P L RAJ IAS & IPS ACADEMY

UPSC

YEARLY COMPILATION

MAINS CONTENT QUESTIONS WITH ANSWER

2025 – 2026

INDEX

1. Bio foundry Technology and India's Path to a $300 Billion Bioeconomy.

Introduction

Biotechnology is one of the fastest-growing sectors globally, shaping how societies produce medicines, food, energy, and materials. A recent milestone in India's journey was the launch of the Bio foundry Network, a pan-India initiative of 21 advanced facilities designed to accelerate biomanufacturing, promote start-ups, and reduce dependence on imports. This initiative aligns with India's vision of building a $300 billion bioeconomy by 2030 and positions the country as a global leader in biotechnology. To appreciate its significance, it is important to first understand what a bio foundry is, why it matters, and how India is integrating it into its growth story.

Bio foundry Technology

A bio foundry is a specialised facility that uses advanced tools of biotechnology, artificial intelligence, and automation to design, build, and test biological systems at scale. In simple terms, it is like a modern "factory" where scientists can rapidly prototype biological processes— whether developing new drugs, creating eco-friendly materials, or engineering microbes to produce biofuels.

Key features

1. Automation platforms -Robots handle repetitive laboratory work with speed and precision.
2. Synthetic biology tools -Genes and biological pathways are designed digitally and then tested in living systems.
3. Artificial Intelligence (AI) -Algorithms help predict outcomes, optimise experiments, and reduce costs.
4. Shared infrastructure -Facilities are open to start-ups, industries, and research institutes, reducing duplication and lowering entry barriers.

Globally, countries like the US, UK, and China already host bio foundries that accelerate innovation. India's entry into this space marks a turning point for its bioeconomy.

Significance of Bio foundry Technology

1. Technological Advancements

1. Bio foundries act as accelerators, turning lab discoveries into market-ready products.
2. They support diverse sectors -pharma, cosmetics, food processing, marine biotechnology, and green energy.
3. For example, developing probiotics, vaccines, or biodegradable plastics becomes faster and cheaper when supported by bio foundry platforms.

2. Employment Generation

1. With India's growing start-up ecosystem, bio foundries provide shared infrastructure that allows entrepreneurs to innovate without investing in costly labs.
2. They will create direct employment for scientists, technicians, and bioengineers, while indirectly supporting logistics, manufacturing, and export networks.
3. The government estimates that the bioeconomy could generate millions of jobs by 2030, especially in rural and semi-urban clusters linked to biomanufacturing.

3. Health Services and Public Welfare

1. Faster drug discovery and vaccine development ensure better preparedness against pandemics like COVID-19.
2. Affordable biotech innovations can improve access to medicines, diagnostics, and nutritional supplements.
3. Personalized medicine, based on genetic tools, can be scaled up with bio foundry support, improving healthcare delivery in India.

Bio foundry Network in India

The Bio foundry Network, launched in 2025, brings together 21 bio-enabler facilities spread across the country. Each focus on a specific niche -

1. Ahmedabad -Probiotics production (Sundyota Numandis Probioceuticals).
2. IIT Madras -Pharma and cosmetic biotech products.
3. Bhubaneswar (KIIT) -Marine biotechnology.
4. Others -Cover microbial biomanufacturing, food-tech, and sustainable materials.

This shared infrastructure model will -

1. Provide pilot and pre-commercial scale testing to start-ups.
2. Support collaborations between academia, industry, and government.
3. Encourage interdisciplinary research, reducing the gap between lab-scale innovation and industrial production.

By connecting across regions, the network also avoids centralisation in a few metro cities and promotes balanced growth.

Government Measures

India has taken multiple steps to support the growth of biotechnology and bio foundries -

1. BioE3 Policy (Biotechnology for Environment, Economy, Employment), 2024 -Focus on sustainable growth through biotechnology, aligning with climate goals and job creation.
2. BIRAC (Biotechnology Industry Research Assistance Council) -Provides funding and incubation support for biotech start-ups.

3. DBT (Department of Biotechnology) -Coordinates national biotech initiatives, ensures policy support, and promotes collaborations.
4. Make in India and Atmanirbhar Bharat -Strong emphasis on reducing import dependence in pharma, healthcare, and critical technologies.
5. Public-Private Partnerships (PPP) -Engaging industry leaders to co-develop infrastructure and scale production.

Together, these measures are laying the foundation for a multi-trillion-dollar bioeconomy by 2047, coinciding with India's centenary of independence.

Challenges and Suggestions

1. Challenge -Limited Skilled Workforce. Suggestion -Invest in bio-education, skill development, and interdisciplinary training at universities and technical institutes.
2. Challenge -High Capital Costs. Suggestion -Expand PPP models, offer tax incentives, and provide soft loans to start-ups.
3. Challenge -Regulatory Bottlenecks. Suggestion -Streamline approval processes for biotech products, while ensuring ethical safeguards.
4. Challenge -Public Awareness and Acceptance. Suggestion -Run public campaigns to highlight the safety, benefits, and sustainability of biotech products.
5. Challenge -Global Competition. Suggestion -Promote India-led standards, push for collaborations with global bio foundries, and support exports of bio-based products.

Conclusion

The launch of the Bio foundry Network is more than a technological initiative; it is a strategic investment in India's future. It strengthens Atmanirbhar Bharat, supports climate commitments, creates jobs, and transforms healthcare access. By turning India into a hub of affordable and scalable biomanufacturing, bio foundries will help the nation move from being a consumer of global biotechnology to a global leader in bio-innovation. In the long run, success in this field will depend on how effectively India expands infrastructure, trains talent, ensures ethical oversight, and integrates start-ups into the ecosystem. If implemented well, bio foundries can be the game-changers of India's 21st-century economy, securing both prosperity and sustainability.

Main Practice Question

"1. Critically examine the significance of India's Bio foundry Network in fostering technological self-reliance, employment generation, and healthcare innovation. What challenges need urgent attention to realise its vision of a $300 billion bioeconomy by 2030?"

Answering Guidelines

Introduction (30–40 words) -Define bio foundry technology briefly. Mention India's 2025 launch of 21 bio foundries under DBT & BIRAC.

Body

1. Significance of Bio foundry Network

1. Technological -Accelerates biotech innovation (synthetic biology, AI, automation).
2. Employment -Supports start-ups, SMEs, PPP-led jobs.
3. Healthcare -Faster vaccines, affordable drugs, probiotics, marine biotech.
4. Strategic -Reduces import dependence, aligns with Atmanirbhar Bharat & SDGs.

2. Challenges

1. Inadequate skilled workforce.
2. High capital and operating costs.
3. Regulatory delays and ethical concerns.
4. Global competition in biotech.
5. Awareness deficit among public and smaller industries.

3. Way Forward / Suggestions

1. Invest in training & interdisciplinary education.
2. Strengthen PPPs and provide incentives.
3. Streamline regulations with strong ethical oversight.
4. Promote eco-friendly technologies like autoclaving/plasma pyrolysis.
5. Build India-led global standards & collaborations.

Conclusion (40–50 words) -Stress that bio foundries are not just infrastructure but ecosystems for innovation. With proper planning, India can transform into a global bioeconomy leader by 2030, securing health, jobs, and sustainable growth.

2. Biomass Co-Firing - A Bridge Pathway for Clean Energy and Rural Growth

Biomass Co-Firing

India faces three interconnected challenges - rural distress, severe air pollution, and the urgent need for cleaner energy pathways. One promising solution is the co-firing of biomass pellets in coal-fired power plants. Biomass co-firing involves blending a proportion of agricultural residues, processed into pellets, with coal in existing thermal power plants. This approach offers a low-cost transitional strategy - it reduces dependence on coal, cuts emissions, curbs stubble burning, and creates rural income — all without dismantling the country's vast coal-based infrastructure. The SAMARTH Mission (Sustainable Agrarian Mission on Use of Agri-Residue in Thermal Power Plants), launched by the Ministry of Power, mandates 5% biomass blending in coal plants, rising to 7%. While modest, this step has transformative potential if scaled effectively.

Nature of Biomass Pellets

Biomass pellets are compact, energy-dense fuel units created from surplus agricultural residues such as -

1. Rice straw, paddy husk, and sugarcane bagasse
2. Cotton stalks, mustard husk, and other crop wastes

These pellets are -

1. Uniform in size and quality → allowing efficient co-firing with coal
2. Low in moisture → ensuring higher calorific value compared to raw residue
3. Easier to transport and store → enabling supply chains between villages and power plants

By converting agricultural waste into usable pellets, India addresses two problems at once - pollution from stubble burning and shortage of clean energy alternatives.

Significance of Biomass Co-Firing and Global Experience

The significance of biomass co-firing lies in its triple-win model -

1. Environmental – Reduces CO_2 emissions by 15–20% per unit of electricity generated, depending on blend ratio.
2. Energy Transition – Extends the life of coal assets while reducing their carbon footprint.
3. Rural Development – Generates demand for agri-waste, benefiting farmers and small industries.

Global Lessons -

1. United Kingdom - Drax power station shifted from coal to 80% biomass, cutting emissions sharply.
2. Japan & South Korea - Integrated biomass in energy mix with national plans targeting 10–20% co-firing.
3. Indonesia - Committed to biomass blending in 52 coal plants (10% target).
4. Sweden - Uses biomass co-firing as part of a low-carbon pathway.

These examples show that biomass is not a silver bullet but a bridge technology, supporting cleaner energy transitions without massive immediate capital expenditure.

Impact on Rural Economy

1. Additional Farmer Income

1. Farmers can earn ₹3,000–6,000 per acre by selling residues.
2. For smallholders, this supplemental income (₹6,000–12,000 for 2 acres) offsets rising input costs.

2. Employment Generation

1. Pellet manufacturing units, often run by local entrepreneurs, create direct jobs.
2. Ancillary work in collection, transport, and equipment servicing boosts rural livelihoods.
3. The National Bio-Energy Mission estimates 50,000+ direct jobs through full-scale adoption.

3. Curbing Pollution

1. Reduces stubble burning in Punjab, Haryana, and Uttar Pradesh.
2. Helps lower particulate pollution in the Indo-Gangetic Plain, especially in winter.

Problems and Challenges

1. Supply Chain Issues

1. Uneven pellet availability and lack of reliable collection networks.
2. Transport from rural areas to plants remains costly.

2. Cost Concerns

1. Co-firing is slightly costlier than coal on a per-unit energy basis.
2. Private power producers hesitate without assured subsidies or incentives.

3. Technical Barriers

1. Compatibility varies across plants.
2. Ash content and handling issues require modifications in boilers.

4. Limited Awareness

1. Farmers often unaware of commercial potential of residues.
2. Many lack access to pelletization infrastructure.

5. Enforcement Gap -While blending is mandated, compliance is inconsistent across utilities.

Government Measures - SAMARTH Mission

The SAMARTH Mission is India's flagship program for biomass use in thermal plants.

Key features

1. Mandatory blending of 5% biomass in coal-fired plants (rising to 7%).
2. Support for supply chains to aggregate and deliver biomass.
3. Promotion of pellet manufacturing units, especially in northern India.
4. Awareness campaigns for farmers to monetize residues.

Additionally, the National Bio-Energy Mission provides support for biomass-based power projects, while Renewable Energy Certificates (REC) and carbon credit mechanisms are being considered.

Suggestions for Strengthening Implementation

1. Standardisation & Procurement Norms -Develop uniform pellet standards, transparent price benchmarks,

and long-term procurement contracts.

2. Support for Pellet Manufacturers

1. Easier access to credit and subsidies.
2. Technical training to meet quality standards.

3. Infrastructure and Logistics

1. Develop storage hubs and transport corridors for pellet movement.
2. Encourage public-private partnerships in logistics.

4. Monitoring & Transparency

1. Publish plant-level data on co-firing and emissions saved.
2. Reward best-performing plants with incentives.

5. Integration with Carbon Markets

1. Link biomass co-firing credits with carbon trading or REC markets.
2. Offer additional financial incentives for early adopters.

6. Awareness & Farmer Outreach

1. Strengthen extension services to educate farmers on pelletization benefits.
2. Provide machinery for residue collection at subsidised rates.

Conclusion

Biomass co-firing represents a practical, inclusive, and low-cost bridge strategy for India's energy transition. It reduces emissions, addresses stubble burning, creates rural incomes, and generates jobs — all while leveraging existing coal infrastructure. India has already taken the first step with the SAMARTH Mission. To scale up, consistent enforcement, strong supply chains, and financial incentives are essential. For aspirants, biomass co-firing exemplifies how sustainability, rural development, and energy security can converge. As India advances towards net-zero by 2070, this approach reflects a policy model where environmental goals and socio-economic inclusion move hand in hand.

Main Practice Question

1. "Biomass co-firing in coal plants under the SAMARTH Mission has been projected as a bridge solution for India's clean energy transition. Critically analyze its potential, challenges, and rural economic significance."

Answering Guidelines

1. Introduction (40–50 words) -Define biomass co-firing - blending agricultural residue pellets with coal in thermal power plants. Mention India's target under SAMARTH Mission (5% rising to 7%). Establish context - interlinkage with air pollution, rural incomes, and energy transition.

2. Body

1. Significance / Potential (80–100 words)

1. Reduces CO_2 emissions by 15–20% per unit power generated.
2. Curtails stubble burning → reduces air pollution in Indo-Gangetic Plain.
3. Enhances rural incomes (₹3,000–6,000 per acre) and generates jobs in pellet manufacturing.
4. Uses surplus residue (~140 million tonnes annually).
5. International experience - UK's Drax, Indonesia's biomass blending, Japan/South Korea's 10–20% targets.

2. Rural Economic Importance (60–80 words)

1. Farmers earn supplemental income.
2. Local entrepreneurs set up pellet plants, creating rural jobs.
3. Strengthens circular economy by converting waste to energy.

3. Challenges (80–100 words)

1. Supply chain and logistics gaps.
2. Limited availability of quality pellets.
3. Higher costs vs coal → reluctance among private generators.
4. Technical issues (boiler compatibility, ash).
5. Weak enforcement of blending mandates.

4. Government Measures (60–70 words)

1. SAMARTH Mission - mandatory 5–7% blending.
2. Support for pellet manufacturing and farmer awareness.
3. National Bio-Energy Mission → promotes biomass-based projects.
4. Exploring REC and carbon credit linkages.

5. Way Forward / Suggestions (80–100 words)

1. Standardise pellet specifications, transparent pricing, long-term contracts.
2. Provide credit and subsidies for pellet units.
3. Develop rural collection centres and logistics hubs.
4. Publish plant-level performance data to ensure accountability.
5. Link biomass co-firing with carbon markets/RECs for financial incentives.
6. Farmer outreach on pelletization benefits and supply systems.

3. Conclusion (40–50 words) -Biomass co-firing is a pragmatic bridge technology - reduces emissions, generates rural income, and cuts stubble burning. Success depends on scaling SAMARTH with better enforcement, supply chains, and incentives. Represents a rare policy solution aligning energy security, environment, and rural prosperity.

3. Biomedical Waste Management in India

Introduction

Biomedical waste (BMW) refers to any waste generated during the diagnosis, treatment, or immunisation of humans and animals, or in research activities. It includes infectious material such as used syringes, dressings, pathological waste, pharmaceuticals, and laboratory discards. If handled properly, much of it can be safely treated and disposed of. But if neglected, it poses a grave threat to public health, water and air quality, and the environment. With India's healthcare sector expanding rapidly, and the memory of the COVID-19 pandemic still fresh, biomedical waste management has emerged as one of the most urgent governance challenges.

Present Status in India

India generates nearly 700 tonnes of biomedical waste per day, according to the Central Pollution Control Board (CPCB). While 90% of this is collected, only about 70% is treated scientifically. The remaining untreated portion often finds its way into landfills, water bodies, or is burned in unsafe conditions. The COVID-19 pandemic highlighted both the strengths and weaknesses of India's BMW management system. On the one hand, emergency protocols and digital tracking helped manage huge volumes of disposable masks, PPE kits, and testing materials.

On the other hand, several states struggled to segregate and treat waste, leading to localised health hazards. Delhi is a recent example. With a population of over 3 crore, the city generates almost 40 tonnes of BMW daily from around 10,000 healthcare institutions. Yet it has only two treatment plants, each on half an acre, which are grossly inadequate. In contrast, Haryana, with a similar population, runs 11 treatment plants. This mismatch shows the infrastructural deficit India faces in tackling biomedical waste.

Significance

The proper management of BMW is not just a technical or administrative issue; it directly affects public health and environmental sustainability. Poorly treated BMW spreads infections, contaminates groundwater, releases harmful toxins like dioxins and furans, and endangers waste-handlers who often work without protective equipment. From a developmental perspective, safe BMW handling aligns with Sustainable Development Goals (SDGs) — Goal 3 (Good Health and Well-Being), Goal 6 (Clean Water and Sanitation), Goal 11 (Sustainable Cities), and Goal 12 (Responsible Consumption and Production). Inadequate BMW management can derail India's progress on these commitments.

Problems in Biomedical Waste Management

1. Infrastructure Gaps - Many states lack adequate treatment plants. Existing facilities are often overburdened.

2. Poor Segregation at Source - Hospitals and clinics frequently fail to separate infectious from non-infectious waste, leading to unsafe mixing.
3. Awareness Deficit - Many healthcare workers, especially in small clinics, lack training on BMW handling.
4. Weak Enforcement - Monitoring agencies like State Pollution Control Boards are understaffed and unable to ensure compliance.
5. Private and Informal Sector Risks - A large amount of BMW ends up in informal recycling markets, where rag-pickers handle syringes and disposables without safeguards.

Government Measures

1. Biomedical Waste Management Rules, 2016 (replacing 1998 rules), and their amendments in 2018 and 2019, tightened segregation norms, expanded coverage to vaccination camps and blood donation centres, and mandated bar-coding for waste bags.
2. CPCB Guidelines introduced digital platforms like the COVID-19 BMW app for real-time tracking.
3. Under the Swachh Bharat Mission, safe waste disposal has been emphasised as part of clean hospital initiatives.
4. Several states have engaged private operators under Public-Private Partnership (PPP) to run common BMW treatment facilities.

While these measures have improved accountability, gaps in implementation remain stark.

Challenges

1. Rising Urban Load - Rapid urbanisation and increasing healthcare facilities generate more BMW than existing plants can handle.
2. Hazardous Disposal Practices - Open burning or burial of untreated BMW in peri-urban areas continues.
3. Informal Handling - Informal sector workers still recover plastics, syringes, and glass from dumps, risking their health and spreading disease.
4. Financial Constraints - Smaller clinics and rural health centres often find BMW disposal costly and bypass formal channels.
5. Technology Lag - Many plants use outdated incineration technologies, which cause secondary pollution.

Suggestions

1. Expand Treatment Capacity - More plants, like the ones now planned for Delhi, must be built in high-density states. Smaller, decentralised units can serve rural clusters.
2. Strengthen Segregation at Source - Hospitals should be incentivised for strict compliance through regular audits, fines for violations, and capacity-building of staff.
3. Leverage PPP Models - Private players can bring in investment and efficiency, provided strong

regulation ensures safety.

4. Promote Technology & Innovation - Eco-friendly alternatives to incineration, such as autoclaving, microwaving, and plasma pyrolysis, should be scaled.
5. Awareness and Training - Healthcare staff, waste-handlers, and local communities need regular training programmes on safe BMW practices.
6. Digital Tracking - A national BMW dashboard, with bar-coding and GPS tracking of waste bags, can ensure accountability across the chain.
7. Integration with Informal Sector - Rag-pickers can be formally trained and employed in waste management systems, ensuring both safety and livelihood security.

Conclusion

Biomedical waste is the hidden side of India's expanding healthcare system. While hospitals cure patients, mismanaged BMW can silently spread disease and degrade the environment. The Delhi example shows that India urgently needs to upgrade infrastructure, ensure segregation at source, and integrate new technologies. Effective BMW management is not merely about waste disposal; it is about public health, environmental justice, and sustainable urban governance. With better planning, investment, and awareness, India can turn a looming hazard into an opportunity — building cleaner cities and ensuring healthier citizens.

Main Practice Question

1. "Biomedical Waste Management is an often-overlooked aspect of public health in India. Discuss its significance, challenges, and the measures required to make it sustainable in urban and rural contexts."

Answering Guidelines

1. Introduction (30–40 words) -Define Biomedical Waste (BMW). Briefly highlight why it is a critical governance and health issue.

2. Body

1. Significance (150 words)

1. Public health protection (prevents infection spread, safeguards workers).
2. Environmental safety (avoids groundwater contamination, toxic air).
3. Links with SDGs (Goals 3, 6, 11, 12).
4. Role in sustainable urban governance.

2. Present Status in India (100 words)

1. 700 tonnes/day generated; 70% treated.
2. COVID-19 as a stress test.
3. Delhi example (40 MT daily, only 2 plants vs Haryana's 11).

3. Problems (120 words)

1. Infrastructure deficit.
2. Poor segregation at source.
3. Informal sector risks.
4. Weak enforcement & lack of awareness.

4. Government Measures (100 words)

1. BMW Rules 2016 & amendments.
2. CPCB digital monitoring.
3. Swachh Bharat's clean hospital drive.
4. PPP-based common treatment plants.

5. Challenges (100 words)

1. Rising urban load.
2. Hazardous disposal (burning, dumping).
3. Financial barriers for small clinics.
4. Technology gaps (outdated incinerators).

6. Suggestions (150 words)

1. Expand capacity & decentralised plants.
2. Strict segregation, audits, incentives.
3. Eco-friendly alternatives (autoclave, plasma pyrolysis).
4. Awareness & formalising informal workers.
5. National BMW dashboard with digital tracking.

3. Conclusion (30–40 words) -BMW management is not just waste disposal but a pillar of public health and environmental justice. Sustainable handling ensures cleaner cities and healthier citizens.

4. Boosting Jobs in India -Understanding the New Employment Linked Incentive (ELI) Scheme.

Introduction -A Landmark Step to Tackle Unemployment

In a major move to generate employment in the formal sector, especially manufacturing, the Union Cabinet recently approved the Employment Linked Incentive (ELI) Scheme. With a massive outlay of ₹99,446 crore, this scheme aims to create 3.5 crore jobs over the next two years. This decision marks a strategic step by the Government of India to strengthen job creation, support first-time workers, encourage formalisation of the labour force, and give a much-needed boost to the employment landscape post-pandemic.

The Cabinet Approval - What Has Been Decided

The ELI scheme, announced in the 2024-25 Union Budget, was approved by the Cabinet chaired by Prime Minister Narendra Modi. The core objective is to support employment generation, enhance employability, and improve social security. The scheme will operate under two parts.

Part A – First-Time Employees - Focuses on individuals entering the workforce for the first time. They will receive a wage subsidy of up to ₹15,000 (in two instalments) via Direct Benefit Transfer (DBT). The second instalment is conditional on 12 months of employment and completion of a financial literacy course. A portion of the benefit will be deposited in a fixed savings account to promote long-term saving.

Part B – Incentives to Employers - Targets additional job creation across sectors, especially manufacturing. Employers will receive monthly incentives for each new employee retained for at least 6 months, as follows -

1. ₹1,000 (wage up to ₹10,000)
2. ₹2,000 (₹10,000–₹20,000)
3. ₹3,000 (₹20,000–₹1 lakh)

For the manufacturing sector, incentives extend up to 4 years, ensuring long-term employment generation.

PLI Scheme - The Precursor and Inspiration

The Production Linked Incentive (PLI) Scheme, launched earlier to boost domestic manufacturing and exports, has laid the groundwork for employment-focused incentives like ELI.

Definition - The PLI Scheme offers financial incentives to firms based on incremental production. It was aimed at making India self-reliant, especially in critical sectors.

Key Sectors Covered - Electronics, pharmaceuticals, telecom, automotive, textiles, food processing, and renewable energy — all of which have significant employment potential.

Impact of the PLI Scheme So Far - Attracted large-scale investments. Boosted exports. Encouraged local value addition. Created lakhs of jobs, especially in electronics and mobile phone manufacturing. However, most job creation remained indirect or contract-based, underlining the need for direct, formal employment incentives, which the ELI Scheme now addresses.

Significance of the ELI Scheme

1. Addresses Formal Employment Gaps - In India, over 90% of employment is informal. ELI aims to bring millions into the formal net via EPFO-linked jobs.

2. Supports First-Time Workers - Youth entering the job market will now receive government support directly, improving financial literacy and security.

3. Boost to Manufacturing - By offering multi-year incentives in the manufacturing sector, the scheme aligns with Make in India and Atmanirbhar Bharat initiatives.

4. Social Security Inclusion - Linking with EPFO ensures pension, provident fund, and long-term security for new workers.

5. Encourages Retention and Skilling - Employers will now focus on retaining and skilling employees, reducing attrition and improving productivity.

Challenges & Implementation Risks

1. Awareness among MSMEs about scheme provisions
2. Verification mechanisms for sustained employment
3. Ensuring financial literacy modules reach all beneficiaries
4. Timely DBT payments and tracking
5. Avoiding misuse or inflated employment claims

Way Forward

1. Mass Awareness Campaigns - Especially among small and medium enterprises and job seekers.

2. Digital Monitoring Framework - Using real-time data from EPFO, Aadhaar, and PAN systems to monitor impact.

3. Capacity Building of Employers - Simplified portals, compliance tools, and onboarding support.

4. Convergence with Skilling Initiatives - Linking ELI with Skill India, PMKVY, and Digital India to ensure employability.

5. Regular Audits and Reviews - For transparency and course correction.

Conclusion - Building a Secure, Skilled Workforce

The Employment Linked Incentive (ELI) Scheme is a landmark initiative that bridges the gap between skilling, job creation, and formalisation. While schemes like PLI gave India a manufacturing push, ELI will strengthen the human capital supporting this growth. If implemented well, ELI could become the cornerstone of India's employment revolution — giving millions of youths a secure start, incentivising employers, and enabling India's march toward a $5 trillion economy with dignity of work at its core.

Main Practice Question (30 words) -

1. "Critically evaluate the Employment Linked Incentive (ELI) Scheme in the context of India's formal employment challenges. How does it differ from the PLI Scheme in intent and impact?"

1. Introduction (30–50 words) -Briefly introduce the Employment Linked Incentive (ELI) Scheme — its launch in 2024-25, objective of generating 3.5 crore formal jobs, and alignment with India's employment and skilling needs.

2. Body

1. Key Features of ELI Scheme (100–120 words)

1. Part A - Direct wage support to first-time employees through EPFO-linked incentives and financial literacy conditions.
2. Part B - Incentives to employers for creating and retaining formal jobs, especially in manufacturing (up to ₹3,000/month/employee).
3. Use of DBT, EPFO tracking, and focus on formalisation.

2. India's Formal Employment Challenges (100–150 words)

1. Over 90% of India's workforce is in the informal sector.
2. High youth unemployment and low EPFO coverage.
3. Need to boost manufacturing jobs, especially post-pandemic.
4. Gender disparities and underemployment.
5. Explain how ELI directly targets these issues, especially through wage subsidies and retention incentives.

3. Comparison with the PLI Scheme (100–120 words) Feature

	PLI Scheme	ELI Scheme
Aim	Boost manufacturing output and exports	Promote formal employment
Beneficiary	Companies with incremental production	First-time employees and employers
Type of Incentive	Linked to output growth	Linked to job creation
Sector Focus	Electronics, pharma, textiles, etc.	All sectors, with special focus on manufacturing
Nature	Production-centred	Labour/employment-centred

5. Cancer Problem in India and the World

Introduction

Cancer is one of the leading public health challenges of the 21st century. It is not just a disease but a complex health, social, and economic problem that affects millions of lives across the globe. The World Health Organization (WHO) estimates that cancer is responsible for nearly one in six deaths worldwide. While cancer is often associated with developed countries, the burden is shifting rapidly to developing nations, where health systems are often unprepared. India is at the centre of this global crisis. Recent data from the Global Cancer Care Observatory (GCCO) paints a concerning picture - India is among the top three countries in terms of cancer incidence, with one of the highest mortality ratios globally.

Cancer as a Global Menace

Cancer is the second leading cause of death globally after cardiovascular diseases. The GCCO estimates more than 19 million new cases and nearly 10 million deaths annually worldwide. Cancers of the lung, breast, colon, rectum, stomach, and liver dominate the global burden.

Two worrying trends stand out -

1. The rising incidence of cancer in developing countries, partly due to lifestyle changes, urbanisation, pollution, and ageing populations.
2. The widening gap in cancer survival rates between developed and developing nations, due to disparities in access to early diagnosis, advanced treatments, and palliative care.

While survival rates in countries like the US, UK, and Japan have improved significantly due to robust screening and treatment infrastructure, many low-and middle-income countries, including India, lag far behind.

Global Cancer Care Observatory Data on India

According to GCCO data (2022) -

1. India ranks third globally in the number of cancer cases.
2. The mortality-to-incidence ratio in India is 64.47%, the highest among the top 10 high-burden countries.
3. Women account for a slightly higher proportion of cancer cases (51%), which goes against the global trend where men are more affected.
4. Breast and cervical cancers dominate among women, while oral, lung, and gastric cancers are more common among men.
5. Regional disparities are sharp - The Northeast, particularly Mizoram, records the highest lifetime risk — 21% for men and 19% for women, compared to the national average of 11%.

These numbers reflect both epidemiological realities and systemic gaps in detection and reporting.

Why the High Cancer Burden in India?

Several interlinked factors explain India's disproportionate cancer burden -

1. Late Detection - Many cancers like oral, lung, and gastric are detected at advanced stages, limiting survival chances.
2. Lifestyle Risks - Tobacco consumption (smoking and chewing), alcohol, unhealthy diets, sedentary lifestyles, and pollution are major contributors. Oral cancer alone is strongly linked to tobacco use, prevalent across India.
3. Environmental Factors - Rising air and water pollution, exposure to industrial chemicals, and unsafe agricultural practices contribute to cancer incidence.
4. Inadequate Screening - Unlike infectious diseases, cancer detection programmes are patchy. Only a fraction of the population is covered under systematic screening.

5. Weak Data Systems - The ICMR's 43 registries cover less than 20% of the population. Many large states like UP, Bihar, and Maharashtra lack mandatory cancer data reporting.
6. Healthcare Inequity - Advanced cancer treatment is concentrated in urban centres, leaving rural populations underserved.
7. Socio-cultural Barriers - Stigma, lack of awareness, and reliance on alternative treatments often delay medical intervention.

Government Measures

India has a long history of attempting to integrate cancer care into its public health programmes. Some key initiatives include -

1. National Cancer Control Programme (NCCP, launched 1975) - Focused on prevention, early detection, treatment, and palliative care.
2. National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS, 2010) - Provides funding for setting up oncology wings in district hospitals.
3. Tertiary Cancer Centres (TCCs) - Government support for state-level comprehensive cancer care centres.
4. ICMR Cancer Registry Programme (1980s) - Collects cancer incidence and mortality data, though limited in coverage.
5. Ayushman Bharat – PM-JAY - Expands financial coverage for cancer care for low-income families.
6. Mission Indradhanush (Expanded) - Includes vaccination against HPV, which can prevent cervical cancer.

These measures show intent, but their impact is diluted by poor implementation, limited reach, and lack of coordination between central and state governments.

Way Forward

India needs a multi-dimensional strategy to effectively combat the cancer crisis -

1. Strengthen Cancer Registries - Expand ICMR coverage to all states, make cancer reporting mandatory, and use digital platforms for real-time data.
2. Early Detection & Screening - Scale up population-level screening for oral, breast, and cervical cancers through primary health centres.
3. Awareness Campaigns - Target high-risk areas like the Northeast with region-specific awareness programmes.
4. Expand Infrastructure - Establish cancer care units in district hospitals and ensure affordable access to diagnostic facilities.
5. Leverage Technology - Use AI, telemedicine, and digital tracking for diagnosis, monitoring, and

treatment outreach.

6. Preventive Measures - Stronger anti-tobacco laws, reduction in industrial pollution, and promotion of healthy lifestyles.
7. Public-Private Partnerships - Collaborate with private hospitals and NGOs to expand affordable treatment options.
8. Human Resource Development - Train more oncologists, oncology nurses, and palliative care professionals.
9. Research and Innovation - Promote indigenous R&D in affordable cancer drugs and diagnostic tools.

Conclusion

Cancer is no longer just a health challenge; it is a test of India's healthcare governance and social preparedness. The Global Cancer Care Observatory data underscores India's high mortality ratio and glaring gaps in detection and care. With rising incidence, the disease threatens to derail the demographic dividend by disproportionately affecting productive age groups.

India must respond with urgency — building robust data systems, scaling up preventive and treatment infrastructure, and focusing on equity in healthcare access. Combating cancer is not only about curing patients but about preventing avoidable deaths, reducing suffering, and ensuring that healthcare systems are responsive and inclusive.

A coordinated, well-funded, and forward-looking strategy can help India transform its cancer care landscape — turning what is today a looming crisis into an opportunity to build a stronger, healthier nation.

Main practice Questions

1. "India has one of the highest cancer mortality burdens globally despite decades of national programmes. Analyse the reasons for this paradox, the effectiveness of government measures, and the way forward."

Answering Guidelines

1. Introduction (50–60 words) -Define cancer as a non-communicable disease with rising global prevalence. Quote Global Cancer Care Observatory 2022 - India has the 3rd highest cases, with 64.47% mortality-to-incidence ratio (highest among top 10 nations). Briefly note paradox - growing programmes but poor outcomes.

2. Body

1. Global & Indian Data (100–120 words)

1. Global - US, China, India lead in cancer cases.
2. India - 700k+ deaths annually; women form 51% of reported cases (contrary to global trend).
3. Common cancers - breast & cervical (women), oral, lung, gastric (men).

4. Mizoram shows highest lifetime cancer risk (21% men, 19% women).

2. Reasons for High Burden in India (150 words)

1. Late diagnosis - Oral & lung cancers often detected in advanced stages.
2. Regional vulnerabilities - Northeast, urban slums, lifestyle-linked factors.
3. Registry gaps - Only 20% of population covered; no legal mandate in major states (UP, Bihar, Maharashtra).
4. Awareness deficit - Stigma, lack of routine screening.
5. Environmental & lifestyle risks - Tobacco, air pollution, diet.

