Supreme Court to deal with significant constitutional and legal issues. Improved admissions policies, more robust lower courts and better case management can help maintain that balance.

Source: **The Indian Express**

Mains PYQ:

Q. 'The judicial systems in India and the UK seem to be converging as well as diverging in recent times. Highlight the key points of convergence and divergence between the two nations in terms of their judicial practices. (2020)

2.8 Operation Trident: Dismantling India's Narco-Hawala Network

Syllabus: Internal Security [GS 3]

Context:

Union Home Minister Amit Shah praised the multi-agency intelligence operation under the name of Operation 'Trident' which exposed a transnational narco-hawala syndicate in India, Myanmar and Bangladesh. As a result of the operation, ₹100 crore in hawala money and ₹17.82 crore in assets were recovered, 1,424 bank accounts were blocked and 18 people were arrested in Assam, Mizoram and Manipur.

Key Operational Highlights:

- **Multi-Agency execution:** The Narcotics Control Bureau (NCB) was leading the execution with 38 teams and in co-ordination with Enforcement Directorate (ED) and respective police forces of Assam, Mizoram and Manipur.
- **Simultaneous Strikes:** Raids hit 38 pre-identified locations targeting logistics corridors (Champhai, Aizawl, Lawngtlai, and Churachandpur).
- **Major Seizures & Restraints:** ₹100 crore were traced in hawala, ₹17.82 crore in property was attached, 1,424 bank accounts were frozen and along with cash of ₹12 lakh, 500 industrial detonators were seized.
- **Cartel Leadership:** Targeted the kingpin of Myanmar-based Thangcintuang aka Chintuang/Tluanga who was exporting methamphetamine (Yaba) and heroin through the road transport networks of the northeast region.

Strategic Significance for Internal Security:

- **The "Death Triangle Corridor" Dynamics:** The trafficking network exploited porous borders across India, Myanmar, and Bangladesh—frequently termed the "Death Triangle Corridor". The Northeast of India is heavily vulnerable in its immediate vicinity to the Golden Triangle (Myanmar, Laos and Thailand) in terms of thick jungle areas, riverine boundaries and the ancient insurgent trails for the movement of contraband.
- **The Narco-Finance and Terror/Insurgency Nexus:** The recovery of 500 detonators alongside hawala books underscores the nexus between narcotics trafficking, illegal armaments, and regional insurgencies. Money for distribution is channeled through underground banking systems (hawalas) and money mules to support crime syndicates and maintain networks in border states that support insurgent groups.
- **Paradigm Shift:** From Seizure-Centric to Network-Disruption Model: In line with the Vision Document on Narcotics Control (2026–2029), Operation Trident marks a major strategic transition:
    - Beyond the street and physical seizure to 360-degree linkage investigation – backward and forward.
    - Blocking of financial networks of money-lenders under the Prevention of Money Laundering Act (PMLA) and Narcotic Drugs and Psychotropic Substances (NDPS) Act.

Institutional Mechanism & Strategic Frameworks:

- **NCORD (Narco Coordination Centre):** Four tier co-ordinating mechanism (Apex, Executive, State, District) to facilitate actionable intelligence sharing between the central agencies and state police.
- **MANAS Portal & Helpline:** A unified platform to register tips and monitor narco-offenses.
- **NIDAAN & ICJS:** Interoperable criminal justice databases profiling repeat NDPS offenders and tracking transnational kingpins.
- **Target 2029:** A policy goal that aims to eradicate drug syndicates from India by 31 December 2029.

Challenge & the Way Forward:

- **Border Fencing & Free Movement Regime (FMR):** Suspension and abandonment of the Indo-Myanmar FMR along with border smart fencing are important measures to prevent illicit transit through sensitive areas.
- **Financial Forensics Capacity:** There is a need for building capacity for conducting financial forensics investigations across state CID units and border posts of the country to trace and investigate cross-border hawala transactions and shell entities as well as crypto-based settlement of transactions.
- **Regional Bilateral Cooperation:** Given the extraterritorial nature of synthetic drug production in Shan State and Sagaing (Myanmar), active diplomatic engagement and joint interdiction frameworks via BIMSTEC and UNODC remain indispensable.

Source: The Indian Express

UPSC Practice Question:

Q. Drug trafficking and hawala transactions pose serious challenges to India's internal security. Discuss the linkages between narcotics networks, money laundering and organised crime, and suggest measures to dismantle these networks.

2.9 India's Declining Green Cover

Syllabus: Environment & Ecology [GS 3]

Context:

India's green cover shrank by 5.6 percentage points between 2001 and 2025, declining from 36.95% to 31.35% of the country's geographical area, according to spatial analyses by research organisations including Climate Trends alongside satellite tracking datasets from Global Forest Watch.

Key Findings & Statistical Highlights (2001-2025):

- **Overall Contraction:** Green cover decreased from 36.95% during 2001 to 31.35% in 2025, while the non-green percent and built-up surfaces increased by 5.6 percentage points in the same time period.
- **Tree Cover Loss:** Remote sensing data indicates India lost approximately 2.4 million hectares (Mha) of tree cover between 2001 and 2025 (~7% of its 2000 base canopy), releasing an estimated 1.4 gigatonnes of CO_2 equivalent.
- **Primary forest depletion:** More than 370,000 ha of continuous humid primary forests was lost and affected climax ecological habitats.
- **Regional Hotspots:** Five Northeastern states—Assam, Mizoram, Nagaland, Manipur, and Meghalaya—accounted for over 50% of the aggregate canopy loss.
- **Canopy Quality Degradation:** More than 90% of forest degradation took place within natural biomes, and there was a proven 12% reduction in photosynthetic efficiency across dense forests.

Major Drivers of Degradation:

- **Linear Infrastructure & Mining:** Highways, rail expansions, and coal/mineral mining in ecologically sensitive belts such as the Hasdeo Aranya corridor and the Western Ghats have fragmented continuous corridors.
- **Shifting Cultivation:** Traditional Jhum cycles in Northeast India shortened due to demographic pressures, limiting forest regeneration.
- **Urban Heat Islands & Concrete Spread:** Peripheral urban forests & wetlands have been lost to unplanned urban expansion.
- **Climate-induced Wildfires:** With dry soil and the increasing occurrence of heatwaves, wildfire frequency has increased in certain states such as Odisha, Uttarakhand, Arunachal Pradesh, etc.

Key Concerns & Ecological Impacts:

- **Microclimatic Warming:** The transition from vegetative to non-green surfaces widened average summer land-surface temperatures by 1°C to 2.5°C, intensifying urban heatwaves.
- **Methodological Lacunae:** FSI includes commercial monocultures (e.g., rubber, eucalyptus, tea, coffee) within canopy metrics. Natural forests have higher biodiversity, better soil-holding capacity and better hydrological balance compared to monocultures.

- **Loss of Forest Thinning:** The forest thinning will make it difficult for India to achieve the target of an additional carbon sink of 2.5 to 3.0 billion tonnes of CO_2 equivalent by 2030 under its Nationally Determined Contributions (NDCs).

Government Initiatives:

- **Statutory Frameworks:** Indian Forest Act (1927), Wildlife Protection Act (1972) and Forest (Conservation) Amendment Act (2023).
- **Afforestation Schemes:** National Mission for a Green India (GIM) under NAPCC, Nagar Van Yojana (urban greening) and the National Afforestation Programme (NAP).
- **Market & Fund Mechanisms:** CAMPA (Compensatory Afforestation Fund Management and Planning Authority) & GCP (Green Credit Programme).

Way Forward:

Transition metrics of forest planning from acreage to ecological density to ecological health and photosynthetic metrics.

- **Regulate Linear Projects:** Implement compulsory eco-ducts, wildlife corridors and rigorous Environmental Impact Assessment (EIA) in the process of clearances of continuous forests.
- **Empower Forest Dwelling Communities:** Expand rights-based management via the Forest Rights Act (FRA), 2006, leveraging community knowledge to restore degraded commons.
- **Focus on Native Species:** Plant more native species that are drought resistant and are not monocultures under CAMPA to create buffers to the long-term climate.

Source: ETEnergyWorld

UPSC Practice Question:

Q. India's declining green cover poses serious challenges to ecological balance, biodiversity and climate resilience. Examine the major causes and suggest measures to address this concern.

2.10 Siang Upper Multipurpose Project

Syllabus: IR [GS 2]

Context:

The protests against the proposed 11,200 MW Siang Upper Multipurpose Project (SUMP) in Arunachal Pradesh (AL) are from the indigenous Adi community and residents of the Siang valley. The government considers the project to be a strategic move in the wake of China's massive plans for construction of hydropower projects on the Yarlung Tsangpo River, but the project is threatening the lives of local communities, their livelihoods, and cultural heritage.

Key Highlights:

- The Siang Upper Multipurpose Project is an alleged hydropower and multipurpose project on the Siang River, Arunachal Pradesh. It is expected to be one of the largest hydropower projects in India with a capacity of 11200 MW.
- The Indian section of the river, called Siang, is the name given to the river in Tibet, where it is called Yarlung Tsangpo. Later it merges with other rivers of Assam to create the Brahmaputra River.
- The plans to utilise the Siang and Subansiri rivers go back to 1982, when the Brahmaputra Board proposed smaller projects.
- The proposal changed course, and the two projects of Siang Upper Stage-I and Stage-II were incorporated in the SUMP framework.
- The project's strategic significance increased following the approval of a massive hydropower project on the Yarlung Tsangpo's lower reaches by China.

Why does India want to build the Siang Dam?

- **Countering China's Hydropower Expansion**
  - A large hydropower plant is being built in China on the Yarlung Tsangpo in Tibet. This has caused concerns around water security in downstream areas in India and a lack of information on the project's operation.
  - Based on the design and operation of a large upstream dam, the timing and pattern of river flows may be affected.
  - India is worried about the threats of sudden water releases, changes in flow regime, and restricted availability of hydrological data.
- **Energy Security**
  - If the project is technically and environmentally feasible, it could be a significant addition to India's power grid with an installed capacity of 11,200 MW.
  - Hydropower can generate electricity with relatively low direct operational emissions and can help meet the demand for electricity from variable solar and wind resources.
  - The project could also promote infrastructure development and economic activities in Arunachal Pradesh.

- **Strategic Infrastructure**
  - The state of Arunachal Pradesh has a vulnerable international boundary with China. In the region, infrastructure development that increases connectivity, provides support to local economic activity, and boosts India's presence in border regions can be done.

Why are Local Communities Opposing the Project?

- **Displacement and Loss of Livelihoods**
  - The local residents of the Adi community and the surrounding areas have concerns that the project may result in the flooding of their homes and land, which is used for farming, fishing, and other traditional livelihoods.
  - Displacement may have a negative impact on community livelihoods, customary land use, and networks that rely on the river.
  - Ancestral land, social ties, and cultural identity are not all just lost and can't be replaced with compensation.
- **Cultural and Religious Significance**
  - The Siang is a source of water for many indigenous people. It is a key element of their cultural identity, their traditional ways, and their tie to the land of their origins.
  - Riverine areas that are submerged and settlements that are relocated may thus have impacts not just on the economic costs of the displacement.
- **Environmental Risks**
  - Large hydropower projects can impact river flow, sediment, and aquatic habitat.
  - Reservoir formation and construction activity may affect forests, biodiversity, and ecological balance in the river valley.
  - Geological investigation and dam-safety assessment are particularly important in seismically active parts of the eastern Himalayas.
  - Alterations in sediment transport may also impact downstream river ecosystems.
- **Lack of Trust and Consultation**
  - There has been a concern among the residents that, given the continuous pre-feasibility process, it may eventually be built against their wishes.
  - The state government has said it will stop development of the project if experts determine it is not viable. It has also offered to provide consultation, environmental and social impact assessment where the proposal goes ahead.

What are the Environmental 7 Federal Concerns?

- The Siang controversy poses questions about evaluating major infrastructure projects in ecologically sensitive and culturally distinct areas.
  - Environmental governance: Planning of projects needs to consider the impact on biodiversity, river ecology, and the cumulative effects of multiple dams, as well as seismic risks.
  - Indigenous rights: Land acquisition and rehabilitation should be consistent with the provisions of existing laws and traditional land use practices.

    - A basin-wide assessment is important due to inter-state implications of any changes in the flow of the Siang, as it will have an impact on areas downstream.
- The need for improved transboundary water governance: Improved access to hydrological information between India and China and improved communication mechanisms on large-scale river projects.
- The question of whether to build or abandon one dam is not the only issue. It has to do with the quality of the evidence, public participation, and river basin planning.

Way Ahead:

- **Full independent feasibility studies:** Geological, seismic, hydrological, and engineering studies should be assessed independently prior to any construction decision.
- **Perform a cumulative environmental assessment:** The study should consider all existing and planned dams in the river basin instead of each individual dam.
- **Ensure meaningful public consultation:** Information should be made available in local languages and communities should have enough time to be able to understand the likely impacts and put forward their concerns.
- **Develop a viable rehabilitation plan:** Compensation, support to livelihoods, protection of land rights and cultural heritage should be worked out before displacement.
- **Improve water dialogue between India and China:** India should seek timely hydrological information, advance warning of large-scale releases, and transparent information regarding the infrastructure built upstream.
- **Evaluating other solutions:** India could consider whether other solutions such as better flood forecasting, reservoir management, hydrological monitoring and other infrastructure-based solutions could meet particular security concerns at lower social and environmental costs.
- **Be transparent:** The government should provide information about the outcomes of feasibility and impact studies, and share information about any input from community concerns into the decision-making process.

Source: The Indian Express

Mains PYQ:

Q. "China's Belt and Road Initiative (BRI) has transformed South Asia from a regional space into a theatre of Great Power competition." Analyse the strategic implications of the BRI for India's security and regional influence in South Asia (250 words). (2026)

2.11 Aatmanirbharta 2.0: Securing India's Strategic Autonomy

Syllabus: Defence & Security [GS 2]

Context:

Union Defence Minister Rajnath Singh called for 'Aatmanirbharta 2.0' in the defence sector on October 26, 2026, while addressing the fifth edition of the Indian Navy's SWAVLAMBAN 5.0 seminar in New Delhi.

Core Pillars of Aatmanirbharta 2.0:

Aatmanirbharta 2.0 transitions Indian defence manufacturing from legacy assembly toward an advanced tech ecosystem built on four core pillars:

1. Development of Advanced Technologies

- Frontier Tech Focus: Directs resources toward critical, high-end technologies including Quantum Computing, Artificial Intelligence (AI) in warfighting, cyber security, and autonomous uncrewed systems.
- Indigenous Design: A change from manufacturing under foreign licenses to gaining intellectual property rights (IPR) by indigenous design and development.

2. Strengthening Research and Development (R&D)

- Support for High Risk Projects: Institutionalizes financial support for high risk innovations with high rewards such as Innovations for Defence Excellence (iDEX) and Technology Development Fund (TDF).
- Industry-Academia Integration: Connect the top-notch academic institutions (e.g., IITs and IISc) with MSMEs and start-ups for the theoretical and practical application of military technology.

3. Create Resilient Domestic Supply Chains

- Raw Material Security: Seeks to reduce vulnerabilities of critical raw materials, including Rare Earth Elements (REEs) and semiconductors, essential for aerospace, electronic warfare.
- Component Level Indigenisation: Manufacturing of Tier-2 and Tier-3 sub-assemblies on a local level to protect against disruptions in the global supply chain.

4. Dual Technology Roadmap

- Civil-Military Convergence: Promotes technologies that possess dual-use applications (e.g., drones, satellite communications) to maximize economic returns.
- Jointness: Emphasises inter-service operational synergy by standardizing technology platforms across the Army, Navy, Air Force, and Coast Guard.

Current Status of India's Defence Sector:

- **Record Production:** India's domestic defence production stood at ₹1.78 lakh crore during FY 2025-26 with an annual growth of 15.6%. This coverage is sourced from Defence Public Sector Undertakings (DPSUs) and the private sector, with 76% of this coverage sourced from DPSUs and 24% of this coverage sourced from the private sector.
- **Fiscal Allocation:** The Defence Budget for FY 2026–27 has been elevated to ₹7.85 lakh crore, with R&D allocations rising to ₹29,100.25 crore to fuel technological self-sufficiency.

- **Export Milestone:** India has successfully transformed from a net importer to a key exporter, supplying defence hardware (such as BrahMos missiles, Dornier aircraft, and radars) to over 80 countries.

Key Challenges to Defence Indigenisation:

- **Long gestation periods:** R&D processes in the military sector have long gestation periods, are highly capital intensive, and often discourage private-sector entry.
- **Critical Sub-Systems Dependence:** Local assembly is high, but critical sub-systems such as aero-engines, advanced sensors, and semiconductor chips remain heavily dependent on foreign Original Equipment Manufacturers (OEMs).
- **Bureaucratic Bottlenecks:** delays in procurement cycles, trial evaluations and complicated testing procedures have sometimes slowed down the commercialisation of start-up innovations.

Way Forward:

To make Aatmanirbharta 2.0 a reality, India needs to make sure the time-bound indigenisation plans are put into action. Increasing the contribution of the private sector to the total production output by 7.5% or more will be crucial to scale up the manufacturing capacity. Moreover, the creation of Defence Industrial Corridors (DIP) in Uttar Pradesh and Tamil Nadu should be expedited to create a clustered ecosystem of testing labs, design houses, component manufacturers, and achieve India's strategic autonomy.

Source: The Hindu

UPSC Practice Question:

Q. Examine the significance of indigenisation of defence production in ensuring India's strategic autonomy and national security.

2.12 Education & Economic Growth: Lessons from Protests across Europe

Syllabus: Education [GS 2]

Context:

Growing concerns over funding for education, housing, and employment costs have been raised in protests throughout France, Greece, Spain, Portugal, and Germany. While the immediate needs vary, the demonstrations suggest that there is a shared issue being addressed: many young people are facing a lack of economic security today that is no longer being met by education.

Why are Students & Young People Protesting?

- **Rising costs of education:** Students voice concerns about insufficient funding of education, substandard education facilities, and the cost of post-secondary education.
- **Has a bit of insecurity around employment opportunities:** Many graduates are unsure about their future work, resulting in dissatisfaction about the return on education.
- **Cost of living and housing:** Students and young professionals are unable to be financially independent because of the high cost of living and housing.
- **Ongoing inequality:** Young people from disadvantaged segments face greater barriers to access quality education, career and networking opportunities, and decent work opportunities.
- Such concerns indicate that access to education is not enough if there are disparities in economic opportunities.

Education & Economic Growth: Key Theoretical Perspective

- **Human Capital Theory**
  - Gary Becker and Theodore Schultz, economists, suggested that education and skill development helped workers to be more productive and to grow the economy.
  - Education provides individuals with knowledge and skills, and enhances the capacity of enterprises to innovate and increase productivity.
  - But in the absence of appropriate employment in the economy, educational qualifications do not necessarily lead to better income or living standards.
- **Signalling Theory**
  - Michael Spence, an economist, said that it is possible for education to "communicate" to an employer a person's skills.
  - As degrees proliferate, but jobs are scarce, competition for a credential rises.
  - Credential inflation, where employers may seek increasingly higher levels of qualifications for roles that don't necessarily require advanced skill sets.
- **Capability Approach**
  - The capability approach of Amartya Sen defines development as the extension of people's substantive freedoms and opportunities.
  - Education should empower them to build a livelihood, engage in society and to live a dignified life.

- Even for educated people, these freedoms can be constrained due to rising unemployment, unaffordable housing, and insecure employment.

Lessons from Global Experiences:

- **The Meiji period of Japan:** Modernisation, administrative capacity, and industrial development was fostered by investment in mass education.
- Economies that invested in education, industrial policy, skill development and creating jobs were able to achieve significant economic change in the East Asian economies.
- **European experience:** The current protests highlight shortcomings of education development without proper housing, working and social protection.
- The core arguments are that education provides improved economic outcomes and that industry, an inclusive labour market and public policy have a positive effect on outcomes.

What does this imply for India?

India has increased the number of schools and colleges with enrolments, but there are problems with learning outcomes, employability, and equity.

- **Mismatch of skills:** There is a lack of practical and technical skills among graduates to meet the requirements of employers, so there is a need to enhance vocational education and industry-academy partnerships.
- **Unequal opportunities:** Inaccessibility to education and career opportunities remains in terms of caste, gender, regional disparities, and household income.
- **Quality Issues:** To ensure that enrolment is linked to meaningful learning, there is a need to improve foundational literacy, numeracy, and teacher training.
- **Lack of formal jobs:** The growth should translate into productive, secure jobs that are able to employ the growing educated population.
- **How class inequalities are reproduced through education:** Pierre Bourdieu and Jean-Claude Passeron's concept of social reproduction offers an explanation of how inequalities of cultural and social capital can be passed down through generations in the educational system.
- India needs to go beyond the mere number of enrolments and degrees in education. The quality of learning is also a key indicator, alongside the indicators of employability and social mobility.

Way Ahead:

- Increase public investment in Teachers' training institutions, Research institutions, Universities and schools.
- Achieve inclusive growth; take steps to support disadvantaged students (transport, social protection and scholarships).
- Improve employment: Education policy should be linked to manufacturing, services, entrepreneurship and labour intensive sectors of the economy.
- Assess meaningful outcomes: In addition to established indicators of learning, other social indicators of learning and employment (such as job quality and social mobility of graduates) should be measured.

Conclusion:

This shows that education alone can't solve unemployment, inequality and economic insecurity in Europe. It's to be backed by good jobs, affordable housing and inclusive growth. In India, the focus needs to be on building an education system that builds capabilities and enhances productivity and opportunities for all.

Source: **The Indian Express**

Mains PYQ:

Q. How have digital initiatives in India contributed to the functioning of the education system in the country? Elaborate on your answer. (2020)

2.13 Indian Railway Security Reforms

Syllabus: Infrastructure [GS 3]

Context:

Indian Railways is looking at technology-based surveillance, improved coordination between security agencies, and community participation to enhance passenger safety. The measures were discussed at the 8th All India Conference of Government Railway Police (GRP) Chiefs, which ended in New Delhi.

New Initiatives to Improve Railway Safety & Security:

- **Drone-Assisted Pink Patrol**
  - South Central Railway is presenting 'Pink Patrol: Eyes in the Sky, SHAKTI on the Ground', an initiative that involves a mix of drone-enabled surveillance and quick response teams.
  - It is designed to further the efforts to build monitoring capacity and enhance security incident responses using women-led technology-driven operations.
- **RailMadad Integration with GRP**
  - CGround 'or Railway Information Systems (CRIS) inducting GRP staff to RailMadad.
  - This integration is anticipated to enhance the redressal of complaints of passengers, monitoring of complaints and information exchange between the railways and the state police.
- **Preventing Stone-Pelting**
  - Railway authorities are promoting hotspot policing, monitoring, and tough measures against criminals.
  - Stone Pelleting Prevention Awareness Campaigns and Youth Engagement are also being encouraged to dissuade stone pelting and other unsafe activities.
- **Festival Crowd Management**
  - Extra arrangements are made for festivals like Diwali and Chhath as they have high passenger volume.
  - These are: CCTV surveillance, public announcements, barricading, holding areas and control rooms.
  - Overcrowding and stampedes can be avoided if there is coordination among Railway Protection Force (RPF), GRP, local police and metro police.
- **Project DISHA**
  - Central Railway's Pune Division introduced the project 'Dedicated Initiative for Safety, Harmony & Awareness' for the education of the children living near the railway tracks.
  - The initiative involves awareness sessions, educational activities, and community participation to discourage trespassing, stone-pelting, and theft.
  - It adopts a teamwork approach by engaging the members of the National Service Scheme and NGO's and the local community.

What did the Sam Pitroda Committee Recommended?

- A major push to modernise Indian Railways was proposed by the Expert Group on Modernisation of Indian Railways headed by Sam Pitroda in 2012, which estimated that it would cost ₹5.6 lakh crore.
- It provided recommendations for infrastructure, safety, and technology/institution reform.
    - **Track safety:** Progress of mechanized track maintenance and modern Inspection systems for the improvement of track reliability.
    - Wheel impact load detectors, train protection warning systems.
    - **Unmanned level crossings:** Removal of unmanned level crossings to minimise accidents.
    - **Infrastructure modernisation:** Modernisation of workshops, coaching depots and maintenance facilities.
    - **Technology adoption:** Increased camera, video surveillance, use of social networks and other emerging technologies.
    - **Governance reforms:** Establishment of a Governance Board to enhance the strategic decision making process and reform the Railway Board's structure.
    - **Qualification of staff:** Slowdown in the hiring of unskilled workers and qualification of professionals.
    - **Independent regulation:** Railway Regulatory Authority is established to enhance regulation.
- The committee's main message was that modernization of the railway requires additional investment, but also institutional changes, professional management and technology-based safety improvements.