3. Government Measures (150 words)

1. ICMR Cancer Registry (1980s) – now 43 registries.
2. National Cancer Control Programme (1975), NPCDCS (2010).
3. Ayushman Bharat & Health and Wellness Centres – secondary screening.
4. Digital tools for cancer data (pilot registries).
5. State initiatives - Kerala, Mizoram community health drives.
6. Gaps - fragmented, uneven coverage, weak inter-state coordination.

4. Way Forward (200 words)

1. Comprehensive cancer map - Expand registry to all states, legal mandate for data reporting.
2. Targeted regional interventions - Oral cancer in Northeast & Gujarat; cervical screening nationwide.
3. Strengthen infrastructure - More oncology centres beyond metros.
4. Preventive approach - Anti-tobacco campaigns, HPV vaccination for girls.
5. Affordable treatment - Public funding, PPP models for cancer hospitals.
6. Community awareness - Localised campaigns in Indian languages.
7. Research & innovation - Indigenous diagnostics, cheaper therapies.

3. Conclusion (60–70 words) -Cancer is a growing public health emergency and a test for India's healthcare resilience. Data-driven, preventive, and inclusive strategies are essential. India must shift from episodic interventions to a comprehensive, long-term strategy that integrates prevention, detection, treatment, and palliative care. A healthier India is central to achieving SDGs and inclusive development.

6. Understanding the IMF's World Economic Outlook

On July 29, 2025, the International Monetary Fund (IMF) released its mid-year update to the World Economic Outlook (WEO)—a flagship report that gives a comprehensive picture of the global economy. For civil services aspirants, this report is vital for understanding international economic dynamics, policymaking challenges, and India's global economic standing.

Significance of the WEO Report

The WEO is the IMF's most important publication. It is released twice a year, in April and October, with updates in January and July. It analyses economic trends, forecasts growth, and highlights risks. The IMF, with 191 member countries, uses the WEO to guide governments on monetary and fiscal policies, especially in times of global instability. For policymakers and exam aspirants, the WEO serves as a key source of data, analysis, and international comparisons.

Two Main Global Trends

This edition of the WEO is titled "Tenuous Resilience amid Persistent Uncertainty." The title captures the two big takeaways -

1. Global economic growth is proving to be resilient despite repeated shocks over the last five years.
2. The outlook remains fragile, with risks that could derail recovery.

Global GDP growth is projected at 3.0% in 2025, slightly better than earlier forecasts, but still below pre-pandemic trends.

Major Upheavals Shaping the Global Economy

Since 2020, the world economy has faced one crisis after another -

1. Covid-19 pandemic - It disrupted supply chains, triggered inflation, and forced massive government spending, blowing up budget deficits.
2. Russia-Ukraine war - Starting in early 2022, this conflict pushed up prices of essentials like food, fuel, and fertilisers.
3. Interest rate hikes - To control inflation, central banks sharply increased rates, straining borrowers across countries.
4. Tariff wars - In early 2025, the return of the Trump administration in the US led to new tariffs, counter-tariffs, and rising protectionism—acting like a global tax on trade.
5. Debt build-up - Governments continued borrowing beyond sustainable levels, especially in advanced economies.
6. Geopolitical tensions - Conflicts in the Middle East and Eastern Europe threaten supply chains and energy prices.

These overlapping shocks have created a situation where growth persists, but on shaky ground.

Why the Resilience Is Tenuous

The WEO stresses that global economic growth is not on solid footing. Here's why -

1. Uncertain trade policies - Tariff increases, especially by the US, have unsettled trade flows. The possibility

of 50% tariffs on metals like copper could slow global manufacturing.

2. Debt risks - High public debt levels raise the cost of borrowing. As confidence in government repayment ability drops, interest rates rise—especially affecting developing countries.
3. Geopolitical flashpoints - Wars or tensions could further spike commodity prices and create new supply bottlenecks.

In short, while the economy is not collapsing, it is vulnerable to shocks, and recovery is far from guaranteed.

Country-wise Impact - A Comparative View

Let's look at how key economies are faring according to the IMF's 2025 forecast -

United States

1. Growth - 1.9% in 2025 (down from 2.8% in 2024).
2. The US is losing steam, with trade policy uncertainty and interest rate hikes slowing investment and consumption.
3. The "Trump tariffs" are expected to hurt more than help, creating cost shocks without increasing productivity.

China

1. Growth - 4.8% in 2025.
2. China's economy remains relatively strong. It saw the biggest upward revision in the report, with 2025 growth upgraded by nearly 1 percentage point.
3. Despite facing demographic and debt issues, China is showing better adaptability to global shocks than most.

Euro Area

1. Growth - 1.0% in 2025.
2. Europe is improving from its weak 2023 performance, but growth remains sluggish.
3. Germany, the region's largest economy, continues to stagnate (0.1% growth), weighing down the Eurozone average.

India

1. Growth - 6.4% in 2025.
2. Though slower than 2023 (9.2%), India remains a standout performer.
3. It continues to outpace all major economies and is closing the GDP gap with advanced nations.
4. India's strength lies in its large domestic market, demographic dividend, and ongoing infrastructure push.

Conclusion - Lessons and Way Forward

The IMF's July 2025 WEO highlights the fragile nature of global recovery. While the worst outcomes like a global recession have been avoided, the world remains vulnerable to inflation, conflict, and policy missteps. The report carries several insights relevant for civil services aspirants -

1. Resilience matters, but so does risk management - Countries need not just to grow, but also to build buffers against shocks.
2. Policy coordination is critical - Unilateral moves like tariffs can derail global recovery.
3. India's position is promising - Continued reform, investment in infrastructure, and stable macroeconomic policies can help sustain high growth.

To stay ahead, India must also reduce its import dependency, improve public sector efficiency, and prioritise skilling and employment generation. The global economy may be uncertain, but with the right policies, India can lead in the decade ahead.

Main Practice Questions

1. "In the context of the IMF's July 2025 World Economic Outlook, critically analyse the nature of global economic resilience and India's relative position amid persistent global uncertainty."

Answering Guidelines -

To structure a high-scoring response, candidates should aim to -

1. Introduction (Approx. 50 words) - Define the IMF World Economic Outlook (WEO) and its purpose. Mention the key theme of the July 2025 update - "Tenuous Resilience amid Persistent Uncertainty."

2. Body (Approx. 200–250 words) -

1. Explain "Tenuous Resilience" (with examples) -

1. Describe how the global economy continues to grow despite multiple shocks - COVID-19, Ukraine war, inflation, tariff hikes.
2. Quote key IMF data - 2025 growth projection of 3.0%.

2. Unpack the uncertainty -

1. Discuss major risks - tariff escalations, high public debt, geopolitical tensions.
2. Highlight the fragility behind the numbers—supply chain vulnerabilities, monetary tightening, and protectionist trends.

3. India's performance and prospects -

1. Point out India's projected growth of 6.4% for 2025.
2. Compare with major economies (US, China, Euro Area).
3. Discuss the structural strengths and risks India faces in sustaining this trajectory.

3. Conclusion (Approx. 50 words) - Summarize how global resilience must be supported by cooperative policy frameworks. Emphasize India's opportunity to lead emerging markets through stable, reform-driven

growth strategies.

7. Trump's Tariffs and India - A Crisis or an Opportunity

Introduction - The Tariff Shock

In July 2025, U.S. President Donald Trump announced a 25% import tariff on Indian goods along with penalties on energy and defence procurements from Russia. The announcement has rattled Indian trade policy circles. At first glance, it appears to be a diplomatic blow and a potential setback to India's export-driven growth ambitions. However, with strategic recalibration, this development could become a pivot point for India's trade policy reforms and a call for deeper economic integration.

Background - Why the Tariffs

Trump's tariff move aligns with his protectionist agenda, where "America First" continues to redefine trade relationships. The U.S. has already imposed tariffs on other countries, but India has been singled out for a steeper rate than even traditional trading partners like the EU, UK, Japan, and Vietnam. This sharp escalation is not just economic — it's strategic.

The U.S. rationale includes -

1. Trade Imbalance - India's trade surplus with the U.S. ($86.5 billion in exports vs $45.7 billion in imports) is seen as unfair.
2. Market Access - U.S. corporations demand lower tariffs and easier access to Indian markets.
3. Russia Sanctions - India's continued procurement of Russian energy and military equipment is viewed unfavourably by Washington.

Implications on India's Trade and Economy

1. Short-Term Economic Impact -

1. Export Pressure - India's export sectors, especially textiles, leather, and generic pharmaceuticals, will feel the heat of higher tariffs.
2. Investment Sentiment - Investor confidence may dip temporarily due to geopolitical tensions and uncertainty in trade routes.
3. Foreign Exchange Fluctuations - A fall in exports could lead to a current account imbalance, pressuring the rupee.

2. Strategic Dependencies -

1. Energy Security - India's discounted oil deals with Russia might face sanctions or supply disruptions.
2. Defence Modernisation - Diversification from Russian to Western defence suppliers may now come with stricter conditions or delays.

3. Diplomatic Strain -

1. Multilateral Trust - It could affect India's position in multilateral trade forums like the WTO and BRICS, and reduce diplomatic bandwidth with Washington.

Crisis or Opportunity

Despite the immediate shocks, this challenge can be turned into a catalyst for positive change.

Opportunities -

1. Boost for FTAs - India can accelerate long-pending Free Trade Agreements (FTAs) like the one with the U.S., the EU, and GCC nations, enabling tariff-free access.
2. Domestic Reforms Trigger - Pressure to improve infrastructure, reduce logistics costs, and overhaul labour and land laws can finally gain urgency.
3. Export Competitiveness - To match global standards, Indian firms may adopt better technology, scale up, and increase productivity.

Risks -

1. Over-dependence on the U.S. market - A slowdown in bilateral trade could hurt MSMEs and job-creating sectors.
2. Compliance Overload - Penalties on Russian deals may create legal and diplomatic hurdles, especially in the energy sector.

Measures Already Taken by India

India has responded with a mix of caution and assertiveness -

1. Diplomatic Engagement - High-level talks have resumed to negotiate tariff reversals and create strategic trade corridors.
2. Diversification Strategy - India is actively exploring new markets in Africa, Latin America, and Southeast Asia to hedge against U.S. overdependence.
3. Ease of Doing Business Push - Streamlining export clearances, expanding PLI schemes, and upgrading port infrastructure are part of the immediate response.
4. Critical Minerals MoU - Agreements on lithium and rare-earth minerals aim to reduce reliance on China and Russia.

Reforms India Needs to Carry Forward

1. Revamp Trade Policy - India must update its trade policy to focus on export-led growth, global value chains, and dynamic tariff structures.
2. Customs & Logistics Reform - Smoothening inland transportation and simplifying customs processes can drastically cut costs for exporters.

3. Labour and Land Laws - A more flexible, investor-friendly framework is crucial to attracting manufacturing FDI.
4. Tech-Driven Manufacturing - India must integrate Industry 4.0 practices to become a hub for electronics, AI, and semiconductors.
5. Boost Services Exports - Leveraging India's IT, health, and education sectors in global markets can offset merchandise trade shocks.
6. Strategic Neutrality in Energy Procurement - India should assert its non-aligned policy stance while developing domestic alternatives like green hydrogen and solar power.

Conclusion - Towards Trade Maturity

The 25% tariff imposition by the U.S. is undoubtedly a tough diplomatic moment. But it is also a wake-up call. India's economic rise will increasingly face geopolitical headwinds, and resilience must come from diversification, reforms, and trade assertiveness. Rather than treat this as a protectionist setback, India must see it as a strategic opportunity to renegotiate its place in the global economic order. Bold reforms at home and balanced diplomacy abroad will ensure that India not only survives this trade turbulence but also emerges stronger — economically and geopolitically.

Main Practice Question Descriptive Question (for Civil Services Mains – General Studies Paper III) -

1. "In light of the recent tariff measures imposed by the United States under the Trump administration, critically examine whether India's trade dependence on select countries is a vulnerability or a strategic opportunity." (30 words)

Answer Guidelines -

1. Introduction (50–80 words) - Briefly introduce India–U.S. trade relations. Mention the recent 25% tariff by the U.S. and associated geopolitical triggers (e.g., Russia oil, defence supplies).

2. Body

1. Nature of India's Trade Dependence (100–120 words) -

1. Highlight key statistics - India's top trade partners (U.S., China, UAE, Russia).
2. Note India's surplus with U.S. and dependency on energy and defence imports from Russia.

2. Strategic Vulnerabilities (150–180 words) -

1. Exposure to external shocks like tariff hikes and sanctions.
2. Risk of over-dependence on a few markets for exports.
3. Energy security concerns amid geopolitical shifts.
4. Strain on MSMEs due to sudden tariff changes.

3. Strategic Opportunities (150–180 words) -

1. Chance to reform trade policy and FTA frameworks.
2. Diversification into new markets (e.g., Africa, Southeast Asia).
3. Use geopolitical leverage to secure better trade terms.
4. Push for "Atmanirbhar Bharat" through industrial policy and export incentives.

4. Measures Taken (100–120 words) -

1. Trade negotiations and diplomatic outreach.
2. India–US defence and tech cooperation.
3. FTA talks with UK, EU, GCC.
4. Domestic reforms like PLI schemes, logistics enhancement, critical mineral MoUs.

3. Way Forward & Conclusion (100–120 words) - Stress on balanced, diversified, and resilient trade ecosystem. Need to decouple strategic autonomy from economic vulnerability. Assert India's diplomatic stand without undermining economic interests.

8. Recent Tariff Rise by President Trump

The recent decision by the Trump administration to impose additional tariffs on Indian goods marks a significant escalation in the ongoing trade tensions between the United States and India. Announced on August 6, 2025, these tariffs are part of broader US efforts to address perceived threats stemming from Indian imports of Russian oil amid the Russia-Ukraine conflict. This move, which effectively raises the total tariffs on Indian goods to 50%, warrants a comprehensive analysis to understand its background, implications, and the way forward for India.

Background of the Tariff Rise

The roots of this tariff escalation lie in the US's strategic and economic responses to Russia's invasion of Ukraine and its subsequent sanctions regime. The Trump administration, citing national security concerns, invoked emergency executive powers under the "Addressing Threats to the US by the Russian Federation" order. This order claims that Russian products, including oil, pose an "unusual and extraordinary threat" to US security and foreign policy.

India's continued import of Russian oil, amounting to approximately 1.75 million barrels per day in the first half of 2025, became a focal point of US criticism. India, along with other BRICS nations like Brazil and China, increased their trade with Russia, especially in energy resources, as Western sanctions made Russian oil cheaper and more accessible. India's reliance on Russian oil—comprising 35% of its total imports—has grown, particularly after Western sanctions in 2022 made Russian crude more attractive through discounted prices.

President Trump's initial tariffs on Indian imports, announced in June 2024, were 25%, later supplemented by threats of further tariffs. The recent 25% tariffs on Indian goods, effective by August 27, are a punitive response aimed at discouraging Indian imports of Russian oil and asserting US geopolitical interests.

Implications of the Tariff Rise

The tariff increase has wide-ranging implications for global trade, US-India relations, and India's economic stability. Primarily, the tariffs are designed to pressure India into curtailing its Russian oil imports, aligning its policies more closely with Western sanctions. If successful, this could reduce India's reliance on Russian energy, but it would also risk disrupting India's energy security and increasing its import costs. Economically, higher tariffs on Indian exports to the US—such as steel, aluminium, and agricultural products—could harm Indian industries. The US is a vital market for India's aluminium and steel exports, with these sectors collectively earning nearly $2.8 billion annually. A 50% tariff could diminish India's competitiveness, leading to potential job losses and reduced export earnings. Politically, the move strains US-India relations. India perceives the tariffs as unfair and unjustified, especially given its stance on the Russia-Ukraine conflict and its efforts to diversify energy sources. The Indian government has condemned the tariffs, calling them "unfair, unjustified and unreasonable," and has vowed to take all necessary actions to protect its national interests.

Impact on India

The immediate impact on India includes increased costs for energy imports and potential disruptions in trade relations with the US. India's trade deficit with the US—around $45.7 billion in 2024—could widen if Indian exports face higher tariffs. Moreover, Indian industries such as steel, aluminium, pharmaceuticals, and agricultural sectors are vulnerable to increased US tariffs, threatening employment and economic growth.

On a strategic level, India faces a delicate balancing act - maintaining strong ties with Russia for energy security and economic reasons while also managing its relationship with the US. The tariff escalation complicates this balancing act and could influence India's foreign policy and trade strategies in the future.

Ethical Aspects

From an ethical perspective, the tariff rise raises questions about fairness, sovereignty, and the balance between national interests and global cooperation. Critics argue that unilateral sanctions and tariffs, especially when used as political tools, can undermine the principles of free trade and hurt developing economies like India. Conversely, proponents contend that such measures are necessary to uphold international norms and safeguard national security. The ethical dilemma lies in whether economic sanctions and tariffs are justified as means of enforcing foreign policy objectives without disproportionately harming global economic stability or innocent populations. India's opposition underscores concerns about the fairness of US actions, especially given its own efforts to diversify energy sources and its stance on sovereignty.

Measures Taken by the Indian Government

In response to the tariff escalation, the Indian government has announced several measures -

1. Diplomatic Engagement - India has issued strong diplomatic protests condemning the tariffs, emphasizing their adverse impact on India's economy and sovereignty.
2. Legal and Trade Remedies - India is exploring WTO mechanisms to challenge the tariffs, asserting that they violate international trade rules.
3. Diversification of Energy Sources - India is accelerating efforts to diversify its energy imports away from Russian sources, including negotiations with other oil-producing nations.
4. Enhancing Domestic Production - The government is promoting domestic manufacturing and energy production to reduce dependence on imports.
5. Strengthening Bilateral Ties - India is engaging more actively with other energy suppliers like the Middle East and Southeast Asia to ensure energy security.

Suggestions for India's Response and Future Strategy

To navigate the evolving trade landscape, India should consider the following strategies -

1. Diplomatic Engagement - Continue high-level diplomatic talks with the US to seek relief or exemptions from tariffs, emphasizing the importance of bilateral trade and mutual benefits.
2. Multilateral Forums - Pursue cases through WTO dispute resolution mechanisms to challenge unfair tariffs and safeguard trade rights.
3. Energy Security - Invest in renewable energy sources and alternative energy import options to reduce reliance on Russian oil and diversify supply chains.
4. Trade Diversification - Expand trade relationships with other regions such as Africa, Southeast Asia, and Latin America to mitigate risks linked to US policies.
5. Domestic Industry Support - Enhance support to domestic industries to improve competitiveness and reduce vulnerability to external shocks.

Conclusion

The recent tariff hike by President Trump underscores the complex interplay of geopolitics, economic interests, and national security concerns in global trade. While aimed at exerting pressure on India regarding its Russian oil imports, it also risks economic repercussions and diplomatic strains. India's response must be strategic—balancing diplomatic negotiations, legal actions, and domestic resilience—to protect its economic interests and uphold its sovereignty.

In an increasingly interconnected world, such trade conflicts highlight the importance of multilateral cooperation and adherence to international trade norms. India's proactive measures, coupled with diplomatic engagement and economic diversification, can help mitigate adverse impacts and foster a resilient, sustainable growth trajectory amid global uncertainties.

Main Practice Question

1. Analyze the recent US tariff escalation on India, its background, implications for India's economy and foreign policy, and suggest strategic measures for India to safeguard its national interests.

1. Introduction (40-50 words) - Briefly introduce the recent US tariff escalation on India. Mention the context of rising global trade tensions and US's focus on Russian oil imports. State the importance of analyzing its background, implications, and India's strategic responses.

2. Body

1. Background (60-70 words) -

1. Explain the US's invocation of emergency powers citing national security concerns related to Russian oil imports.
2. Highlight India's increased oil imports from Russia post-2022 sanctions, making it a key target.
3. Mention previous tariffs and threats issued by the US, leading to the recent escalation.
4. Contextualize within US-India-Russia geopolitical dynamics.

2. Implications for India (80-90 words) -

1. Economic impact - increased costs for energy and exports, potential harm to key sectors like steel, aluminium, agriculture.
2. Diplomatic strain - deteriorating US-India relations, challenges to bilateral trade.
3. Strategic dilemma - balancing energy security with geopolitical alignments.
4. Broader impact - risk of reduced competitiveness and trade disruptions.

3. Ethical and Political Aspects (30-40 words) -

1. Discuss the fairness of unilateral sanctions and tariffs as political tools.
2. Reflect on sovereignty, international norms, and the need for multilateral diplomacy.

4. Measures Taken by India (40-50 words) -

1. Diplomatic protests and WTO legal recourse.
2. Diversification of energy sources and trade partners.
3. Domestic policy measures to promote self-reliance.

4. Engagement in multilateral forums for dispute resolution.

5. Suggestions/Strategies for India (40-50 words) -

1. Strengthen diplomatic engagement with the US.
2. Pursue WTO cases and multilateral avenues.
3. Accelerate energy diversification and domestic manufacturing.
4. Expand trade ties with other regions to reduce dependency.

3. Conclusion (20-30 words) - Summarize the importance of a strategic, multi-pronged response. Emphasize resilience, diplomacy, and economic diversification as key to safeguarding India's interests amid global trade tensions.

9. GST 2.0 - Recasting India's Tax Landscape

Introduction

Goods and Services Tax (GST), introduced in 2017, was one of the most significant indirect tax reforms in India's history. It replaced a complex web of central and state taxes with a unified system intended to streamline taxation, reduce inefficiencies, and create a single national market. Eight years later, the government has unveiled GST 2.0 — a bold step that simplifies tax slabs, rationalises rates, and aims at long-term revenue growth through increased compliance and economic activity. While short-term challenges are expected, the reform signals a strategic shift towards economic efficiency and structural clarity.

GST 2.0 Reforms

The hallmark of GST 2.0 lies in simplification. The earlier four-slab system (5%, 12%, 18%, 28%) has been collapsed into two main slabs of 5% and 18%. Special rates of 0.25% and 3% continue for select items, while a new 40% slab has been introduced for luxury and "sin goods" like tobacco, aerated drinks, and online gaming services.

Key highlights -

1. Rate Rationalisation - 90% of goods categories see rate reductions, with 52 items gaining full exemptions. Only a small fraction faces higher rates.
2. Progressive Taxation - Luxury consumption and inelastic demand goods (like tobacco) now face higher taxes, reflecting equity in taxation.
3. Exemptions for Essentials - Essential commodities are exempt or kept at the lowest slab, ensuring affordability for the poor.

4. Removal of Compensation Cess - Coal, lignite, and peat will now be taxed at 18%, boosting power sector revenue while removing distortions from cess.
5. Institutional Strengthening - Establishment of the GST Appellate Tribunal (GSTAT) offers businesses a dedicated mechanism for dispute resolution.
6. Support to Exporters - Removal of thresholds for low-value consignments and benefits for Indian intermediaries strengthen global trade competitiveness.
7. Ease for Small Businesses - Voluntary simplified registration for firms with monthly tax liability under ₹2.5 lakh aims to reduce compliance burdens.

Impact on the Economy

1. Boost to Economic Activity - Simplification reduces compliance costs for businesses. Lower rates on essentials and intermediate goods can spur consumption and production, enhancing GDP growth.
2. Revenue Dynamics - Initially, collections may fall by about ₹48,000 crore (based on FY24 data), but the Laffer Curve principle suggests lower rates can eventually boost collections through better compliance and increased economic activity.
3. Improved Investment Climate - Certainty in tax rates, faster refunds, and GSTAT can improve investor confidence, particularly for exporters and MSMEs, which struggled with earlier refund delays.
4. Public Health & Social Objectives - Higher tax on harmful products aligns with public health goals. Likewise, taxation of "youth-centric" consumption (gaming, fast food, sugary drinks) helps generate revenue from inelastic demand sources.
5. Support for Fiscal Policy - Though the short-term fiscal deficit may widen, rationalisation supports India's long-term fiscal consolidation goals, reinforced by sovereign credit upgrades.

Problems and Challenges

Despite its promise, GST 2.0 faces several short-term and structural hurdles -

1. Revenue Dip - States dependent on GST compensation may resist reforms due to fear of short-term revenue loss.
2. Implementation Hurdles - Coordination across states, training officials, and updating IT systems pose significant challenges. Past global experiences (e.g., Malaysia's GST withdrawal) highlight risks.
3. Classification Disputes - The two-slab system reduces complexity but disputes may still arise, especially for goods straddling the 5% and 18% brackets.
4. Inverted Duty Structures - Industries dependent on inputs taxed higher than final goods may face cash flow challenges despite promises of faster refunds.
5. Market Sentiments - Initial negative reactions from markets due to projected revenue shortfalls could impact business confidence.

6. State Autonomy Concerns - States might feel their fiscal autonomy is shrinking under uniform GST rules.

Long-Term Significance

Despite the teething issues, GST 2.0 is a strategic investment in India's economic future -

1. Formalisation of the Economy - Simplified registration and compliance measures can bring lakhs of small and informal businesses into the tax net.
2. Higher Tax Buoyancy - With a broader base and greater compliance, collections can grow sustainably, reducing India's tax gap (currently only 70% of potential).
3. Equity and Efficiency - Exemptions for essentials, coupled with higher taxes on luxury goods, strengthen equity, while simplification enhances efficiency.
4. Global Competitiveness - Trade-friendly measures (export benefits, removal of bottlenecks) can boost India's standing in global supply chains.
5. Institutionalisation - With GSTAT and digital platforms, the system gains stability, transparency, and trust.
6. Synergy with Demographic Dividend - Targeted taxes on youth consumption trends also signal how taxation can align with behavioural and societal shifts.

Conclusion

GST 2.0 is more than a tax reform — it is a vision for India's economic transformation. By collapsing slabs, rationalising rates, and strengthening institutions, it addresses long-standing weaknesses in India's indirect tax system. While short-term revenue losses and implementation hurdles are inevitable, the reform embraces classic economic wisdom - that simplification, trust-building, and voluntary compliance yield greater dividends than coercion and complexity. For aspirants of the Civil Services, GST 2.0 is a case study in public finance, governance, and economic reform. It reflects the broader themes of balancing short-term sacrifices with long-term sustainability, ensuring inclusivity while promoting efficiency, and using taxation not just for revenue collection but also for shaping social and economic behaviour. If executed well, GST 2.0 can indeed fuel India's journey towards becoming a $5 trillion economy.

Main practice Question

"GST 2.0 seeks to simplify India's tax system by rationalising rates and easing compliance, even at the cost of short-term revenue loss. Critically analyse how these reforms may influence India's economy, fiscal federalism, and social equity in the long run."

Answering Guidelines

A good answer should cover the following dimensions -

1. Introduction (Definition + Context) -Briefly introduce GST as a landmark tax reform of 2017. Mention GST 2.0

as the next phase, emphasising simplification and long-term growth.

2. Body

1. Key Features of GST 2.0

1. Collapse of slabs into 5% and 18%.
2. Introduction of 40% slab for luxury/sin goods.
3. Exemptions for essentials, removal of cess on coal.
4. GST Appellate Tribunal for dispute resolution.
5. Simplified registration for small businesses.

1. Positive Impacts

1. Economy - Boost to consumption, formalisation of economy, ease of doing business, improved cash flows for exporters/MSMEs.
2. Revenue Logic - Laffer curve principle – short-term dip, long-term buoyancy through compliance.
3. Social Equity - Progressive taxation (luxury taxed more, essentials exempt).
4. Public Health - Deterrent taxes on tobacco, sugary drinks, gaming.

2. Challenges & Criticisms

1. Revenue shortfall for states in short term.
2. Possible disputes on classification of goods.
3. Implementation hurdles - IT, training, refund delays.
4. Federal concerns - States' autonomy in taxation.

4. Long-Term Significance

1. Strengthening fiscal federalism via GST Council.
2. Aligning taxation with Atmanirbhar Bharat and $5 trillion economy vision.
3. Enhancing India's trade competitiveness.
4. Using taxation as a tool for behaviour change and inclusive development.

3. Conclusion -Balanced view - GST 2.0 is a strategic investment, not a short-term revenue scheme. Success will depend on implementation efficiency and cooperative federalism.

10. GST 2.0 - A Timely Reform for India's Economy

The Goods and Services Tax (GST), introduced in July 2017, was one of the most ambitious tax reforms in independent India. It replaced a complex web of central and state taxes with a single, unified tax system. After eight years of experimentation and adjustments, 2025 has witnessed another major milestone - GST 2.0 reforms, centered around rate rationalisation. These changes are not just about simplifying tax rates but are expected to impact India's economy, revenue patterns of the Union and states, and long-term fiscal stability.

GST 2.0 Reforms

The GST Council in 2025 announced a significant rationalisation of tax slabs, to be implemented from September 22, 2025. The key changes include -

1. Merging the 12% tax slab with 5% → bringing down the median tax rate from 12% to 5%.
2. Subsuming the 28% slab into 18%, thus eliminating the higher slab for most goods.
3. Introducing a 40% slab for a limited set of luxury and demerit goods, replacing the earlier practice of adding cess over the 28% slab.
4. Shifting some items to the nil rate, making them tax-free to boost affordability.

This simplification effectively reduces the number of slabs and provides clarity to businesses and consumers. Importantly, the timing of the reforms — just ahead of the festive season — is expected to give an immediate boost to consumption.

Impact on the Economy

The immediate effect of GST 2.0 will be felt in consumer demand and producer sentiment. Lowering the effective tax rate means many goods and services will become cheaper, encouraging households to increase spending. Producers, in turn, are expected to benefit from higher sales volumes, which may boost private investment in domestic consumption-driven sectors such as FMCG, retail, and automobiles.
Additionally, the reforms have been carefully timed. By advancing the rollout to September 22 — ahead of Diwali — the government has reduced fears of deferred consumption that could have dented GDP growth in the second quarter. Instead, higher sales in the festive season are likely to lift growth momentum. At the same time, GST rationalisation will provide a counterbalance to external shocks, such as the imposition of US tariffs and penalties on Indian exports. While exporters may remain cautious in investing in fresh capacity, the domestic economy will draw strength from enhanced consumption, shielding overall growth to some extent.

Impact on Union Government Revenues

From the perspective of the Union Government, GST is an important but not dominant contributor to revenues. The Central GST (CGST) accounts for less than one-fourth of the Centre's tax receipts. Moreover, a substantial part of CGST is shareable with states, as 41% of it is devolved under Finance Commission rules.
The government has estimated that the rationalisation of rates will lead to a revenue foregone of around ₹48,000 crore in the second half of FY 2025-26, or ₹96,000 crore annually. Of this, the Centre's net loss is about ₹28,300 crore. While this is a sizable figure, it is comparable to the revenue foregone due to personal income tax reductions announced earlier in the Union Budget.
However, the Union Government is betting on the second-round effect of higher consumption, which could

partly compensate for the initial revenue loss. Increased economic activity would, over time, generate more tax collections through higher volumes, even if rates are lower.

Impact on States

The states are likely to be affected more significantly than the Centre. State GST (SGST) contributes over 40% of states' own tax revenue. According to budget estimates for 2025–26, states had projected SGST collections of ₹10.8 trillion, a 22% increase from the previous year. However, actual growth between April and August has been modest at 5.8%.

The new GST rates will further impact state revenues. It is estimated that of the total annualised revenue foregone of ₹96,000 crore, the states' share will be about ₹67,700 crore. This will not only affect their tax receipts but also reduce the central devolution transfers, since the Centre itself will collect less CGST.

For states already facing fiscal stress and revenue deficits, this loss may compel them to either -

1. Raise other sources of revenue (for example, excise on alcohol, property tax), or
2. Cut down on expenditure, especially developmental spending.

Therefore, while GST 2.0 is a progressive reform in terms of simplicity and growth, it places fiscal adjustment pressures squarely on the states.

Long-Term Significance

Despite the short-term concerns on revenue, the long-term benefits of GST 2.0 are substantial -

1. Simplification of the tax structure - With fewer slabs, compliance becomes easier for businesses, especially MSMEs. Litigation over classification disputes is likely to reduce.
2. Boost to consumption-led growth - A lower effective median tax rate (from 12% to 5%) will support household demand, which is the backbone of India's GDP.
3. Investment stimulus - By improving business sentiment, rationalisation may encourage private sector investment, particularly in domestic-focused industries.
4. Reduction in distortions - The replacement of cess with a higher slab (40%) for luxury goods brings greater transparency.
5. Cooperative federalism - GST continues to be a joint venture between the Centre and states. Rationalisation requires both to balance fiscal prudence with growth imperatives, reinforcing cooperative federalism in practice.
6. Global competitiveness - A simplified GST system aligns India with best practices worldwide and strengthens the ease of doing business.

Over time, as consumption and compliance improve, the initial revenue loss may narrow, allowing both the Centre and states to reap the benefits of a more vibrant economy.

Conclusion

The introduction of GST in 2017 was rightly described as a "watershed moment" in India's tax history. The GST 2.0 reforms of 2025 mark another landmark by rationalising rates, reducing slabs, and simplifying the structure. While the move entails a significant revenue sacrifice — particularly for states — its timely implementation during the festive season ensures that consumption demand and business sentiment receive a strong push. In the long run, GST 2.0 is expected to strengthen India's domestic growth model, promote investment, and reduce compliance complexities. For the Union and the states, the key challenge will be to manage fiscal balances in the short run while reaping the benefits of higher consumption and economic vibrancy in the future. GST 2.0 is not just a tax reform — it is a strategic bet on India's growth story.

Mains Practice Question.

1. "Critically examine the GST 2.0 reforms of 2025 in terms of their impact on consumer demand, Union and State revenues, and long-term economic growth. Do the benefits outweigh the fiscal costs?"

Answering Guidelines

1. Introduction (50–70 words) -Briefly define GST and highlight the significance of GST 2.0 reforms. Mention the key change - rate rationalisation (12% merged with 5%, 28% into 18%, new 40% slab).

2. Body

1. Impact on Consumer Demand and Economy (150–200 words)

1. Cheaper goods → higher consumption, especially during festive season.
2. Boost to private investment in domestic sectors.
3. Helps offset negative impact of global trade tensions (e.g., US tariffs).
4. Short-term demand revival vs long-term consumption-led growth.