What is Kavach?

- Kavach is an indigenous Automatic Train Protection (ATP) system built by the Research Designs and Standards Organisation (RDSO) and the domestic industry.
- It's meant to lower the likelihood of train accidents caused by human error and train collisions.
- How Does Kavach Work?
    - Signal enforcement: In the event of a locomotive pilot's inadequate response to a red signal, Kavach can automatically apply the brakes.
    - Train speed control: It tracks the speed of trains and takes corrective measures if the train's speed surpasses the allowed limit.
    - Collision Prevention: Equipment onboard and trackside systems communicate to identify conflicting train movements.
    - Cab signalling: Gives the locomotive pilot the signal information and movement authority.
    - SPAD prevention: Assists in stopping a train from passing a stop signal without authorised permission.
- Kavach employs a combination of onboard equipment, trackside infrastructure, radio communication and station-based systems. It relies on the reliability of equipment, installation, maintenance and adequate network coverage.

Challenges Ahead:

- **Expensive:** It takes a long-term investment of money to cover the costs of implementing the safety systems throughout an extensive railway system.
- Equipment installation, testing, and maintenance in order to keep pace with expansion.
- **Information sharing and responsibilities of institutional coordination:** RPF, GRP, state police and railway authorities require timely information sharing and clear responsibilities.
- **Human factors:** Training and fatigue management, and compliance with operating procedures are still crucial.
- **Awareness raising:** This should support surveillance and enforcement activities.

Way Ahead:

Indian Railways should integrate the deployment of Kavach with frequent safety inspections, cutting-edge maintenance strategies, skilled training, and clear accident enquiries. Coordinated operations and sharing of information and data should be improved at the security agencies, and grievance systems for passengers should be improved to enable quick responses. Community programmes can be used to avoid potentially dangerous situations such as trespassing and stone-pelting.

Conclusion:

Safety on a railway can only be achieved by moving away from reactive to preventing action, through technology, institutional coordination and public participation. The Kavach can prevent collisions and other security concerns like the Pink Patrol, RailMadad and Project DISHA can be tackled. But to make railway travel safer and more reliable, it is necessary to take a coordinated approach.

Source: The Indian Express

Prelims PYQ:

Q. With reference to bio-toilets used by the Indian Railways, consider the following statements: (2015)

1. The decomposition of human waste in the bio toilets is initiated by a fungal inoculum.
2. Ammonia and water vapour are the only end products in this decomposition which are released into the atmosphere.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans: (d)

2.14 India Needs to Strengthen Capabilities across the Value Chain

Syllabus: Science & Tech, Indian Economy [GS 3]

Context:

India needs to strengthen its domestic capabilities across the entire value chain—moving beyond design and assembly to local manufacturing, raw materials, research, and specialized skills.

Key Areas Requiring Value Chain Enhancement:

Semiconductors & Electronics:

- While India has a strong base in chip design, it remains heavily dependent on foreign suppliers for critical inputs like Electronic Design Automation (EDA) tools, fabrication infrastructure, raw materials, chemicals, and packaging.
- Under the India Semiconductor Mission (ISM), the government has backed multiple projects and expanded focus pillars to include R&D and specialized skill development.

Mobile Manufacturing:

- Large scale manufacturing schemes have spurred domestic production with more than 99% of mobile phones being produced domestically and value added. Recently, India sanctioned a Mobile Phone Manufacturing Scheme, amounting to ₹62,500 crore from FY2026-27 to FY30-31, to encourage the sourcing, design and components of mobile phones in the country.

Chemicals & Petrochemicals:

- High import dependence on petrochemical intermediates and specialty chemicals creates a substantial trade deficit (~$31 billion), requiring better feedstock availability and infrastructure according to NITI Aayog Policy Reports.

Pharmaceuticals & Active Pharmaceutical Ingredients (APIs):

- India provides significant contribution of generic medicines and vaccines to the world, but imports 65-70% ofAPI raw materials from outside India (namely China).

Strategic Push Factors:

- **Strategic Indispensability:** Economic strategies emphasize embedding India deeply into global value chains (GVCs) so its participation becomes non-substitutable for global resilience.
- **Trade and Economic Corridors:** India is working with various FTAs with leading economies, India–Middle East–Europe Economic Corridor (IMEC), bilateral partnerships (India–Germany frameworks on power semiconductors and precision engineering) to spread risk.

Strategic Enablement & Connectivity:

India's value chain policies are closely linked with its foreign policies and infrastructure networks:

- **Structural Competitiveness of Indian Manufacturing:** The India-Middle East-Europe Economic Corridor (IMEC) project is an example of an

intercontinental initiative that will reduce transit times and transportation costs, thereby enhancing the competitiveness of Indian manufacturing.

- **Strategic Bilateral Alliances:** Deepening economic integration through Free Trade Agreements (FTAs) and tech partnerships—including the India-Germany framework on power semiconductors and precision engineering—enables bilateral technology transfers and mitigates geopolitical risks.

Way Forward for India:

- **Boosting R&D and IP:** Improving R&D and IP has to be taken as a step for "Make in India" to "Design and Innovate in India" by enhancing GERD.
- **Logistics Cost Rationalization:** The National Logistics Policy (NLP) and PM GatiShakti must be aggressively implemented to reduce domestic logistics costs, which are an implicit tax on exporters.
- **Advanced Skill Development:** Workforce training in clean-tech manufacturing, precision engineering and automation must be flexible and adaptive.

Source: The Hindu

UPSC Practice Question:

Q. India's semiconductor ambitions require capabilities across the entire value chain, not merely chip design. Discuss the challenges and suggest measures to reduce foreign dependence.

2.15 India' Capital Cycle & Carbon Trajectory

Syllabus: Indian Economy & Environment [GS 3]

Context:

India is about to experience a huge capital expenditure (capex) spree. As India continues to invest heavily in infrastructure, manufacturing and urban expansion, decisions taken in this next investment cycle will be determining the country's carbon path for the next few decades.

A Macroeconomic & Climate Dualism in India:

- **India faces a unique dual challenge:** sustaining a 7-8% GDP growth rate to lift millions out of poverty while honoring its global climate commitments.
- **The Investment Imperative:** Massive capital is flowing into heavy industries (steel, cement, chemicals) and infrastructure (roads, railways, power grids).
- **The Carbon Risk:** Traditional growth models are very fossil fuel intensive. If the investments slated for the future result in carbon intensive technologies, India can end up with "stranded assets" and be unable to honour its climate commitments.

Key Drivers of the Next Investment Cycle:

1. Infrastructure Scaling & Urbanization

- National Infrastructure Pipeline (NIP): Billions are being channeled into physical connectivity, which inherently demands high-energy inputs.
- Building Boom: India is projected to add urban infrastructure equivalent to a new Chicago annually over the next 20 years, leading to an increased need for steel and cement.

2. Manufacturing Resurgence (Make in India 2.0)

- PLI Schemes: The Production Linked Incentive schemes are driving manufacturing growth in the electronics, auto and heavy machinery sectors in the country.
- Industrial Decarbonization: The challenge lies in powering these new factories using clean energy rather than grid electricity dominated by coal.

Critical Areas for Green Capital Allocation:

- **Renewable Energy Infrastructure:** Beyond generating solar and wind power, massive investments are required in grid integration, transmission lines, and battery energy storage systems (BESS).
- **Green Hydrogen Ecosystem:** Green hydrogen is the only way to achieve deep decarbonisation for hard-to-abate sectors such as steel, fertiliser and shipping.
- **Electric Vehicle (EV) Value Chains:** Shifting from assembling EVs to localized manufacturing of cells, cathode materials, and recycling infrastructure.

Challenges in Transitioning the Investment Cycle:

1. Financing and the Cost of Capital

- High Risk Premium: loans are costly for the developers of new green technology (green hydrogen, carbon capture etc.).
- Fiscal constraints: This transition requires financing beyond the capacity of the public sector; there are exposure limits for the domestic commercial banks in the infrastructure sector.

2. Technology and Supply Chain Monopolies

- Critical Mineral Dependency: India is very dependent on imports for critical minerals like Lithium and Cobalt, and solar PV components, which exposes it to geopolitical risks linked to supply disruptions.

Way Forward for India:

- **Enhancing Sustainable Finance:** Growing the Domestic Carbon Market and green sovereign bond market to lower the cost of funding for green projects.
- **Blending Public and Private Capital:** Utilizing "blended finance" structures where multilateral institutions de-risk early-stage green investments to attract private capital.
- **Policy Coherence:** Linking the implementation of industrial policy (such as PLI schemes) directly to environmental requirements, making sure that new factories have the most modern and cleanest technologies from the start.

Source: The Hindu

UPSC Practice Question:

Q. Should the pursuit of carbon credits and clean development mechanisms set up under UNFCCC be maintained even though there has been a massive slide in the value of a carbon credit? Discuss with respect to India's energy needs for economic growth.

2.16 India's Emergence as the World's Oil Refining Hub

Syllabus: Indian Economy [GS 3]

Context:

India is rapidly cementing its status as the world's preferred oil refining hub. In India, the domestic demand, huge investments, and declining refining presence in the western side of the world has transformed India to become the fourth-largest refining country in the world, and second-largest in Asia. Despite importing over 85% of its crude oil requirements, the nation has transformed this vulnerability into an economic strength, transitioning into a key net exporter of high-value refined petroleum products.

Current Status of India's Refining Sector:

- **Capacity Landscape:** As of late 2026, India boasts an installed refining capacity of approximately 290 Million Metric Tonnes Per Annum (MMTPA).
- **Projections for Growth:** The Union Ministry for Petroleum and Natural Gas has estimated that the capacity will reach 300 MMTPA by 2030 and will be extended to 400-450 MMTPA in the long run.
- **Export Dominance:** India recently emerged as the second-largest exporter of seaborne diesel globally, trailing only the United States. The sector is a significant economic force and accounts for almost 20% of the country's total revenue.

Factors Driving India's Rise as a Global Refining Hub:

1. Shrinking Western Infrastructure vs. Indian Expansion

- While European and North American nations are closing older, less efficient refineries due to steep operating costs and stringent climate laws, India is expanding existing sites and establishing modern greenfield projects. An average of 250,000 bpd is being lost from Europe's capacity each year.

2. Advanced Refining Complexity

- Indian units, such as the world's largest unit on a single site, the Jamnagar Refinery of the Reliance group, have an extremely high Nelson Complexity Index. This will enable Indian refiners to upgrade low-quality crude, which is low in value, high in sulphur and sour, into high-quality crude which is low in sulphur and sweet and is in demand by the western markets.

3. Geopolitical balancing and strategic arbitrage

- Following the 2022 Ukraine crisis, Indian refiners successfully leveraged discounted Russian crude. India was able to convert this crude to high-value diesel and petrol, helping to meet the needs of both Europe and the United States, and thus became an important swing supplier in the world.

4. Favorable Government Policy

- Foreign Direct Investment (FDI) is encouraged with 100%, automatic route for the refining sector and integrated refining-petrochemical complexes are encouraged.

Strategic & Economic Significance in India:

- **Strategic Autonomy:** Refining prowess grants India geopolitical leverage, turning a resource-scarce nation into a vital anchor for global energy security.
- **Macroeconomic Cushion:** High-value petroleum exports yield billions in foreign exchange, helping to balance the fiscal deficit driven by raw crude purchases.
- **Regional Anchor:** India satisfies the direct petroleum demands of neighboring nations like Nepal, Bhutan, and Mauritius, expanding its diplomatic footprint in the Indian Ocean.

Key Challenges & Vulnerabilities:

- **Upstream Vulnerability:** India's reliance on foreign raw crude makes its processing center vulnerable to any unexpected disruption in West Asia.
- **Green Energy Disruption:** The accelerating global shift toward Electric Vehicles (EVs) and green hydrogen threatens long-term international demand for traditional transport fuels.
- **Oversupply & Margin Risks:** Risk of overexpansion into petrochemical integration and narrow margins in the light of global overcapacity.

Way Forward:

The industry needs to adopt a two-pronged approach for India to firmly establish itself as a world-class refiner. Refineries need to ramp up their connection with the production of petrochemicals to defend themselves from falling demand for transport fuels. At the same time, investments in carbon capture technologies and co-location of green hydrogen infrastructure will be vital to meet increasingly stringent international emission targets and to keep access to clean energy markets, particularly in the West.

Source: bl.

UPSC Practice Question:

Q. Explain the key challenges for India's energy security. What measures do you suggest for ensuring energy security along with economic growth and sustainability?

2.17 Cabinet Approves Manufacturing & Panchayat Schemes

Syllabus: Economy [GS 3]

Context:

The Union Cabinet has approved three major schemes to boost manufacturing in the country and encourage sports goods manufacturing and better local governance in villages. These programmes are targeted at promoting the vision of Viksit Bharat by making industries more competitive, creating jobs and strengthening the Panchayati Raj Institutions.

Container Manufacturing Promotion Scheme:

- The objective of the scheme is to create a world-class Indian container manufacturing ecosystem, minimize the dependency on imports, and boost the maritime and logistics supply chains.
- **Financial outlay:** ₹10,000 crore over 13 years, up to FY 2039–40.
    - The coverage includes support for new manufacturing facilities, as well as expansion of existing facilities.
- **Key elements:** Interest subvention, testing and certification assistance, land leasing assistance, and operational expenditure assistance.
- **Employment:** Estimated 3,000 direct jobs and over 50,000 indirect jobs.
- **Industries that can be linked to the scheme:** Specialized steel, corner castings, wooden frames, paints, and other industries related to the scheme are expected to be supported by the scheme.
- **Significance**
    - Reduce reliance on imported shipping containers through domestic production (import substitution).
    - Supply-chain resilience: Improving local capability will help to overcome the global shortages of containers.
    - Potential for export: India has huge potential in manufacturing and exporting good shipping containers.
    - Industrial development: The scheme can help to attract investments, technology adoption and, in turn, the development of supporting industries.

Khelo India Sports Goods Manufacturing Scheme:

- The scheme aims to help India become a globally competitive manufacturer of good-quality sports goods and enhance India's presence in international supply chains.
- **Financial outlay:** ₹1,856 crore over eight years, from FY 2026–27 to FY 2033–34.
- **Sports Goods Manufacturing Zones:** Special zones for cluster-based manufacturing and integrated industrial regions will be promoted.
- Anchor Investment Support is meant to make a home in the country for top domestic and international manufacturers, brands, and retail chains by offering them support.
- **Turnover-Linked Support:** Incentives will stimulate increased production, capacity expansion, and continued production.

- **Two-pronged strategy:** incentives will be provided for manufacturing and larger interventions will focus on supporting the broader industrial ecosystem.
- **Significance**
  - Competitiveness of manufacturing industry: Investment and production incentives can enhance the scale and efficiency of the domestic manufacturing industry.
  - Employment generation: Diverse types of jobs can be generated through the expansion of sports goods manufacturing activities in production, design, logistics and distribution.
  - MSME development: Cluster-based manufacturing can enable small suppliers to find their way into big domestic and global value chains.
  - Sports ecosystem: Greater access to good quality sports equipment and a better sporting ecosystem in the country.

Pradhan Mantri Viksit Gram Swaraj Yojana (PMVGSY):

- The basic objective of the Centrally Sponsored Scheme (CSS) is to make Panchayats and other local governance institutions self-reliant, empowered, accountable, and high-performing.
- **Financial outlay:** ₹7,395 crore.
- **Duration:** Five years, from FY 2026–27 to FY 2030–31.
- Rural local bodies, traditional bodies, eligible institutions in non-Part IX areas: more than 2.78 lakh.
- **Beneficiaries:** Over 32 lakh elected representatives and other stakeholders, including Panchayat functionaries, in over 2.55 lakh Panchayats and traditional local bodies.
- **Significance**
  - Better participatory politics and democratic accountability: Stronger local institutions can have a positive impact on participatory decision-making and democratic accountability.
  - Local development: Improved institutional capacity of Panchayats can enable them to plan and implement development programmes more effectively.
  - Decentralisation: The scheme has the potential to enhance local self-governance and responsiveness to community needs.
  - Empowered rural institutions can be a source of inclusive development and public service delivery in Viksit Bharat.

Dearness Allowance & Dearness Relief Increased by 3%:

- The Cabinet has approved a DA of 3% for all employees of the Central government and DR of 3% for pensioners from July 1, 2026.
  - Beneficiaries: Over 48 lakh central government staff and 68 lakh pensioners.
  - Additional expenditure is estimated at more than ₹10,000 crore per year (fiscal impact).
  - Objectives: DA and DR adjustments aim to compensate the income of employees and pensioners for the effects of inflation.
- The rise is likely to translate into extra funds for the beneficiaries, but will not significantly influence their purchasing power unless the inflation rate is high.

Way Ahead:

- These programs will be successful if they are implemented in a timely manner, and if incentives are delivered with transparency and measurable outcomes.
- Manufacturing of containers is dependent on availability of specialised material and export infrastructure, whereas sports goods production is dependent on quality standards, innovation and better linkages with foreign buyers.
- The [PMVGSY] needs to be more institutional, more economical, and more visible in terms of the positive impact it can deliver on governance in rural areas.

Conclusion:

The three schemes cater to the three interrelated priorities of being self-reliant, manufacturing sports equipment, and fostering democratic governance. They can help enhance the agricultural sectors and rural development, as well as contribute to employment creation, if they are executed properly and work within domestic value chains. The DA and DR complement these measures by giving extra financial relief to the Central government employees and pensioners.

Source: **The News on AIR**

Mains PYQ:

Q. "Industrial growth rate has lagged behind in the overall growth of Gross-Domestic-Product (GDP) in the post-reform period" Give reasons. How far are the recent changes in Industrial Policy capable of increasing the industrial growth rate? (2017)

2.19 Tobacco Free Youth Campaign 4.0

Syllabus: Governance [GS 2]

Context:

In New Delhi, Union Minister of State for Health and Family Welfare Prasanta Rao Jadhav launched the Tobacco Free Youth Campaign 4.0. The nationwide campaign will last for 60 days and focus on three goals: stopping children from ever smoking, helping them quit smoking, and improving enforcement of tobacco control regulations.

Key Features of Tobacco Free Youth Campaign 4.0:

- **Time period:** National 60-day campaign.
- **Prevention:** Aim to deter youth from starting to smoke.
- **Cessation:** It prompts current tobacco users to stop using tobacco and find suitable support to help them.
- **Law enforcement:** To bolster enforcement of tobacco control laws.
- **Tobacco-free places:** It advocates for tobacco-free schools, village and public area tobacco-free.
- **Youth participation:** Youth to be active in awareness generation and community mobilization.
- According to past campaigns, over 5.8 lakh schools and 73,000 villages went tobacco-free.

Why is Tobacco Control Important in India?

- **Public Health Burden**
  - Consumption of tobacco has been linked to various non-communicable diseases such as cancers, cardiovascular diseases, and respiratory diseases.
  - Second-hand smoke is also harmful to non-smokers, such as children and other vulnerable people.
  - Young tobacco initiation is associated with the risk of long-term addiction and related health issues – prevention of tobacco initiation at a young age can lower this risk.
- **Economic Consequences**
  - Tobacco-related diseases add up in health care costs and can also lead to lost productivity due to absenteeism from work and disability and death.
  - Household expenditures for tobacco could be put elsewhere, such as nutrition and education.
  - If implemented properly, tobacco control can help create a healthier workforce and alleviate the burden on a health care system in the long term.
- **Protecting Young People**
  - Younger ages can be crucial for the onset of addictive behaviors: adolescence and early adulthood.
  - Peer influence, advertising, social acceptance and availability can influence tobacco initiation.
  - School education, Parent participation and youth campaigns can help develop anti-tobacco resistance.

Legal Framework for Tobacco Control in India:

- The Cigarettes and Other Tobacco Products Act (COTPA), 2003 covers tobacco advertising, smoking in public places, marketing to minors and sales at or near educational institutions, packaging and warning.
- National Tobacco Control Programme (NTCP): Provides assistance for awareness, enforcement, and tobacco quit campaigns.
- WHO Framework Convention on Tobacco Control (WHO FCTC): India has been a signatory to this international treaty, which lays the groundwork for tobacco exposure reduction.
- It is important for those measures to be implemented effectively to ensure that these awareness campaigns result in a change in behaviour that is sustained.

Challenges:

- **It is readily available:** Tobacco products can be made available to young people even if they must be prohibited by law.
- **Enforcement gaps:** There's variation in compliance with restrictions on sales, advertising and public smoking.
- **Addiction and relapse:** You may find it difficult to quit tobacco without counselling and addiction reduction products and services.
- New nicotine and tobacco products (also known as emerging products) should be given attention through monitoring and regulation.
- **Social acceptance:** cultural practices and peer influence may work against awareness initiatives.

Conclusion:

Tobacco Free Youth Campaign 4.0 aims to shift the focus from Government action to a national campaign about tobacco. It will be reliant on ongoing awareness, appropriate oversight and access to drinking cessation support, as well as engagement and meaningful participation of young people. Preventing exposure to tobacco by youth is a vital investment in India's public health and in human resources.

Source: **The News on AIR**

Prelims PYQ:

Q. Which one of the following groups of plants was domesticated in the 'New World' and introduced into the 'Old World'? (2019)
(a) Tobacco, cocoa and rubber
(b) Tobacco, cotton and rubber
(c) Cotton, coffee and sugarcane
(d) Rubber, coffee and wheat

Ans: (a)

2.19 HNRC Advisory on Female Prisoners & Children

Syllabus: Social Justice [GS 2]

Context:

The National Human Rights Commission (NHRC) has given a guidance note regarding the protection of the human rights of children and female inmates. It requires a gender-responsive approach to prison administration, particularly in regard to health care, decent living conditions, access to justice, and the welfare of children of mothers who are in prison.

Key Areas Covered by the NHRC Advisory:

- **Admission Records and Child Documentation**
  - Admission and child records are being maintained.
  - Authorities need to keep accurate admission records and make sure to have proper databases that show the children whom their mothers put into custody.
  - Documentation will facilitate the continuity of healthcare, access to welfare services, and ensure legal identity of children.
- **Healthcare and Mental Health Services**
  - Women should have access to good medical attention, reproductive and maternal health, and mental health services.
  - Children residing in prisons should receive routine check-ups, food rations, vaccinations, and appropriate care for their ages.
  - Psychological support and trauma counseling services play a role in supporting the mental health of individuals who are a part of the system for treatment and addressing trauma, anxiety, and psychological impacts of incarceration and family separation.
- **Humane Living Conditions and Hygiene**
  - In the prison, there must be proper sanitation, clean water and food, privacy, and hygienic facilities.
  - Women's needs, such as menstrual management and healthcare during pregnancy, should be taken care of.
  - A safe environment for children with safe spaces, play facilities, and development of all aspects of a child's body and mind.
- **Legal Aid and Access to Justice**
  - Ensure Inees women Prisoners access legal representation, information regarding their rights and a timely justice process.
  - Authorities should ensure legal aid covers existing costs and payments, and ensure that bail-related and communication facilities are made available to authorities and other permitting agencies.
  - Delicate prisoners must be supported to comprehend legal procedures and remedies obtainable.
- **Family Relationships and Children's Best Interests**
  - Mother's should be allowed to make adequate contact with their families in prison, often referred to as "family contact," but subject to legal restrictions and safety precautions.
  - The best interests, development and emotional health of children must be taken into account when making decisions that concern children.

  - If children cannot be left with their mothers, they should be provided with safe and suitable alternative care provision.
- **Rehabilitation and Social Reintegration**
  - The production of skills, education, counseling and vocational training can provide preparation for life after release for women.
  - Linkages with welfare departments and community organisations can help with accommodation, jobs and family reintegration.
  - The rehabilitation measures must decrease stigma and potential reoffending.