2. Impact on Union Revenues (120–150 words)

1. CGST contribution and revenue foregone (~₹28,300 crore for Centre).
2. Effect on central devolution to states (41% shared).
3. Compensating factors - increased economic activity, higher compliance.

3. Impact on States (150–200 words)

1. SGST = ~40% of states' own tax revenue → heavy dependence.
2. Loss of ~₹67,700 crore projected; uneven impact across deficit vs surplus states.
3. May force states to either raise alternative revenues or cut developmental expenditure.
4. Tension between fiscal consolidation and growth.

4. Long-Term Significance (120–150 words)

1. Simplification of tax slabs reduces disputes and compliance burden.
2. Encourages consumption, investment, and ease of doing business.
3. Strengthens cooperative federalism despite fiscal stress.

4. Aligns India's GST with international best practices.

3. Conclusion (50–70 words) -Balanced view - Short-term revenue loss vs long-term systemic efficiency. Stress that GST 2.0 is not just fiscal, but a growth-oriented reform. Benefits outweigh costs if states and Centre manage fiscal prudence effectively.

11. Next-Generation Economic Reforms - A New Chapter in India's Growth Story

Introduction

On August 15, 2025, Prime Minister Narendra Modi announced the formation of a new task force dedicated to next-generation economic reforms. This move signals a major push to rework India's legal and policy frameworks to match the demands of the 21st century. For aspirants of the civil services, understanding the evolution of economic reforms and the significance of this new phase is crucial.

Economic Reforms of 1991 - The First Breakthrough

India's first major economic reforms began in 1991, triggered by a balance of payments crisis. The country was on the brink of default, with barely enough foreign exchange to cover two weeks of imports. In response, the government under Prime Minister P.V. Narasimha Rao and Finance Minister Dr. Manmohan Singh initiated bold liberalization measures.

Key Features of the 1991 Reforms -

1. Liberalization - Ended the license raj and allowed private players to operate more freely.
2. Privatization - Disinvestment in public sector enterprises began.
3. Globalization - Trade barriers were reduced, and foreign investment was welcomed.
4. Monetary Reforms - Devaluation of the rupee and deregulation of interest rates.

These reforms transformed the Indian economy from a closed, centrally planned system into a more market-driven one.

Generational Reforms - Evolution Over the Years

Economic reforms in India have come in waves, often referred to as first-generation, second-generation, and now, next-generation reforms.

First-Generation (1991–2000)

1. Focused on liberalizing the industrial and trade sectors.
2. Opened up the economy to global competition.
3. Introduced financial sector reforms (banking, capital markets).

Second-Generation (2000–2014)

1. Continued with more sector-specific reforms.
2. Emphasis on fiscal consolidation, telecom deregulation, and banking sector strengthening.
3. Major initiatives included the Fiscal Responsibility and Budget Management (FRBM) Act and improved governance in infrastructure development.

Third Wave (2014–2024)

Characterized by deeper structural reforms -

1. Goods and Services Tax (GST) - Unified indirect tax system.
2. Insolvency and Bankruptcy Code (IBC) - Streamlined resolution of business failures.
3. Direct Benefit Transfers (DBT) - Improved subsidy delivery through Aadhaar and Jan Dhan.
4. Labour Code Simplification - Merged 29 laws into four simplified codes.

Why Next-Generation Reforms Now?

As India aims to become a developed nation by 2047, mere tweaks in existing systems won't suffice. Current laws and rules often act as bottlenecks in a fast-moving, globalized economy. For example -

1. Outdated laws penalize minor infractions with jail terms.
2. Complicated compliance structures discourage startups and MSMEs.
3. Redundant procedures delay exports and inflate logistics costs.

Next-generation reforms aim to rebuild the entire governance architecture that affects economic activity.

The Task Force - Vision and Relevance

To steer this massive transformation, the Prime Minister announced a dedicated task force. Its mandate is to overhaul laws, rules, and procedures across sectors to ensure they are -

1. Simpler
2. Globally compatible
3. Innovation-friendly
4. Digitally aligned

Why is a Task Force Needed?

1. Focused Expertise - Brings together legal, economic, and administrative minds.
2. Time-bound Action - Avoids bureaucratic delays.
3. Holistic Reform - Looks at interlinkages across sectors.

This task force is expected to complete its work within a set timeframe and recommend actionable changes.

Expected Impact of Next-Gen Reforms

1. Ease of Doing Business

1. Fewer licenses and approvals.
2. Faster registration and compliance processes.

2. Support for Startups and MSMEs

1. Lower compliance costs.
2. Better access to funding and markets.

3. Boost to Exports

1. Efficient logistics and trade facilitation.
2. Reduced transaction costs.

4. Legal Modernization

1. Repeal of obsolete laws.
2. Rational penalties that differentiate between minor and serious offenses.

5. Global Confidence in India

1. As seen by S&P's upgrade of India's credit rating after 18 years.
2. A stable legal and economic environment encourages foreign investment.

2. Government's Progress So Far

1. Over 40,000 compliances scrapped.
2. 1,500 outdated laws repealed.
3. 280 legal provisions removed in the last parliamentary session alone.
4. PM highlighted that many such laws had criminal penalties for minor issues – creating unnecessary fear and red tape.

These steps show that the government is not only planning reforms but also implementing them in a measurable way.

Conclusion

India's journey from crisis-driven reforms in 1991 to confident, strategic reforms in 2025 reflects its growing maturity as an economy. The upcoming task force on next-generation reforms marks a turning point. It signals that India is not just reacting to problems but actively designing its future.

For civil services aspirants, understanding these reforms isn't just about exams—it's about grasping the tools and strategies that shape a nation's destiny. As India marches toward 2047, these reforms will lay the foundation for a competitive, inclusive, and globally respected economy.

Main Practice Question -General Studies Paper III

1. "Critically examine the significance of next-generation economic reforms in shaping India's vision for 2047. How does the proposed task force reflect a shift in reform strategy and implementation?"

Answering Guidelines -

To structure a strong, high-quality answer, candidates should -

1. Introduction (30–40 words) - Briefly define next-generation economic reforms. Mention their alignment with India's long-term development goal—becoming a developed nation by 2047.

2. Body -

1. Significance of Next-Gen Reforms (80–100 words) -

   1. Go beyond legacy reforms - Focus on legal, procedural, compliance-based, and system-level overhauls.
   2. Impact on MSMEs, startups, export competitiveness, legal modernization.
   3. Relevance in a globalized and digital economy.

2. Task Force as a Strategic Shift (80–100 words) -

   1. From piecemeal reforms to holistic, time-bound structural transformation.
   2. Inclusion of experts, inter-departmental coordination.
   3. Represents a proactive, future-oriented approach.
   4. Emphasizes simplification, rationalization, and innovation-readiness.

3. Link to India@2047 Vision (80–100 words) -

   1. Reform as a tool for inclusive and sustainable growth.
   2. Building investor confidence, enhancing global economic integration.
   3. Role in increasing productivity and ease of governance.

3. Conclusion (30–40 words) - Reiterate the importance of institution-driven reforms in achieving national transformation. Suggest that success will depend on political will, execution, and stakeholder alignment.

12. India–UK Free Trade Agreement 2025 - A Landmark Deal with Strategic Significance

On July 24, 2025, India and the United Kingdom signed the Comprehensive Economic and Trade Agreement (CETA) during Prime Minister Narendra Modi's visit to London. This marks a major breakthrough in India's global trade diplomacy. For the UK, it's their most significant deal post-Brexit. For India, it is the first major pact with a Western power after the European Free Trade Association (EFTA) agreement in 2024. This agreement is not just about trade—it's a strategic partnership that reflects deeper economic alignment and political trust. It has the potential to double bilateral trade from $56 billion to $120 billion by 2030.

Key Provisions of the Deal

1. Market Access & Tariff Reductions

1. India's Gains - 99% of Indian goods will now enter the UK duty-free. Major sectors that will benefit include -

    1. Textiles and garments
    2. Leather and footwear
    3. Engineering goods
    4. Marine products
    5. Gems and jewellery

2. UK's Gains -

    1. Tariffs eliminated or reduced on 90% of UK exports.
    2. Scotch whisky and gin - Duties slashed from 150% to 75% immediately, and to 40% over 10 years.
    3. Luxury cars - Tariff reduced to 10% under a quota system.
    4. Other benefiting sectors - cosmetics, electronics, medical devices, lamb, salmon, machinery.

2. Services, Mobility & Investment

1. Work Visas - 1,800 annual UK visas for Indian professionals, including IT experts, chefs, yoga instructors, musicians.
2. Social Security - Indian workers in the UK will be exempt from National Insurance contributions for 3 years.
3. Government Procurement - UK companies can bid for Indian government contracts worth up to £38 billion, in non-sensitive sectors.

3. Strategic & Sectoral Cooperation

Launch of "Vision 2035" for cooperation in -

1. Defence
2. Green energy
3. Education & innovation
4. Clean technologies

Electric Vehicles (EVs) - UK granted quota access for Indian EV exports.

4. Other Key Provisions

1. No Carbon Border Adjustment Mechanism (CBAM) was included—relief for Indian exporters.
2. Indian firms in the UK are exempt from double social security contributions for three years.
3. No "Economic Needs Test" for Indian professionals, easing service access.
4. UK gains unprecedented access to India's public procurement—a bold and strategic move by India.

Economic Gains for Both Sides Country	Projected Gains
UK	£4.8 billion in GDP per year, £2.2 billion in wages, £1.8 billion in tax revenue

India	Surge in exports, FDI, remittances; expected trade volume - $120 billion by 2030

Beyond numbers, it builds investor confidence and opens up long-term opportunities for small and mid-sized businesses in both countries.

India's Strategy - What Makes This Deal Stand Out

Unlike many past FTAs, the India–UK agreement has clear, measurable benefits across goods, services, and investment. The Indian side succeeded in protecting sensitive sectors like agriculture—no concessions were given on dairy, apples, walnuts, whey, seeds, etc. Similarly, the UK kept some meat and egg-based products out. This selective liberalization reflects India's calibrated approach—open where competitive, protective where necessary.

A Template for India–US Trade Talks

India is currently negotiating an interim trade deal with the United States, under pressure from an August 1 deadline to avoid up to 26% tariffs. The UK deal offers several strategic cues -

1. Sector-Specific Gains - Like with the UK, India will likely push for gains in labour-intensive sectors (textiles, gems, engineering).
2. Tariff Advantage - The UK deal reduced average tariffs on UK goods from 15% to 3%. India will aim to secure similar or better terms with the US to maintain its edge over competitors like Vietnam.
3. Agriculture as a Red Line - As seen in the UK deal, India is expected to resist US pressure to open up the agri market—especially for GM foods like soy and corn.
4. Avoiding Transhipment Clauses - India will be cautious of clauses that penalize use of imported intermediate goods (common in pharma and electronics).

In short, the UK FTA gives India a benchmark, both in terms of what to seek and what to avoid in upcoming deals.

Way Forward

1. Ratification - The deal still needs UK parliamentary approval, expected by late 2025. Implementation will begin soon after.
2. Utilisation - A major concern with FTAs is low industry awareness and uptake. This time, business leaders from both sides are engaged early, forming working groups to monitor and maximise gains.
3. Replication - The success of this agreement can unlock similar pacts with the EU, US, and Australia.
4. Monitoring - A joint review mechanism will be essential to ensure provisions are used and misuses are addressed.

Conclusion

The India–UK trade agreement is a milestone in India's trade history. It not only unlocks economic gains but also signals India's arrival as a serious and strategic player in global trade negotiations. For civil services aspirants, it's a classic example of how diplomacy, economics, and domestic interests intersect. This FTA sets a template—sectoral clarity, strategic cooperation, calibrated liberalisation. It shows how India can build partnerships without compromising on core interests. As India prepares for deals with the US and EU, the UK agreement is both a milestone and a map—a confident step towards shaping a more assertive and future-ready trade policy.

Main Practice Question

1. Critically examine the significance of the India–UK Comprehensive Economic and Trade Agreement (CETA) of 2025 in shaping India's future trade diplomacy, especially with reference to ongoing India–US negotiations.

1. Introduction (30–50 words) - Briefly introduce the India–UK CETA signed in July 2025. Mention it as a landmark post-Brexit deal and a key achievement in India's evolving trade policy.

2. Body (200–220 words) -

1. Significance of India–UK CETA -

1. Market access for Indian goods (99% duty-free in UK).
2. Gains for sectors like textiles, leather, marine products.
3. Strategic cooperation in EVs, green energy, defence.
4. Mobility benefits - visas, social security exemptions.

2. Reflecting a Mature Trade Strategy -

1. Selective liberalisation - agriculture excluded, indicating defensive realism.
2. Encourages FDI and procurement access for UK firms—balanced reciprocity.
3. Institutional trust - Joint monitoring and cooperation frameworks.

3. Lessons for India–US Trade Talks -

1. Sectoral leverage - Push for access in labour-intensive sectors.
2. Red lines clarified (e.g., GM food, transshipment clauses).
3. CETA sets benchmark tariff rates and negotiation templates.
4. Builds diplomatic capital ahead of tight US deal deadlines.

3. Conclusion (30–50 words) - CETA is both a template and test case for India's economic diplomacy. Its success could enhance India's negotiating position globally, especially with the US and EU, reinforcing India's vision as a key trade partner without compromising on core interests.

13. Understanding China - The Missing Link in India's Policy Introduction

India and China are two of the world's oldest civilizations and modern nation-states with shared borders, similar demographic pressures, and overlapping development ambitions. Yet, despite being neighbours and competitors, India's understanding of China remains shallow and fragmented. While India is steadily building military and economic capabilities, a critical gap persists — the lack of sustained investment in knowledge about China's history, politics, language, and society. The absence of deep expertise makes India dependent on external narratives and vulnerable to misjudgements in policy.

India and China - Civilisational Parallels

India and China have interacted for more than two millennia. Buddhism travelled from India to China and shaped East Asian civilisation. Chinese travellers like Fa-Hien and Xuan zang documented India's society, economy, and culture, which today serve as valuable historical records. Both countries are continental-sized, diverse, and populous, grappling with similar challenges of poverty reduction, industrialisation, urbanisation, and inequality. In the modern era, both nations were subject to colonialism and humiliation — China under Western powers and Japan, and India under British rule. Both societies emerged with strong nationalistic movements that prioritised sovereignty and development. These civilisational and historical parallels make China a natural comparative mirror for India, offering lessons in successes and failures.

India's Current Understanding of China - A Weak Link

Despite these deep connections, India's institutional understanding of China is extremely limited. Today, most of India's knowledge of China is reduced to troop movements on the border, trade imbalances, or official statements. The rich complexity of Chinese politics, society, culture, and governance is often overlooked.

For example -

1. China's "Century of Humiliation" (1840s–1940s) continues to influence its foreign policy outlook.
2. The Maoist revolutionary legacy shapes how the Communist Party operates internally.
3. Confucian ideas still inform governance and social behaviour.
4. China's techno-nationalism under Xi Jinping combines ideology with advanced digital surveillance and state capitalism.

Without serious study, India risks reducing China to stereotypes or superficial markers, making informed policy impossible.

Why Understanding China Matters for India

1. Strategic Importance - India and China are direct competitors in Asia, and understanding China's motives is vital for defence, diplomacy, and economic security.

2. Economic Lessons - China's journey from poverty alleviation to becoming an $18 trillion economy offers lessons in industrial policy, infrastructure, and technology. Its missteps in over-urbanisation, debt, and environment are equally instructive for India.

3. Foreign Policy - A nuanced understanding helps India navigate its position in multipolar forums like BRICS, SCO, and the UN, where China often plays a decisive role.

4. Domestic Relevance - Chinese records also contain information about India's own history. Engaging with these sources can enrich Indian historiography.

China Studies in India - Inadequate and Security-Heavy

India has only about five or six centres focusing on China, concentrated in Delhi and a few major cities. They are chronically underfunded and dominated by a security-centric view, with little investment in language training, historical research, or cultural studies.

By contrast -

1. The US has embedded China Studies across disciplines in major universities.
2. Australia, though less directly threatened, has robust China research centres.
3. In India, very few universities offer Mandarin training, and almost no fellowships encourage deep immersion in Chinese archives or universities.

This inadequacy makes India dependent on Western or foreign interpretations of China, weakening its ability to craft independent narratives.

Necessity of Expertise

Building China expertise is no longer optional — it is a strategic necessity. A secure nation must act from knowledge and foresight, not insecurity. For this, India needs -

1. Language proficiency - Rigorous Mandarin training for students and policymakers.
2. Interdisciplinary scholarship - China must be studied not only through security but also history, politics, sociology, economics, and culture.
3. Accessible resources - Translation of Chinese primary sources into Indian languages for wider audiences.
4. Localised expertise - Centres in border states like Arunachal Pradesh, Sikkim, and Ladakh can provide unique ground-level perspectives.

Government Measures So Far

1. The MEA's Institute of Chinese Studies (ICS) and a few think tanks engage with China, but capacity is limited.
2. Sporadic student exchange programmes exist, but they lack long-term immersion.

3. The New Education Policy (NEP 2020) highlights the importance of languages and global understanding, but does not specifically prioritise China.

Overall, measures remain piecemeal and security-driven, rather than systemic and academic.

Suggestions for the Future

1. Establish well-funded China Centres across major Indian universities with interdisciplinary faculty.
2. Launch fellowships for Indian scholars to study in Chinese universities and archives.
3. Integrate China Studies into Political Science, History, Sociology, and Economics curricula.
4. Promote translations of Chinese sources and research into Indian languages.
5. Develop state-level hubs in border states for local expertise and policy input.
6. Institutionalise policy-academia linkages, ensuring policymakers draw regularly on expert scholarship.

Conclusion

India's future engagement with China cannot rely on short-term optics or reactive policies. It requires deep, independent knowledge of China as a civilisation, society, and political entity. Investing in China Studies is not just about understanding a competitor — it is about building the foresight and confidence of a rising nation. For India to act from a position of strength, it must invest in nurturing experts who can interpret China's policies, history, and culture with nuance. Only then can India shape a balanced and independent approach to its most powerful neighbour.

Main Practice Question

1. "India's engagement with China often remains limited to border disputes and trade imbalances. Critically examine why building deep expertise in China Studies is essential for India's strategic, economic, and academic future."

Answering Guidelines

1. Introduction (50–70 words) -Begin with India–China as ancient civilizations and contemporary competitors. Mention that relations today are shaped not only by security concerns but also by deeper socio-political, cultural, and economic factors.

2. Body (multi-dimensional analysis)

1. Civilisational & Historical Parallels

1. Buddhism, ancient exchanges, Chinese records of Indian history.
2. Shared struggles with colonialism and development.

2. Current Gaps in India's Understanding

1. Few China Studies centres (5–6, Delhi-centric).
2. Security-heavy lens, lack of language training, poor interdisciplinary approach.

3. Dependence on foreign scholarship.

3. Importance of China Expertise

1. Strategic - Managing border disputes, decoding Chinese Communist Party politics.
2. Economic - Lessons in poverty alleviation, tech, industrialisation; avoiding China's mistakes (urbanisation, environment).
3. Diplomatic - India's position in multipolar world, BRICS, SCO, UN.
4. Academic - Chinese sources vital for Indian historiography.

4. Government Measures & Limitations

1. Think tanks like ICS, sporadic exchanges.
2. NEP 2020 emphasis on global studies but no dedicated China focus.

5. Suggestions

1. Establish well-funded China Studies centres across universities.
2. Fellowships for immersion in Chinese archives/universities.
3. Translation of Chinese texts into Indian languages.
4. Local expertise in border states (Arunachal, Sikkim).
5. Stronger policy–academia linkages.

3. Conclusion (50–60 words) - Understanding China is no longer optional but a strategic necessity. True strategic autonomy lies in building our own intellectual capacity, not relying on foreign interpretations. India's ability to engage confidently with its most powerful neighbour will depend on the foresight gained through knowledge.

14. India's Ancient Democratic Spirit

India's democratic tradition did not begin in 1947 or with British colonial reforms. Long before modern institutions were formalized, the idea of participatory governance was deeply embedded in India's civilisational ethos. From ancient republics like Vaishali to the village assemblies under the Chola dynasty, India had its own indigenous models of democracy — well-organized, codified, and remarkably advanced for their time. One such remarkable example is the Kudavolai system of elections practiced in Uthiramerur under the Cholas, which reveals the ethical and procedural depth of India's early democratic spirit.

Genesis of the Indian Democratic Spirit

The seeds of democracy in India go back over two thousand years. Historical evidence points to early republics like Vaishali in Bihar, which had governing councils as early as the 6th century BCE. Ancient texts like the Arthashastra by Kautilya mention samghas, or local assemblies, which contributed to decision-making in rural and tribal areas. These early forms were rooted in community discussions, consensus-building, and rule-based governance. By the 9th century CE, this democratic spirit took a more institutional shape under the Chola dynasty, particularly in Tamil Nadu. While the Cholas are known for their temple architecture and military prowess, they also created one of the most advanced systems of village self-governance the world had ever seen.

The Kudavolai System of Elections

At the heart of Chola-era democracy was the Kudavolai system, which literally means "ballot pot." This system was used to elect members to village committees responsible for administration, justice, and resource management.

The process was simple yet highly transparent -

1. Eligible candidates had their names written on palm leaf slips.
2. These slips were then placed inside a large pot.
3. A young boy, chosen for his impartiality, would draw a slip in full public view.

This ensured neutrality and fairness in selection. The elected members served for one-year terms, after which fresh elections were held. What stands out is that this wasn't just a symbolic process. These elected members had real power and responsibility, operating within a framework of rules and accountability.

Uthiramerur Inscription - A Democratic Blueprint

Most of what we know about this system comes from a stone inscription found in the Vaikuntaperumal Temple in Uthiramerur, dating back to circa 920 CE, during the reign of Parantaka Chola I. This inscription provides a detailed account of how elections were to be conducted, who was eligible, and how officials could be removed.

Key points from the inscription -

1. Wards were created to elect committee members.
2. Each committee had a specific function - justice, irrigation, revenue, etc.
3. Only individuals between 35 and 70 years of age could contest.
4. Candidates had to own tax-paying land, live in a house built on that land, and be well-versed in sacred texts or administrative knowledge.

5. The selection was done by the ballot pot method, ensuring fairness.
6. Disqualification norms were clearly laid out.

The level of detail shows this was not a token system. It was a functional, ethical, and community-led model of governance.

Model Code of Conduct and Disqualification Criteria

The inscription also highlights a strict moral code for public office, some aspects of which are even more rigorous than today's political standards.

Candidates could be disqualified if they -

1. Defaulted on debts or failed to present accounts from past office.
2. Consumed alcohol or were guilty of moral misconduct.
3. Had close relatives who had committed such offenses.

Those found guilty of embezzlement or dereliction of duty could be removed from office and barred from re-election, in some cases for seven generations. This reflects a zero-tolerance policy toward corruption and nepotism. The right to recall elected officials was also granted to villagers — a principle still debated in modern democracies.

Significance for Modern India

In today's age of increasing voter apathy, corruption, and political malpractice, the Chola model serves as a reminder and a benchmark. It demonstrates that -

1. Democracy in India is not a colonial import, but a native, deeply institutionalized tradition.
2. Ethical conduct and civic responsibility were core to public office.
3. Mechanisms for transparency and accountability were already in place a thousand years ago.

The Kudavolai system and the Uthiramerur inscription show that India had already envisioned and practiced rule-based, participatory governance — centuries before the Magna Carta or Western democratic institutions.

Conclusion

India's democratic ethos is ancient, ethical, and indigenous. The Chola-era electoral system was not only about choosing leaders but about building trust, enforcing accountability, and upholding public morality. As civil services aspirants, understanding this legacy is crucial. It reinforces the idea that governance rooted in values and community participation is not new to India — it is part of our DNA. The story of Uthiramerur is more than history; it is a blueprint for ethical governance, a source of civilisational pride, and a call to uphold the true spirit of democracy in today's republic.

Main Practice Question - (GS Paper I – Indian Heritage and Culture) -

1. "The Chola-era Kudavolai system reflects India's indigenous democratic traditions far preceding Western models." Critically examine the democratic ethos embedded in the Uthiramerur inscription.

Answering Guidelines -

1. Introduction (30–40 words) - Briefly introduce the Chola dynasty and the Uthiramerur inscription as an example of early Indian democratic practices.

2. Body -

1. Historical Context (70–100 words) -

1. Mention India's ancient republican traditions like Vaishali and samghas.
2. Set the stage for democratic evolution before colonial influence.

2. Main Body (200–250 words) -

1. The Kudavolai System - Describe the ballot pot system — its method, transparency, and fairness.
2. Uthiramerur Inscription Provisions - Detail eligibility criteria, disqualification norms, term limits, recall powers, and moral code enforcement. Emphasize the structured nature of local governance.
3. Comparative Analysis - Compare this with modern democratic systems and highlight the contrast with today's political ethical lapses. Point out how this system predates the Magna Carta and Western models of representative governance.
4. Critical Reflection (70–100 words) -
    1. Discuss implications for present-day democratic values, accountability, and electoral reforms.
    2. Reflect on whether contemporary India lives up to these indigenous ideals.

3. Conclusion (30–40 words) - Reaffirm India's deep-rooted democratic culture. Stress the importance of drawing lessons from historical models for ethical governance and civic participation.

15. Fordow Nuclear Facility and the Shifting Sands of West Asian Geopolitics

Introduction

The recent escalation between Iran and Israel in June 2025 has brought global attention back to the Islamic Republic's nuclear programme, particularly its most secure and controversial uranium enrichment facility — the Fordow Fuel Enrichment Plant (FFEP). The geopolitical drama surrounding this subterranean site encapsulates larger tensions involving Israel, the United States, and the broader global community.

Fordow

The Fordow Fuel Enrichment Plant is Iran's most heavily fortified nuclear site. Located approximately 95 km southwest of Tehran, it is built deep inside a mountain — buried between 260 to 300 feet underground — making it impervious to conventional airstrikes. Iran began construction in 2007, with the site going operational in 2009. Initially hidden from the international community, its existence was only acknowledged after Western intelligence revealed it to the International Atomic Energy Agency (IAEA).

Why is Fordow Significant?

Fordow's importance lies in its function and location -

1. It houses around 2,000 advanced centrifuges capable of enriching uranium to 60% purity — just a step short of the 90% needed for weapons-grade material.
2. It is fortified against aerial assaults, posing a serious challenge even for countries with advanced military capabilities.
3. As of 2025, IAEA reports suggest that Iran has enriched over 166 kg of uranium to 60%, enough to theoretically produce four nuclear weapons if further enriched.

These developments raise alarms among global powers, particularly Israel and the United States, who view such capabilities as a direct threat to regional and global security.

Why Fordow Emerged as a Concern

1. Originally designed as a secret facility, its very existence raised questions about Iran's intentions.
2. Although Iran signed the Joint Comprehensive Plan of Action (JCPOA) in 2015, promising to convert Fordow into a research centre and suspend enrichment, the deal began to unravel in 2018 after the US unilaterally withdrew under President Trump.
3. Since then, Iran resumed high-level enrichment, and in 2023, particles enriched up to 83.7% were detected by the IAEA, reigniting fears of a clandestine weapons programme.

Fordow, therefore, became symbolic — not just of Iran's nuclear ambitions, but of the crumbling trust in international agreements.

Recent Actions by Israel

In June 2025, tensions exploded when Israel launched a barrage of pre-emptive strikes (Operation Rising Lion) on various Iranian nuclear and military facilities, including Natanz, Isfahan, Tehran, and Khondab.

1. Fordow, however, remains untouched. Its fortified nature prevented Israel from causing substantial damage.

2. Israel's actions appear aimed at disrupting Iran's nuclear infrastructure and sending a signal that its so-called "nuclear threshold" is not negotiable.

Expected US Involvement

The spotlight now shifts to whether the United States will take direct military action -

1. Only the US possesses the GBU-57 A/B Massive Ordnance Penetrator — a 30,000-pound "bunker buster" designed specifically to destroy deep underground facilities like Fordow.
2. Delivery requires the B-2 Spirit stealth bomber, stationed in Whiteman Air Force Base, Missouri — approximately 15 hours away.
3. Although the US has reportedly prepared strike plans, it has withheld the final go-ahead, possibly to give diplomacy a last chance or avoid regional escalation.

However, if Iran continues enrichment, or builds a new underground facility as it claims, the US might reconsider, especially under pressure from Israel and other allies.

Broader Implications

1. Risk of Regional Escalation - A direct US strike could escalate into a wider West Asian conflict, drawing in Iran-backed proxies like Hezbollah and Houthis, potentially destabilising global oil supplies.
2. Global Nuclear Non-Proliferation Concerns - Iran's breaches of the IAEA safeguards threaten to unravel the global nuclear non-proliferation regime, encouraging other countries to pursue similar strategies.
3. Strained US-Europe Relations - European signatories of the JCPOA are caught in the crossfire, balancing diplomatic channels with Iran and their security alliances with the US and Israel.

Impact on India

India, although not a direct player in the conflict, faces significant ripple effects -

1. Energy Security - India depends heavily on crude oil imports, and any disruption in West Asian oil exports due to the conflict could lead to price volatility, impacting inflation and trade deficits.
2. Diplomatic Balancing - India maintains cordial ties with Iran, strategic defence cooperation with Israel, and economic and geopolitical alignment with the US. This puts India in a delicate position where non-alignment diplomacy and careful messaging are vital.
3. Regional Stability - Instability in the Gulf could affect 8 million Indian expatriates working in the region and billions in remittances.

Conclusion

The Iran-Israel conflict over Fordow is not just a bilateral standoff; it is a litmus test for nuclear non-proliferation, American leadership, and the fragility of West Asian stability. As the world watches Fordow closely, the decision to strike or not will shape the future of the region and possibly the broader global order.

For India, this crisis is a reminder of the strategic vulnerabilities that arise from geopolitical volatility. Balancing energy needs, strategic partnerships, and global image will be crucial in the days ahead. Above all, the situation underscores the need for stronger global consensus on peaceful nuclear use and the perils of brinkmanship.

Main Practice Question (GS Mains – Paper -3) -

"Discuss the strategic and geopolitical implications of Iran's Fordow nuclear facility amid rising tensions with Israel and the United States. How does this evolve scenario impact India's national interests?" (30 words)

Answer Guidelines

Your answer should be structured in a well-balanced, analytical manner, ideally within 250–300 words.

Here's how to approach it -

1. Introduction (Approx. 40–50 words) -Briefly introduce Fordow as a heavily fortified underground uranium enrichment facility in Iran. Mention the context - recent Iran-Israel hostilities and U.S. military posturing.

2. Body

1. Strategic & Geopolitical Significance of Fordow (70–80 words)

1. Explain why Fordow is pivotal — depth, advanced centrifuges, potential to produce weapons-grade uranium.
2. Highlight the challenge it poses to conventional military strikes.
3. Discuss symbolism of Fordow in the Iran-West nuclear standoff.

2. Recent Developments (40–50 words)

1. Outline Israeli Operation Rising Lion - targeted attacks on other facilities.
2. Fordow remains unscathed.
3. Speculation on U.S. involvement via bunker-busting GBU-57 warhead.

3. Implications of Escalation (50–60 words)

1. Risk of regional war involving Iran's proxies (Hezbollah, Houthis).
2. Threat to global non-proliferation regime.
3. Oil market volatility.
4. Weakening of JCPOA framework.

4. India's Stake and Response (70–80 words)

1. Energy security - India imports 80%+ of oil needs, many from Gulf.
2. Strategic balancing between Iran, Israel, and the U.S.
3. Diaspora and remittance exposure.
4. Diplomatic tightrope and role in regional peace.

3. Conclusion (30–40 words) -Conclude by stressing the importance of multilateral diplomacy. Mention

India's consistent support for peaceful nuclear use and its interest in stability in West Asia.

16. Cloudbursts and the Uttarkashi Disasters - Understanding a Cloudburst

A cloudburst is a sudden, extreme rainfall event — usually more than 100 mm in an hour — over a small geographical area. In hilly or mountainous regions, such intense rain cannot be absorbed by the soil quickly, leading to flash floods, landslides, and debris flows. While cloudbursts are natural, their frequency and intensity are increasing due to climate change, warmer air holding more moisture, and rapid environmental degradation.

The Three Flood Disasters in Uttarkashi (August 5, 2025)

On August 5, 2025, three devastating climate-related events struck a short scenic stretch of the upper Bhagirathi River valley in Uttarkashi district, Uttarakhand.

1. First Disaster – Dharali Flood (Around 1 -00 pm)

1. A suspected cloudburst (later debated by IMD) caused a sudden debris-laden flood.
2. It severely damaged the town of Dharali, sweeping away houses, shops, hotels, and even the ancient Kalp Kedar temple.
3. Many people were caught unprepared, with 4 deaths confirmed and 60–70 people missing, including 9 Army personnel.

2. Second Disaster – Downstream Harshil (Around 3 -00 pm)

Another intense flood hit a small mountain stream valley downstream of Harshil, further damaging the region and creating logistical challenges for rescue efforts.

3. Third Disaster – Harshil Helipad Flood (Around 3 -30 pm)

Floodwaters submerged the crucial helipad, potentially delaying relief operations in a terrain where airlifting is often the only option.

Rescue operations began immediately with the Army, NDRF, SDRF, ITBP, and local police working together.

Environmental Reasons Behind the Disasters

According to Uttarakhand's noted geoscientist Navin Juyal, these were not purely "cloudbursts" but three avalanche-driven floods caused by a combination of climatic and geological factors -

1. Hanging Glaciers and Cirques - The steep slopes above Dharali are dotted with glacial cirques — hollowed depressions left behind by receding glaciers. These hold rocks, boulders, and ice.
2. Avalanche Triggers - Rising temperatures melt the snow faster in the summer monsoon. Heavy rains, combined with glacial melt, cause massive avalanches of ice, water, and debris to hurtle down narrow streams.

3. Role of Deodar Forests - Dense deodar trees normally stabilise slopes and reduce avalanche speed. However, road expansion and planned felling of 6,000 trees for the Char Dham highway threaten this natural protection.
4. Global Warming & Climate Change - The Himalayas are warming faster than most regions of India, increasing the risk of glacier melt, flash floods, and landslides.