Constitutional & Legal Framework:

- **Article 14:** Equality before the law and equal protection of the laws.
- **Article 21:** guarantees the right to life and personal liberty, which is the foundation for treating people in custody in a humane and respectful manner.
- **Article 39(f):** Requirements for the provision of opportunities and facilities for children to develop in freedom and in dignity to the State.
- **Protection of Human Rights Act, 1993:** Support the statutory framework of the NHRC and the human rights protection role of the NHRC is given in the Protection of Human Rights Act, 1993.
- **Prisons legislation and rules:** State governments and prison authorities play a key role in driving reforms as the administration of prisons is mainly the responsibility of the State.
- Internationally, the UN Bangkok Rules will guide how women prisoners and women offenders are treated and dealt with non-custodially. In addition, the Convention on the Rights of the Child, which the United Nations adopted, also emphasizes best interests, protection, and development of children.

Challenges in Implementation:

- **Overcrowding:** Prisons can be overcrowded and limit access to appropriate facilities and privacy for mothers and children, and to health services.
- Lack of resources can lead to weaker service delivery, as medical staff, counsellors and trained staff are not available.
- **Coordination gaps:** cooperation between prison departments and health services, and between legal aid authorities and child welfare institutions is an essential condition for promoting effective implementation.
- Social stigma– liberated women may experience challenges in their job search, in their housing choices, and from their families.

Way Ahead:

- The States/UTs should have a definite time frame for implementing the NHRC advisory and keep an eye on compliance.
- Independent audits and independent checks should be made of healthcare, sanitation, legal assistance, and child welfare in prisons.
- Governments need to boost mental health services and specialised training for prison staff, and legal aid.
- Children's care needs to be coordinated with child welfare institutions, to not exclude children from receiving care due to the incarceration of their mother.

- Rehabilitation programmes should link released women to livelihoods and counselling and community support.

Conclusion:

Ensuring the safety of female prisoners and children of prisoners is a fundamental element of a rights-centered and compassionate criminal justice. NHRC advisory will allow for the consideration of gender-specific needs, for the protection of the welfare of children and the enhancement of rehabilitation. It will require ongoing implementation, timely and sufficient investments, and responsible prison management to have positive effects.

Source: **The News on AIR**

Mains PYQ:

Q. Though the Human Rights Commissions have contributed immensely to the protection of human rights in India, yet they have failed to assert themselves against the mighty and powerful. Analysing their structural and practical limitations, suggest remedial measures. (2021)

2.20 Ballot Papers in Indian Elections

Syllabus: Polity [GS 2]

Context:

The controversy over EVMs and ballot papers has been brought back to the fore since the 28 Legislative Council seats across India were up for grabs on October 28, 2026. Overall, the Congress took one seat — and the voting system in various elections came back into the political arena.

Where are Ballot Papers still used in India?

- EVMs are being used in Lok Sabha and State Assembly elections, while Ballot Papers continue to be used in certain elections such as many local body polls in rural areas, Rajya Sabha and Legislative Council Elections. This choice will depend on the constitutional provisions, electoral rules, and type of electoral system.
- **Panchayati Raj Elections**
  - Ballot papers are still used in elections to Gram Panchayats, Panchayat Samitis and Zilla Parishads.
  - The study conducted by the Indian Institute of Public Administration (IIPA) in 2023, which was sponsored by the Ministry of Panchayati Raj, revealed that 53% of States were using ballot papers for conducting Gram Panchayat elections.
  - The study has revealed that only Kerala, Sikkim, Dadra and Nagar Haveli and Daman and Diu had deployed EVMs in all Gram Panchayat constituencies at the time.
  - Some States have adopted two types of Ballot papers and EVMs in various constituencies or tiers.
  - Finances, logistics, and the necessity of holding several elections at the same time can impact the voting method.
- **Rajya Sabha Elections**
  - The Rajya Sabha is elected by the system of proportional representation by means of single transferable votes (STV).
  - The voters representing each Assembly elect Members of Legislative Assemblies (MLAs) by ticking their choices on the ballot papers.
  - The system enables votes to be moved according to preference in the following conditions: when there are surplus votes among candidates and when a lower-ranked candidate is eliminated.
  - In the case of elected MLAs, the Rajya Sabha polls are conducted by open ballot, in accordance with the applicable statutory procedure.
- **Legislative Council Elections**
  - Only a few States have Legislative Councils or Vidhan Parishad.
  - Using preferential voting (STV) for elections means that voters will be asked to fill in preference ballots.
  - The electoral college depends on the type of seat and comprises elected MLAs and, where provided by the Constitution, local authorities, graduates, teachers or nominated members.
  - This is an election unlike any Election to the Lok Sabha and State Legislative Assemblies.

- **Elections to the Council and the Student Union**
  - The method of voting in municipal elections is determined by the State Election Commissions, which carry out the elections under the supervision of the State Election Commissions as stipulated by the State laws and rules.
  - For instance, the Municipal Corporation of Delhi has adopted the use of EVMs, and Punjab has adopted ballot papers for municipal elections in 2026.
  - There are also differences between the institutions in the way that student unions are elected. EVMs are used in the Delhi University Students' Union elections, and ballot papers are used to conduct Jawaharlal Nehru University Students' Union elections.

Why are Ballot Papers still used?

- **Electoral system:** When conducting a preference-based electoral system (STV), voters must rank candidates, and ballot papers are appropriate for capturing preferences.
- **Logistical aspects:** In some rural areas, local body elections may have several levels and multiple candidates, requiring the deployment of enough EVMs to ensure the elections are conducted.
- **Lack of funds:** Purchasing, transporting, maintaining, and securing machines can be costly.
- **State-level rules:** The States' relevant election rules and laws allow either of the methods.
- **Local requirements:** For some elections, candidate-specific symbols and voting arrangements affect how the ballots or voting machines are set up.

What is Single Transferable Vote?

- The STV system is a system of voting that aims for proportional representation and enables voters to list candidates in order of preference.
- For instance, during Rajya Sabha Elections, an MLA can give Candidate A as a first choice and Candidate B as a second choice.
- First preference counting: Votes are tallied to see if they have the necessary number of votes.
- Surplus votes: If there are more votes cast for an elected candidate than the number he/she received, surplus votes can be redistributed to other candidates based on the voters' preferences.
- Elimination: If the number of open seats is not filled, then the candidate who receives the least votes can be eliminated and their "sacrificed" votes allocated based on the next candidate.
- The estimate for the number of seats to be filled in the Rajya Sabha is determined on the basis of the formula provided in the respective electoral rules. It is dependent on the number of valid votes and the number of vacancies. It's not something that can be done by just counting the votes and announcing the winner.

Organic Law & Legal Environment:

- **Article 80:** Provides for the composition of the Rajya Sabha and election of its elected members through proportional representation by means of STV.

- **Article 171:** Relates to the composition of State Legislative Councils and stipulates that certain categories of members shall be elected using STV based on proportional representation.
- **Article 243K:** The State Election Commissions are vested with powers to supervise, guide, and regulate Panchayat elections.
- **Article 243ZA:** Provides for State Election Commission supervision of municipal elections.
- **Representation of the People Act, 1951:** Regulates significant issues relating to Parliamentary and Assembly elections, such as electoral procedures.

Way Ahead:

The form of the election by which the voters cast their ballots should be legally valid and should be both transparent and accessible and operationally sound in India. Election authorities should enhance voter awareness, counting processes, audit processes, and public communication. In the context of local elections, States ought to cost, logistically evaluate their capacity, and determine their electoral system needs before deciding between EVMs and ballot papers.

Conclusion:

Ballot papers are still widely used in Indian elections, especially those that involve preferential voting and proportional representation. They are also still being used in other elections, which mirrors the rules and considerations at the State level. The goal should be to have free, fair, transparent, and credible elections, rather than the type of voting technology employed.

Source: The Indian Express

Mains PYQ:

Q. Discuss the role of the Election Commission of India in the light of the evolution of the Model Code of Conduct. (2022)

2.21 Bonds under the BNSS

Syllabus: Polity [GS 2]

Context:

The Code of Criminal Procedure (CrPC) was replaced by the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023, which provides a mechanism for the prevention of breaches of peace and public order. In Chapter IX, the authorities may demand a security bond from people if there is reason to believe there will be a disturbance.

Preventive Security Proceedings:

- The purpose of these proceedings is to prevent violence from happening. Their implementation must, however, be subject to constitutional freedoms and protections against arbitrary action.
- A security bond is a legal promise to keep the peace or behave well for a definite amount of time. You can get a bond without a surety, although a bail bond does require a surety, who then has more responsibility.
- The BNSS has provisions for two types of preventive proceedings in general.
    - Section 126: Where the authorities believe that a person is likely to breach the peace or cause public disturbance or an act which could cause public disturbance, they can instigate proceedings.
    - Sections 127-129: These refer to certain categories, such as persons who spread certain prohibited material, suspected persons who cover their presence with intent to commit a cognisable offence, and habitual offenders.
- The goal is to stop potential threats from turning into violence or crimes.

How do Security Proceedings Differ from an FIR?

- FIR and Preventive security proceedings are two different things.
    - When the information reveals a cognisable offence, then an FIR is filed, and the police can investigate the alleged crime.
    - In a security proceeding, the aim is to prevent a future threat to peace; they can be started even if there is no offence.
- For example, when there is a potential for violence between two communities, preventive proceedings can be used to prevent a conflict. If violence has already taken place, the Police can register an FIR and investigate. Preventive proceedings may also be filed if any additional violence is predicted.
- Therefore, the two processes can take place in parallel.

How are these Proceedings Conducted?

- Normally, proceedings are conducted by the Executive Magistrates including Sub-Divisional Magistrates. In the police commissionerate system, some of the powers may be delegated to authorised police officers as Executive Magistrates.
- The steps in the procedure are as follows:

    - Assessment: the Magistrate reviews information such as police reports and other evidence that might indicate that a likely breach of peace has occurred.
    - Preliminary order: Section 130 of the Act sets out the grounds and will ask the person to appear before the Magistrate and provide reasons why the security bond is not to be ordered.
    - Inquiry: Section 135 provides for an inquiry into the truth of the information and an opportunity for the person to respond and present evidence.
    - Interim security: If the statutory conditions are fulfilled, then an interim bond may be imposed during the inquiry to ensure that there is no threat of a breach of peace. It is necessary to record reasons in writing.
    - Final decision: the Magistrate makes the decision on whether to require security and sets the conditions.
- The investigation should be completed within a period of six months at the most, unless extended under the provisions of the statute. Otherwise, the proceedings terminate.

Why are Bond amounts & Sureties Required?

- A bond does not normally have to be paid all at once. Rather, it imposes a legal requirement to meet certain conditions.
- In the event of a violation of the conditions of a bond, the bond may be lawfully recovered thereafter, pursuant to applicable procedures. A Surety is a further guarantee and can help to promote compliance. Section 140 provides for examining the fitness of a proposed surety.
- Subject to the provisions in effect, if a person does not provide security, imprisonment may be imposed upon the person after a final order. Under Sections 126-128 the maximum period can be extended to 1 year and under Section 129 it can be extended to 3 years.

What Safeguards Prevent Misuse?

- While preventive powers can help to prevent violence, their misuse can be a threat to individual liberty and freedom of expression. The BNSS contains procedural safeguards.
    - A written preliminary order, which must provide reasons for the proposed action, must be obtained pursuant to section 130.
    - Section 135 sets out the provisions for an inquiry and evidence to be presented.
    - The final decision on furnishing security is in section 136.
    - There are legal avenues of review available under Section 414 and criminal revision under Sections 438-442, subject to conditions.
- Madhu Limaye v. Sub-Divisional Magistrate, Monghyr (1970) handled the challenge to the constitutionality of specific preventive provisions of the CrPC, in relation to maintenance of public order.
- Article 19(1)(a) and Article 19(1)(b) guarantee freedom of speech and freedom of expression and the right to assemble peaceably without weapons. These rights are subject to reasonable restrictions in terms of Article 19(2) and 19(3) on specific grounds. Any preventive action must then be accompanied by material and meet legal protection measures.