Administrative Negligence and Policy Gaps

1. Ignored Eco-Sensitive Zone Norms - The Gaumukh–Uttarkashi stretch was declared an Eco-Sensitive Zone (BESZ) in 2012 to regulate development. However, regulations were poorly enforced.
2. Highway Expansion Against Expert Advice - In 2020, the Supreme Court's High Powered Committee recommended avoiding slope disturbance and instead building an elevated riverside road. The advice was ignored, and massive tree-felling plans proceeded.
3. No Carrying Capacity Studies - Towns like Gangotri and Harshil have no scientific assessment of how many tourists and vehicles their fragile ecosystems can sustain.
4. Pattern of Ignoring Warnings - Past disasters — Kedarnath floods (2013), Tapovan-Vishnugad avalanche (2021), Joshimath subsidence (2023), Teesta GLOF (2023) — all highlighted the risks of unchecked infrastructure projects in fragile zones, yet lessons remain unimplemented.

Lessons from the Disaster

1. Nature Has a Threshold -The Himalayas cannot endlessly absorb road-cutting, dam-building, and unregulated tourism without destabilising slopes and river systems.
2. Disasters Are Now Climate-Driven -Events like avalanche floods are becoming more frequent and intense due to a combination of climate change and local environmental degradation.
3. Early Warning Systems Are Crucial -Real-time glacier melt monitoring, weather forecasting, and community-based warning networks could reduce loss of life.
4. Local Knowledge Matters -Scientists and local communities often warn of specific high-risk areas, but their inputs rarely make it into policy decisions.

Cautions and Recommendations

1. Strict Enforcement of Eco-Sensitive Zone Rules - Halt all large-scale slope-cutting, tree felling, and high-traffic road widening in BESZ areas.
2. Rethink Infrastructure Design - Use tunnels, elevated roads, and slope stabilisation engineering instead of cutting through steep hillsides.
3. Limit Human Pressure - Carrying capacity studies must guide tourism, pilgrimage traffic, and construction limits.

4. Strengthen Disaster Preparedness - Establish more NDRF/SDRF units in high-risk Himalayan districts with airlift-ready plans.
5. Climate-Resilient Development - Adopt building codes, road designs, and hydropower project limits that account for increased avalanche and flood risk.
6. Community Involvement - Train local volunteers in evacuation and rescue, and involve them in environmental monitoring.

Suggestions for the Way Forward

1. Integrate Climate Risk into All Himalayan Development Plans - No new project should be approved without a climate vulnerability assessment.
2. Implement "Do No Harm" Principles - Infrastructure in high mountains should be designed to cause minimal environmental disruption.
3. Create a Himalayan Climate Research Authority - A dedicated body to collect, analyse, and publish data on glacier health, rainfall trends, and risk zones.
4. Public Awareness Campaigns - Educate pilgrims, tourists, and local businesses about the fragility of the Himalayas.
5. Legal Accountability - Hold agencies and contractors responsible for ignoring scientific recommendations.

Conclusion

The triple disaster in Uttarkashi is not an isolated tragedy — it is part of a growing chain of climate-driven events in the Himalayas. As the region warms and extreme weather becomes more frequent, the costs of ignoring environmental science will only rise. The lesson is clear - development must respect ecological limits. Protecting forests, glaciers, and river systems is not anti-growth — it is the foundation for long-term survival and sustainable prosperity. India's Himalayan policy needs to move from reactive relief after disasters to proactive prevention based on science. Only then can we safeguard both lives and livelihoods in these sacred mountains.

Main Practice Question - (UPSC Civil Services Main – GS Paper III level)

"The recent triple flood disasters in Uttarkashi highlight the compounded impact of climate change, fragile Himalayan ecology, and policy negligence. Analyse the causes, consequences, and policy failures behind such disasters, and suggest sustainable disaster management measures."

Answering Guidelines

1. Introduction (50–60 words) - Define cloudburst and its link to intense rainfall in a short time. Mention Uttarkashi August 5 disaster as a case study – three climate-related floods within 2.5 hours. Briefly state the

broader theme - fragile Himalayas + climate change + poor governance = disaster risk.

2. Body

1. The Three Flood Disasters – Factual Brief (80–100 words)

1. Incident 1 - Suspected cloudburst around 1 pm in Dharali – bazaar, hotels, Kalp Kedar temple destroyed; many missing.
2. Incident 2 - Second flood at 3 pm downstream of Harshil.
3. Incident 3 - 3 -30 pm flood submerging Harshil helipad.
4. Rescue by Army, NDRF, SDRF, ITBP.

2. Environmental Reasons (150–180 words)

1. Geological factors - Steep slopes, deodar forest cover, cirques with hanging glaciers, avalanche-prone streams.
2. Climatic factors - Global warming causing snowmelt, intense monsoon rains.
3. Anthropogenic drivers -
4. Road widening, cutting of 6,000 deodars despite Eco-Sensitive Zone notification (BESZ).
5. Construction in avalanche and flood-prone zones.
6. Ignoring High-Powered Committee (HPC) warnings.
7. Climate change trend - Himalayan region warming faster than plains, increasing frequency of extreme weather.

3. Administrative Negligence & Policy Failures (100–120 words)

1. Lax enforcement of BESZ norms.
2. Ignoring HPC's alternative elevated highway proposal.
3. No carrying capacity studies before tourism and infrastructure expansion.
4. Continued approval of hydropower projects in para-glacial regions.
5. Lack of relocation policies for vulnerable settlements.

4. Lessons from the Disaster (60–80 words)

1. Kedarnath (2013), Joshimath subsidence (2023), and Teesta GLOF (2023) show repeated pattern of ignored scientific warnings.
2. Disaster management is reactive, not preventive.
3. Economic growth without ecological respect undermines long-term development.

5. Suggestions / Way Forward (150–180 words)

1. Strict enforcement of Eco-Sensitive Zone rules.
2. Ban construction and road widening beyond safe slope gradient limits.
3. Relocate settlements from avalanche and flash flood zones.

4. Conduct carrying capacity assessments for Himalayan towns.
5. Integrate IMD's extreme weather forecasting with local disaster response drills.
6. Adopt nature-based solutions - restore forests, stabilise slopes, protect river floodplains.
7. Strengthen community disaster preparedness.
8. Link climate adaptation plans to state development policies.

3. Conclusion (40–50 words) -Quote - "Recognising and respecting nature's boundaries is our safest route to survival." Emphasise that Himalayas are both India's ecological shield and a climate hotspot. Call for a shift from reckless development to resilient, sustainable growth.

17. Government Schools in India - Challenges, Relevance, and the Road Ahead

Introduction

Education is the foundation of a nation's social and economic progress. In India, government schools have historically been the backbone of the education system, providing access to millions of children, particularly from poor and marginalised communities. Yet, the latest National Statistics Office (NSO) Comprehensive Modular Survey on Education reveals a worrying decline in attendance and enrolment in government schools. This trend underlines deep-rooted problems in the system and has significant implications for India's future workforce and equity.

Status and Nature of Government Schools in India

India has one of the world's largest schooling systems -

1. Over 10 lakh government and government-aided schools operate across rural and urban India.
2. They cater to children from low-income and marginalised families, providing education either free or at a very nominal cost.
3. Many government schools are linked with welfare measures like the Mid-Day Meal Scheme, free uniforms, and textbooks.
4. The system employs lakhs of teachers, who are relatively better paid compared to many private school counterparts.

Despite this vast reach, recent surveys highlight a steady exodus of students from government schools to private institutions, even though private education is much costlier and not always superior in learning outcomes.

Significance of Government Schools

1. Equity and Social Justice -Provide access to education for children from Scheduled Castes, Scheduled Tribes, Other Backward Classes, and economically weaker families. Act as instruments for reducing social inequality.

2. Nation-Building -State schooling has been the backbone of rapid development in countries like South Korea, China, and Singapore. A strong public school system can create a skilled workforce and strengthen democratic values.

3. Affordability -Government schools charge nominal fees, often just a fraction of private school expenses. In rural India, private schooling costs are on average seven times higher than government schooling.

4. Inclusive Growth -By educating the poorest, government schools expand opportunities and prevent intergenerational poverty.

Problems of Government Schools in India

1. Declining Enrolment and Attendance - The NSO survey shows a 10 percentage-point drop in rural higher secondary enrolment (68% in 2017-18 to 58.9% in 2025). Families, even poor ones, increasingly prefer private schools due to perception of better quality.

2. Teacher Absenteeism and Vacancies - Teacher absenteeism is as high as 25% nationally, and in some states as high as 46%. Large number of vacancies add to learning deficits.

3. Infrastructure Deficits - Many schools lack toilets, drinking water, libraries, laboratories, and digital facilities. Safety and hygiene issues deter enrolment, especially of girls.

4. Quality of Learning - Surveys like ASER (Annual Status of Education Report) show that even after five years of schooling, many children cannot read simple texts or do basic arithmetic. The quality gap between private and government schools (real or perceived) drives families towards fee-paying institutions.

5. Lack of Accountability - While teachers are well-paid, performance monitoring is weak. School management committees often lack authority to enforce accountability.

6. Social Segregation - With middle-class families exiting, government schools are increasingly left with the poorest, reinforcing inequality and limiting aspirations.

Government Measures

Right to Education Act (2009) - Mandated free and compulsory education for children aged 6–14 years. Set norms for infrastructure, teacher-student ratios, and quality benchmarks.

Mid-Day Meal Scheme (now PM POSHAN) - Provides free meals to improve attendance, nutrition, and retention.

Samagra Shiksha Abhiyan - Integrated scheme covering pre-school to senior secondary education, focused on quality and equity.

Digital India Initiatives - Smart classrooms, DIKSHA platform, and digital libraries to modernise government schooling.

Recruitment and Training - States like Delhi have invested in teacher training, infrastructure, and "happiness curriculum," showing promising outcomes.

Government Schools in the New Education Policy (NEP 2020)

The National Education Policy (NEP) 2020 places government schools at the heart of reform -

1. Universal Access - Ensure every child is enrolled and attends school.
2. Early Childhood Care and Education (ECCE) - Pre-schooling integrated into government schools.
3. Foundational Literacy and Numeracy - Mission to achieve universal literacy by Grade 3.
4. Teacher Training and Accountability - National mission to improve teacher quality, merit-based recruitment, and performance-linked promotions.
5. Public Investment - NEP recommends raising public education spending to 6% of GDP.
6. School Complexes - Pooling of resources among small government schools for better efficiency.

Suggestions

1. Improve Accountability - Introduce biometric attendance for teachers. Empower School Management Committees with real monitoring powers.
2. Upgrade Infrastructure - Ensure basic amenities like toilets, libraries, and digital facilities in all schools.
3. Teacher Reforms - Regular training, performance-linked incentives, and faster filling of vacancies.
4. Strengthen Learning Outcomes -Focus on foundational literacy and numeracy as NEP 2020 emphasises. Continuous student assessment instead of rote-based exams.
5. Restore Public Trust - Showcase model schools (like Delhi government schools) as proof that government schools can outperform private ones.
6. Bridge Social Inequality - Encourage middle-class families to return to government schools by improving quality and reducing the stigma attached to them.

Conclusion

Government schools are not just education centres but engines of social justice, equity, and nation-building. Their decline reflects systemic issues that, if left unaddressed, could deepen inequality and trap millions in cycles of poverty. Reviving them requires accountability, investment, and reform, as envisaged in NEP 2020. India's demographic dividend will only pay off if every child, rich or poor, receives quality schooling. Strengthening government schools, therefore, is not a choice but a necessity for India's future.

Main practice Question.

1. "Government schools in India face declining enrolment and eroding quality despite being central to equity and nation-building. Critically analyze their challenges, significance, reforms under NEP 2020, and suggest measures for revival."

Answering Guidelines

1. Introduction (40–50 words) - Mention the role of government schools in India's education system. Cite recent NSO survey showing sharp decline in enrolment, especially in rural higher-secondary levels. Highlight paradox - affordable yet losing trust of families.

2. Body

1. Significance of Government Schools (80–100 words)

1. Provide affordable education to poor and marginalised.
2. Promote social equity and inclusion.
3. Historically vital for literacy expansion.
4. Example - Asian Tigers and China relied on strong public schooling systems.

2. Key Challenges (100–120 words)

1. Declining enrolment due to perceived low quality.
2. Teacher absenteeism and vacancies (up to 25–46%).
3. Poor infrastructure (toilets, digital tools, libraries).
4. Learning outcomes weak (ASER findings).
5. Social segregation - richer families move to private schools, leaving poor behind.
6. Accountability gap despite high salaries post Pay Commissions.

3. Government Measures (60–80 words)

1. RTE Act (2009) - free and compulsory education.
2. Samagra Shiksha Abhiyan - integrated scheme for school education.
3. Mid-Day Meal / PM POSHAN - nutrition and retention.
4. Digital initiatives - DIKSHA, smart classrooms.

4. NEP 2020 Provisions (60–80 words)

1. Universal access & ECCE integration.
2. Foundational literacy and numeracy mission.
3. Teacher training, merit-based recruitment.
4. School complexes for resource efficiency.
5. Target - public spending at 6% of GDP.

5. Suggestions (80–100 words)

1. Strengthen accountability (biometric attendance, empowered SMCs).

2. Upgrade infrastructure and digital tools.
3. Fill teacher vacancies quickly, link pay to performance.
4. Showcase model government schools (Delhi example).
5. Encourage middle-class participation to reduce stigma.
6. Improve continuous learning assessments instead of rote exams.

3. Conclusion (40–50 words) - Government schools remain vital for equity, democracy, and demographic dividend. Reviving them requires investment, accountability, and reform as envisioned in NEP 2020. A strong public school system is not optional but essential for India's inclusive growth and nation-building.

18. India's Cooperative Movement

The cooperative movement in India, with its roots deeply embedded in the agricultural sector, stands as a testament to collective action and community empowerment. From facilitating credit access for farmers to venturing into diverse sectors, cooperatives have evolved into formidable drivers of grassroots development. With 844,000 registered cooperatives spanning 30 sectors, these member-owned enterprises play a crucial role in India's socio-economic fabric. Understanding their evolution, significance, the new policy framework, inherent challenges, and potential way forward is vital for any civil services aspirant.

Explaining Cooperatives in India

At its core, a cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise. In India, cooperatives are primarily governed by the Cooperative Societies Act, 1912, and various state-specific cooperative laws.

Historically, the movement gained prominence in the early 20th century, largely in response to rural indebtedness and the exploitation by moneylenders. Early cooperatives focused on providing agricultural credit, leading to the formation of Primary Agricultural Credit Societies (PACS). Over time, their scope expanded to include marketing, processing, consumer goods, housing, dairy, fisheries, handlooms, and more recently, even digital services. The 'Amul' model, a shining example of a dairy cooperative, perfectly illustrates the potential for value creation and farmer empowerment through this model.

Significance of Cooperatives in India

The significance of cooperatives in India is multi-faceted and profound -

Financial Inclusion and Poverty Alleviation - Cooperatives, especially PACS, have been instrumental in providing credit and financial services to the unbanked and underserved rural population, reducing their reliance on informal credit sources.

Economic Empowerment - They enable small producers and consumers to achieve economies of scale, access markets, and negotiate better prices for their produce or procure goods at competitive rates. This empowers local communities and enhances their economic well-being.

Grassroots Development - Cooperatives foster local leadership, promote democratic functioning, and encourage community participation in decision-making, leading to sustainable grassroots development.

Employment Generation - They create direct and indirect employment opportunities, particularly in rural and semi-urban areas, contributing to livelihood security.

Social Cohesion - By bringing people together for a common purpose, cooperatives promote social harmony, mutual aid, and a sense of community ownership.

Bridging Market Gaps - They often step in where the private sector finds it unprofitable or inefficient to operate, especially in niche markets or remote areas.

The New National Cooperative Policy 2025 - Vision and Important Provisions

Recognizing the need to revitalize and modernize India's cooperative sector, the government unveiled the National Cooperative Policy 2025, building upon the first policy rolled out in 2002. This policy is a comprehensive attempt to unlock the sector's full potential with a 20-year vision.

Key Vision and Objectives

Expansion and Inclusivity - The policy aims to increase the number of cooperatives by 30%, ensuring the presence of at least one cooperative in every village. A highly ambitious goal is to bring 500 million citizens, currently inactive or non-members, into active participation.

Strengthening Governance - It emphasizes timely elections within cooperative societies to counter chronic inefficiencies and political interference.

Deepening Service Delivery - A crucial aspect is strengthening the role of PACS by designating them "implementing agencies" for various government schemes, thereby deepening service delivery at the grassroots.

Enhancing Global Competitiveness - The policy seeks to unlock the marketing and export potential of cooperatives, especially in high-quality products like dairy, spices, handicrafts, and organic produce. It aims to achieve this through promoting aggregation, standardization, better branding, and improved logistics.

Important Provisions and Initiatives

State-Level Reforms - Recognizing cooperatives as primarily a state subject, the policy encourages states to reformulate their state cooperative policies and digitize all cooperative processes.

National Cooperative Exports Ltd (2023) - This pivotal development aims to provide technical assistance, enable economies of scale, and serve as a credible export platform for small cooperatives, addressing issues of poor branding and limited awareness of international standards.

Computerization of PACS - This initiative is crucial for enabling PACS to access online markets, digital banking, and improve their overall efficiency.

Model Bye-laws - Creation of model bye-laws aims to make PACS multipurpose, allowing them to diversify their activities beyond just credit.

Decentralized Grain Storage Programme - The launch of the world's largest decentralized grain-storage programme underscores the government's commitment to strengthening agricultural cooperatives.

Tribhuvan Sahkari University - The establishment of this university is a significant step towards filling skill development and innovation capacity gaps within the cooperative sector.

Challenges Faced by Cooperatives

Despite the ambitious vision, several foundational challenges need to be addressed for the long-term success of the cooperative movement -

Defunct PACS - A significant concern is that nearly 40% of PACS are currently defunct, indicating a severe issue with viability and governance.

Limited Digital Adoption - Despite efforts, there is limited adoption of digital tools, restricting access to online markets and digital banking, particularly in rural areas.

Weak Institutional Capacity - Many cooperatives suffer from weak institutional capacity, lacking professional management, modern infrastructure, and robust internal controls.

Financing Constraints - Access to adequate and timely finance remains a major hurdle, deterring expansion and diversification into new areas.

Technological Infrastructure and Human Capital - Most cooperatives lack the necessary technological infrastructure and skilled human capital to scale up operations or foster innovation.

Regulatory Uncertainty and Overlap - A critical challenge, particularly for cooperative banks, is dual regulation by both the Reserve Bank of India and state registrars. This overlapping jurisdiction leads to compliance issues and regulatory arbitrage. As cooperatives expand into new areas like insurance, this potential for regulatory overlap looms even larger.

Political Interference - Chronic political interference in the management and elections of cooperative societies often undermines their democratic functioning and efficiency.

Lack of Awareness and Member Participation - Despite the goal of increasing membership, many members remain inactive or unaware of their rights and responsibilities, impacting the democratic character of cooperatives.

Way Forward and Conclusion

To truly realize the vision of the National Cooperative Policy 2025, a concerted and multi-pronged approach is required -

Revitalization of Defunct PACS - A targeted strategy for the revival of defunct PACS, including financial restructuring, governance reforms, and capacity building, is paramount.

Accelerated Digital Transformation - Incentivizing and facilitating the adoption of digital tools, including online platforms for marketing and banking, is crucial for market access and efficiency.

Professionalization of Management - Emphasis on recruiting and training professional managers, implementing modern management practices, and reducing political interference in day-to-day operations.

Enhanced Financial Support and Diversification - Providing easier access to credit, promoting innovative financing mechanisms, and encouraging diversification into new, high-growth sectors.

Addressing Regulatory Gaps and Overlaps - A clear framework is needed to streamline regulation, particularly for cooperative banks and new ventures, ensuring a single, coherent regulatory authority where possible, or clearly demarcating responsibilities.

Capacity Building and Skill Development - Leveraging institutions like Tribhuvan Sahkari University to provide quality education, training, and research in cooperative management, technology adoption, and marketing.

Promoting Member Education and Active Participation - Launching campaigns to raise awareness among members about their rights, responsibilities, and the benefits of active participation.

Strengthening Marketing and Branding - Providing support for branding, quality control, and adherence to international standards to enhance the global competitiveness of cooperative products.

Data-Driven Policy Making - Regular assessment and evaluation of policy implementation, using data to identify bottlenecks and refine strategies.

In conclusion, India's cooperative movement stands at a crucial juncture. The National Cooperative Policy 2025 offers a robust framework to invigorate the sector and propel it towards greater inclusive growth and global competitiveness. However, the successful implementation of this vision hinges on effectively addressing the deep-rooted structural, financial, and regulatory challenges. A strong political will, coupled with sustained efforts towards professionalization, digitization, and transparent governance, will be key to transforming India's cooperatives into truly vibrant and impactful engines of sustainable development. For civil services aspirants, understanding this dynamic interplay of policy, potential, and challenges is essential for comprehending India's developmental trajectory.

Main Practice Question

Critically examine the significance of India's cooperative movement and assess the efficacy of the National Cooperative Policy 2025 in addressing its foundational challenges.

Answering Guidelines

Approach - Your answer should be structured to provide a comprehensive analysis, demonstrating a clear understanding of both the strengths and weaknesses of the cooperative sector and the policy.

1. Introduction (Approx. 20-30 words) - Briefly define cooperatives and their historical context in India. State the core argument – their importance and the policy's aim.
2. Body

1. Part 1 - Significance of India's Cooperative Movement (Approx. 100-120 words) -

Economic Empowerment - Discuss role in credit access (PACS), market access for producers (e.g., dairy, handlooms), and reducing exploitation.

Social Impact - Highlight financial inclusion, poverty alleviation, women's empowerment, and community development.

Democratic Values - Mention grassroots democracy and local leadership.

Diversification - Note expansion beyond agriculture into various sectors.

Use examples like Amul (dairy) to substantiate points.

2. Part 2 - National Cooperative Policy 2025 -Vision and Efficacy (Approx. 120-150 words) -

Vision - State key objectives like expansion (30% increase, one in every village), bringing in inactive members, and strengthening governance.

Key Provisions/Initiatives -

1. Strengthening PACS - Role as "implementing agencies" for government schemes.
2. Marketing & Export - National Cooperative Exports Ltd (2023), focus on aggregation and standardization.
3. Digitization - Computerization of PACS.
4. Skill Development - Tribhuvan Sahkari University.
5. Decentralized Grain Storage.
6. Efficacy Assessment (Critical Examination) - Evaluate how effectively these provisions could address the challenges. Acknowledge the positive intent but immediately transition to challenges.

3. Part 3 - Foundational Challenges (Approx. 100-120 words) -

1. Internal Weaknesses -

Defunct PACS - High percentage of non-functional societies.

Governance Issues - Chronic inefficiencies, political interference, lack of professional management, timely elections.

Lack of Digital Adoption - Restricting market access and banking in rural areas.

Weak Institutional Capacity & Financing - Constraints on expansion, innovation, human capital.

2. External/Systemic Issues -

Regulatory Uncertainty - Dual regulation (e.g., cooperative banks by RBI and state registrars), leading to compliance issues.

Lack of Awareness/Participation - Inactive members.

4. Part 4 - Way Forward/Recommendations (Approx. 80-100 words) -

Governance Reforms - Ensure timely elections, professionalize management, reduce political interference.

Financial & Infrastructure Support - Revitalize defunct PACS, provide adequate funding, invest in technology.

Regulatory Clarity - Streamline regulatory framework, potentially single-window clearance or clear demarcation of roles.

Capacity Building - Skill development, training, and awareness campaigns for members.

Market Linkages - Aggregation, branding, and export promotion.

3. Conclusion (Approx. 20-30 words) - Summarize the potential of the cooperative movement. Reiterate that successful implementation of the policy, by effectively tackling challenges, is crucial for inclusive growth.

General Tips

Keywords - Use relevant keywords like "financial inclusion," "grassroots development," "democratic functioning," "regulatory overlap," "digitization," etc.

Structure - Use clear headings/subheadings or distinct paragraphs for better readability.

Analytical Tone - Maintain a critical yet balanced perspective.

Word Limit - Adhere strictly to the overall word limit (typically 150-250 words for a 10-marker, 250-400 words for a 15-marker, depending on the specific exam and question type). Adjust section lengths accordingly.

Examples - Weave in relevant examples from the article (e.g., PACS, Amul, National Cooperative Exports Ltd) to strengthen your arguments.

19. India's Demographic Dividend - A Race Against Time.

Demographic Dividend

Demographic dividend refers to the economic growth potential that arises from a decline in fertility and mortality rates, resulting in a larger proportion of working-age population (15–64 years) compared to dependents (children and elderly). This phase, when supported by suitable policies and investments, can lead to a significant boost in productivity, income, and national development. The opportunity of demographic dividend is time-bound and requires timely action, especially in areas of education, employment, health, and skill development.

India's Demographic Transition - The Window Opens

India entered the demographic dividend phase around 2019, as the working-age population began to outnumber dependents. This window is expected to remain open for about 30 years, until around 2050.

Key Features of India's Demographic Structure -

1. Over 65% of Indians are in the working-age bracket.
2. More than 50% are below the age of 30.
3. India is set to remain the youngest major country in the world for the next few decades.

Demographic Dividend and Economic Growth - Global Experience

Historically, countries such as South Korea, Singapore, and China leveraged their demographic dividend effectively through -

1. High-quality primary and secondary education.
2. Massive investment in human capital and healthcare.
3. Job creation in industrial and services sectors.
4. Rapid urbanisation and support for labor migration.
5. Stable institutions and economic planning.

China, for instance, experienced 9.3% average GDP growth during its demographic window, largely due to strategic alignment of education, industry, and labor policies.

India’s Divergent Path - Demographic Potential Not Fully Tapped

Unlike the East Asian experience, India's growth during its demographic window has been modest. Since 2019, average growth has hovered around 6-7%, well below the double-digit aspiration.

Key Discrepancies -

1. Employment share in agriculture has increased, indicating reverse structural transformation.
2. Female labor force participation remains below 25%, one of the lowest in the world.
3. Learning outcomes in school-age children remain poor, affecting skill readiness.
4. A large portion of the youth remains under-skilled and under-employed.

In short, demography alone does not ensure growth; it must be matched with demand for labor and capacity building.

Constraints Holding India Back

1. Education Deficit -
    1. Low public expenditure on education.
    2. Poor learning outcomes despite high enrollment.
    3. Digital divide and regional disparities.
2. Skilling Gaps -
    1. Mismatch between skill training and industry demand.
    2. Fragmented implementation of vocational programs.
3. Health and Nutrition Challenges -
    1. High levels of child stunting and malnutrition.
    2. Inadequate healthcare infrastructure in rural areas.
4. Gender Gaps -
    1. Social norms discourage women’s participation in work.
    2. Safety, infrastructure, and wage disparity add to the problem.
5. Employment Crisis -
    1. Jobless growth in the manufacturing sector.
    2. Low absorption capacity of the formal economy.
6. Regional Disparities -
    1. Southern states are aging faster and need labor.
    2. Northern states have youth bulge but poor human capital.

Policy Suggestions - Making the Dividend Work

1. Education Reform -
    1. Invest in foundational literacy and numeracy.

2. Strengthen teacher training and accountability.
3. Promote digital learning and public-private partnerships.

2. Skill Development 2.0 -

1. Align Skill India Mission with industry needs.
2. Promote apprenticeship and dual education models.
3. Focus on emerging sectors - AI, green jobs, healthcare, logistics.

3. Women's Workforce Inclusion -

1. Improve childcare support, safety in transit, and flexible jobs.
2. Implement gender budgeting for job creation.

4. Health and Nutrition -

1. Expand Ayushman Bharat and POSHAN 2.0.
2. Focus on adolescent girls and maternal care for long-term impact.

5. Job Creation and Migration Support -

1. Promote labor-intensive sectors like textiles, construction, food processing.
2. Enable safe and legal internal migration with portability of benefits.

6. Decentralised Growth -

1. Build urban infrastructure in Tier-2 and Tier-3 cities.
2. Encourage entrepreneurship and startups in rural India.

Government Measures So Far

1. National Skill Development Mission (2015) - Targets skill training of over 400 million people by 2022.
2. PM Kaushal Vikas Yojana - Short-term training and certification programs.
3. Samagra Shiksha Abhiyan - Unified scheme for school education.
4. National Education Policy 2020 - Focuses on holistic and flexible learning.
5. Startup India and Make in India - Aims to foster innovation and job creation.
6. Beti Bachao, Beti Padhao - Promotes girl child education and empowerment.
7. Deendayal Antyodaya Yojana - Skill development for urban and rural poor.

While these schemes are well-intended, implementation gaps, overlap, and lack of coordination remain key concerns.

Conclusion - Demography is a Responsibility, not a Guarantee

India's youthful population is both an opportunity and a challenge. If the country can invest in its people, create jobs, and promote inclusivity, it can emerge as a global economic powerhouse. If not, the window may close, leaving behind unemployment, social unrest, and missed potential.

Demographic dividend is not destiny — it is a test of governance, policy vision, and long-term investment in human capital.

Main Practice (GS Paper II/III – Governance & Economic Development) -

1. "India's demographic dividend presents both a golden opportunity and a looming challenge. Examine the key constraints India faces in leveraging this dividend, and suggest policy interventions for sustainable inclusive growth."

Answer Guidelines -

1. Introduction (50–70 words) - Define Demographic Dividend — the economic benefit that arises when the working-age population is larger than the dependent population. Briefly mention that India entered this phase around 2019, and it is expected to last till 2050. Highlight the urgency - the window is time-bound and demands proactive policy.

2. Body Structure -

A. Importance of Demographic Dividend for India

1. Current demographic structure - over 65% working-age population.
2. Potential to boost GDP, productivity, and become a global labor hub.
3. Opportunity to achieve "Viksit Bharat" vision if managed well.

B. Key Constraints India Faces

1. Education Deficit

   1. Poor learning outcomes in government schools (e.g., ASER Reports).
   2. Lack of digital access in rural areas.

2. Skilling Gaps

   1. Fragmented vocational training.
   2. Misalignment between skilling programs and industry demand.

3. Low Female Workforce Participation -Social norms, safety concerns, poor childcare support.

4. Health and Nutrition Issues

   1. High stunting and wasting among children.
   2. Inadequate healthcare infrastructure.

5. Unemployment and Jobless Growth

   1. Reversal of structural transformation (more people in agriculture).
   2. Lack of formal sector absorption capacity.

6. Migration Challenges & Regional Disparities

   1. Youth-rich northern states lack opportunities.
   2. Urban-centric growth limits rural participation.

C. Policy Interventions Needed

1. Education Reforms - Foundational literacy, NEP 2020 implementation, digital inclusion.
2. Skill 2.0 - Apprenticeships, demand-driven skilling, continuous learning.
3. Promoting Female Participation - Safety, flexible jobs, gender budgeting.
4. Health & Nutrition - Expand Ayushman Bharat, strengthen POSHAN, adolescent care.
5. Job Creation - Labor-intensive sectors, rural industrialization, gig economy.
6. Support Labor Mobility - Portability of benefits, inter-state worker support.

D. Government Initiatives (Brief Overview)

1. Skill India, PMKVY, NEP 2020, Beti Bachao Beti Padhao, Startup India.
2. Evaluate implementation challenges and need for integration.

3. Conclusion (40–50 words) -

1. Reaffirm - Demographic dividend is not automatic; it must be earned through governance and investment.
2. Quote - "Demography is not destiny, unless it's backed by policy."
3. Emphasize the need for urgency, inclusion, and coordination to harness the dividend before the window closes.

20. Earthquakes in Afghanistan and India's Role in Disaster Preparedness.

Introduction

On September 1, 2025, Afghanistan was struck by a 6.0-magnitude earthquake with its epicentre near Jalalabad in Nangarhar province. Over 800 people lost their lives and more than 2,500 were injured. Rescue efforts have been challenging as the affected areas lie in remote, mountainous terrain. India promptly extended humanitarian assistance, sending 1,000 tents and 15 tonnes of food while committing to additional relief. This tragic episode brings attention to the geological realities of South Asia, the humanitarian consequences of such disasters, and India's own preparedness for seismic risks.

Why Afghanistan is Prone to Earthquakes

Afghanistan lies at the collision boundary between the Indian Plate and the Eurasian Plate. This tectonic setting creates intense geological stress, leading to frequent earthquakes.

1. Indian Plate Movement - The Indian Plate is moving northwards at around 5 cm/year, colliding with the Eurasian Plate.
2. Fault Lines - Afghanistan sits on several active fault systems such as the Chaman Fault, Hari Rud Fault, and Central Badakhshan Fault.
3. Himalayan Tectonics - The same forces that created the Himalayas extend westwards, affecting

Afghanistan and Pakistan.

Because of these conditions, earthquakes of moderate to strong magnitude are common in the region, often causing high casualties due to weak infrastructure and difficult terrain.

Understanding Earthquakes

An earthquake is the sudden release of energy stored in the Earth's crust, producing seismic waves that cause the ground to shake.

Magnitude - A measure of energy released, often recorded on the Richter Scale or Moment Magnitude Scale (Mw).

Focus (Hypocentre) - The point inside the Earth where the earthquake originates.

Epicentre - The point on the surface directly above the focus.

Aftershocks - Smaller tremors following the main quake, often adding to destruction.

The September 2025 earthquake in Afghanistan was followed by a 4.7-magnitude aftershock, a common phenomenon.

Consequences of Earthquakes

1. Humanitarian Impact

1. Loss of lives due to collapsed houses and poor medical access.
2. Injuries from falling debris and landslides.
3. Displacement of communities in already fragile states.

2. Infrastructure Damage

1. Rural houses built of mud and stone collapse easily.
2. Roads and bridges get cut off, delaying rescue.
3. Hospitals and schools often become non-functional.

3. Environmental Impact

1. Landslides and avalanches in mountainous terrain.
2. Changes in river courses, damming of streams, or flash floods.

4. Economic Impact

1. Agricultural disruption.
2. Costly reconstruction needs.
3. Worsening poverty in vulnerable regions.

Geological Categorisation of Earthquake Zones

Globally, seismic risk is mapped into zones based on probability of occurrence.

1. High Risk Areas - Collision boundaries (Himalayas, Hindu Kush, Afghanistan).

2. Moderate Risk Areas - Interior stable continental regions.
3. Low Risk Areas - Shield areas with minimal tectonic activity.

In India, the Bureau of Indian Standards (BIS) classifies the country into four seismic zones -

1. Zone V (Very High Risk) - Entire Northeast, Kashmir, Himachal, Uttarakhand, parts of Bihar.
2. Zone IV (High Risk) - Delhi, parts of Gujarat, Bengal, Maharashtra.
3. Zone III (Moderate Risk) - Southern and central India.
4. Zone II (Low Risk) - Peninsular shield areas like Karnataka and Kerala.

Afghanistan lies in a very high seismic hazard region, similar to the Himalayan belt in India.

India’s Role in Afghanistan’s Relief

India has historically been one of the first responders in regional disasters. In this instance -

Immediate Aid - 1,000 tents and 15 tonnes of food were delivered to Kabul and Kunar province.

Future Assistance - Additional consignments of relief material including medicines and blankets are being prepared.

Diplomatic Outreach - EAM S. Jaishankar assured Afghanistan’s foreign minister that India “stands by Afghanistan at this difficult time.”

This reflects India’s commitment to regional solidarity, humanitarian diplomacy, and soft power projection.

India’s Disaster Readiness and Response to Earthquakes

India itself is highly vulnerable to earthquakes, with around 59% of its landmass prone to seismic hazards. Major past quakes such as Bhuj (2001), Kashmir (2005), and Nepal (2015) highlight the need for preparedness.

Government Measures

1. National Disaster Management Authority (NDMA) - Formulates policies, guidelines, and mitigation strategies.
2. Seismic Zoning Maps - BIS updates seismic codes for construction.
3. Earthquake Resistant Buildings - Increasingly integrated in urban planning, though rural areas lag behind.
4. Early Warning and Monitoring - IMD and IIT Roorkee’s seismological centres track seismic activity.
5. Capacity Building - National and State Disaster Response Forces (NDRF, SDRF) are trained for earthquake rescue.

Challenges

1. Weak enforcement of building codes.
2. High population density in vulnerable zones.

3. Poor awareness and preparedness in local communities.

Suggestions

1. Infrastructure Strengthening - Enforce quake-resistant building norms, especially in schools and hospitals.
2. Community Preparedness - Conduct regular earthquake drills and awareness campaigns.
3. Technology Use - Expand seismic monitoring networks, use AI for risk prediction.
4. Regional Cooperation - Work with neighbours like Nepal, Afghanistan, and Bhutan for joint disaster relief.
5. Linking to SDGs - Integrate earthquake resilience into urban planning and sustainable development.

Conclusion

The Afghanistan earthquake of September 2025 is a stark reminder of the fragility of life in seismically active regions. While tectonic forces cannot be stopped, human vulnerability can be reduced through preparedness, resilient infrastructure, and coordinated relief.

For India, this tragedy underscores two imperatives -

1. To continue its role as a first responder in South Asia, demonstrating humanitarian leadership.
2. To strengthen its own disaster management systems, ensuring that when earthquakes strike, loss of life and property is minimised.

Earthquakes test both the strength of our infrastructure and the strength of our compassion. India must advance on both fronts to build a safer, more resilient future.

Main practice Questions.

1. "The recent earthquake in Afghanistan underlines the complex interaction of geology, governance, and humanitarian response. Discuss why Afghanistan is highly earthquake-prone and critically assess India's role in regional disaster diplomacy."

Answering Guidelines

1. Introduction - Brief reference to the September 2025 Afghanistan earthquake (6.0 magnitude, 800+ deaths). Importance of the issue - humanitarian tragedy + geopolitical relevance.

2. Body

1. Why Afghanistan is Earthquake-Prone

1. Plate tectonics - Indian Plate colliding with Eurasian Plate.
2. Fault systems - Chaman Fault, Hindu Kush seismicity.
3. Similarity with Himalayan seismic belt.
4. Fragile terrain + poor infrastructure = high vulnerability.

2. Consequences of Earthquakes in Afghanistan

1. Humanitarian (casualties, displacement).

2. Infrastructural (collapsed houses, blocked access).
3. Environmental (landslides, river damming).
4. Economic (agriculture, poverty cycle).

3. India's Role in Relief and Regional Diplomacy

1. Immediate assistance - 1,000 tents, 15 tonnes of food, more aid promised.
2. India's history as first responder in South Asia (Nepal 2015, Sri Lanka tsunami 2004).
3. Soft power projection, humanitarian diplomacy, and strategic interests.

4. India's Own Disaster Preparedness

1. NDMA, NDRF, seismic zoning, resilient infrastructure codes.
2. Challenges - poor enforcement, urban density, informal housing.
3. Lessons India can share with neighbours.

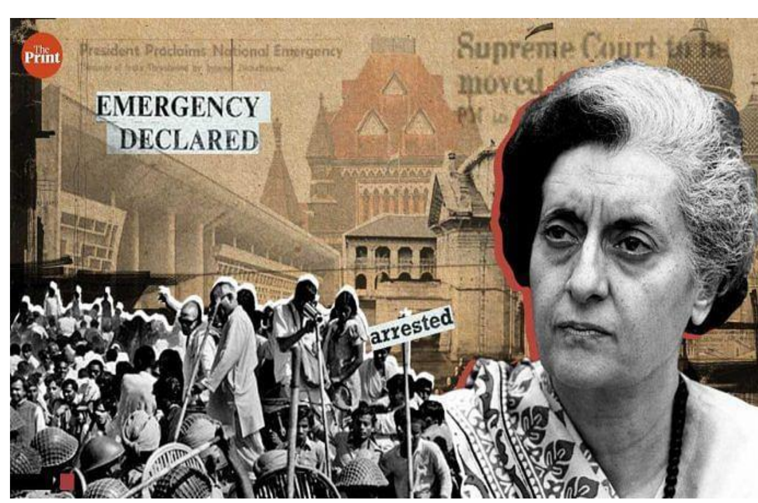
5. Critical Analysis

1. Humanitarian aid builds goodwill but must be sustained.
2. Importance of regional disaster cooperation beyond ad-hoc relief.
3. Link with climate change + SDGs.

3. Conclusion - Earthquakes cannot be prevented, but vulnerability can be reduced. India must balance its own preparedness with regional humanitarian leadership. "Geology is destiny, but governance shapes the outcomes."

21. India's 1975 Emergency - Constitutional Breakdown, Judicial Servility, and Lessons for Democracy

National Emergency



A National Emergency under Article 352 of the Indian Constitution is declared when the security of India or any part of it is threatened by war, external aggression, or internal disturbance (now amended to "armed rebellion" by the 44th Amendment Act, 1978). When invoked, it transforms India into a unitary state, suspending many federal features and limiting certain fundamental rights.

Genesis and Political Prelude to the Emergency

The Emergency declared on June 25, 1975, was not triggered by war or rebellion but by political turbulence. The immediate spark was the Allahabad High Court's verdict against Prime Minister Indira Gandhi, finding her guilty of electoral malpractices in the 1971 Raebareli elections. The court disqualified her from Parliament for six years. This ruling emboldened the opposition, notably Jayaprakash Narayan's Sampoorna Kranti (Total Revolution) movement, which called for non-violent civil disobedience and institutional reforms. Amid escalating protests and demands for resignation, Gandhi sought a reprieve from the Supreme Court, which granted only a conditional stay. Meanwhile, demands were made for the "Blue Book" (a government manual on PM's security) to be released as evidence of abuse of power. Rather than abide by judicial scrutiny, the Gandhi government advised the President to declare a state of emergency, citing "internal disturbances"—a vague phrase that allowed broad interpretation.

Impact of the Emergency on Fundamental Rights

1. Fundamental Rights under Article 19 were suspended, and preventive detentions under MISA (Maintenance of Internal Security Act) and DIR (Defence of India Rules) became widespread.
2. Over 1 lakh people including opposition leaders, activists, and journalists were imprisoned.
3. The Press was censored, civil liberties were suppressed, and mass sterilization drives were enforced as part of population control.

The most infamous judicial event during this time was the ADM Jabalpur v. Shivkant Shukla (1976) case. The Supreme Court held by a 4 -1 majority that during an emergency, even the Right to Life (Article 21) could be suspended. Justice H. R. Khanna, the sole dissenting judge, was sidelined in judicial promotions—a blow to judicial independence.

Constitutional Amendments and the issue of Judicial Servility during emergency

The 42nd Constitutional Amendment (1976), often dubbed the "Mini Constitution", drastically altered the Constitution -

1. Inserted "Socialist" and "Secular" into the Preamble.
2. Curtailed the powers of the judiciary by amending Articles 32, 226, and 368.
3. Strengthened the central government's powers vis-à-vis the states.
4. Extended President's Rule in states from 6 months to 1 year.
5. Placed Directive Principles above Fundamental Rights in several contexts.

This era marked the lowest point in judicial independence, with the executive influencing appointments and judgments. The imposition of Justice A. N. Ray as CJI over three senior judges (after the Kesavananda Bharati verdict) was seen as blatant executive overreach.

Issues of Constitutional Morality

The Emergency exposed significant breaches in constitutional morality -

1. Misuse of Article 352 - Invoked for political survival, not national threat.
2. Subversion of institutions - Parliament, judiciary, media, and Election Commission were all weakened.
3. Centralisation of power - Decisions were dictated from the PMO and by a small clique, often overriding institutional autonomy.

The politicisation of the judiciary, as seen in ADM Jabalpur and the supersession of judges, indicated the erosion of checks and balances essential in a democracy.

Post-Emergency Safeguards and Reforms

After the Janata Party came to power in 1977, several constitutional safeguards were introduced -

1. The 44th Amendment Act (1978) revised Article 352, requiring written Cabinet approval before emergency declaration.
2. Replaced "internal disturbance" with "armed rebellion" as grounds for emergency.
3. Restored and reaffirmed Article 21 and 19, making them non-suspendable even during emergencies.
4. Enhanced Parliamentary oversight, requiring periodic review and extension of emergency powers.

This amendment was a turning point, aiming to prevent misuse of emergency provisions in the future.

Lessons of Emergency

1. Judicial vigilance is vital - ADM Jabalpur remains a cautionary tale; its overturning by later benches (notably Justice D. Y. Chandrachud) affirms this.
2. Constitutional checks must be respected - Executive overreach can corrode democracy.
3. Institutions need insulation - An independent media, free judiciary, and robust Parliament are democracy's guardians.
4. Public memory is crucial - Recalling history prevents repetition. Events like the Emergency must be studied to inoculate democracy against authoritarian temptations.

Conclusion

The 1975 Emergency remains one of the most defining and disturbing episodes in Indian democracy. While it temporarily suspended India's democratic essence, it also strengthened long-term safeguards through popular resistance and constitutional amendments. Civil Services aspirants must study this period not just as history but as a lesson in the fragility and resilience of institutions. Vigilance, constitutional morality, and institutional autonomy remain the cornerstones of a thriving democracy.

Main Practice question (General Studies Paper II)

1. "Critically examine the constitutional, judicial, and political consequences of the 1975 Emergency in India. In what ways did this period reshape the discourse on fundamental rights and democratic safeguards?"

Answer Guidelines

1. Introduction (50–70 words) - Begin by defining the National Emergency of 1975–77 under Article 352. Briefly mention the political context - the verdict in the Raebareli election case, Indira Gandhi's disqualification, and the subsequent invocation of Emergency citing "internal disturbances."

2. Body (Structured Analysis) -

1. Constitutional and Political Developments

1. Proclamation of Emergency and its implications.
2. Misuse of Article 352 without parliamentary scrutiny.
3. The 42nd Amendment Act (1976) -
    1. Made Fundamental Rights subservient to Directive Principles.
    2. Centralised power; undermined federalism.
    3. Introduced “socialist” and “secular” into the Preamble.

2. Impact on Fundamental Rights and Democracy

1. Suspension of Articles 14, 19, and 21.
2. Arrests under MISA, mass censorship, and sterilisation drives.
3. Loss of personal liberty, free speech, and press freedom.

3. Judicial Response and Servility

1. ADM Jabalpur v. Shivkant Shukla
2. 4 -1 majority ruled that right to life was not enforceable during Emergency.
3. Dissent of Justice H.R. Khanna — a symbol of judicial courage.
4. Supersession of senior judges to install Justice A.N. Ray as CJI.

4. Post-Emergency Constitutional Safeguards - 44th Amendment Act (1978)

1. Replaced “internal disturbances” with “armed rebellion”.
2. Restored judicial powers and made Article 21 inalienable, even in Emergency.
3. Tightened the procedure for Emergency declaration — Cabinet must recommend it in writing.

5. Legacy and Lessons

1. Reinforced the role of judiciary as guardian of the Constitution.
2. Highlighted the dangers of executive overreach and centralisation.
3. Emphasised the need for institutional checks and balances.
4. Showcased the importance of public vigilance and civil liberties.

3. Conclusion (50–70 words) - Summarise that the Emergency was a turning point in India’s constitutional history. Though a dark phase, it led to critical reforms and awareness about protecting democratic institutions. Conclude by stating its continued relevance in the context of judicial independence, executive

accountability, and citizens' rights.

22. Infant Mortality in India - A Milestones

Introduction

Infant Mortality Rate (IMR) is one of the most sensitive indicators of a nation's development. It not only reflects the survival chances of newborns but also mirrors the quality of public health, nutrition, sanitation, and governance. India has recently achieved a historic milestone - as per the Sample Registration System (SRS) 2023, the country's IMR has declined to 25 per 1,000 live births. This is the lowest ever recorded, a sharp fall from 129 in 1971. While the achievement is laudable, persistent inequalities, health gaps, and social vulnerabilities continue to challenge India's path towards sustainable child survival.

Recent Milestone Achievement

The SRS data reflects decades of steady progress -

1. IMR reduced to 25 (2023) from 129 (1971).
2. Kerala (5) and Manipur (3) have shown outcomes comparable to advanced nations through strong decentralised planning and robust primary healthcare.
3. Larger states like Uttar Pradesh, Madhya Pradesh, and Chhattisgarh still show IMR at 37, pointing to uneven progress. This achievement proves that investment in immunisation, maternal health, sanitation, and nutrition yields results, but also highlights that India's journey remains unfinished.

Background of IMR in India

At Independence, India's IMR was among the highest globally, at more than 150 per 1,000 live births. Gradual decline was seen with -

1. Family Welfare Programmes (1950s–70s)
2. Universal Immunisation Programme (1985)
3. Integrated Child Development Services (ICDS)
4. National Rural Health Mission (2005) and Janani Suraksha Yojana

Global commitments like the Millennium Development Goals (MDGs) and later the Sustainable Development Goals (SDGs) accelerated action. India is targeting the SDG benchmark of neonatal mortality rate (NMR) of 12 by 2030.

Existing Problems and Weaknesses

Despite the achievement, several issues persist -

1. Immunisation Gaps

1. WHO-UNICEF (2025) reports that 900,000 infants in India missed all vaccines in 2024.

2. Vaccine hesitancy and logistical challenges leave communities exposed to preventable outbreaks.

2. Maternal and Child Nutrition

1. NFHS-5 (2019–21) - 52% of pregnant women and 67% of children under 5 are anaemic.
2. Malnutrition and poor antenatal care weaken immunity and birth outcomes.

3. Weak Health Infrastructure

1. Many PHCs lack basic obstetric and neonatal facilities.
2. In Madhya Pradesh, nearly 70% of child specialist posts are vacant, crippling newborn care.

4. Regional Disparities -Kerala and Tamil Nadu lead with strong governance, while central and northern states lag, widening inequity.

5. Behavioural and Social Gaps -Poor breastfeeding practices, limited awareness of maternal diets, and inadequate sanitation reduce survival chances.

Government Measures

The government has launched multiple schemes to reduce IMR -

1. National Health Mission (2005) - Focus on maternal and child health services.
2. Janani Suraksha Yojana (JSY) - Incentives for institutional deliveries.
3. POSHAN Abhiyaan (2018) - Comprehensive nutritional improvement for women and children.
4. Mission Indradhanush (2014) - Boosted immunisation coverage.
5. LaQshya Programme - Improving quality of maternity care.
6. Special Newborn Care Units (SNCUs) - Set up in many district hospitals to reduce neonatal mortality.

These measures have contributed to the decline, but implementation gaps persist, particularly in large, populous states.

Suggestions

1. Strengthen Primary Healthcare

1. Replicate Kerala's decentralised model focusing on community health participation.
2. Upgrade PHCs and CHCs with 24×7 maternal and neonatal facilities.

2. Universal Nutrition Access

1. Ensure fortified foods, iron supplementation, and dietary diversification under POSHAN.
2. Replicate Telangana's Aarogya Lakshmi model of providing hot cooked meals to pregnant women.
3. Zero Missed Children in Immunisation -Use digital dashboards, mobile health vans, and ASHA-led outreach to ensure full coverage.

4. Human Resource Strengthening

1. Fill vacancies of specialists in high-burden states.
2. Incentivise and train ASHA workers for awareness and service delivery.

5. Behavioural Change Campaigns

1. Promote exclusive breastfeeding, maternal diets, and hygiene through IEC campaigns.
2. Counter vaccine hesitancy with local community leaders and health workers.

6. Equity in Health Investment -Prioritise investments in lagging states like Uttar Pradesh, Bihar, Madhya Pradesh, and Chhattisgarh.

Conclusion

India's decline in IMR to its lowest-ever level is an historic achievement that showcases the nation's capacity for health transformation. However, this must not overshadow the unfinished agenda - regional disparities, nutrition gaps, and weak health infrastructure still put millions of infants at risk. Sustained action across nutrition, immunisation, maternal care, sanitation, and awareness is essential to make survival gains universal. With strategic investment and inclusive governance, India can not only achieve the SDG target for child survival but also lay the foundation for a healthier, more productive generation.

Ensuring that every infant has an equal chance to survive and thrive must remain the cornerstone of India's public health journey.

Main Practice Question

"India has achieved historic progress in reducing Infant Mortality Rate (IMR), yet regional disparities and systemic gaps persist. Critically examine the causes, government interventions, and suggest measures for universal child survival."

Answer Guidelines

1. Introduction - Define IMR briefly. Mention milestone - IMR dropped to 25 (SRS 2023) from 129 in 1971.

2. Body

1. Progress & Achievements

1. Kerala, Manipur success stories.
2. Role of immunisation, NRHM, Janani Suraksha Yojana.

2. Existing Problems & Disparities

1. Regional gaps - UP, MP, Chhattisgarh still high.
2. Immunisation gaps (900,000 missed vaccines in 2024).
3. Anaemia (52% women, 67% children).
4. Infrastructure shortage, vacant posts of specialists.

3. Government Measures

1. POSHAN Abhiyaan, Mission Indradhanush, LaQshya programme.
2. Newborn Care Units, Janani Shishu Suraksha Karyakram.

4. Suggestions

1. Replicate Kerala's model - decentralised health + community participation.
2. Strengthen PHCs/CHCs, fill workforce gaps.
3. Universal nutrition, fortified food, Aarogya Lakshmi model.
4. Behaviour-change campaigns (breastfeeding, vaccine uptake).
5. Digital tracking for "zero missed child".

3. Conclusion -IMR decline = historic milestone.But unfinished agenda - equity, nutrition, infrastructure. Stress on SDG-3 (Good Health & Well-being) and India's demographic dividend.

23. Landslides in India

Introduction

The recent Wayanad landslide that claimed over 250 lives has once again underlined the growing threat of landslides in India. No longer isolated events, landslides are now frequent, widespread, and increasingly devastating. For aspirants preparing for the Civil Services Exam, understanding the causes, patterns, and implications of this hazard is critical—especially in the context of climate change and disaster management.

Alarming Rise in Landslides in India

Landslides in India are occurring with increasing frequency and intensity. Between 2015 and 2022, India recorded 3,285 major landslides, with Kerala alone witnessing over 2,200 incidents—59% of the national total during that period. The National Institute of Disaster Management (NIDM) reports a 30% increase in landslide incidents in the Himalayas over the past two decades. The India Meteorological Department (IMD) has also recorded a 34% rise in extreme rainfall events since the 1950s, further contributing to landslide risks.

Reasons Behind the Surge in Landslides

The rise in landslides in India is due to a combination of natural factors and human-induced activities -

1. Climate Change and Extreme Rainfall

1. Intense rainfall saturates soil, weakens slopes, and triggers landslips.
2. IMD data shows Kerala and Western Ghats are experiencing heavier and more erratic rainfall due to changing monsoon patterns.

2. Deforestation

1. Removal of forest cover, especially in the Western Ghats and Himalayan regions, weakens natural slope stability.

2. The Forest Survey of India reports a loss of 1,582 sq km of dense forest between 2019 and 2021.

3. Unregulated Urbanization

1. Haphazard construction on fragile slopes (roads, resorts, homes).
2. Lack of slope assessment and building code violations worsen vulnerability.

4. Infrastructure Development

1. Roads, dams, and mining activities disturb the natural terrain, destabilizing slopes.
2. The Char Dham road project and tunneling activities in Joshimath are recent examples.

5. Geological Vulnerability -Steep slopes, fragile rock systems, and seismic activity make areas like the Himalayas and Western Ghats naturally prone to landslides.

Impact of Landslides on India

Landslides are more than just a geological hazard—they have serious social, economic, and environmental consequences -

1. Human Loss - Hundreds die annually, as seen in Wayanad (2024), Idukki (2020), and Kottayam (2021).
2. Displacement - Thousands are forced to leave their homes and live in relief camps.
3. Economic Damage - The World Bank estimates that landslides cause $400 million in losses every year.
4. Ecological Damage - Destruction of forests, water sources, and biodiversity hotspots.
5. Infrastructure Damage - Roads, bridges, and communication lines are often destroyed, disrupting connectivity.

Areas Most Vulnerable to Landslides

1. Himalayan Region - Includes Himachal Pradesh, Uttarakhand, Jammu & Kashmir, Sikkim, and Arunachal Pradesh. Prone due to steep gradients, tectonic activity, and erratic monsoons.

2. Western Ghats - Kerala, Karnataka, Tamil Nadu, and Maharashtra. Hills with over 20° slope, high rainfall, and dense population increase risk.

3. North-Eastern States - Nagaland, Mizoram, and Manipur face landslides due to deforestation and shifting cultivation.

4. Eastern India - Darjeeling (West Bengal) and parts of Meghalaya are also at high risk.

Current Strategies and Their Shortcomings

India has frameworks in place to manage landslides, but implementation gaps and lack of coordination reduce their effectiveness.

Existing Strategies

1. Zonation Mapping by the Geological Survey of India (GSI).
2. Early Warning Systems by IMD and ISRO.

3. Disaster Management Plans at central and state levels.
4. National Landslide Risk Management Strategy (2020).

Challenges

1. Poor enforcement of building codes in hill regions.
2. Lack of data on minor landslides and near-miss events.
3. Fragmented governance between environment, forest, and public works departments. Insufficient funding for early warning systems and slope stabilization.

Government Measures Taken

In response to increasing threats, both central and state governments have introduced several initiatives -

1. Kerala has set up a Landslide Early Warning System in high-risk areas.
2. Indian Navy, Army, and Air Force regularly assist in post-disaster relief efforts.
3. IMD's Climate Report highlights vulnerable zones and climate-induced risks.
4. Geospatial Mapping of over 80,000 landslide-prone areas by GSI is ongoing.
5. The Centre has released compensation for victims, and the State Disaster Response Fund (SDRF) has been expanded.
6. The Ministry of Environment has proposed restrictions on construction in Ecologically Sensitive Zones (ESZs).

Conclusion

The Wayanad disaster is a grim reminder that India's landslide vulnerability is increasing—driven by a dangerous mix of climate change and human negligence. While natural terrain cannot be altered, policy, planning, and preparedness can.

To tackle this challenge, India must -

1. Enforce strict land-use regulations in ecologically fragile zones.
2. Invest in community-based disaster preparedness.
3. Strengthen early warning systems and slope management infrastructure.
4. Integrate climate resilience into all development projects.

As India continues to urbanize and grow, the choice lies between sustainable development or disaster. Civil servants of tomorrow will play a vital role in making that choice wisely.

Mains Practice Question

1. "Landslides in India are no longer isolated geological events but a growing development crisis. Critically analyze the causes, regional vulnerability, and the adequacy of India's current mitigation and response

strategies."

Answering Guidelines

1. Introduction (30–40 words) - Define landslides as both natural and human-triggered disasters. Briefly mention their increasing frequency due to climate change and unplanned development.

2. Body -

1. Causes of Rising Landslides (80–100 words)

1. Climate-related - Increased extreme rainfall, monsoon variability.
2. Human-induced - Deforestation, unregulated construction, infrastructure in ecologically sensitive zones.
3. Geological - Seismic activity, slope instability, poor drainage systems.

2. Areas of High Vulnerability (80–100 words)

1. Himalayan Region - J&K, Uttarakhand, Himachal Pradesh, Sikkim.
2. Western Ghats - Kerala, Maharashtra, Tamil Nadu, Karnataka.
3. North-East - Mizoram, Nagaland, Manipur.
4. Mention Kerala's disproportionate share of national landslides (over 59%).

3. Impact (60–80 words)

1. Human fatalities and displacement.
2. Economic loss (over $400 million annually).
3. Environmental damage (loss of forest cover, biodiversity).

4. Government Strategies and Their Limitations (80–100 words)

1. Landslide Zonation Mapping, Early Warning Systems, National Disaster Management Authority guidelines.
2. Limitations - weak enforcement, poor inter-agency coordination, underfunding, lack of community preparedness.

3. Conclusion (30–40 words) - Emphasize the need for sustainable development practices in fragile ecosystems. Suggest integrated planning, resilient infrastructure, and stronger disaster governance.

24. Leadership in Contrast - Narendra Modi vs. Indira Gandhi – A Civil Services Perspective

As Prime Minister Narendra Modi crosses his 11th consecutive year in office in 2025, comparisons with Indira Gandhi — India's longest-serving Prime Minister before him — are both inevitable and insightful. Despite their shared status as dominant leaders of their times, their political origins, ideological postures, and leadership styles offer rich contrasts and thought-provoking parallels. This article explores their journeys across five critical dimensions - political settings, domestic politics (especially their 11th year), foreign policy, economic governance, and leadership similarities.

Political Setting at Appointment - Contrasts in Mandate and Circumstances

Indira Gandhi's ascent to power in 1966 was circumstantial and reluctant. Following Lal Bahadur Shastri's sudden demise, the Congress chose her as a compromise candidate. She lacked a mass electoral mandate initially and was underestimated, famously dismissed as a "goongi gudiya" (dumb doll).

Narendra Modi, by contrast, assumed office in 2014 with a thumping majority — the first single-party majority since 1984. Unlike Gandhi, Modi was the face of the BJP campaign and carried immense political capital even before assuming power. The economy was stable, and his leadership was the product of a planned and peaceful transition. In short, Gandhi inherited instability; Modi inherited expectation.

Domestic Politics in the 11th Year - The Emergency vs. Electoral Legitimacy

Indira Gandhi's 11th year (1975-76) is infamously remembered for the Emergency — a dark chapter in Indian democracy. Civil liberties were suspended, the press was gagged, and opposition leaders were jailed. She extended her rule through constitutional amendments and suppressive means, not elections.

In contrast, Modi's 11th year in 2025 is the result of an electoral process. While his 2024 win saw a dip in seats to 240, he retained power through alliances. Despite criticism over weakening institutions and dissent suppression, there is no Emergency-like authoritarianism. His authority remains electorally sanctioned and politically undisputed within the BJP. Thus, Gandhi ruled by suppressing opposition; Modi rules by dominating it electorally.

Foreign Policy - Cold War Balancing vs. Multi-alignment in a Fragmented World

Indira Gandhi led India during the Cold War's most turbulent phase. She balanced pressures by signing the Indo-Soviet Treaty (1971) and leading the Non-Aligned Movement. Her biggest foreign policy triumph was the creation of Bangladesh after the 1971 war.

Modi's foreign policy initially embraced multi-alignment - building relations with the US, Russia, and the Gulf. But Pakistan-China challenges, and the unpredictable shifts under US administrations like Trump's, disrupted his balancing act. The 2019 Balakot strike and Pahalgam episode (2025) indicated a shift to assertive military diplomacy. While Gandhi navigated a bipolar world, Modi manages a fragmented, multipolar reality.

Economic Policies - From Socialism to Reform-Plus-Welfare

Indira Gandhi embraced a deep socialist agenda - bank nationalisation, state control, and the license-permit raj. Public sector expansion was central. Despite green revolution success, her tenure was marked by economic stagnation.

Modi, though ideologically opposed to socialism, ironically mirrors Gandhi's statism. His government has avoided aggressive privatisation and continues investing in public sector undertakings. However, he has also introduced major reforms like GST, Insolvency and Bankruptcy Code, and digital infrastructure. Still, major reforms — land, labour, and agriculture — have stalled. His "Hindutva rate of growth" (6–6.5%) has been respectable, but not transformative. Modi talks reform, walks cautious statism — echoing Indira Gandhi in a market economy.

Leadership Similarities - Centralisation, Charisma, and Nationalism

Both leaders are characterised by -

1. Centralised power - Gandhi marginalised party stalwarts post-1969; Modi replaced regional BJP satraps with loyalists.
2. Charisma - Gandhi's image as "Mother India" post-1971 mirrors Modi's "nation-builder" persona.
3. Institutional command - Both had compliant Presidents; both faced criticism for undermining institutions.
4. Nationalism - Gandhi's nationalism was born out of war victories and global diplomacy. Modi's is identity-based and militarised — using surgical strikes and a Hindu cultural resurgence.

They ruled with conviction, confidence, and an iron grip — shaping political discourse around their personas.

Conclusion - Two Titans, Two Times

Indira Gandhi and Narendra Modi are India's strongest post-Independence prime ministers. Their leadership shaped India's political structure, for better or worse. Gandhi ruled in chaotic times with coercion;

Modi in stable times with electoral dominance. Their paths diverged ideologically — socialist vs. cultural nationalist — yet converged in style - commanding, centralised, and narrative-driven.

For civil services aspirants, their comparative study reveals the evolution of Indian democracy — from institutional fragility to strength, from ideological experimentation to assertive nationalism. It also underlines how leadership must adapt to global challenges, domestic aspirations, and constitutional values. Both leaders etched their legacy. The real question is — who will inspire future leadership more?

Main Practice Question.

1. Compare and contrast the leadership styles of The Prime Ministers Indira Gandhi and Narendra Modi in their 11th year of rule, focusing on domestic politics, foreign policy, economic governance, and nationalism.

Answer Guidelines -

1. Introduction (30–50 words) - Briefly introduce both leaders as dominant figures in post-independence India. Mention their respective timelines (Indira Gandhi - 1966–77, Narendra Modi - 2014–2025) and significance of the 11th year in each tenure.

2. Body - Thematic Comparison

1. Domestic Political Landscape -

1. Indira Gandhi - Emergency, centralised power, suppression of dissent, constitutional amendments.
2. Narendra Modi - Electoral mandate, party centralisation, strong opposition control, but within electoral democracy.

2. Foreign Policy -

1. Gandhi - Cold War balancing, Indo-Soviet Treaty, creation of Bangladesh.
2. Modi - Multi-alignment, assertive diplomacy, Balakot strike, challenges with China and US realignment.

3. Economic Governance -

1. Gandhi - Socialism, nationalisation, state-led development.
2. Modi - Reform-welfare mix, digital economy, cautious privatisation, statist tendencies despite reform rhetoric.

4. Nationalism -

1. Gandhi - Strategic nationalism through wars and diplomacy.
2. Modi - Cultural nationalism, Hindutva, muscular foreign policy, mass polarisation.

5. Leadership Style -

1. Centralised command, charismatic image, control over party and government in both cases.
2. Modi's use of technology and direct communication vs. Gandhi's institutional route.

3. Conclusion (50–70 words) - Conclude by stating that while the context and ideology differ, the leadership strategies show striking similarities in centralisation and narrative control. Their tenures are critical to understanding the evolving nature of Indian democracy and governance.

25. Lightning Menace in India - Understanding the Threat and Mitigation Measures

Introduction

Lightning is one of nature's most powerful and dangerous phenomena — a sudden, massive discharge of electricity that occurs during thunderstorms. While spectacular to watch, it can be deadly. In India, lightning kills more people annually than any other extreme weather event, including floods, heatwaves, or cyclones. Its rising frequency and expanding geographic reach make it a major public safety and disaster management challenge.

Understanding Lightning

Lightning forms when electrical charges build up in storm clouds due to the movement of ice particles and water droplets. The difference in electrical potential between clouds and the ground — or within clouds — eventually overcomes the insulating properties of air, resulting in a rapid discharge of energy.

Four key conditions are needed -

1. Intense heating – warms the air and triggers upward movement.
2. High humidity – adds moisture to form storm clouds.
3. Atmospheric instability – encourages strong vertical air currents.
4. Trigger mechanism – such as low-pressure systems.

Lightning as a Natural Disaster in India

Lightning's threat is severe in India because it overlaps with agricultural activity and rural exposure.

1. High Fatalities - Between April–July 2025 alone, 1,621 deaths were recorded, including 100 deaths over just three days in Bihar and Uttar Pradesh. From 2002–2024, lightning accounted for 46% of all weather-related deaths in India.
2. Geographic Spread - Traditionally concentrated in eastern states, lightning zones now extend to central, northern, coastal, and even Himalayan regions.
3. Seasonal Peaks - Strikes are most frequent during July–August, coinciding with paddy sowing, leaving farmers in open fields vulnerable.

Categories of Lightning Zones in India

The IMD-CROPC mapping of lightning has revealed shifting hotspots -

1. Very High-Risk Zones - Odisha's Mayurbhanj, Gujarat's Kutch, Madhya Pradesh's central districts.
2. Emerging Hotspots - Rajasthan's Bikaner and Churu, parts of the Himalayan foothills.
3. Urban Lightning - Metro cities like Delhi, Gurugram, and Kolkata are increasingly witnessing strikes due to the Urban Heat Island Effect and air pollution.