Security Proceedings vs. Section 163 of the BNSS:

- This Section 163, which supersedes the Section 144 of the CrPC vests the powers of authorised Magistrates to take urgent action in cases where they feel that a specified danger exists, such as a threat to public tranquillity, riots and affrays.
    - Conduct, movement or gatherings within an area designated by a Section 163 order may be regulated, and in an emergency, may be conducted without notice.
    - Security proceedings are directed at specific individuals and ask them to demonstrate cause why they should post a bond to keep peace or behave well.
- For instance, authorities could limit gatherings under Section 163 if there's a likelihood of confrontation. Additional security proceedings may also be considered if a person keeps on making credible calls for violence.

Way Forward:

- Authorities need to take preventive action based on clear-cut evidence and not on peaceful dissent or criticism.
- Magistrates should read the Police Reports and make a clear record of their reasons.
- People must have a worthwhile chance to rebut claims and respond to illegal orders.
- The amount of bonds and conditions should be commensurate with the situation.
- The restriction of liberty should not be arbitrary, nor should it be permitted through the judge.

Conclusion:

The BNSS offers a way to prevent disruptions of peace from becoming violent. It relies on evidence-based decisions, procedural fairness, and judicial oversight to strike a balance between public order and the preservation of constitutionally guaranteed freedoms.

Source: **The Indian Express**

2.22 Market Economy vs. Social Protection

Syllabus: Social Issues [GS 1]

Context:

The concerns of rising cost of living, housing affordability, education, and economic opportunities were raised in the protests in European countries such as France, Italy, Belgium and Albania. The result has reignited discussion of the social implications of an increasingly market oriented economy.

Karl Polanyi & the Rise of Market Society:

- The sociologist and economic historian, Karl Polanyi, provides insights into why expanding markets can create a demand for social protection, in particular through the notions of 'fictitious commodity' and 'double movement'.
- Polanyi discussed the change in the nature of the market-society connection in his 1944 book The Great Transformation.
    - The markets existed before capitalism, but during the capitalism of the 19th century, a self-regulating market system was sought in which prices and supply and demand started to regulate economic activity.
    - Economics traditionally was tied to social relationships, customs and obligations.
    - In a market society, social life was growing more and more dependent on market needs, becoming an issue of livelihoods with growing inequality and economic insecurity.
- Polanyi wondered where the limits of market influence on access to basic resources and services should be placed.

What are Fictitious Commodities?

- For Polanyi, labour, land and money are fictitious commodities, as they are not created for sale like a normal commodity. However, in the market economy they are treated as commodities.
    - Labour: Labour cannot be separated from human beings. Viewing it as a commodity can leave workers vulnerable to joblessness, precarious work and low pay.
    - Land: Land is a natural resource that is vital for life and livelihoods, communities and the environment. If considered solely as a market asset, it can make housing unaffordable and expel communities.
    - Money: Money has been formed by banking systems, credit institutions and state policies and is not an ordinary good that is sold. Financial markets, if not regulated, can be sources of instability and economic crisis.
- Polanyi argues that such an unregulated approach to these elements can destabilise society and hurt the economy.

Understanding the Double Movement:

- According to the double movement theory of Polanyi, there are two processes that are linked together.

  - First movement: Market expansion: Markets have more influence on labour, land and money and more influence over wages, housing, credit, and access to resources.
  - Second movement: The workers, communities and governments react to the resulting insecurity by mobilizing for social protection, enacting labour laws, establishing welfare institutions, increasing public services and social security.
- There isn't a movement that's trying to get rid of markets. Rather, it strives to contain the negative social impacts of their harmfulness, while maintaining economic activity inside institutions that safeguard people.
- So it's not just a battle between the state and the market. The state also sets up the legal and institutional frameworks around which markets work.

Explaining Europe's Protests through Polyani:

- The protests are symptomatic of a number of tensions arising from market expansion.
  - Housing affordability: As houses become investment vehicles, the increasing costs of homes and rents can make them unaffordable for lower-income households and demand for more affordable housing and rent regulation grows.
  - Employment insecurity: Poor wages, lack of employment security and uncertainty about the availability of future jobs can create needs for increased labour protections.
  - Public services: Education and health care are areas of concern, and questions are raised about whether the ability to access essential services should be based mainly on purchasing power.
  - Economic inequality: The focus on wealth can create a disparity between economic growth and the level of security that normal people enjoy.
- These developments are a demonstration of the way economic insecurity can create demands for institutional intervention. But this is not the only reason why the protests occurred, as it could also be indicative of political discontent and local conditions.

Relevance to India's Public Policy:

- The relevance of Polanyi's framework to a number of Indian policy debates.
  - Labour protection: India's labour codes aim to ease the burden on labour, promote formalization of employment and ensure labour protection and social security. The leitmotif is to reconcile the flexibility of the economy with the power of bargaining and job security for the workers.
  - Land acquisition: Land is an economic asset and is a source of livelihood. Infrastructure-driven growth vs farmers/local communities' rights is the conflict theme brought up by acquisition disputes.
  - Food security: PDS and NFSA ensure availability of essential food without leaving the people totally at the mercy of market prices.
  - Education and healthcare: Investing in public services and welfare measures can enhance access to basic services, especially for those of low income.

- The examples illustrate the social costs that public institutions can moderate in the context of market dependence.

Limitations of Polyani's Framework:

- The theory of Polanyi, useful as it is, is not a complete account of the current economic and political developments.
- Markets can promote innovation, productivity, investment and employment opportunities.
- Too much state intervention can lead to inefficiencies, protectionism and incentive distortion.
- Public responses to economic insecurity can create demands for welfare and economic nationalism and political backlash.
- The challenge is to balance market efficiency and social protection and not to make either of them necessarily a goal in itself.

Way Forward:

- Social security, labour protection and access to affordable housing should be enhanced by governments.
- The public funding of education, health and basic services must diminish reliance on purchasing power.
- Economic reform must involve Vulnerable workers and vulnerable communities through impact assessments.
- Bridging of interests should be achieved through social dialogue between governments, employers, workers and civil society.

Conclusion:

- The growth of markets produces demands for social protection as a result of Karl Polanyi's double movement. The European strikes give a good example of the conflict between economic efficiency and the security of everyday life, and the Indian debates over policy do likewise.
- The challenge of any modern economy isn't between markets and the state, but making sure economic growth doesn't clash with social welfare, human dignity and stability.

Source: **The Indian Express**

Mains PYQ:

Q. "Social values are more important than economic values." Discuss the above statement with examples in the context of inclusive growth of a nation. (2015)

2.23 NVS-03 Satellite: Reviving India's 'Own GPS' Constellation

Syllabus: Science & Tech [GS 3]

Context:

ISRO's NVS-03 satellite will enable standalone navigation for India's indigenous satellite navigation system NavIC. The NVS-03 places the satellite in the critical 4th orbital position making the minimum requirement for calculation of 3D Trilateration and positioning in orbit.

Background: Why NavIC Needed Restoration?

- **The Four-Satellite Requirement:** Requires a minimum of 4 operational satellites, with 3 satellites needed for determining the spatial coordinates x, y, z, and the fourth satellite is needed for receiver clock bias synchronization.
- **Loss of Standalone Positioning:** With older spacecraft (like IRNSS-1F with 10 years design life) reaching the end of their design life in 2026, and previous anomalies, such as the propulsion valve issue in IRNSS-1I in 2025, the operational constellation of active Positioning, Navigation and Timing (PNT) services has dropped to just three spacecraft, IRNSS-1B, IRNSS-1I, and NVS-01.
- **Impact:** One-way messaging and timing were still available, but NavIC could not provide standalone positioning and needed to be complemented by foreign systems, such as the Global Positioning System (GPS) of the United States. The deployment of NVS-03 brings back the fourth satellite node, enabling indigenous position fixing capability for the first time.

Key Features of NVS-03 & Second-Generation (NVS) Series:

- **Indigenously Developed Atomic Clocks:** NVS-03 carries a Space Applications Centre (SAC)-developed Rubidium Atomic Frequency Standard (RAFS). The original IRNSS series used imported European clocks (SpectraTime) that had many early failures in orbit.
- **Tri-Band Civilian Signals (L1, L5, and S Bands):** The first generation of satellites transmitted on L5 (1176.45 MHz) and S (2492.028 MHz) bands. The civilian L1 frequency band (1575.42 MHz) is the same one used by the consumer GNSS chipsets; NVS-03 is thus directly compatible with low power consumption modules such as smartwatches, smartphones, and IoT devices.
- **Extended Operational Life:** The spacecraft utilizes the standardized I-2K satellite bus with a mission life of 12 years, as opposed to the 7-10-year life provided by the first generation spacecraft.
- **Improved Encryption:** Defense forces use a protected signal known as Restricted Service (RS) that is encrypted; the encryption process has been improved.

Overview of NavIC Architecture:

- **Nomenclature:** The Indian Regional Navigation Satellite System (IRNSS) was conceived after the GPS denial in the 1999 Kargil War, with the official name Nomenclature.

- **Coverage Area:** Primary coverage spans India and up to 1,500 km beyond its geopolitical borders. The extended service area is from 30° S to 50° N latitude and 30° E to 130° E longitude.
- **Constellation Geometry:** A nominal 7-satellite constellation at ~36,000 km with 3 GEO (Geostationary) and 4 inclined GEO (IGSO) orbits to provide continuous geometric line-of-sight over the region.
- **Dual Services:**
    - Standard Positioning Service (SPS): Open for civilian use, no encryption (position accuracy of less than 20 m).
    - Restricted Service (RS): Encrypted, for strategic military use (<5 m accuracy).

Strategic Significance for India:

- **Strategic Autonomy:** Prepares for geopolitical crises and war time that will prevent dependence on foreign GNSS (GPS, GLONASS, Galileo, BeiDou).
- **National Security & Defense:** Assists in precision weapons targeting, missile guidance, automatic drones reconnaissance and secure military logistics.
- **Disaster Management & Maritime Domain:** Provides safety-of-life information to deep-sea fishers out of terrestrial cell range and assists in early warning cyclone information.
- **Commercial Integration:** Fully supports the Government's instructions to smartphone manufacturers and commercial vehicles (AIS-140) to integrate NavIC chipsets as native components.

The Road Ahead:

The launch of two additional satellites NVS-04 and NVS-05 would be required to regain the 7-satellite orbital redundancy in the constellation to counter the single point failures and allows for full system resilience.

Source: HT,IE

UPSC Practice Question:

Q. With reference to NavIC (Navigation with Indian Constellation), consider the following statements:

1. It is India's indigenous regional satellite navigation system.
2. It provides navigation services to India and an area extending beyond its boundaries.
3. It is operated by the European Space Agency.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Answer: (a) 1 and 2 only

Explanation: NavIC is India's independent regional navigation satellite system developed by ISRO. It provides coverage over India and approximately 1,500 km beyond its boundaries. It is not operated by the European Space Agency.

2.24 Neoliberalism & the Rise of Global Youth Unrest

Syllabus: IR, Social Issues [GS 2], Economy [GS 3]

Context:

Global youth unrest is increasingly linked by analysts to the structural strains of neoliberal capitalism. Youth, especially Generation Z, have rallied in response to a growing sense of economic insecurity from France and Spain to Bangladesh, Nepal, and India.

Core Drivers of Youth Unrest:

- **High youth unemployment rates:** In many OECD countries (most G7 countries) youth unemployment rates are about double or more than the overall unemployment rate.
- **Fiscal Austerity and Public Spending Cuts:** Neoliberal policies have always included cutting public spending and prioritized fiscal restraint, resulting in lower welfare, underfunded schools and cut social safety nets. For example, recent French protests were sparked in part by a lack of resources in public high schools.
- **High Cost of Education and Housing:** Tuition has been rising and living costs are up—meaning that young workers face burdensome debt and stagnant or declining wages.
- **The precarious nature of jobs:** contract and platform-based gig work, and concerns about automation and Artificial Intelligence (AI) have made entry-level career paths insecure and vulnerable.
- **Underconsumption and Inequality:** The concentrated wealth at the top of the economy and low household spending result in a cycle of slow growth, with business investment not creating stable, long-term employment opportunities.

The Monetarist Counter charge & the Shrinking Welfare State:

Neoliberalism came as an ideology backlash in the late 1970s, championed by economist Milton Friedman and used politically by Ronald Reagan in the USA and Margaret Thatcher in the UK.

- **The pretext:** Neoliberals shifted the blame for cost-push inflation of the 1970s to government tampering and its profligacy in the form of Keynesian expansion.
- **Now the doctrine:** They said that full employment is an automatic by-product of the capitalist order and that governments have “no business to be in business”.
- **The Impact on the Young:** This shift triggered aggressive cutbacks in public expenditure, widespread privatization, and the erosion of the social safety net. This is the first generation to have been born into all this stripped back institutional environment, in which public goods such as affordable health care, housing, social security have been so compromised.

Under consumption & the "Low Wage, Low Growth" Trap:

- **Decline in Wage Share:** Weakened trade unions reduced workers' bargaining power, causing wages to stagnate despite rising productivity.
- **Underconsumption:** Lower wages reduced workers' purchasing power and overall consumption demand.
- **Decline in Productive Investment:** Weak demand discouraged business expansion, while capital shifted towards financial speculation and property markets, raising asset prices without creating sufficient jobs.

Persistent Unemployment & Precarity:

The absence of productive investments has resulted in high and persistent youth unemployment.

- **The Data:** Global youth unemployment (ages 15–24) climbed back to 12.4% in 2025, leaving roughly 67 million young people without jobs.
- **The NEET Crisis:** The percentage of young people Not in Education or Employment or Training (NEET) has been reduced and is now as high as 20%.
- **The Rise of the Gig Economy:** For those who do find work, secure employment has been replaced by the gig economy—characterized by short-term contracts, a lack of benefits, and intense labor precarity.

The Commercialisation of Education:

Neoliberalism changed the concept of the social contract of education from a public good into a commercialized industry that generates profit.

- **The skyrocketing costs:** Young people are constantly urged to pursue more and more qualification in order to be competitive, but the costs have continually increased.
- **Uncertain Returns:** Generations now have massive student debt loads and face a low-wage job market with high cost of living. University education doesn't always lead to financial stability or a middle class life.

The Path Forward:

In order to defuse this global crisis and make use of the younger generation's demographic dividend, political and economic systems need to shift away from austerity. They say governments have to step up and deliver more public investment to fill the demand deficit, build up the welfare state, curb the commercialization of basic service provision such as education and actively support stable, decent job creation.

Source: The Hindu

UPSC Practice Question:

Q. Examine how neoliberal economic policies have contributed to rising economic inequalities and youth unrest across the world.

2.25 Legislative Council Elections in India

Syllabus: Polity [GS 2]

Context:

The process of elections to the Legislative Councils (MLCs) is different from that of Assembly elections. To replace the universal adult franchise, elections are conducted using the single transferable vote (STV) to elect members by different categories of voters like MLAs, local body members, graduates and teachers.

What is a Legislative Council?

- At present, there are six states in India where there are Legislative Councils, namely Andhra Pradesh, Bihar, Karnataka, Maharashtra, Telangana and Uttar Pradesh. The system is supposed to represent various elements of society and add diversity and new voices to state legislatures.
- The Union has a bicameral legislature, the Lok Sabha and Rajya Sabha. The Constitution also provides states the right to have a second house of Parliament, known as the Legislative Council.
- The Constitution-makers had discussed these Councils. Backers said they would offer a forum for the experienced, be formative of diverse interests, and prevent hurried legislation. They were seen by critics as too costly and perhaps not even needed; they might even be tools of political patronage.
- Instead, the Constitution gave flexibility and it left it to the states whether they shall have a Legislative Council.
    - Article 169: Parliament can establish or discontinue a Legislative Council in the State on a resolution passed by the State Legislative Assembly by a special majority.
    - Article 171: Declares the size and composition of Legislative Councils.
    - The minimum number of members for a Council is 40, and its number is capped at one-third of the size of the State Legislative Assembly.

How are MLCs Elected?

- Article 171 deals with representation in the Legislative Council and different types of representation.
    - A third of the members are elected by MLAs.
    - One-third are elected by members of local authorities (municipalities, district boards).
    - One-twelfth are elected by graduates of the state.
    - One-twelfth are elected by teachers.
    - The other members will be appointed by the Governor.
- The Governor appoints those who have special knowledge or experience in literature, science, art, the cooperative movement, and social service.

Who can Vote in MLC Elections?

- In contrast with the Assembly elections, the electoral constituencies of MLC elections are different, as only eligible adult citizens are eligible to vote in MLC elections.

    - MLA constituencies: No non-members of the State Legislative Assembly can vote in an MLA constituency.
    - Local authority constituencies: The voters of the specified local authorities cast their votes.
    - Graduate constituencies: Any eligible graduate who meets the residence and educational qualification requirements is eligible to vote.
    - Voting Eligible Teachers (VET): Eligibility to vote: Eligible teachers with the prescribed teaching experience and institutional requirements.
- Electoral lists are drawn up separately for graduates and teachers. Qualification for voting is open to application by eligible voters and all voter qualification requirements must be met.
- A voter is normally required to have been in possession of a recognised graduate qualification in the constituency for a period of at least three years before the qualifying date for the graduate constituencies.
- For teacher constituencies: A voter shall have been engaged in teaching in an educational institution not lower than secondary school for not less than three years during the six years immediately preceding his or her election.

Why are Graduates & Teachers given Representation?

- The principle of special representation for the various sections of society can be traced back to Colonial Constitutional arrangements.
- The members of the Constituent Assembly agreed to representation of groups with specialised knowledge and experience during debates. The aim was to involve aspects of other political streams in the legislative process.
- Graduates and teachers are added because it is believed that education and experience can be important to legislative debate.

Why do MLC Elections use Preferential Voting?

- The single transferable vote (STV) is employed to calculate the results of MLC elections.
- Under this system:
    - Each voter lists his or her preferred candidates as 1, 2, 3, and so on.
    - The candidate has to get the required number of votes to get elected.
    - Surplus Votes can be distributed if a candidate gets more votes than they need, according to the next preferences.
    - If no candidate gets the requisite votes, the person who got the least votes is eliminated, and the rest of their votes are redistributed.
- This system enables the voters to vote for more than one candidate and is designed to promote proportionality.
- In the Legislative Council elections, as against the Rajya Sabha, the voting is done through a secret ballot by MLAs, whereas in the Rajya Sabha, the voting is open.

Term & Retirement of MLCs:

- The term of an MLC is six years.
- The Legislative Council does not dissolve and is a permanent House.
- 33% of its members retire every two years.
- The age of a candidate is 30 and he/she should meet the respective election criteria.

Legislative Council vs. Rajya Sabha:

- Both are Upper Houses but have unequal constitutional status and powers.
- The Rajya Sabha is a permanent House at the Union level, whereas a state's Legislative Council can be created or abolished under Article 169.
- The Rajya Sabha is the representative of the States and Union Territories in the National Legislature and Legislative Councils act within the State legislatures.
- Legislative Councils possess restricted legislative powers in regard to ordinary legislation. They are able to propose amendments or to delay the action of the Legislative Assembly but cannot stop the Legislative Assembly from reaching a decision.
- Money Bills can only be introduced in the Legislative Assembly and the Council has a short period of time in which to make its recommendations.

Way Forward:

- States should evaluate the need for a Legislative Council in terms of administrative need and legislative scrutiny.
- Elections should be free and transparent from political manipulation.
- Electoral rolls and the process for registering for them must be accurate for graduate and teacher voters and accessible.
- Legislative Councils should be empowered to review legislation and to represent various interests.

Conclusion:

In the federal system of government in India, there are also Legislative Councils, which serve as another form of representation and a tool for legislative oversight. They have a unique electoral system which aims to have representatives from the local community, graduates, teachers and nominated experts. But, their usefulness, in the end, depends on their usefulness in improving legislative debate and accountability.

Source: **The Indian Express**

Mains PYQ:

Q. Explain the constitutional provisions under which Legislative Councils are established. Review the working and current status of Legislative Councils with suitable illustrations. (2021)

2.26 Bhutan GLOF Triggers Flood Alerts in India

Syllabus: Disaster Management [GS 3]

Context:

Details revealed that a Glacial Lake Outburst Flood (GLOF) from the Shintaphu Lake in Gasa district of Bhutan has caused Flood Alerts in certain parts of Assam and West Bengal. Police troops have registered their presence in the downstream regions of the Sankosh River to check for possible impact in the sensitive areas.

What is a Glacial Lake Outburst Flood (GLOF)?

- A glacial lake is a body of water that has formed near, under, or on a glacier due to its melting.
- GLOFs are events that are caused when, due to the failure of a natural barrier, such a lake's stored water is suddenly released.
- Glacial lakes fill in the glacier's drainage basins as the glaciers recede.
- These lakes are typically formed by the deposition of sand, gravel and rocks, usually forming a moraine, which occurs at the terminus of glaciers.
- Moraine dams can suffer from erosion and failure; they are structurally weak and are inferior to solid rock dams.
- A sudden breakage may unleash several million cubic metres of water, which may trigger flash floods, landslides and devastation further downstream.
- In certain cases, up to about 15,000 cubic metres per second are reached during peak flows in a GLOF event.

Why are the Himalayas Vulnerable to GLOFs?

- This is a very fragile zone as it has glaciers, steep mountain topography and climate variability.
    - Glacier retreat: An increase in temperature leads to retreat of glaciers, resulting in the creation of new lakes or expansion of existing lakes.
    - Fragile moraine dams: Sections of moraines consisting of loose glacial deposits may fail from erosion, overtopping or the sudden release of pressure from the buildup of water.
    - Extreme rainfall: Heavy rainfall or heavy peak flows may raise the level of the lake and cause instability of slopes.
    - Landslides and avalanches: Rockfalls, landslides and ice avalanches are potential triggers for rock falls and landslides that can enter into glacial lakes, displace water and cause sudden floods.
    - Seismic activity: Earthquakes can cause natural barriers and slopes around them to destabilise.
- Climate change is a contributing factor to expanding conditions conducive to these hazards. But it is not a sufficient indicator of the cause of each specific GLOF event.

How serious is the GLOF Threat in the Himalayas?

- The glacial lakes in numerous river basins of the Himalayas are on the increase leading to enhanced potential threats to downstream communities and infrastructure.

- An inventory by the National Remote Sensing Centre (NRSC) carried out in 2011-15 identified:
    - In the Indus River Basin, there are presently 352 glacial lakes and water bodies.
    - In the Ganga River Basin, there were 283.
    - The Brahmaputra River Basin: 1,393.
- These statistics show the magnitude of water bodies in the glacial environment of the Indian Himalayas.
- In 2023, the devastating effects of a GLOF were witnessed in Sikkim's South Lhonak Lake, where extensive damage and loss of life resulted from the water surge. In 2021, the Chamoli disaster and the Kedarnath floods in 2013 are other examples of sudden water releases and cascading hazards, albeit with different triggers, highlighting the vulnerability of the Himalayas to such events.

How can GLOF Risks be reduced?

The National Disaster Management Authority (NDMA) recommends a combination of scientific monitoring, structural interventions and community preparedness.

- **Identification and monitoring**
    - Satellite image processing, field surveys and historic databases should be used to search for potentially dangerous glacial lakes.
    - Synthetic Aperture Radar (SAR) images can be used to map the change in lake size and, for example, during the cloudy monsoon period, even the creation of new lakes.
    - Level changes of the lake, and moraine stability and surrounding glaciers, should be monitored continuously.
- **Structural measures**
    - The use of controlled drainage can help to decrease water levels in sensitive lakes.
    - Water flows can be controlled using outlet-control structures.
    - Minimizing lake levels can be achieved through pumping or siphoning.
    - Controlled drainage may be provided through a moraine barrier or through an under-ice tunnel, which could be technically feasible in certain cases.
    - Such interventions must be scientifically assessed in detail to not cause the very disaster they aim to avert.
- **Early-warning systems**
    - High-risk lakes should have ground-based sensors and monitoring systems.
    - Communication systems should be available to provide alerts to downstream communities in a timely manner.
    - Emergency evacuation routes are to be formed and regular mock evacuations should be organized with evacuation shelters in place.
- **Regional cooperation**
    - Himalayan rivers span international borders, so there is a need to strengthen the cooperation between India, Bhutan, Nepal and China regarding the sharing of hydrological data, early warning systems and response in case of disaster.