Climate Change and the Rising Menace

Climate change is a major driver behind the rise in lightning strikes -

1. Warming atmosphere - For every 1°C rise in temperature, air can hold 7% more moisture, making storms more intense.
2. Hotter Seas - Bay of Bengal temperatures have risen 4°C, fuelling moisture for lightning-prone storms.
3. Urbanisation & Land-use Change - Rapid construction, deforestation, and loss of green cover intensify heat and instability.
4. Scientific Estimate - Lightning activity could increase 10–12% for each degree of warming.

Government Measures

India has recognised lightning as a serious hazard but has not yet classified it as a national natural disaster, which would trigger compensation mechanisms. Still, several steps have been taken -

a) Forecasting and Alerts -IMD now predicts lightning with 86% accuracy using radar, satellite, and AI-based models.

Multi-stage alerts -

1. 5-day potential area warnings.
2. District-level alerts 48 hours ahead.
3. Real-time polygon maps updated every 3 hours.

DAMINI App - Sends instant lightning alerts to mobile phones.

b) Mitigation Projects -₹186 crore National Lightning Mitigation Project in 50 districts across 10 states. High-risk areas identified near water bodies, hills, and open farmland.

c) State Initiatives -Odisha - Declared lightning a state-specific disaster (2015), planted 1.9 million palm trees as natural conductors. Localised awareness drives in panchayats and schools.

d) Infrastructure and Outreach -Smart poles in villages with loudspeakers and CCTV for emergency alerts. WhatsApp groups for community safety coordinators.

Challenges in Implementation

Despite technological progress, challenges persist -

1. Last-Mile Gaps - Delays in passing alerts from IMD to end-users.
2. Awareness Deficit - Many rural and urban poor remain unaware of lightning safety protocols.
3. Behavioural Inertia - People often ignore warnings during work hours, especially in agriculture and informal labour.
4. Urban Vulnerability - In cities, economic status and infrastructure determine safety — informal workers face higher risks.

Lessons Learned

The data and recent disasters show that -

1. Lightning is no longer a rural-only threat — urban areas must prepare.
2. Climate change adaptation is as important as emission control.
3. Early warning systems save lives only when paired with public responsiveness.
4. Nature-based solutions (trees, wetlands) must complement technology.

Suggestions for the Way Forward

1. National Disaster Classification - Declare lightning a national disaster for uniform compensation and preparedness funding.

2. Universal Awareness Campaigns - Door-to-door outreach, school drills, and community training on safe shelters during storms.

3. Integrating Technology - Combine DAMINI app alerts with cell tower-based SMS to reach all mobiles. AI-powered local forecasts linked to municipal sirens.

4. Infrastructure Protection - Install lightning arresters in public buildings, transport hubs, and rural schools.

5. Urban Planning Measures - Increase green cover to reduce heat island effects.

6. Scientific Research - More studies on lightning patterns under changing climate conditions.

Conclusion

Lightning is a silent but deadly hazard, often overshadowed by more dramatic disasters like floods and cyclones. Its rising frequency, geographical spread, and urban intrusion demand a nationally coordinated approach. Combining scientific forecasting, community outreach, resilient infrastructure, and climate adaptation policies can reduce fatalities drastically. The ultimate goal is simple yet critical — to ensure that no life is lost to a hazard that is both predictable and preventable.

Main Practice Question

"Lightning-related disasters are a growing threat in India, exacerbated by climate change and inadequate mitigation measures. Discuss the causes, socio-economic impacts, and strategies for effective prevention and adaptation."

Answering Guidelines -

1. Introduction -Define lightning and its nature as a sudden electrostatic discharge. Mention rising frequency in India and recent incidents.

2. Body

1. Causes

1. Meteorological factors - convection, moisture, instability.
2. Role of climate change - higher temperatures increasing thunderstorm intensity.

2. Socio-Economic Impacts

1. Human fatalities (highlight vulnerable groups like farmers).
2. Damage to infrastructure, livestock, and agriculture.
3. Economic costs and impact on rural livelihoods.

3. Administrative and Policy Challenges

1. Gaps in early warning systems.
2. Lack of community awareness and preparedness.
3. Limited adoption of lightning-safe infrastructure in rural areas.

4. Strategies for Mitigation and Adaptation

1. Strengthening real-time lightning detection and warning networks (e.g., Damini app).
2. Incorporating lightning safety into disaster management plans.
3. Community-based awareness campaigns.
4. Lightning protection infrastructure (e.g., arresters in public spaces, schools).
5. Integration of lightning risk in climate resilience strategies.

3. Conclusion -Emphasise the need for a proactive, technology-driven and community-centred approach. Link lightning risk mitigation to broader climate change adaptation and disaster risk reduction goals.

26. Mission Sudarshan Chakra

India's defence capability took a major leap forward when the Defence Research and Development Organisation (DRDO) successfully conducted the maiden flight tests of the Integrated Air Defence Weapon System (IADWS) off the Odisha coast. This achievement marks a critical milestone under the larger frame-work of Mission Sudarshan Chakra, which aims to establish a multi-layered, homegrown security shield by 2035 to protect the nation from multi-domain threats. The test has attracted significant attention not only because of its advanced technological parameters but also for its symbolism in India's growing pursuit of strategic self-reliance and indigenous defence innovation.

Explaining the Sudarshan Chakra Test

The Integrated Air Defence Weapon System (IADWS) tested recently is a multi-layered defence system, designed and developed indigenously by DRDO. The system combines -

1. Quick Reaction Surface-to-Air Missiles (QRSAM) – capable of engaging high-speed aerial targets at medium ranges.
2. Very Short-Range Air Defence Missiles (VSHORADS) – designed to neutralise low-flying aerial threats such as drones, helicopters, and attack aircraft.
3. Directed Energy Weapons (DEW) – high-power laser systems to disable and destroy enemy drones and aerial vehicles. All components of the system are networked through a Centralised Command and Control Centre, ensuring seamless coordination, real-time monitoring, and precision engagement.

During the test, three different aerial targets – including high-speed unmanned aerial vehicles and multi-copter drones – were simultaneously intercepted and destroyed by different layers of the IADWS. Importantly, the flawless functioning of radars, communication systems, and the integrated command structure was validated during these trials.

Key Parameters of the Test

1. Simultaneous Engagement – Multiple targets of different speeds and altitudes neutralised at once.

2. Use of Multiple Weapons – QRSAM, VSHORADS, and DEW functioned together under centralised command.

3. Indigenous Technology – All major components were developed within India, showcasing Atmanirbhar Bharat in defence.

4. Multi-Layered Shielding – Capacity to defend against long-range missiles, UAVs, and enemy aircraft simultaneously.

Difference from Previous Systems

India already operates powerful air defence assets like -

1. S-400 Triumf (Russian origin)
2. Barak 8 MRSAM (joint Indo-Israel system)
3. Akash Missile System (indigenous)

However, the Sudarshan Chakra initiative differs in several ways -

1. Fully Indigenous Development - Unlike the S-400 and Barak, IADWS is entirely homegrown.
2. Directed Energy Weapons - First operational integration of laser-based systems into India's defence shield.
3. Multi-Domain Coverage - Goes beyond missiles by integrating surveillance, cyber defence, and counter-drone technologies.
4. Future-Oriented - Designed to be the backbone of a comprehensive security grid by 2035.

Significance of the Test

1. Strategic Autonomy – Reduces dependency on foreign suppliers for critical defence technology.

2. Comprehensive Protection – Multi-layered defence ensures safeguarding of critical infrastructure, borders, and cities.

3. Counter to Modern Threats – With drones, swarm attacks, and hypersonic missiles becoming more common, IADWS addresses future warfare challenges.

4. Boost to Defence Industry – Encourages participation of private sector and start-ups alongside DRDO, spurring domestic innovation.

5. Geopolitical Significance – Signals to adversaries that India is rapidly advancing its indigenous defence preparedness.

Role in Operation Sindoor

The relevance of a strong integrated defence grid was seen during Operation Sindoor, when Indian armed forces successfully intercepted Pakistani drones and missiles. Systems like S-400, Barak 8, and Akash were crucial in neutralising these threats. The newly tested IADWS, when integrated with IAF's Integrated Air

Command and Control System (IACCS) and the Army's Akashteer, will provide a more synchronised, layered, and future-ready shield, strengthening the lessons learnt from Operation Sindoor.

DRDO's Vision

DRDO's long-term vision is to establish India as a global leader in indigenous defence technology. With systems like IADWS, it is moving beyond conventional missiles towards -

1. Laser-directed energy systems,
2. Integrated command platforms, and
3. Cyber-physical defence networks.

The roadmap under Mission Sudarshan Chakra also ties into the larger vision of India@2047, where India aspires to become a leading global defence power, not just a buyer of arms.

Relevance to India's Defence Pride

India's defence ecosystem has traditionally been dependent on imports. Achievements like IADWS symbolise a paradigm shift towards Atmanirbharta (self-reliance). It boosts national pride by -

1. Demonstrating scientific innovation capacity.
2. Strengthening strategic deterrence against adversaries.
3. Enhancing employment and skill development in defence industries.

This test also resonates with the historical symbolism of the Sudarshan Chakra – Lord Vishnu's weapon of protection and righteousness – now embodied as India's technological shield of security and sovereignty.

Conclusion

The successful maiden test of the Integrated Air Defence Weapon System under Mission Sudarshan Chakra is not just a scientific milestone but a strategic leap for India's security architecture. It marks the beginning of a new era of multi-layered, indigenous defence shield capable of tackling modern threats ranging from drones to long-range missiles. In the coming years, the challenge will lie in fast-tracking production, ensuring seamless integration with existing systems, and continuous upgradation to stay ahead of evolving threats.

Main Practice Question –GS Paper III (Science & Tech / Internal Security).

"Critically examine the significance of DRDO's Integrated Air Defence Weapon System (IADWS) under Mission Sudarshan Chakra in strengthening India's multidomain security architecture. How does it redefine India's defence self-reliance and strategic posture?"

Answering Guidelines

1. Introduction (40–50 words) -Define IADWS and mention its recent maiden test by DRDO. Situate it within Mission Sudarshan Chakra (2035) as part of India's push for multi-layered, indigenous defence shield.

2. Body

(a) Key Parameters of IADWS

1. Indigenous QRSAM, VSHORADS, and Directed Energy Weapons.
2. Centralised Command & Control integration.
3. Multi-layered interception capability (missiles, drones, UAVs).

(b) How it Differs from Previous Systems

1. Beyond imported systems like S-400; emphasizes indigenous, integrated development.
2. Incorporates laser-based DEWs (next-gen tech).
3. Multi-domain integration with IAF's IACCS and Army's Akashteer.

(c) Significance

1. Enhances air defence against UAVs, long-range missiles, cyber threats.
2. Reduces dependence on foreign systems → aligns with Atmanirbhar Bharat.
3. Boosts confidence after successes in Operation Sindoor.

(d) Challenges and Concerns

1. Need for sustained funding and private sector participation.
2. Cybersecurity vulnerabilities in networked defence systems.
3. Integration across services requires institutional synergy.

(e) Broader Implications for India's Defence Posture

1. Strengthens deterrence against adversaries.
2. Expands role as a responsible regional power.
3. Showcases India's defence R&D capabilities globally.

3. Conclusion (40–50 words) -Summarize that IADWS under Mission Sudarshan Chakra is a strategic leap in India's defence evolution. Emphasize it as both a shield and symbol of India's rising technological self-reliance. Future success depends on innovation, integration, and sustained policy support.

27. The Prime Minister Internship Scheme

India's journey towards becoming a $5 trillion economy hinges on its demographic dividend — the energy, ideas, and ambition of its youth. But tapping into this potential requires one key enabler - opportunity. Recognising this, the Government of India introduced the Prime Minister Internship Scheme (PMIS) in the Union Budget 2024–25. Designed to bridge the gap between academic knowledge and industrial skill, PMIS seeks to provide structured, inclusive, and meaningful internship opportunities for India's young population.

Explaining the Scheme

The PMIS aims to provide internship opportunities to one crore youth over a five-year period. It is focused on students and fresh graduates from diverse backgrounds — particularly from Scheduled Castes (SCs), Scheduled Tribes (STs), Other Backward Classes (OBCs), and Persons with Disabilities (PwDs). The scheme began with a pilot project in October 2024, with a target of 1.25 lakh internships in the first year. As of July 2025, over 71,000 offers had been made by 327 companies, against 4.5 lakh applications — highlighting the overwhelming response from aspirants and the increasing private sector engagement.

Nature of Partnership with Corporates

One of the most innovative features of PMIS is its collaborative model between government and private enterprise. The Ministry of Corporate Affairs (MCA) acts as the nodal agency, coordinating between companies and candidates. The top 500 companies, including major PSUs like ONGC and Oil India Ltd, have come on board. These companies post internship roles on a centralised digital platform, and students apply directly through it. Shortlisting is done by the platform, ensuring transparency and fairness, and partner companies conduct the final selection. Importantly, the scheme does not mandate financial compensation, but encourages companies to offer a stipend and certificate of experience, both of which are essential for future employability.

Advantages of the Scheme

PMIS provides multiple systemic benefits -

1. Bridges the Industry-Academia Gap - Many graduates face joblessness not due to a lack of degrees but due to lack of experience. PMIS gives students exposure to the actual work environment and business processes.
2. Structured Pathways to Employment - Internships are often the first step toward full-time employment. The structured nature of the scheme increases the chances of conversion to jobs.
3. Diversity and Inclusion - With a focus on socially disadvantaged communities, PMIS ensures that the benefits of economic progress reach every stratum of society.
4. Digital Infrastructure - The platform-based application and tracking mechanism ensure speed, transparency, and minimal paperwork.

Benefits for Aspirants

For India's youth, particularly from rural or underprivileged backgrounds, PMIS is a game-changer

1. Real-world Exposure - Many applicants, especially first-generation learners, gain their first experience of a formal corporate setup through this scheme.
2. Skill Development - Interns learn communication, digital tools, teamwork, and workplace discipline — skills that go beyond textbooks.
3. Networking Opportunities - Interacting with industry professionals expands horizons and boosts confidence.
4. Resume Value - The internship certificate adds weight during future job searches or higher education applications.

Socio-Economic Impact

PMIS is not just about jobs — it's about inclusive development. By prioritising SC/ST/OBC and PwD candidates, the scheme contributes to -

1. Economic Mobility - Helping underprivileged youth get a foot in the door.
2. Regional Balance - States like Assam and Uttar Pradesh have seen large numbers of internship candidates, addressing the urban-rural opportunity divide.
3. Entrepreneurial Thinking - Exposure to business environments often plants the seeds for future start-ups or self-employment ventures.
4. Gender Empowerment - With a likely increase in women applicants, the scheme can become a driver for gender inclusion in the workforce.

As internship culture grows, India's economic base becomes not only stronger, but also more inclusive and socially just.

Challenges and the Way Forward

Despite its promise, the scheme has faced early hiccups. In the first round, only 8,700 out of 28,000 selected candidates actually joined — a conversion rate of less than 15%. Reasons include lack of clarity, low or no stipends, geographic mismatch, and poor awareness.

To address this -

1. Stipend Support - A limited government subsidy to ensure all interns receive basic support could incentivise participation.
2. Better Awareness Drives - Colleges, training institutes, and civil society organisations must help spread the word and guide applications.
3. Regional Matching - Efforts should be made to match candidates with companies near their home regions.
4. Digital Support and Counselling - Hand-holding and mentorship through digital platforms and mobile apps can help reduce dropout rates.

Conclusion

The Prime Minister Internship Scheme is a bold attempt to align youth aspirations with economic realities. With strategic tweaks and continuous monitoring, it can become a foundational pillar of India's skilling and employment ecosystem. As India seeks to compete globally and lift millions into the formal economy, initiatives like PMIS show that true development is not just in GDP numbers but in the dignity of opportunity offered to every young Indian.

Main Practice Question

Critically evaluate the Prime Minister Internship Scheme (PMIS) in terms of its potential to bridge the industry-academia gap and promote inclusive socio-economic development. Discuss key challenges and suggest measures for effective implementation.

Answering Guidelines -

1. Introduction -Briefly introduce PMIS, highlighting its objective to provide internship opportunities to one crore youth over five years and its focus on inclusivity (SCs, STs, OBCs, PwDs).

2. Body

1. Industry-Academia Gap Bridging

Discuss how PMIS provides real-world exposure, practical skill development, workplace discipline, and increases employability among graduates lacking experience.

2. Inclusive Socio-Economic Development

Analyze the scheme's emphasis on marginalized groups, regional balance, gender empowerment, and entrepreneurial thinking leading to economic mobility and social justice.

3. Operational and Implementation Challenges

Examine issues such as low conversion rates, stipend inadequacy, geographic mismatches, lack of awareness, and digital illiteracy affecting scheme uptake.

4. Suggested Measures for Effective Implementation

Recommend government stipend support, awareness campaigns, localized matching of interns and companies, mentorship, digital counseling, and continuous monitoring.

3. Conclusion -Summarize PMIS as a transformative initiative with potential to enhance India's skilled workforce and social equity, subject to strategic improvements and commitment.

28. Operation Sindoor - Military Ethics, Civilisational Assertion & India's Strategic Resolve

Introduction

Operation Sindoor is not merely a military retaliation; it is an ethical, symbolic, and strategic act that reflects the deep civilisational philosophy of India. It was launched to counter decades of terrorism emanating from Pakistan's soil, without targeting civilian lives or non-combatant infrastructure. It illustrates a critical balance between assertiveness and restraint, peace and punishment.

Ethical Dimension of Military Retaliation

India's strategic doctrine is grounded in the idea of "just war" or Dharma Yuddha. This ancient ethical code emphasizes righteous warfare—war as a last resort, proportionate in force, and directed only at perpetrators of injustice. In Operation Sindoor -

1. Only terrorist infrastructure was targeted - Lashkar-e-Taiba camps in Muridke and Jaish-e-Mohammed complexes in Bahawalpur.
2. The Pakistani military and civilian targets were deliberately spared, underlining India's moral high ground.
3. This selective targeting reflects India's adherence to international humanitarian law and its strategic culture of restraint.

Zero Tolerance on Terrorism - A Clear Message

The operation sent a crystal-clear message—India will no longer tolerate terrorism or the use of nuclear threats as a shield for proxy warfare. By striking deep inside terror camps, India established -

1. The end of strategic restraint that previously gave immunity to terror hubs.
2. A declaration of new rules of engagement - Any terror attack is equal to war and will attract proportional response.
3. The deconstruction of the nuclear bogey long used by Pakistan to paralyse Indian countermeasures.

Water and Terror - Indivisible Red Lines

In his post-operation address, Prime Minister Narendra Modi invoked the phrase, "blood and water cannot flow together."

1. This reflects India's new resolve to treat terrorism as an existential challenge, on par with water security.
2. It draws from Indian tradition, where rivers are considered sacred and pure, and terrorism—associated with death and destruction—is its antithesis.
3. This also symbolizes India's potential reconsideration of Indus Water Treaty obligations in the face of cross-border terror, reinforcing a new moral calculus in foreign policy.

The Symbolic Assertion of 'Sindoor'

The code name "Sindoor" was deeply symbolic. In Indian tradition -

1. Sindoor (vermillion) is associated with the honour of a woman, the essence of life, and the sanctity of family and society.
2. By naming the operation after this symbol, the Indian state conveyed that an attack on the Indian people is an assault on the soul of Bharat.
3. The destruction of terror bases thus becomes not only a tactical strike but a civilisational act of protecting honour and sanctity.

Strategic Significance and Military Readiness

Operation Sindoor also showcased India's technological and operational superiority -

1. The Indian Air Defence System successfully neutralized multiple Pakistani aerial attacks.
2. Chinese-supplied weapon systems to Pakistan (like J-10 jets and HQ-9 missiles) failed miserably, creating strategic embarrassment for Beijing.
3. The Indian military demonstrated readiness to operate even in a two-front war scenario, reinforcing deterrence against both Pakistan and China.

Civilisational Doctrine - Dharma as State Policy

Unlike traditional realpolitik powers, India's statecraft is rooted in Dharma, or moral order -

1. Operation Sindoor signifies the reinstatement of that Dharma—that peace must be protected by strength.
2. The notion that "Shakti (power) is the instrument of peace" resonates in India's broader spiritual and cultural texts, like the Mahabharata.
3. The operation can be seen as a 21st-century application of that ancient wisdom - Strike only when needed, but strike with full force and clear conscience.

A New Strategic Doctrine for a Peaceful Future

This operation lays the foundation for a more assertive India on the global stage -

1. India has moved from a reactive to a pre-emptive strategy in counterterrorism.
2. It is also sending a signal to adversaries - India's patience is strategic, not endless.
3. Peace is a priority, but it will no longer come at the cost of national dignity or civilian safety.

Conclusion - Strength is Peace

Operation Sindoor represents more than a military mission. It is a civilisational awakening, a statement that modern India is willing and able to defend its people, its culture, and its values.

By upholding military ethics, targeting only the guilty, refusing to compromise on terror or sacred treaties, and evoking the sanctity of feminine honour through "Sindoor," India has rewritten its rules of engagement — not with malice, but with morality.

Main Practice Question -(GS Paper II or III or IV)

1. "Operation Sindoor signifies a shift in India's military doctrine—rooted in civilisational ethics yet defined by strategic clarity and zero-tolerance to terror." Critically examine this in the context of India's evolving national security posture.

1. Introduction (50–80 words) -Briefly explain Operation Sindoor and its context - A pre-emptive, multi-pronged strike on terror camps in Pakistan-occupied territory. Introduce the duality of India's posture — ethically grounded yet assertive militarily.

2. Body

1. Civilisational and Ethical Foundations (100–150 words)

1. Reference to Dharma Yuddha—the principle of righteous war.
2. Explain how India avoided civilian and state targets, upholding international law and Indian ethos.
3. Symbolism of "Sindoor" — rooted in Indian culture as representing honour, especially of women — reflects the moral high ground and civilisational assertion.

2. Strategic and Doctrinal Shifts (150–200 words)

1. Erosion of Pakistan's nuclear blackmail narrative — India's move from strategic restraint to calibrated retaliation.
2. Use of advanced indigenous systems like Akash, Rudram, and BVRAAMs — signs of techno-strategic maturity.
3. Two-front war readiness - message to both Pakistan and China.
4. Assertive statements from leadership — "blood and water can't flow together" — marking a shift to clear red lines.

3. Zero Tolerance to Terrorism (100–150 words)

1. A doctrinal shift that equates terror acts with acts of war.
2. Strategic messaging to the global community - India will respond decisively, regardless of geopolitical pressure.
3. Counterterrorism policy now includes pre-emptive capabilities and deep-strike assets.

4. Implications for Peace and Stability (100–150 words)

1. Emphasis on deterrence-based peace - "Strength is peace".
2. India's model - peace is pursued not through appeasement but by asserting deterrence.
3. Message to adversaries and global allies - India's intent is peace but not passivity.

3. Conclusion (50–80 words) -Restate the broader significance - Operation Sindoor is not just a military strike, but a statement of India's civilisational values blended with hard power. Acknowledge challenges, like global diplomatic pressures, but reaffirm the emerging doctrine of assertive, ethical statecraft.

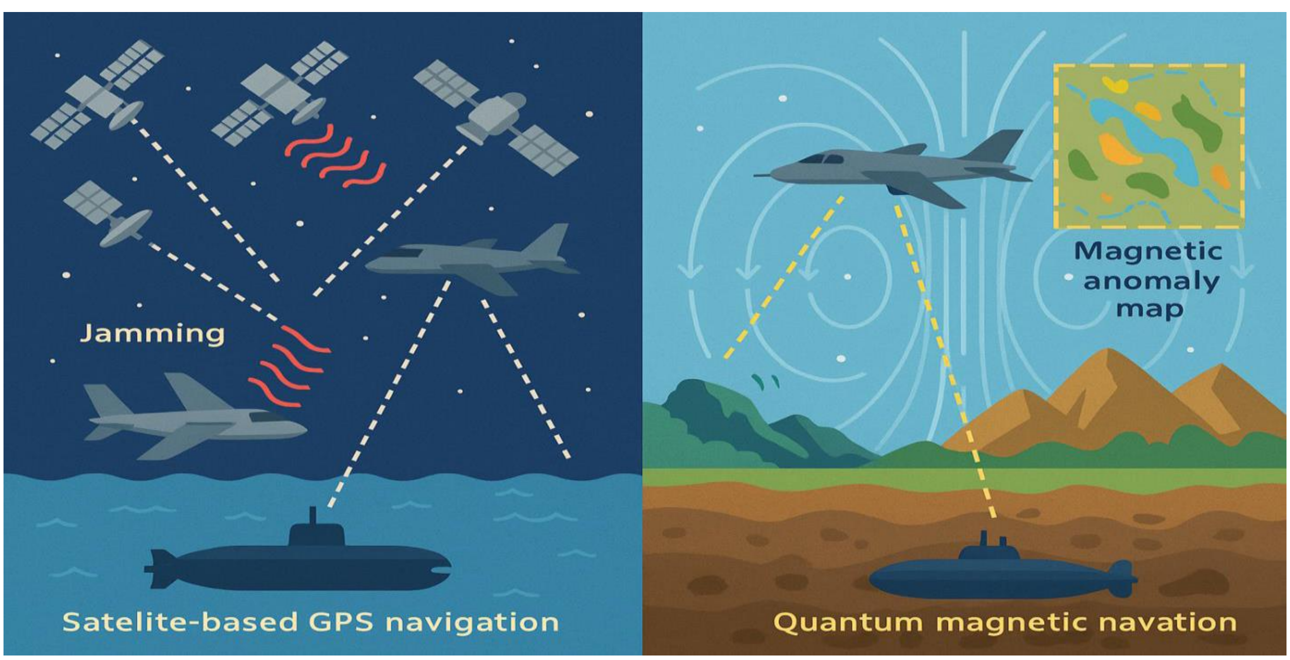
29. Quantum Magnetic Navigation System (QMNS)

Introduction

In modern warfare and high-precision operations, navigation plays a critical role. Traditionally, navigation systems have relied on satellite-based positioning, such as GPS (USA), GLONASS (Russia), Galileo (EU), and BeiDou (China). These systems have been the backbone for military, commercial, and civilian navigation. However, recent conflicts — from Ukraine to West Asia — have revealed a vulnerability - satellite navigation can be jammed, spoofed, or even disabled by adversaries. This has led to the urgent search for alternative navigation systems that work even in GPS-denied environments. One promising technology is the Quantum Magnetic Navigation System (QMNS).

QMNS

The Quantum Magnetic Navigation System is an advanced navigation method that does not rely on satellites. Instead, it uses quantum sensors — particularly quantum magnetometers — to detect tiny variations in Earth's magnetic field.



How it works -

1. Earth's crust has unique magnetic "fingerprints" called magnetic anomalies.
2. QMNS uses ultra-sensitive quantum magnetometers to measure these anomalies.
3. The system compares real-time measurements with magnetic anomaly maps to pinpoint location.
4. When combined with Inertial Navigation Systems (INS), it gives highly accurate, drift-free positioning.

Because QMNS does not require satellites, it is immune to GPS jamming, spoofing, or anti-satellite attacks.

Applications of QMNS

A. Military

1. Air Warfare - Precise navigation for stealth aircraft and drones in hostile electronic environments.
2. Naval Warfare - Submarine and Unmanned Underwater Vehicle (UUV) navigation in GPS-denied waters.
3. Special Forces - Covert missions in areas without satellite coverage.

B. Civilian and Economic

1. Undersea Mining - Accurate mapping and navigation for mineral extraction.
2. Oil and Gas Exploration - Positioning in complex underwater terrains.
3. Cable and Pipeline Inspection - Locating and maintaining subsea infrastructure.
4. Maritime Safety - Navigation in the Indian Ocean Region, especially in bad weather.

Advantages over Existing Systems Feature	Satellite Navigation (GPS/GLONASS/etc.)	Quantum Magnetic Navigation (QMNS)
Dependency	Requires satellite signal	Works without satellites
Vulnerability	Prone to jamming, spoofing, anti-satellite attacks	Resistant to electronic warfare
Underwater Use	Not possible underwater	Fully functional underwater
Accuracy	High in clear conditions, but fails if jammed	High, even in GPS-denied zones
Drift Over Time	INS drifts without satellite update	Minimal drift when combined with INS

Why is QMNS Important for India?

1. Strategic Security - India's location in the Indian Ocean Region (IOR) makes maritime security a top priority. With increasing Chinese submarine activity and electronic warfare capabilities, India needs denial-proof navigation.

2. Underwater Domain Awareness - As the world competes for seabed resources, India must have the ability to operate submarines, UUVs, and deep-sea research vessels without relying on foreign satellites.

3. Resilience in Conflict - Adversaries can target India's NavIC or allied GPS systems. QMNS provides an independent, sovereign navigation method.

4. Boosting the Blue Economy - Sectors like undersea mining, deep-sea fishing, oil exploration, and shipping can benefit from precise, always-on navigation.

Measures for Development in India

India is already making early moves -

1. National Quantum Mission (₹6,000 crore) - Focuses on quantum sensing, computing, and communications.
2. DRDO Quantum Technology Research Centre - Developing quantum magnetometers, gyroscopes, and atomic clocks.
3. IIT Bombay - Creating portable quantum sensors for drones and marine use.
4. Startups - QuBeats received ₹25 crore under ADITI 2.0 Defence Challenge to develop a Quantum Positioning System for the Indian Navy.

Suggested Steps Forward -

1. Accelerate R&D through defence–academia–industry collaboration.
2. Develop indigenous magnetic anomaly maps of Indian territory and oceans.
3. Integrate QMNS with existing INS and NavIC for hybrid, multi-modal navigation.
4. Set up field trials with the Navy, Air Force, and Coast Guard.
5. Promote dual-use (civil + defence) applications to justify investment.

Challenges

1. High Cost - Quantum sensors and mapping infrastructure are expensive.
2. Magnetic Anomaly Data - Requires large-scale, precise mapping of Earth's magnetic field.
3. Miniaturisation - Making the system compact enough for drones, aircraft, and small submarines.
4. Skill Shortage - Need for more trained quantum physicists and engineers in India.

Lessons from Other Countries

1. China - Reportedly nearing operational deployment on submarines.
2. USA - DARPA's AQNav integrates quantum navigation with AI for superior performance.
3. UK & Germany - Jointly working on quantum navigation for next-gen submarines.

India can adapt these models by blending government funding, military application, and private innovation.

Conclusion

The world is entering an era where navigation superiority will define strategic advantage. Satellite systems like GPS will remain important, but they are increasingly vulnerable. Quantum Magnetic Navigation Systems (QMNS) offer a resilient, high-precision, and denial-proof alternative.

For India, investing in QMNS is not optional — it is a strategic necessity. It will strengthen defence capability, secure maritime interests, and boost the Blue Economy. By acting decisively now, India can leapfrog into the next generation of navigation technology and ensure sovereignty in both physical and digital navigation domains.

Main Practice Question

1. "In the context of growing vulnerabilities in satellite navigation systems, critically examine the potential of Quantum Magnetic Navigation Systems (QMNS) for India's defence and economic security, highlighting challenges and policy measures for its development."

Answering Guidelines

1. Introduction (30–40 words) -Briefly explain the increasing vulnerability of GPS/GLONASS/BeiDou/Galileo due to jamming, spoofing, and anti-satellite threats. Introduce QMNS as a denial-proof, satellite-independent navigation technology.

2. Body

1. Importance of QMNS (150–180 words)

1. Defence - Remote warfare, submarine navigation, UAV operations in GPS-denied zones, electronic warfare resilience.
2. Civil/Economic - Deep-sea mining, undersea cable maintenance, oil exploration, maritime safety.
3. Strategic Autonomy - Reducing reliance on foreign satellite constellations, complementing NavIC.
4. Indian Ocean Region Security - Tracking adversarial vessels, ensuring undersea domain awareness.

2. Advantages over Conventional Systems (100–120 words)

1. Works without satellites.
2. Immune to jamming/spoofing.
3. Functions underwater where GPS fails.
4. Minimal drift when combined with INS.
5. Can integrate with AI and magnetic anomaly mapping for precision.

3. Challenges (80–100 words)

1. High cost of R&D.
2. Need for detailed magnetic anomaly maps of India's land and oceans.
3. Miniaturisation of quantum sensors for deployment on drones and small submarines.
4. Skilled workforce gap in quantum engineering.
5. Early-stage nature of India's prototypes.

4. Measures for Development (100–120 words)

1. Accelerate National Quantum Mission implementation for defence and civilian applications.
2. DRDO–IIT–startups collaboration (example - QuBeats project).
3. Build indigenous magnetic anomaly database.
4. Dual-use technology development for economic and security purposes.

5. International collaboration while ensuring tech sovereignty.

3. Conclusion (40–50 words) -QMNS is a strategic necessity, not a luxury, for India's future navigation security. Timely investment now can allow India to leapfrog to a sovereign, resilient, next-generation navigation capability — critical for both national security and economic growth.

30. India's Rise as a Global Rice Power- Achievements, Challenges & Way Ahead.

India, a country known for its rich agricultural heritage, has achieved a historic milestone in rice cultivation. With an estimated production of over 149 million tonnes in 2024-25, India has become the world's largest producer of rice, surpassing China. This achievement not only highlights the strength of Indian agriculture but also reflects India's growing influence in global food security.

India's Achievement in Rice Cultivation

India's emergence as the top rice producer and exporter is a remarkable feat considering its population of over 1.4 billion and the dominance of small and marginal farmers in its agrarian structure.

Key achievements include-

1. 149 million tonnes of rice produced in 2024-25
2. Over 40% share in global rice exports since 2012
3. Government stock of 59.5 million tonnes, far above the buffer norms.
4. Expansion of rice-growing area to 51.5 million hectares
5. Rise in average yield from 3.6 to 4.32 tonnes/hectare in a decade

Reasons Behind the Achievement

Several interconnected factors have contributed to this rice revolution-

1. Agricultural Research & Innovation- Development of high-yielding varieties like IR-8, Jaya, and Ratna. Continuous innovation by Indian research institutions in pest resistance and climate-resilient varieties.

2. Green Revolution Legacy- Building on the 1960s' gains, rice followed wheat in adopting scientific farming methods.

3. Government Policies-

1. Minimum Support Price (MSP) for paddy procurement.
2. Subsidised seeds, fertilisers, electricity, and irrigation.
3. Public distribution system supporting rice growers.