Way Forward:

- A new concept for infrastructure is to build climate-resilient infrastructure in vulnerable mountain areas.
- GLOF Risk assessments and cumulative environmental impact studies need to be included in infrastructure projects.
- Local communities should be prepared for evacuations and emergency response.
- The monitoring of glaciers, as well as the modeling of climate risks, especially for the glaciers, needs to be enhanced by scientific institutions.
- It is important to have transboundary early-warning networks to make sure that information is available to the downstream countries in a timely fashion.

Conclusion:

The potential range of GLOF hazard in the Himalayan region is a synergy of geological conditions and human exposure in the background of climate change. The Bhutan incident emphasises the importance of continuous monitoring, early warning systems and regional integration. The transition from flood relief to scientific risk reduction of disasters and community preparedness in the area of disaster management will come a long way.

Source: **The Indian Express**

Mains PYQ:

Q. Describe the various causes and the effects of landslides. Mention the important components of the National Landslide Risk Management Strategy. (2021)

2.27 Digital Arrest Scams in India

Syllabus: Security [GS 3]

Context:

Digital arrest scam is one of the big cybercrimes in India, resulting in financial losses to the tune of thousands of crores of rupees. The Supreme Court has raised doubts on the part of the banks and Reserve Bank of India (RBI) to stop such frauds and has suggested that the banks can be held responsible to pay compensation to the victim if proper due diligence is not carried out and suspicious transactions are made.

What is a Digital Arrest Scam?

- Digital arrest scam is a cyber fraud in which criminals pretend to be police officers, judges or officials of Central Bureau of Investigation (CBI), Enforcement Directorate (ED), etc.
- Fraudsters reach out to the victim on phone call or video calls and state that their Aadhaar or mobile number or bank account is associated with severe crimes.
- Commonly falsely alleging victims engaged in money laundering, drug trafficking and other offenses.
- Senior citizens are forced to stay on video calls for long periods of time and are told not to contact family members or anyone else.
- Forgery of arrest warrants, court orders and fake backgrounds of police stations generate fear for culprits.
- Eventually, victims are asked to wire money to supposedly verify, secure, or to avoid arrest.
- The Indian law hasn't provided for digital arrest. Police officers cannot use video calls to pull people over or ask for money to avoid prosecution.

Prevalence of Digital Arrest Scams in India:

- While there has been a reported downfall in complaints since 2024, the scale of digital arrest fraud has grown significantly.
- The Indian Cybercrime Co-ordination Centre (I4C) had submitted the data before the Supreme Court:
    - Total Arrest complaints in India in 2022 were 39,925.
    - In 2024, the complaints rose to 1,23,672 and losses reported amounted to around ₹1,935 crore.
    - The number of complaints in 2025 reduced to 58,239, which resulted in losses of approximately ₹1,211 crore.
    - During this period (January-August 2026), 21,928 complaints were received, resulting in losses of more than ₹647 crore.
- It is estimated that the losses have exceeded ₹3,000 crore. The reality could be greater as many victims do not report such incidents for fear, embarrassment or lack of awareness.
- The Supreme Court has suo motu taken cognisance of the matter in October 2025 after a couple of senior citizens from Haryana had lost over ₹1 crore to fraudsters posing as investigating agencies.

Why are Digital Arrest Scams Difficult to Stop?

- **Psychological manipulation**
  - Fraudsters exploit victims with threats of arrest, social stigma and legal action.
  - Extended video calls deny victims of rape a chance to get advice or to check out the truth.
  - Those with a good education and seniors can be targets, too, since scammers employ official-sounding language and valid-looking paperwork.
- **Mule bank accounts**
  - Bank accounts belonging to intermediaries—also known as money mules—are the typical places where stolen funds are deposited.
  - Funds flow quickly in and out of several accounts and banks, making it challenging to track.
  - Organised criminal networks may use the same some accounts multiple times for many fraudulent transactions.
- **Cross-border operations**
  - Some cybercrime networks are based abroad making it difficult to pursue investigations and recovery of funds stolen from the network.
  - Cooperation and enforcements can be hampered by differences of jurisdiction and a lack of timely cooperation.
- **Gaps in banking safeguards**
  - Large and unusual transactions may not always be the catalyst for timely action.
  - Fraudsters take advantage of inadequate customer verification, and lack of transaction monitoring and suspicious account reporting.
  - Unusual delays in account freezing may enable the money to be transferred beyond the reach of immediate recovery.

What is the SC Saying?

- The Supreme Court has voiced its worry about the escalating size of digital arrest fraud and if banks are taking sufficient steps to safeguard their customers.
- The Bench asked why banks did not carefully review these transactions, especially from accounts of senior citizens, when they were unusually large.
- The Court also faulted the RBI's reply and questioned whether banks should be held responsible to pay damages to the victims, at least for the extent of their loss, if they are faced with fraudulent transactions due to inadequate due diligence.
- It focuses more on the duty of financial institutions to identify suspicious behaviour and, less, on the individual customer's inability to be cautious enough to prevent the fraud.

What are the RBI & Banks doing to Prevent Such Frauds?

- **Revised KYC regulations**
  - Directions include proposals to bolster the identification of suspicious accounts and money mule activity.
  - Banks can temporarily block accounts rather than funds, if they suspect some of the funds are being used in an unlawful manner.
  - Verification and safeguards are in place to prevent indefinite bans on “legitimate” customers.

- **Kill switch mechanism**
  - The RBI and government are working on introducing a kill switch feature for digital banking.
  - It might enable consumers to cease funds transfers instantly if they suspect they are being victim to fraudsters.
  - Emergency option may be available in banks' payment applications.
- **Stronger transaction monitoring**
  - Banks should enhance their monitoring of unusual transactions in real time, especially large sums of money being transferred or transactions that deviate from a customer's typical banking habits.

Way Forward:

- **Greater accountability:** Banks must be held accountable if prescribed due diligence or transaction monitoring failures lead to preventable fraud.
- **Real-time intervention:** Suspicious transactions should be immediately verified and temporary safeguards should be put in place.
- **Improved coordination:** Information sharing should be facilitated among banks, RBI, I4C, cybercrime units and law enforcement agencies.
- **Mule account detection:** Inter-bank data sharing and advanced analytics can help identify mules who are often drawn into fraud schemes by making deposits into their accounts.
- **Awareness:** Citizens should be aware that no police officer, judge, investigative agency can arrest them over a video call, and that they must be found guilty in court or pay money.
- **Support for victims:** There is a need for a time-limited and simple process for reporting fraud, freezing assets and recovering lost funds.

Source: The Indian Express

Mains PYQ:

Q. What are the different elements of cyber security? Keeping in view the challenges in cyber security, examine the extent to which India has successfully developed a comprehensive National Cyber Security Strategy. (2022)

2.28 India's Rapid Progress in Poverty Reduction

Syllabus: Indian Society [GS 1]

Context:

According to the World Bank India Poverty and Equity Brief (October 2026), India achieved one of the fastest rates of poverty reduction globally between 2011 and 2023.

Key Data & Metrics:

A. Monetary Poverty (2021 Purchasing Power Parity)

- Extreme Poverty ($3.00/day): Plunged from 27.1% in 2011 down to 2.6% in 2023.
- Lower Middle-Income Poverty ($4.20/day): Dropped from 57.7% in 2011 to 16.1% in 2023.
- Projections: Poverty at the $4.20/day line is projected to decline further from 14.2% in 2026 to 12.1% by 2028.

B. Non-Monetary & Multidimensional Poverty

- Oxford OPHI Multidimensional Poverty Index (MPI): Fell sharply from 53.8% in 2005–06 to 16.4% in 2019–21.
- World Bank MPI Measure: Stood at 15.5% in 2022–23.
- Basic Infrastructure: Household electricity access reached 99% of the population.

Primary Drivers of the Decline:

The World Bank Report attributes this rapid reduction to several compounding structural factors:

- **Strong Consumption Growth:** Robust domestic demand and household expenditure have expanded consistently.
- **Rising Employment & Rural Women:** Overall employment surged by 134 million between 2017 and 2023, outpacing working-age population growth. This was in great part due to rural women's participation in the paid labor market, which led to an increase in the number of breadwinners in the household.
- **Expanded Social Transfers:** Scaled public programs, including comprehensive food subsidies and direct benefit infrastructures, cushioned the low-income population.
- **Closing Regional Gaps:** Welfare gains advanced more aggressively in rural territories, successfully narrowing the historical rural–urban poverty divide.

Future Outlook & Challenges:

Looking forward, the World Bank forecasts poverty at the $4.20-a-day benchmark to continue shrinking—projecting a further drop to 14.2% in 2026 and hitting 12.1% by 2028, though the pace of reduction will naturally become more gradual. However, the report highlights key persistent challenges:

- **Geographic concentration:** About 57% of the remaining poor people in India live in a contiguous geographic belt from Uttar Pradesh to West Bengal, thus a focused effort to create jobs in these areas.

- **Structural Dynamics:** Earnings remain largely flat as employment additions are mostly tied to lower-productivity segments. Furthermore, youth unemployment experienced a slight uptick, climbing from 14.6% to 15.9% between the first quarters of FY26 and FY27.

Way Forward for Policy:

- **Productive Job Creation:** Make job creation in high productivity manufacturing and formal service sector jobs, instead of simply jobs.
- **Geographical Targeted Interventions:** Design state-specific economic packages for the high-poverty central-to-eastern belt (UP, Bihar, WB, MP and others).
- **UpSkilling & Female Retention:** Institutionalize skilling programs for rural women and youth, and reduce frictional unemployment.

Source: The Hindu

UPSC Practice Question:

Q. "India's poverty reduction journey reflects significant progress, but sustaining this momentum requires addressing multidimensional deprivation and economic inequalities." Discuss.

2.28 Census 2027: Door-to-Door Enumeration

Syllabus: Polity & Governance [GS 2]

Context:

The Ministry of Home Affairs (MHA) via the Registrar General and Census Commissioner of India has officially announced the Schedule of the coming Population Enumeration (Population Census 2027). This exercise is a major leap into the history of administration in India; it is only now that it is becoming highly digitalised in terms of data collection.

Timeline & Operational Framework:

The Census operations will follow a strict timeline to balance administrative efficiency, seasonal weather variations, and political cycles across states.
Core Nationwide Schedule

- **Online Self-Enumeration:** Open from 10th to 24th January 2027, where citizens can submit their data voluntarily on an online platform.
- **Door-to-Door Enumeration:** The main field exercise will be carried out from 25th January to 28th February 2027.
- **Revisional Round:** To take account of births, deaths and migrations since the first Round, this round will take place from March 1 to March 5, 2027.
- **Official Reference Time:** The statistical snapshot of India's population will be anchored exactly at 00:00 hours on March 1, 2027.

Regional & Political Adjustments:

- Some states and territories will not follow the normal schedule, but will adjust their resource allocation to manage the allocation:
- **Poll-Bound States:** Uttar Pradesh, Punjab, Uttarakhand and Goa will have enumeration early, between 1st December 2026 and 4th January 2027, due to legislative assembly elections.
- **Geographical Exceptions:** Timelines will be rescheduled for the snow affected districts in Jammu & Kashmir, Himachal Pradesh and Ladakh.
- Ongoing security issues and law and order complexities have put Fieldwork in Manipur on hold with Indefinite Deferral.

Structural Changes: The Expanded Questionnaire

Census 2027 introduces a comprehensive 40-question matrix, adding 13 new data parameters that reflect India's modern socio-economic landscape.
Key Inclusions and Sub-Categories

- **Caste and Social Demographics:** The survey includes very detailed classification of Scheduled Castes (SC) and Scheduled Tribes (ST) so as to eliminate the ambiguity of the caste categorization.
- **Parental and Lineage Tracking:** Newly developed queries on parental location and mother tongue have been added for more accurate portrayal of internal migration.
- **Financial and Digital Inclusion:** Enumerators will collect information on whether or not households have a bank account, a smartphone, and use digital public infrastructure (DPI).

- **Identity Verification:** Measures have been put into place to ensure that government-issued identification numbers are linked, so that cross-checks can be made with existing databases of social safety nets.

Conclusion:

The Census 2027 is not just a count of people, it is one of the most important constitutional processes that impacts fiscal devolution, political representation and affirmative action. Administrators will have to execute the technological transition and also cover the entire area in volatile areas, which will be the main challenges.

Source: The Hindu

UPSC Practice Question:

Q. Discuss the significance of Census 2027 in addressing emerging demographic, social and economic challenges in India

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