4. Farmer Adaptability- Willingness to adopt new technologies despite landholding constraints.

5. Strong Export Ecosystem- Parboiled and basmati rice exports make India a global player.

Problems in Rice Cultivation in India

Despite these accomplishments, rice farming in India faces significant structural and environmental challenges-

1. Water Inefficiency -Rice is a water-intensive crop requiring 15,000 litres of water per kg, much higher than necessary. 45-50% of irrigation water in India is consumed by paddy fields alone.

2. Groundwater Depletion -Particularly alarming in states like Punjab and Haryana due to excessive flooding and tubewell irrigation.

3. Environmental Impact -Methane emissions from flooded rice fields contribute to greenhouse gases.

4. Climate Vulnerability - Irregular monsoons, heatwaves, and floods are increasingly affecting yields.

5. Soil Degradation & Chemical Use- Over-reliance on fertilisers and pesticides harms long-term soil health.

Sustainable Development Challenges

To ensure long-term food security, India must address the sustainability of rice cultivation.

Key Concerns-

1. Unsustainable use of water in traditional transplantation methods.
2. Soil erosion and reduced biodiversity in mono-cropping systems.
3. Greenhouse gas emissions and carbon footprint of conventional rice farming.

Solutions Through Sustainable Practices

India has begun implementing alternative, sustainable farming techniques-

1. Direct Seeded Rice (DSR) - Seeds are sown directly in the field instead of transplanting. Saves up to 60% water, reduces methane emission and labour.

2. Alternate Wetting and Drying (AWD)- Fields are allowed to dry intermittently instead of constant flooding. Improves water-use efficiency and decreases GHG emissions.

3. Climate-Resilient Varieties- Use of heat, drought, and flood-tolerant strains developed by ICAR and IRRI.

4. Integrated Nutrient & Pest Management- Balanced fertiliser use and biological pest control over chemical inputs.

5. Agri-Tech Integration-Use of drones, AI-based monitoring, and satellite-based crop health tracking.

Government Measures

To promote sustainable rice production, the Indian government has undertaken several initiatives-

National Food Security Mission (NFSM)- Focus on improving productivity, reducing yield gaps, and promoting sustainable methods.

Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)- Aims at 'more crop per drop' through micro-irrigation and better water management.

Soil Health Card Scheme- Encourages balanced fertiliser usage based on soil health diagnostics.

Agri Export Policy- Strengthens India's position in global trade with infrastructure and logistics support.

Fasal Bima Yojana- Offers insurance coverage to reduce financial risks of crop failure.

Conclusion

India's success in rice cultivation is a global example of agricultural resilience, innovation, and policy support. However, with rising environmental concerns and water crises looming large, the country must now shift towards climate-smart agriculture and sustainable intensification of rice production. By promoting direct-seeded rice, improving irrigation efficiency, investing in research, and scaling up farmer education, India can ensure not only food security for its own people but also continue to support global markets.

The challenge now lies in transforming the rice revolution into a sustainable green legacy that nurtures both people and the planet.

Main Practice Question (GS Paper III – Agriculture / Environment / Economy)-

1. "India has emerged as the world's largest rice producer and exporter, yet faces grave sustainability challenges. Examine the factors contributing to its success and critically evaluate the sustainability of its rice cultivation practices." (30 words)

Answer Guidelines

1. Introduction (Approx. 50 words)

Briefly introduce India's achievement in rice cultivation-

1. World's largest producer and exporter of rice.
2. Achieved production of 149 million tonnes (2024-25).
3. Importance in global food security and domestic food grain self-sufficiency.

2. Body

I. Factors Contributing to India's Success (Approx. 150 words)

A. Technological Innovations -Development of high-yielding varieties (IR-8, Jaya, Ratna). Extensive rice breeding programs and pest-resilient strains.

B. Policy Support -MSP-based procurement and public distribution system. Input subsidies- fertilisers, irrigation, electricity.

C. Farmer Adoption -Small and marginal farmers adopting new technologies. Expansion of rice area- 43.5M ha → 51.5M ha. Productivity growth- 3.6 → 4.32 tonnes/ha.

D. Export Ecosystem -India's consistent role in global rice markets since 2012.

II. Sustainability Concerns in Rice Cultivation (Approx. 200 words)

A. Water Overuse -15,000 litres used to grow 1 kg paddy (vs. optimal 6,000). 45–50% of irrigation water consumed by paddy. Groundwater depletion in Punjab, Haryana.

B. Environmental Issues -Methane emissions from flooded rice fields. Soil degradation due to overuse of chemicals.

C. Climate Vulnerability -Rice yield exposed to monsoon failure, floods, and heatwaves.

III. Sustainable Practices and Technological Alternatives (Approx. 150 words)

A. Direct Seeded Rice (DSR) -Reduces water use by 30–60%, lowers methane emissions.

B. Alternate Wetting and Drying (AWD) -Intermittent irrigation increases water-use efficiency.

C. Climate-Resilient Varieties -Drought, flood, and heat-tolerant rice breeds.

D. Agri-tech Integration -Use of AI, drones, and satellite monitoring.

IV. Government Measures (Approx. 100 words)

1. NFSM, PMKSY, and Soil Health Card Scheme to improve productivity and water-use efficiency.
2. Fasal Bima Yojana to reduce risk.
3. Export support under Agri Export Policy.
4. Promotion of resource-conserving technologies via extension services.

3. Conclusion (Approx. 50–70 words) - India's rice revolution is a remarkable success but is not sustainable without reform. Transition from volume-centric to sustainability-centric agriculture is critical. With policy incentives and technological adoption, India can continue to lead the world while conserving natural resources.

31. Samudrayaan

India is preparing to make history — not in space this time, but deep beneath the ocean's surface. With the Samudrayaan mission, the country is working towards sending humans 6,000 metres below sea level in a made-in-India submersible. This bold step in deep ocean exploration mirrors the ambition of the Gaganyaan mission and places India among the elite nations exploring the Earth's final frontiers.

Samudrayaan

Samudrayaan is India's first manned deep-sea mission, under the broader Deep Ocean Mission launched by the Ministry of Earth Sciences (MoES). Its main goal is to send three humans — called aquanauts — down to 6,000 metres (6 km) beneath the sea in an indigenously developed submersible named Matsya6000. The Matsya6000 is being designed to withstand crushing underwater pressure, and it includes a titanium sphere, scientific instruments, and life-support systems to ensure the safety and functioning of the crew for up to 12 hours of operation (extendable to 96 hours in emergencies).

Recent Breakthroughs - Deepest Dives by Indians

In a significant milestone for India, two Indian aquanauts — Cdr (Retd) Jatinder Pal Singh and R Ramesh — recently dived to 5,002 metres and 4,025 metres, respectively, in the French submersible Nautile, in the Atlantic Ocean. This marks the deepest underwater journey by Indians so far. These dives were part of hands-on training and collaboration with France, offering Indian experts rare exposure to advanced deep-sea technology. The exercises lasted about 9.5 hours, involved using robotic arms, managing lightless conditions, checking emergency systems, and handling underwater communication using acoustic phones. This training mirrors how Indian astronauts are prepared through international missions like Axiom-4 for the Gaganyaan programme.

Why Samudrayaan Matters

1. Scientific Value -Deep-sea ecosystems are largely unexplored. By sending humans to such depths, researchers can - Study unique marine life and microbial communities. Collect valuable geological and mineral samples. Observe underwater tectonic activity, which is crucial for understanding earthquakes and tsunamis.
2. Strategic Significance-Deep Ocean missions also have a strategic dimension - They give India access to rare earth metals, cobalt, and manganese nodules on the seabed — key for green tech and electronics. They strengthen India's claim in international seabed resource management under UNCLOS (United Nations Convention on the Law of the Sea).
3. Technological Development -Designing a vessel like Matsya6000 pushes the boundaries of Indian science and engineering. The titanium sphere built by ISRO is 80 mm thick, with precision deviation of only 0.2 mm — a tiny margin, but critical for safety under immense pressure.

Government's Role and Preparations

The Ministry of Earth Sciences (MoES), ISRO, DRDO, and other agencies are jointly developing the technologies needed for the mission. Samudrayaan is scheduled to unfold in phases -

2026 - Trial run at 500 metres depth using a steel sphere.

Mid-2027 - Full integration of the titanium sphere and test dives.

2027–28 - Final mission to 6,000 metres.

The Government has also supported -Development of acoustic communication systems, since radio waves don't travel underwater. High-end sensors, life-support systems, and manipulators for undersea sampling. This investment also supports the larger Blue Economy vision of India, promoting sustainable use of ocean resources for economic growth, jobs, and ecosystem health.

Future Impact

1. Economic Potential -Seafloor minerals like polymetallic nodules can be game-changers for India's manufacturing and renewable energy sectors. These resources are vital for lithium batteries, solar panels, and electronic goods — reducing dependence on imports.

2. Scientific Leadership -If successful, India will become the sixth country after the US, Russia, China, France, and Japan to conduct crewed deep-sea missions. This will elevate India's global scientific standing and foster new collaborations.

3. Skill Development -The mission is already creating a pool of trained personnel in sub-sea engineering, robotics, and marine biology — essential for future explorations and industries.

4. Environment-Friendly Mining -India aims to lead in responsible deep-sea exploration, using Samudrayaan to study how to extract resources without harming marine ecosystems — something that's becoming a hot global topic.

Conclusion

Samudrayaan is more than a deep-sea mission. It's a symbol of India's rising capabilities — scientifically, technologically, and strategically. It complements the nation's space ambitions and shows how land, sea, and space are all part of India's development story. In the words of Union Science Minister Dr. Jitendra Singh - "We will have an Indian going to space and another diving 6,000 metres under the sea in our own mission by 2027." For civil service aspirants, Samudrayaan represents the convergence of science, policy, environment, and diplomacy — all crucial themes in modern governance. Understanding its goals, progress, and impact is essential for anyone preparing to shape India's future.

Main Practice Question - (General Studies Paper III)

1. Discuss the strategic, scientific, and environmental significance of India's Samudrayaan mission in the context of sustainable development and technological self-reliance.

Answering Guidelines –

To answer this question effectively, candidates should structure their response into clear sections demonstrating critical thinking, integration of facts, and broad awareness -

1. Introduction (30–40 words)

Briefly introduce Samudrayaan - India's first manned deep-sea mission under the Deep Ocean Mission. Mention the goal of exploring ocean depths up to 6,000 metres using the indigenous Matsya6000 submersible.

2. Body

1. Strategic Significance

Resource access - Potential for mining polymetallic nodules, cobalt, rare earth elements.

Geopolitical relevance - Enhances India's presence in international seabed governance under UNCLOS.

Technological parity - Puts India among the six countries capable of human deep-sea exploration.

2. Scientific Significance -Marine biodiversity studies in the hadal zone (beyond 6,000m). Geological and seismic data collection for earthquake prediction and plate movement analysis. Supports India's goals in oceanography and blue economy research.

3. Environmental and Sustainable Development Aspects -Enables research into climate regulation roles of deep-sea ecosystems. Promotes sustainable and low-impact mining techniques. Advances environmental baseline studies to frame future marine policies.

4. Technological Self-Reliance -Indigenous development of titanium hulls, acoustic systems, and life-support tech. Builds capacity in marine robotics, navigation, and undersea communication.

Reduces dependence on foreign deep-sea technologies.

5. Challenges to Address -High cost and engineering complexity. Safety risks at extreme pressure depths. Balancing resource extraction with ecological sensitivity.

3. Conclusion - Conclude by linking Samudrayaan with India's broader vision of "Viksit Bharat by 2047". Emphasize the role of such missions in ensuring science-led growth, technological leadership, and sustainable development.

32. India and the SCO - Rethinking Regional Strategy

Introduction - India's Refusal at the SCO

In April 2025, India made headlines when it refused to sign the Shanghai Cooperation Organisation (SCO) joint statement at the Defence Ministers' meeting in Qingdao, China. The reason - the omission of the April 22 Pahalgam terror attack in the statement, a move perceived by India as a clear dismissal of its security concerns. To make matters worse, the statement included references to insurgent activity in Balochistan, aligning more closely with Pakistan's narrative. India's Defence Minister Rajnath Singh sought to include a reference to Pahalgam but Pakistan vetoed it — leading to India's firm refusal to endorse the final document. This incident, while minor in formality, is symbolically significant. It reflects the limitations of relying on multilateral platforms like the SCO for support on sensitive security issues such as terrorism. It is also a signal for India to recalibrate its regional diplomacy and adapt to evolving strategic dynamics in South Asia.

Background - What is the SCO?

The Shanghai Cooperation Organisation was founded in 2001 by China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan. Over time, it expanded to include India and Pakistan in 2017, and most recently Iran in 2023. The SCO aims to enhance regional cooperation, particularly in the fields of security, counter-terrorism, economic collaboration, and cultural exchange.

For India, joining the SCO was initially viewed as an opportunity to -

1. Gain leverage in regional geopolitics,
2. Counter Chinese influence,
3. Push back against Pakistan's terrorism narrative in multilateral forums.

But events like the recent Defence Ministers' meeting prove that SCO's structure — where each member has veto power — makes genuine consensus difficult, especially when national interests collide.

The Pahalgam Incident and What It Reveals

India's proposal to mention the terror attack in Pahalgam (J&K) was blocked by Pakistan. Simultaneously, the inclusion of Balochistan — where Pakistan accuses India of supporting separatism — showed a clear diplomatic bias. The outcome underscores three key realities -

1. China's Deep Alliance with Pakistan - China, the dominant force in SCO, continues to act as Pakistan's strategic protector.

2. Russia's Strategic Drift - With Russia increasingly dependent on China post-Ukraine war, Moscow is unlikely to challenge Beijing or back India in forums like the SCO.

3. Pakistan's Resilience in Diplomacy - Despite domestic economic woes, Pakistan effectively uses forums like SCO to neutralize India's diplomatic narrative.

Key Lessons for India

This episode is a wake-up call for Indian foreign policy. It exposes two illusions that have long shaped India's regional posture -

Illusion 1 - That India can diplomatically isolate Pakistan in global and regional forums.

Illusion 2 - That India can unilaterally dictate terms to its smaller neighbours, like Bangladesh.

In reality, China's regional influence is growing — including stronger ties with both Pakistan and Bangladesh. Bangladesh's increasing openness to Chinese strategic initiatives, especially since the change in government in August 2024, has added a new layer of complexity to India's eastern flank. In reality, China's regional influence is growing — including stronger ties with both Pakistan and Bangladesh. Bangladesh's increasing openness to Chinese strategic initiatives, especially since the change in government in August 2024, has added a new layer of complexity to India's eastern flank.

Rethinking India's Regional Strategy

In light of emerging geopolitical complexities, India must recalibrate its regional strategy, moving beyond notions of diplomatic isolation and reactive posture. The need of the hour is strategic pragmatism — a forward-looking, multi-dimensional engagement with neighbours that ensures India's regional leadership while safeguarding national interests.

1. Forward Posture Towards Pakistan -India must adopt a proactive strategy towards Pakistan, especially in dealing with cross-border terrorism. While retaliatory action remains essential as deterrence, India should simultaneously develop mechanisms for measured diplomatic engagement, focusing on maintaining regional stability, exploring back-channel dialogues, and engaging with civil society and international partners to expose Pakistan's duplicity on terrorism.

2. Robust Posture with Bangladesh -India's relationship with Bangladesh must be rooted in mutual respect and strategic clarity. Dhaka is a critical partner, and India should actively strengthen economic and security ties. through trade liberalisation, infrastructure connectivity, and people-to-people initiatives. At the same time, India must firmly uphold its security red lines, especially in countering anti-India narratives and cross-border provocations.

3. Balancing China's South Asia Strategy -With China expanding its strategic footprint in South Asia, India must respond with regional coalition-building and assertive diplomacy. This includes strengthening multilateral platforms such as ASEAN, BIMSTEC, and the Indian Ocean Rim Association (IORA). Moreover, forming counter-strategic partnerships with countries like the Philippines, Taiwan, and Vietnam will reinforce India's presence in the Indo-Pacific and limit China's regional hegemony.

4. Reinvesting in South-South Diplomacy -India's historical leadership in South-South cooperation must be revitalised. With its rich civilizational legacy, democratic credentials, and development model, India must leverage soft power, cultural exchange, education diplomacy, and development assistance to rebuild trust and goodwill across the neighbourhood and the Global South.

Conclusion - Strategic Clarity over Sentimentalism

India's refusal to sign the SCO joint statement was a principled stand, but it also reflects the practical limitations of multilateral diplomacy when national interests diverge. The incident is a timely reminder that New Delhi must rely on smart, bilateral diplomacy, backed by hard power and consistent regional engagement — rather than expecting multilateral forums dominated by adversaries to reflect its strategic concerns. As China's South Asian footprint grows, and as Pakistan and Bangladesh recalibrate their foreign policy, India's best path forward lies in building resilient relationships, strengthening regional cooperation, and avoiding the strategic trap of over-reliance on flawed institutions like the SCO.

Main practice Question (GS Paper II – International Relations) -

1. "In light of India's refusal to sign the 2025 SCO Defence Ministers' Joint Statement, critically evaluate the limitations of multilateral platforms in addressing India's core security concerns. How should India recalibrate its regional strategy in response?"

Answer Guidelines -

Your answer should cover the following key points in a structured manner -

1. Introduction -

1. Briefly explain the context of India's refusal at the Shanghai Cooperation Organisation (SCO) Defence Ministers' meeting in Qingdao (2025).
2. Mention the omission of the Pahalgam terror attack and inclusion of Balochistan references, leading to India's principled dissent.

2. Body

1. Limitations of Multilateral Platforms like SCO -

1. Explain SCO's structure and consensus model (veto by any member blocks collective decisions).
2. Show how China and Pakistan manipulate the forum to suit their narratives.
3. Highlight Russia's strategic drift towards China, limiting its support to India.
4. Conclude that SCO's utility in counterterrorism cooperation for India is minimal.

2. Implications for India's Security and Diplomacy -

1. Underscore how such exclusions undermine India's counter-terror diplomacy.
2. Talk about the geopolitical isolation risks in a multilateral setting dominated by adversaries.
3. Impact on India's image, strategic autonomy, and regional leverage.

3. Rethinking India's Regional Strategy (from your earlier reformulated strategy) -

1. Forward posture with Pakistan (balanced deterrence + cautious diplomacy).
2. Robust engagement with Bangladesh (security + development cooperation).
3. Countering China in South Asia through regional coalitions (ASEAN, BIMSTEC, IORA).
4. Reinvesting in South-South and cultural diplomacy for long-term goodwill.

3. Conclusion -Reiterate that India must not rely solely on multilateral statements for its core concerns. India's regional strategy should be rooted in realism, strategic depth, and inclusive leadership.

33. 2026 - The Year of Soy –A Call for Nutritional and Agricultural Transformation

Introduction

India's soybean industry is at a turning point. Production has stagnated around 12.5 million tonnes in recent years, even as demand surges. Recognizing this, stakeholders have proposed declaring 2026 as the "Year of Soy", a national campaign to revitalise this nutritionally rich and economically vital crop. For Civil Services aspirants, understanding soybean's multifaceted role in agriculture, nutrition, and industry is essential.

Why 2026 Should Be the Year of Soy

The proposal to declare 2026 as the Year of Soy is timely and strategic. It provides a national platform to -

1. Raise awareness about soybean's nutritional value.
2. Encourage consumption, especially in protein-deficient populations.
3. Promote domestic production to reduce import dependency.
4. Boost the soy-based industry, which has strong job-creating potential.
5. Push for policy reforms in favour of sustainable soybean cultivation.

With soybean facing stagnation in both productivity and acreage, a focused year-long campaign can catalyse much-needed reforms and public engagement.

The Significance of Soybean in India

1. Nutritional Importance -Soybean is one of the richest plant-based protein sources, containing all 9 essential amino acids. It offers 40% protein and around 20% healthy fats (mono-and poly-unsaturated). It also contains fibre, vitamins (A, K), minerals (iron, calcium, zinc), antioxidants, and phytonutrients. Despite this, India's per capita soy consumption is just 2 grams/day, compared to 40g in China and 30g in Japan.

2. Agricultural and Economic Role -Cultivated mainly in Madhya Pradesh, Maharashtra, and Rajasthan, soybean covers about 11-12 million hectares. It is a dual-purpose crop—valuable for both oil extraction and protein feed. The soy industry supports animal feed, food processing, health supplements, and exports.

3. Potential for Food Security -With India battling protein malnutrition, especially among vegetarians and rural poor, soy-based foods can be a cost-effective protein source—cheaper than eggs or milk protein.

4. Industrial & Export Opportunity -India mainly exports de-oiled soy meal for animal feed. There's a growing global market for value-added soy products like tofu, soy milk, soy flour, and isolates—which India can tap into with better processing and quality control.

Problems in Soybean Cultivation and Promotion

1. Agronomic Challenges -Climate change has brought erratic rainfall and higher pest/disease pressure. Rising input costs and low-price realisation are dissuading farmers. Crop diversification trends show farmers shifting to paddy, sugarcane, or maize in pursuit of higher returns.

2. Low Consumer Acceptance -Taste, digestibility issues, and preference for dairy alternatives (milk, paneer, curd) restrict uptake. Anti-nutritional factors like trypsin inhibitors and phytates cause gas and poor absorption. Many people are unaware that proper soaking, cooking, or processing can remove these harmful compounds.

3. Lack of Awareness -Even educated consumers are unaware of soy's health benefits, preparation techniques, or potential uses. Marketing and branding of soy-based products remain weak compared to dairy or millet sectors.

4. Processing Limitations -India's soy processing units focus more on animal feed rather than high-value human food products. There is limited R&D in improving flavour, texture, and variety of soy foods for Indian taste preferences.

Measures Taken by Government

1. Support for Oilseeds -Under the National Food Security Mission (NFSM) and National Mission on Oilseeds and Oil Palm (NMOOP), soybean farmers get access to quality seeds and extension support. Government also offers Minimum Support Price (MSP) for soybean procurement.

2. Research Initiatives -Indian Council of Agricultural Research (ICAR) and public universities are working on pest-resistant, high-yielding soybean varieties. Support for cluster demonstrations, farmer training, and seed hubs to increase productivity.

3. Processing and Value Addition -Schemes under PM Formalisation of Micro Food Processing Enterprises (PM-FME) can be leveraged to support small-scale soy processing units.

4. Awareness Campaigns -Public sector bodies like the Soy Food Promotion and Welfare Association (SFPWA) are pushing for greater awareness of soy-based nutrition.

Suggestions for Way Forward

To truly transform India's soybean ecosystem, the following steps are recommended -

1. Declare 2026 as the "Year of Soy" officially—tie it to national nutrition missions, farmer outreach, and food security goals.

2. Promote soy-based foods in midday meals, anganwadi schemes, and hospitals to drive demand and nutrition together.

3. Strengthen processing infrastructure, especially for value-added foods like tofu, soy snacks, and protein supplements.

4. Support farmers with better seeds, insurance, and market linkages to make soy a reliable income crop.

5. Invest in R&D to develop low-odour, easily digestible soy products suitable to Indian taste and cooking styles.

6. Run nationwide awareness drives (like those done for millets in 2023) to educate the public on soy's benefits and how to prepare it properly.

Conclusion

Soybean holds the key to solving multiple national challenges—nutritional insecurity, edible oil import dependence, and agro-industrial employment. Yet, the potential remains underutilized due to policy gaps, market neglect, and consumer hesitation. Declaring 2026 as the Year of Soy offers a unique opportunity to rally efforts across ministries, industries, farmers, and consumers toward a shared goal. With the right push, soy can move from being a marginal crop to a mainstream solution for India's health and economy.

Main Practice question.

"Discuss the strategic importance of soybean for India's nutritional security and agro-economy. Evaluate the challenges in its cultivation and promotion, and suggest measures for a sustainable soybean ecosystem."

Answering Guidelines -

1. Introduction (30–40 words) - Briefly introduce soybean as a dual-purpose crop—rich in protein and oil. Mention the 2026 "Year of Soy" proposal as a potential turning point for policy focus.

2. Body -

1. Importance of Soybean (80–100 words) -

Nutritional - High protein (40%), healthy fats (20%), essential amino acids, vitamins and minerals.

Economic - Supports rural livelihoods, agro-industries, animal feed, and exports.

Strategic - Helps reduce edible oil imports, fights protein malnutrition in vegetarian populations.

2. Challenges in Cultivation and Promotion (100–120 words) -

Climate vulnerability - Rainfall variability, pests, low yields.

Farmer shift to other profitable crops.

Poor consumer acceptance due to taste and digestibility issues.

Low awareness about nutritional benefits and preparation.

Lack of processing infrastructure for value-added soy products.

3. Government Initiatives (80–100 words) -

MSP for soybean, NFSM and NMOOP schemes.

ICAR research on improved varieties.

SFPWA's advocacy and public awareness efforts.

PM-FME scheme for small processors.

4. Suggestions (80–100 words) -

Declare and leverage "Year of Soy 2026" for multi-ministry coordinated efforts.

Promote soy in public nutrition schemes (MDM, PDS).

Strengthen extension services and farmer incentives.

Expand R&D into consumer-friendly soy products.

Launch national awareness campaigns on cooking, health value, and taste innovation.

3. Conclusion (30–40 words) - Emphasize soybean's potential to serve as a cornerstone for nutritional and economic sustainability. Reinforce the need for integrated policy, research, and consumer engagement to unlock its full value.

34. Balancing Technology and Human Elements in Public Service

Introduction

Public service is at the heart of a nation's governance, ensuring that the government meets the needs of its citizens in a fair, transparent, and effective manner. As society evolves, so does the nature of public service, especially in the 21st century when technology and human elements are both crucial in shaping how governments deliver services to the people. Civil services aspirants must understand how this balance impacts governance, democracy, and society.

The Role of Technology in Public Service

In recent years, the digital transformation of public service has brought both opportunities and challenges. Technologies like Artificial Intelligence (AI), Big Data, e-Governance platforms, and blockchain have made public administration faster, more transparent, and more accessible. These tools help to automate routine tasks, reduce paperwork, speed up service delivery, and enhance government outreach. For example, citizen services, like applying for documents or paying taxes, have become more efficient through online portals and apps.

Technology also plays a major role in decision-making by enabling data-driven governance. Administrators now have access to real-time data for better planning, monitoring, and evaluation of government schemes. Smart technologies are used in smart cities, healthcare, financial inclusion, and disaster management, making public service more proactive and effective.

Importance of Human Touch in Public Service

Despite technological advances, the human element remains irreplaceable in public service. Civil servants interact directly with citizens, understand their problems, and respond with empathy and discretion. Qualities such as compassion, integrity, ethical decision-making, and emotional intelligence cannot be replaced by machines. Human judgment is essential in complex cases where technology can only provide limited solutions. For example, technology may flag a potential issue, but a civil servant's experience is needed to resolve disputes, deal with sensitive matters, or adapt policies to local conditions. Human innovation and critical thinking drive reforms and changes, ensuring administration remains people-centric.

Key Challenges in Balancing the Two

Although technology improves efficiency, it can sometimes risk excluding vulnerable populations, especially those unfamiliar with digital platforms or lacking resources. Over-reliance on automation may lead to loss of personalized service and reduced accountability.

Maintaining privacy and data security is a concern, as citizens entrust personal information to online government systems. Ethical governance, proper regulation, and strong oversight are needed to protect rights and prevent misuse of data. Another challenge is training the workforce. Civil servants must continuously upgrade their digital skills to adapt to new tools while also developing interpersonal capabilities for grassroots engagement. This dual focus is vital for integrated public service delivery.

Why Civil Services Aspirants Should Learn This

For civil services preparation, understanding both technology and human values is essential. Modern administration expects officers who are tech-savvy, aware of rapid innovations, and skilled in digital governance. At the same time, aspirants must cultivate empathy, teamwork, negotiation, and leadership abilities that underpin public service ethics. Insights from this sector help in answering General Studies questions, writing essays on governance, and handling ethics case studies. The ability to analyze the impact of emerging

technologies and advocate people-friendly measures will make aspirants effective future administrators.

Exam-Oriented Highlights

1. Recognize the benefits and limitations of digital transformation in public service. Understand the continuing role of human skills, values, and ethical conduct.
2. Discuss inclusive policy approaches to avoid digital exclusion and promote universal access.
3. Analyze the need for data privacy, cyber security, and responsible use of technology. Emphasize training for both digital and interpersonal skills among administrators.
4. Argue for balanced reforms, combining technological innovation with human-centric administration.Use relevant examples from Indian government schemes (like Digital India, e-Governance) and global best practices to illustrate points.

Conclusion

Public service is undergoing rapid transformation, with technology becoming a major driver for efficiency and transparency. However, the human element continues to be the backbone of governance, ensuring dignity, empathy, and ethical standards. Aspiring civil servants must master the art of balancing technology and human values to serve society better, adapt to changing scenarios, and uphold the spirit of public service. This holistic approach will prepare them for the challenges and opportunities that lie ahead in their administrative careers

Main Practice questions

"Discuss how the integration of technology with human-centric values can enhance efficiency and inclusivity in public service delivery. Critically examine the challenges and ethical concerns that arise in this process."

Answering Guidelines for Aspirants

1. Introduction -Briefly define the scope of technology and human elements in public service.

2. Body -

1. Explain how technology improves efficiency, transparency, and accessibility, with examples (e.g., e-Governance, real-time data).
2. Elaborate on the irreplaceable role of human-centric values -empathy, ethical judgment, adaptability, and personalized solutions.
3. Analyze the balance—how their integration strengthens inclusive policy execution and addresses citizen needs more holistically.
4. Examine challenges -digital divide, loss of personal touch, potential exclusion, need for digital literacy, data privacy, and accountability in automated systems.
5. Address ethical concerns -privacy, security, responsible use of data, preservation of trust and human dignity.

3. Conclusion -Summarize the need for a balanced approach, emphasizing ongoing training, reform, and safeguarding both technological advancement and human values.

4. Tips -Adopt a critical and analytical tone. Use current examples and draw from the article's arguments. Present both opportunities and limitations clearly.

35. India's Deep Ocean Mission and Leadership in PMS Exploration

Introduction

In September 2025, India became the first country in the world to hold two contracts with the International Seabed Authority (ISA) for the exploration of Polymetallic Sulphides (PMS).

With exclusive rights over 10,000 sq km of the Carlsberg Ridge in the Indian Ocean, alongside its earlier allocation in the Central and Southwest Indian Ridge, India now holds the largest exploration area globally for PMS. This development is not merely a scientific milestone but a strategic advancement that consolidates India's maritime presence, aligns with its Deep Ocean Mission, and strengthens the foundations of its Blue Economy. For a country heavily dependent on imported minerals and seeking leadership in global governance of the commons, this achievement has far-reaching implications.

Background -Polymetallic Sulphides and the International Seabed Authority

Polymetallic Sulphides (PMS) -Found near hydrothermal vents on ocean ridges. Contain iron, copper, zinc, silver, gold, and platinum. Considered vital for industries ranging from electronics and renewable energy to aerospace.

International Seabed Authority (ISA) -Established under the UN Convention on the Law of the Sea (UNCLOS) in 1994. Governs mineral resources of the international seabed, considered the "common heritage of humankind." Allocates exploration areas to countries and ensures protection of marine ecosystems. India has had a long association with the ISA. In 1987, it became the first country to receive a pioneer area for polymetallic nodule exploration and was designated as a Pioneer Investor. The second PMS contract reaffirms India's status as a leader in deep-sea exploration.

India's Deep Ocean Mission

Launched in 2021, the Deep Ocean Mission (DOM) represents India's vision to harness resources from the oceans while advancing marine science and technology. Its six major components include -

1. Development of technologies for deep-sea mining and manned submersibles.
2. Exploration of polymetallic nodules and sulphides.
3. Study of deep-sea biodiversity and conservation.
4. Development of ocean climate change advisory services.
5. Research on deep-sea ecosystems for bioprospecting.
6. Establishment of advanced marine stations.

The PMS contract at Carlsberg Ridge directly strengthens Component 2, while enhancing India's technological and scientific leadership.

Significance of the Achievement

1. Strategic and Geopolitical Significance -The Indian Ocean is becoming a theatre of global competition, with China investing heavily in seabed exploration. India's dual contracts not only secure mineral rights but also enhance its maritime strategic depth. Hosting the 8th ISA Annual Contractors Meeting in Goa (2025) projects India as a responsible leader in global ocean governance.
2. Economic Significance -India's manufacturing sector, especially renewable energy, electric vehicles, and electronics, requires critical minerals like copper, zinc, and rare metals. Domestic reserves are limited; dependence on imports exposes India to price volatility and supply chain risks. PMS exploration can secure resource independence and reduce reliance on external markets.
3. Scientific and Technological Significance -Developing indigenous mining technologies, remotely operated vehicles, and manned submersibles places India among the select nations with advanced marine capabilities. Enhances research on hydrothermal vent ecosystems, contributing to global knowledge.
4. Blue Economy and Sustainable Development -India's Blue Economy contributes nearly 4% to GDP but remains underdeveloped compared to its potential. PMS exploration aligns with India's vision of using marine resources for sustainable growth, employment, and energy security.

Challenges and Concerns

While the achievement is remarkable, it comes with serious challenges that aspirants must critically examine -

1. Environmental Concerns -Hydrothermal vents are biodiversity hotspots, home to unique species adapted to extreme conditions. Mining could destroy fragile ecosystems, disrupt marine food chains, and release toxic substances. Over 99% of the deep ocean floor remains unexplored, raising ethical questions about exploitation without full understanding.
2. Technological Barriers -Deep-sea mining at depths exceeding 3,000–6,000 metres require advanced robotics, pressure-resistant equipment, and sustainable extraction technologies. High costs and risks of accidents remain major hurdles.
3. Governance and Regulation -ISA regulations on deep-sea mining are still evolving. Balancing resource utilisation with environmental protection will be contentious. India must navigate diplomatic challenges as global consensus on seabed mining is fragile, with some countries demanding a moratorium.
4. Economic Viability -Extraction, processing, and transport of PMS are extremely expensive. Unless global demand and prices for metals remain high, projects may struggle to be commercially sustainable.

Way Forward for India

1. Strengthening Research and Development -Enhance collaboration between MoES, NCPOR, ISRO, and IITs for indigenous mining technology. Invest in AI, robotics, and remote sensing for sustainable extraction.
2. Environmental Safeguards -Adopt a "precautionary principle" in exploration. Commit to biodiversity mapping, impact assessments, and eco-friendly mining techniques.
3. Diplomatic Leadership -Lead global negotiations in ISA to frame fair, transparent, and sustainable regulations. Push for an equitable sharing of resources under the principle of "common heritage of humankind."
4. Integrating with Blue Economy Policy -Link PMS exploration with India's fisheries, renewable energy, and port-led development. Develop coastal infrastructure for mineral processing and logistics.
5. Public-Private Partnerships -Encourage participation of Indian industries in deep-sea technology development. Model partnerships similar to the space sector's private integration under ISRO.

Conclusion

India's dual PMS contracts with the ISA mark a historic milestone in the country's quest to harness ocean resources. It consolidates India's strategic presence in the Indian Ocean, aligns with the Deep Ocean Mission, and strengthens its claim as a leader in global ocean governance.

Yet, the achievement must be tempered with caution. Exploiting seabed resources poses serious environmental, technological, and governance challenges. For India, the challenge lies in balancing its economic aspirations with its environmental responsibilities. If pursued with vision and responsibility, PMS exploration can become a pillar of India's Blue Economy, contributing to resource independence, global leadership, and sustainable growth. The oceans hold immense promise, but the future will depend on how wisely humanity — and India — navigates this uncharted frontier.

Main Practice Question (15 Marks, 250 words)

1. "India has become the first country to hold two exploration contracts with the International Seabed Authority for Polymetallic Sulphides". Critically examine the significance of this achievement for India's economy, strategic interests, and environmental responsibilities under the Deep Ocean Mission."

Answering Guidelines

1. Introduction (30–40 words)

Briefly introduce Polymetallic Sulphides (PMS) and mention India's milestone of holding two ISA contracts. State how this aligns with India's Deep Ocean Mission and broader Blue Economy vision.

2. Body

1. Significance for India (Economic, Strategic, Scientific) (80–100 words)

Economic -Access to copper, zinc, gold, platinum – critical for EVs, electronics, renewable energy; reduces import dependency.

Strategic -Enhances maritime depth in Indian Ocean; positions India as a leader vis-à-vis China.

Scientific -Advances in deep-sea mining technology, robotics, biodiversity studies.

Diplomatic -Strengthens India's role in ISA and global commons governance.

2. Challenges and Concerns (60–70 words)

Environmental risks -Fragile hydrothermal ecosystems, biodiversity loss, toxic releases.

Technological barriers -High costs, deep-sea mining at 3000–6000m depth.

Governance gaps -ISA regulations evolving; risk of disputes.

Economic viability -High extraction costs, uncertain demand-supply balance.

3. Way Forward (40–50 words)

1. Strengthen R&D in sustainable mining technologies.
2. Adopt precautionary principle for ecosystem protection.
3. Lead ISA negotiations on fair and sustainable seabed governance.
4. Integrate PMS exploration with Blue Economy & Atmanirbhar Bharat.

3. Conclusion (30–40 words)

India's leadership in PMS exploration is a historic step that strengthens economic security and global standing. However, success will depend on balancing development with environmental stewardship, ensuring that the oceans remain a shared heritage for humankind.

36. U.S. Government Shutdown

The shutdown of the United States government in October 2025 marks yet another chapter in the country's long history of political deadlock. It has triggered disruption in public services, forced thousands of federal employees on leave without pay, and raised concerns about the vulnerabilities of democratic governance when partisanship overshadows consensus. For aspirants of civil services, understanding the concept, history, and implications of shutdowns offers key insights into constitutional design, governance challenges, and lessons for India's parliamentary democracy.

Government Shutdown

A government shutdown occurs when the U.S. Congress fails to approve the annual appropriations bills or a continuing resolution to fund government operations. Since federal spending requires Congressional authorization, failure to pass a budget result in the cessation of funding for all "non-essential" government functions. Only critical services — such as military, border security, and law enforcement — continue to function, but even these workers go unpaid until funds are restored.

Essentially, a shutdown reflects a budgetary impasse between the executive and legislature, often rooted in deep partisan divides.

A Brief History of Shutdowns in the U.S.

Government shutdowns are not new in the U.S. Since the 1970s, when new budget rules were enacted, there have been over 20 shutdowns of varying lengths.

1981–1995 -Multiple short shutdowns occurred during Ronald Reagan's and Bill Clinton's presidencies, usually lasting 1–5 days.

1995–96 -A 21-day shutdown under President Clinton became one of the longest at the time, caused by disputes over welfare reforms and budget cuts.

2013 -A 16-day shutdown took place during Barack Obama's presidency over disagreements concerning the Affordable Care Act ("Obamacare").

2018–19 -The longest shutdown in U.S. history, lasting 35 days under President Donald Trump, revolved around funding for a border wall.

2025 -The most recent shutdown has been triggered by the Senate's failure to pass funding plans, with bitter standoffs between Democrats and Republicans over spending priorities. Each episode highlights how political polarization can paralyze governance.

The Constitutional Basis of Shutdowns

Unlike parliamentary democracies like India, the U.S. operates under a presidential system where there is a strict separation of powers between the legislature (Congress) and the executive (President). The U.S. Constitution requires that federal spending be authorized by Congress (Article I, Section 9) If appropriations bills or resolutions are not passed, the government cannot legally spend money. The Anti deficiency Act (1884) further enforces this, prohibiting agencies from operating without approved funds. Thus, shutdowns are not accidents but the constitutional consequence of separation of powers combined with political deadlock.

Consequences of a Government Shutdown

1. On Governance -Non-essential services, such as scientific research, public data release, and routine administration, come to a halt. Thousands of federal employees are sent on furlough without pay, creating uncertainty and reducing morale.
2. On the Economy -Shutdowns cost billions of dollars. The 2018–19 shutdown, for example, shaved off $11 billion from U.S. GDP. Markets face volatility as investor confidence declines. Delay in services like

visa processing, tax refunds, and small business approvals affects economic activity.

3. On Society -Families of federal workers face immediate income disruptions. Public trust in government institutions erodes, reinforcing cynicism toward politics.
4. On International Standing -Allies view shutdowns as indicators of domestic instability. For a global leader like the U.S., such events weaken the image of governance efficiency.

Constitutional and Democratic Lessons

1. Rigidity vs. Flexibility of Systems -The U.S. presidential system's separation of powers often creates gridlock. By contrast, parliamentary systems like India's ensure smoother budget passage since the executive depends on legislative majority.
2. Consensus Building is Crucial -Shutdowns show how lack of bipartisan cooperation can paralyze the state. Democracies must encourage dialogue and compromise to avoid governance collapse.
3. Institutions Must Protect Public Interest -Constitutional design must ensure that essential services and citizen welfare are insulated from political battles. In India, for example, "vote on account" provisions prevent government paralysis during budget disputes.
4. Fiscal Responsibility vs. Political Agendas -Shutdowns also underline the dangers of using fiscal tools (budgets) as political weapons. Responsible governance requires prioritizing long-term stability over partisan goals.

Relevance for India

Avoidance of Gridlock -India's parliamentary system prevents shutdown-like crises but still faces delays due to adjournments and disruptions. Strengthening legislative productivity is essential.

Institutional Reforms -The U.S. shutdowns highlight the need to balance checks and accountability with mechanisms that safeguard continuity of governance.

Public Interest Safeguards -India must ensure that welfare services, subsidies, and essential schemes are never compromised due to political tussles.

Conclusion

The U.S. Government Shutdown of 2025 serves as a stark reminder that constitutional systems, however robust, can falter when political partisanship overtakes governance responsibility.

While shutdowns are constitutional in the U.S. context, their consequences — from economic losses to weakening public trust — underline the importance of consensus-driven politics.

For India, the episode reaffirms the relative stability of the parliamentary system but also offers cautionary lessons on ensuring that citizen welfare remains above political disputes. Governance, after all, must be a continuous responsibility, not a hostage to partisan agendas.

Main Practice Question

1. Introduction (30–40 words) -Define government shutdown — a budgetary impasse halting non-essential services. Link with U.S. separation of powers and Anti deficiency Act. Briefly mention the 2025 episode as context.

2. Body

1. Constitutional Basis (50–60 words)

Article I, Section 9 -Congress must authorize spending.

Anti-deficiency Act prohibits expenditure without approval.

Presidential system → executive cannot dissolve legislature → gridlock leads to shutdowns.

Contrast with India's parliamentary system where "vote on account" prevents such paralysis.

2. Consequences (70–80 words)

Governance -halt in scientific research, public services.

Economy -billions lost, volatility in markets.

Society -federal workers unpaid, public distrust.

Global standing -damages U.S.'s image as a stable democracy.

3. Lessons for India (50–60 words)

1. Importance of consensus-building in fiscal matters.
2. Safeguards for uninterrupted welfare and essential services.
3. Reinforcing legislative productivity to prevent disruptions.
4. Balance between accountability and continuity of governance.

3. Conclusion (30–40 words) -Shutdowns are constitutional in U.S. design but erode governance credibility. India must value fiscal stability, consensus, and institutional safeguards to prevent governance paralysis. Governance must prioritize citizens above partisan divides.

37. Gen Z Revolts and Governance Challenges -Lessons for India

Introduction

A new form of political awakening is sweeping across the developing world — led not by seasoned politicians or ideologues but by the young, digitally empowered Generation Z (Gen Z). From Bangladesh and Nepal to Sri Lanka, Madagascar, and beyond, the world is witnessing youth-driven movements against corruption, unemployment, and institutional apathy. These uprisings, characterized by their spontaneity and social-media mobilization, have toppled governments and reshaped governance debates.

For India, surrounded by these tremors, the lessons are profound — not only about governance but also about restoring public trust in institutions.

What Is Gen Z and What Are Its Trends?

Gen Z broadly refers to those born between 1997 and 2012, who have grown up in an era of smartphones, social media, and global connectivity.

Unlike earlier generations, Gen Z is

1. Digitally native — their opinions are shaped by online discourse.
2. Politically aware — they track governance failures through instant news and data.
3. Values-driven — transparency, justice, and climate consciousness matter deeply.
4. Less patient with institutional inefficiency or corruption.

Globally, Gen Z protests are marked by memes, symbolism, and decentralized leadership. A striking example is the "straw-hat skull" symbol — drawn from the anime *One Piece* — now representing rebellion against corrupt elites in several countries.

Countries Affected by Gen Z Revolts

1. Bangladesh -The immediate trigger was the reinstatement of a job quota system that favoured the elite, sparking student-led protests. High unemployment, corruption (TI rank 150), and economic hardship deepened the anger.
2. Nepal -A proposed social-media ban ignited protests among youth frustrated with censorship, joblessness (20.8%), and corruption (TI rank 107).
3. Sri Lanka -Years of misgovernance, corruption, and economic collapse led to the Aragalaya movement, toppling the Rajapaksa regime. Youth anger against nepotism and inflation drove the revolt.
4. Madagascar -Triggered by electricity and water shortages, protests rapidly spread, drawing inspiration from Sri Lanka and Nepal.

5. Indonesia, Philippines, Kenya, Morocco -Youth revolts in these countries followed policies that symbolised elite excess — such as salary hikes for politicians or subsidy cuts — reflecting global frustration with unresponsive governance.

Fundamental Causes Behind Gen Z Revolts

Though each uprising had a local trigger, the underlying causes converge into a pattern of structural discontent -

1. Rampant Corruption -Transparency International data shows most of these nations rank poorly — between 100 and 150 — indicating weak institutions and rent-seeking behaviour.
2. Youth Unemployment -In Sri Lanka and Nepal, over one-fifth of youth are unemployed, creating fertile ground for frustration and protest.
3. Digital Mobilization -Social media acts as both a mobilising tool and a mirror reflecting elite privilege. Platforms like TikTok, Instagram, and X (formerly Twitter) become vehicles of protest.
4. Poor Governance and Service Delivery -Inadequate electricity, water, healthcare, and education amplify daily suffering and erode legitimacy.
5. Loss of Faith in Traditional Politics -Young people view older leaders as detached, dynastic, and corrupt.
6. Global Economic Stress -Rising prices, shrinking opportunities, and post-pandemic inequality have worsened the generational divide.

Implications for India

While India has not experienced a Gen Z revolt of this scale, the warning signs are visible.

1. Youth expectations are rising. With over 65% of India's population below 35, governance failures can quickly translate into unrest.
2. Corruption perception remains high. India's TI rank of 96 has stagnated since 2014, and daily bribery persists despite digitisation.
3. Unemployment anxiety is deep. Educated youth face job scarcity, especially in northern states, driving internal migration.
4. Digital activism is growing. Hashtag movements on issues like #FarmersProtest or #ExamReform show how quickly Gen Z can mobilise narratives.

However, India's scale and institutional resilience — a functioning election system, judiciary, and media — act as buffers against sudden collapse.

Why India's Case Is Unique

1. Strong Democratic Framework -India's vibrant democracy allows dissent within the system — protests are often institutionalized rather than revolutionary.

2. Absorptive Capacity of Politics -Youth discontent finds expression through electoral politics, civil-society engagement, and social movements rather than regime change.
3. Federalism as a Safety Valve -State governments provide alternative models of governance (e.g., Kerala's local governance, Gujarat's industrialization, Tamil Nadu's welfare schemes).
4. Digital Public Infrastructure -Platforms like *Aadhaar*, *UPI*, and *Digi Locker* have improved transparency, even if corruption hasn't vanished.
5. Migration as Pressure Relief -Interstate mobility offers economic escape valves, preventing mass youth stagnation seen in smaller nations.

Concerns and Risks

Despite these strengths, several red flags remain -

1. Persistent petty corruption in local offices, police, and judiciary.
2. Institutional fatigue — slow justice delivery and politicisation of bureaucracy.
3. Information manipulation — disinformation on social media can convert discontent into polarisation.
4. Economic inequalities — regional and caste disparities fuel alienation.
5. Crisis of trust — when transparency erodes, even reform efforts are doubted.

If ignored, these could trigger localised unrest or a trust deficit between youth and the state.

Role of Institutions

Institutions remain the of first line defence against political breakdown.

1. Election Commission -Must ensure fair competition and transparency in political funding.
2. Judiciary -Needs to uphold rule of law without delay or bias.
3. Media and Civil Society -Should act as watchdogs, not echo chambers.
4. Anti-Corruption Agencies -CVC, CBI, and Lokpal must act independently and decisively.

Strengthening these institutions will reduce the perception that corruption is "inevitable."

Role of the Government

1. Youth Employment Focus -Expanding apprenticeship programs, start-up incentives, and skilling schemes under *PM Kaushal Vikas Yojana*.
2. Transparency in Political Funding -Replace opaque mechanisms like *electoral bonds* with publicly auditable systems.
3. Digital Governance -Expand e-governance with grievance redressal tools accessible at local levels.
4. Social Media Engagement -Use official digital channels to build trust and counter misinformation.
5. Strengthen Education and Values -Civic education should cultivate ethical citizenship, reducing susceptibility to populism.

Historical Lessons

India's past shows that youth discontent can transform into reform movements when channelled positively.

JP Movement (1974) -Began as a student protest against corruption and evolved into a major democratic reform.

Anna Hazare Movement (2011) -Sparked the Lokpal Act and re-energised public debate on accountability.

The lesson is clear — youth anger must be harnessed, not suppressed.

Conclusion

Gen Z uprisings across the world represent a generational demand for honesty, opportunity, and responsive governance. Their revolts are not merely against individual leaders but against systems that ignore accountability. For India, this is a moment for introspection — to reform institutions, tackle everyday corruption, and create genuine employment opportunities. If India can bridge the gap between governance and aspiration, it will avoid unrest and instead transform its youthful energy into a force for nation-building and democratic renewal.

Main Practice Question

1. "Global Gen Z revolts reflect a new era of digitally-driven accountability movements. What lessons can India draw from these youth-led uprisings in strengthening governance and combating corruption?" (250 words)

1. Introduction (40–50 words) -Define Gen Z and briefly mention recent youth-led revolts (Bangladesh, Nepal, Sri Lanka, Madagascar). State the core idea -youth frustration over corruption, unemployment, and poor governance.

2. Body (150–170 words)

A. Global Overview

1. Mention common causes — corruption, joblessness, poor governance, digital mobilisation.
2. Highlight Transparency International data showing poor corruption scores.

B. Lessons for India

1. Strengthen anti-corruption institutions (Lokpal, CVC, Judiciary).
2. Improve employment and skill training schemes.
3. Foster digital transparency (open data, e-governance).
4. Promote civic education and youth engagement in policy-making.
5. Ensure transparency in political funding and ethical governance.

3. Conclusion (30–40 words) -Conclude with the idea that India must harness Gen Z's energy for reform, not revolution. "A government that listens to its youth prevents rebellion and builds renewal."

38. India's Higher Education Challenge -Bridging the Quality Deficit.

Introduction -The Paradox of Potential

India's higher education system stands at a crossroads. It is one of the largest in the world, with over 1,100 universities and 43 million enrolled students, and has produced globally respected professionals, entrepreneurs, and scientists. Yet, despite this impressive scale, the latest QS Asia University Rankings (2025) expose a worrying truth — Indian institutions are struggling to match the quality and global competitiveness of their Asian peers. While India seeks to position itself as the "services capital of the world" and a hub for global capability centres, its higher education framework remains riddled with systemic weaknesses. Without meaningful reforms in quality, governance, and research orientation, India risks squandering its demographic advantage.

The Status of Higher Education in India

India has made significant quantitative progress in the past few decades. According to the All India Survey on Higher Education (AISHE), the Gross Enrolment Ratio (GER) in higher education has increased to over 28%, reflecting growing access. Institutions such as the IITs, IIMs, IISc, AIIMS, and select central universities have built a reputation for excellence.

However, the recent QS Asia Rankings highlight how India's higher education sector is losing ground -

1. No Indian institution figures in the top 10 in Asia.
2. IIT Delhi, India's best-ranked institution, slipped from 44th to 59th place.
3. IIT Bombay and IIT Kharagpur also dropped significantly.
4. Out of 294 Indian universities listed, most ranked in the middle or lower tiers.

In contrast, China now dominates the Asian academic landscape with 395 universities in the rankings, several in the top 50, such as Peking University (14) and Tsinghua University (17).

The Quality Deficit -Understanding the Problem

India's challenge is not access but quality. The gap between the best and the average university is vast, and global rankings expose a consistent pattern of underperformance in several areas -

1. Low Research Output and Citations -India's academic research output, while increasing, remains fragmented, poorly funded, and lacking global visibility. Limited research funding (less than 0.7% of GDP on R&D) constrains innovation.

2. Poor Global Engagement -Few international collaborations and limited presence of foreign faculty weaken global linkages and knowledge exchange.
3. Faculty Shortages and Quality Issues -Vacancies in central universities and state colleges remain high — in some cases exceeding 30%. Faculty development and training are weak, particularly in state-run institutions.
4. Rigid Curricula and Examination Systems -Outdated syllabi, rote learning, and limited emphasis on critical thinking discourage innovation and research culture.
5. Governance and Autonomy Deficits -Frequent political interference in appointments, curriculum design, and administration has compromised institutional autonomy.
6. Brain Drain and Student Exodus -Over 1.8 million Indian students are currently studying abroad — not only for prestige but also for better academic freedom, infrastructure, and research opportunities.

Why This Is a Cause for Concern

The quality deficit in Indian higher education is more than an academic problem; it has strategic national implications -

Loss of Talent and Capital -India spends billions annually as students go abroad for education, while domestic universities struggle for funding.

Impact on Innovation and Industry -Weak research culture hampers India's ambition to lead in high-tech manufacturing, biotechnology, and AI.

Reduced Global Standing -Without globally ranked universities, India cannot project itself as an academic or innovation leader.

Mismatch with Demographic Dividend -A young population without world-class higher education risks underemployment and frustration.

If not addressed, India could remain a "back-office" economy rather than emerging as a "knowledge powerhouse."

Recent Government Reforms in Higher Education

Over the past decade, the Government of India has undertaken several structural reforms to address these issues. Some key initiatives include -

1. National Education Policy (NEP) 2020
   1. Envisions a holistic, multidisciplinary, and flexible education system.
   2. Promotes research through the National Research Foundation (NRF).
   3. Encourages internationalisation and entry of foreign universities.
2. Institution of Eminence (IoE) Scheme -Aims to create 20 world-class universities with greater autonomy and funding flexibility.

3. Higher Education Commission of India (HECI) (Proposed) -To replace UGC and AICTE with a single regulator for improved coordination and accountability.
4. PM-USHA (University Grants Reforms) -Focuses on funding state universities and upgrading infrastructure and digital learning facilities.
5. Digital Initiatives -Platforms like SWAYAM, National Digital Library, and DIKSHA aim to democratise access to quality content.
6. Academic Bank of Credits (ABC) -Enables students to transfer and accumulate credits across institutions, encouraging flexibility. While these reforms are transformative in intent, implementation challenges, resource constraints, and institutional resistance have slowed their impact.

Suggestions and the Way Forward

1. Strengthen Research Ecosystems
1. Increase R&D spending to at least 1.5% of GDP.
2. Encourage university–industry collaborations.
3. Establish research parks and incubators in universities.
2. Enhance Faculty Development
1. Regular training, performance-linked incentives, and research sabbaticals.
2. Attract global and diaspora scholars through fellowships and flexible hiring.
3. Ensure Institutional Autonomy
1. Reduce political interference in recruitment and academic matters.
2. Empower governing boards for transparent and merit-based decision-making.
4. Focus on Quality in State Universities -State institutions educate nearly 70% of students; their revival through funding, digital access, and curriculum reform is crucial.
5. International Collaboration
1. Facilitate joint degrees, exchange programmes, and global research consortia.
2. Fast-track foreign university campuses in India with clear regulatory frameworks.
6. Encourage Private and Philanthropic Funding -Incentivise private endowments and CSR contributions to build research infrastructure.
7. Restore Academic Freedom and Integrity
1. Insulate universities from ideological or political pressures.
2. Foster critical inquiry across humanities, sciences, and social sciences.

Conclusion -Towards a Knowledge-Powered India

India's quest to be a Viksit Bharat (Developed India) by 2047 will depend largely on the quality of its human capital. Quantity without quality in higher education cannot sustain India's ambition to become the global services and innovation hub.

The QS Rankings are not just a scorecard; they are a mirror reflecting India's urgent need for deep academic and governance reform. By strengthening research ecosystems, ensuring autonomy, and prioritising merit over control, India can truly unleash its intellectual potential.

To paraphrase former President A. P. J. Abdul Kalam, "A developed nation is not one where the government builds more universities, but where every university builds better citizens."

Main Practice Question.

1. "India's higher education faces a crisis of quality, not quantity." Discuss the causes, implications, and reforms needed to transform India's universities into globally competitive centres of learning and innovation. (15 marks)

Answer Guidelines

1. Introduction (40–50 words) -Briefly define higher education's role in nation-building. Mention India's vast network (1100+ universities, 43 million students) but low global standing. Cite QS Asia University Rankings 2025 -India's decline vs. China's rise.

Example -India's higher education system, though among the largest globally, faces an acute quality crisis. The latest QS Asia Rankings reveal declining global competitiveness, signalling deeper structural and governance issues.

2. Body

1. Causes of the Quality Deficit (90–100 words)

Low Research Output -Weak R&D investment (<0.7% of GDP); limited industry–academia links.

Faculty Shortage -30% vacancies, poor training, lack of incentives.

Governance Deficits -Political interference; limited autonomy.

Rigid Curriculum -Outdated syllabi; rote-based pedagogy.

Funding Gaps -Dependence on state grants; weak private endowments.

Brain Drain -1.8 million students abroad (2025).

2. Implications (40–50 words)

1. Weak innovation capacity; India risks missing the knowledge-economy transition.
2. Increased dependency on foreign universities.
3. Talent and capital outflow (loss of ₹50,000+ crore annually).
4. Reduced employability and mismatch between education and industry needs.

3. Government Reforms and Initiatives (40–50 words)

NEP 2020 -Multidisciplinary learning, NRF, foreign universities.

Institution of Eminence Scheme -20 world-class universities.

HECI -Proposed single higher education regulator.

Digital Initiatives -SWAYAM, Academic Bank of Credits.

PM-USHA -Upgrading state universities.

4. Way Forward (50–60 words)

1. Increase R&D to 1.5% of GDP; promote university–industry partnerships.
2. Faculty training and global collaboration.
3. Strengthen autonomy and accountability.
4. Focus on state universities' revival.
5. Encourage private and philanthropic funding.
6. Insulate academics from ideological and political interference.

3. Conclusion (30–40 words)

India's higher education needs a shift from control to creativity, and from quantity to quality. True reform lies in empowering institutions to innovate, research, and nurture global citizens who can lead India's knowledge revolution.

39. India–Bhutan Relations a model of Stable relations

India and Bhutan share one of the most stable, trusted, and time-tested partnerships in South Asia. Unlike India's ties with some other neighbors, the India–Bhutan relationship has consistently remained cordial, cooperative, and forward-looking. This stability is especially significant given Bhutan's political transition, China's growing footprint in the Himalayas, and shifting geopolitics in South Asia. Prime Minister Narendra Modi's recent visit to Bhutan once again highlighted the depth, maturity, and strategic value of this partnership.

A Relationship Marked by Exceptional Stability

India–Bhutan relations are often described as unique because they are built on mutual trust, shared civilizational bonds, and respect for each other's sovereignty. While India has witnessed fluctuating relations with Nepal, Maldives, and Sri Lanka in recent years, Bhutan remains an exception — the bilateral relationship has never been marked by hostility or mistrust.

This stability stems from,

1. India's consistent developmental partnership with Bhutan since the 1960s
2. The Bhutanese monarchy's conscious policy of maintaining strong ties with India
3. Shared Buddhist cultural heritage

This foundation has allowed the two countries to weather political changes, including Bhutan's major constitutional shift in 2008.

Bhutan's Democratic Transition and India's Steady Support

Bhutan adopted parliamentary democracy in 2008. Many observers feared that, as with Nepal, democratic politics might open the space for anti-India sentiments.

However, India–Bhutan ties remained strong, thanks to -

1. The proactive role of King Jigme Singye Wangchuck (K4), who initiated democratic reforms
2. Cross-party political consensus in Bhutan favouring close ties with India
3. Continued economic interdependence and mutual respect

This demonstrates the resilience of the relationship, unaffected by domestic political changes.

The 2007 Treaty Revision -A Modern Framework

A major milestone in bilateral ties was the 2007 revision of the Indo–Bhutan Friendship Treaty, replacing the 1949 treaty.

Key changes included

1. Removal of the clause requiring Bhutan to be "guided" by India in foreign policy
2. Addition of a clause emphasizing "mutual respect for sovereignty and territorial integrity"
3. Agreement that neither country's territory will be used for activities harmful to the other

This modernization enhanced Bhutan's strategic autonomy while maintaining the essence of partnership. It also increased Bhutan's confidence internationally and demonstrated India's willingness to engage on equal terms with a smaller neighbor.

Development Cooperation -Hydropower as the Backbone

Hydropower cooperation is the defining pillar of India–Bhutan economic ties. India has helped Bhutan develop some of its most important hydropower projects, such as -

1. Chukha
2. Kurichhu
3. Tala

4. Mangdechhu
5. Punatsangchhu I and II

Electricity generated in Bhutan is purchased by India, providing crucial revenue to Bhutan. Hydropower accounts for a major share of Bhutan's GDP and export earnings, making India the cornerstone of Bhutan's economic development. Beyond hydropower, India supports Bhutan in education, health, infrastructure, digital connectivity, and capacity building.

Modi's Visit -Cultural, Strategic, and Developmental Engagements

Prime Minister Modi's latest visit showcased both soft power diplomacy and hard infrastructure support.

Cultural and civilizational dimension -Modi was the guest of honor at K4's 70th birthday celebrations. He inaugurated the Kalachakra Empowerment ceremony, strengthening Buddhist cultural ties. He attended a prayer ceremony held by the King in memory of the Red Fort blast victims, symbolizing shared values.

Economic and developmental engagements

1. Inaugurated the 1,020 MW Punatsangchhu-II hydroelectric project.
2. Announced ₹4,000 crore in assistance for new Bhutanese energy initiatives.
3. Signed agreements in digital cooperation, including Phase-II of the Unified Payments System (UPI).
4. Supported Bhutan's ambitious Gelephu Mindfulness City, a futuristic urban hub envisioned as an economic gateway.
5. Announced an immigration check-post in Assam to facilitate cross-border movement and investment.

The visit strengthened the multi-dimensional nature of the partnership — cultural, political, economic, and digital.

China's Growing Presence in Bhutan -A Strategic Worry

India's engagement with Bhutan must be viewed in the backdrop of China's increasing attempts to build influence in the Himalayan kingdom.

Areas of concern include

1. China's longstanding territorial claims on Bhutan, especially near Doklam
2. Efforts to negotiate a boundary settlement with Bhutan
3. Increased cultural and diplomatic signalling from China
4. Bhutan hosting Chinese New Year celebrations and adjusting stance on sensitive Tibetan issues

Although Bhutan is being pragmatic, these developments raise strategic alarms for India, especially given the 2017 Doklam standoff close to the Siliguri Corridor, India's vulnerable "Chicken's Neck".

Thus, Modi's visit signifies renewed Indian commitment to close engagement and reassurance.

Diplomatic Significance of the Visit

The visit plays several critical roles -

1. Strategic reassurance -India signals that Bhutan is a priority partner in the Himalayan region.
2. Economic partnership -Strengthening hydropower and future urban development ensures long-term developmental linkage.
3. Countering China-Deepening engagement reduces Bhutan's perceived need to lean towards China.
4. Cultural diplomacy -Shared Buddhist traditions are used as a source of trust-building.
5. Future-oriented cooperation -Through digital technologies, green energy, and cross-border connectivity.

Conclusion

India–Bhutan relations represent a rare example of enduring goodwill, mutual trust, and policy continuity in South Asia. The relationship has evolved from one of asymmetry to one of mutual respect and strategic cooperation, especially since the 2007 treaty revision. Bhutan's smooth transition to democracy, without impacting ties with India, further reflects the maturity of both partners. Prime Minister Modi's visit reinforces the political, economic, and cultural pillars of this partnership, while also addressing new geopolitical challenges posed by China's expanding presence in the region. As the Himalayas become a theatre of great-power competition, India–Bhutan cooperation will continue to be central to regional stability, development, and strategic balance.

Main Practice Question

"Critically examine how India–Bhutan relations have remained one of India's most stable neighborhood partnerships. In what ways does PM Modi's recent visit reinforce strategic, developmental, and cultural dimensions amid China's growing presence?"

Answer Guidelines

1. Introduction (30–40 words) – Briefly define India–Bhutan relations as a unique, stable, trust-based partnership in South Asia. Mention recent developments such as PM Modi's visit and evolving regional geopolitics.

2. Body

1. Why India–Bhutan Is India's Most Stable Neighborhood Partnership (50–60 words)

1. Deep civilizational and Buddhist cultural ties.
2. Mutually respectful diplomacy—no major anti-India political currents.
3. Bhutan's democratic transition (2008) did not cause friction.
4. 2007 Treaty revision strengthened sovereignty and modernized the relationship.

2. Strategic and Developmental Foundations (50–60 words)

1. India's long-term role in Bhutan's development -hydropower (Chukha, Tala, Mangdechhu, Punatsangchhu-II).

2. India as Bhutan's largest trade partner, development partner, and security ally.
3. Coordination on border security and Doklam concerns.

3. Significance of PM Modi's Visit (60–70 words)

Cultural -Kalachakra ceremony; presence at K4's 70th birthday.

Economic -

1. Inauguration of Punatsangchhu-II Hydropower Project.
2. ₹4,000 crore for new energy initiatives.
3. Support for Gelephu Mindfulness City

Connectivity & Digital -

1. Phase-II of UPI integration.
2. New immigration check-post in Assam.

The visit reasserts India's support as China deepens outreach to Bhutan.

4. China Factor and Strategic Implications (40–50 words)

1. China's claims over Doklam and other Bhutanese areas.
2. Growing cultural presence and negotiation push.
3. Bhutan's balancing act increases the need for India's proactive diplomacy.

3. Conclusion (20–30 words)

India–Bhutan ties exemplify stable, mutually respectful neighborhood diplomacy. PM Modi's visit strengthens cultural trust, economic integration, and strategic alignment—crucial in a shifting Himalayan geopolitical landscape.

40. India's Maritime Policy

India's maritime sector has re-emerged as a central pillar of national development and strategic policy. The announcement of a ₹69,725 crore package for shipbuilding and maritime infrastructure during India Maritime Week 2025 marks a decisive moment in revitalising a sector long neglected despite India's vast oceanic advantages. As global geopolitics shifts towards the Indo-Pacific and economies increasingly depend on maritime logistics, India's maritime policy has acquired new urgency and strategic relevance.

Introduction -India's Maritime Policy and Its Renewed Focus

India's maritime policy encompasses initiatives aimed at strengthening the country's shipbuilding capacity, upgrading ports, enhancing maritime logistics, expanding the Indian shipping fleet, and integrating India firmly into global supply chains. With 95% of India's trade by volume and 70% by value transported through the seas, maritime security and capacity-building are foundational to national growth.

The government's recent policy thrust—developing a stronger Indian-flagged fleet, reducing dependence on foreign vessels, incentivizing shipbuilding, and modernizing port infrastructure—reflects a long-term vision to transform India from a maritime user to a maritime power.

Significance of the Maritime Sector for India

a) Economic Lifeline -Maritime trade underpins India's integration with global markets. A strong shipping industry lowers logistics costs, enhances export competitiveness, and reduces foreign exchange outflow currently paid as freight to foreign ships.

b) Energy and Food Security -India imports most of its crude oil, LNG, and fertilizers. Dependence on foreign-flagged vessels exposes India to supply disruptions during geopolitical shocks.

c) Strategic and Geopolitical Leverage -Control over sea lanes is essential in the Indo-Pacific region where global power rivalries are intensifying. Strengthening India's maritime capacity enhances deterrence and supports national security objectives.

d) Employment and Industrial Growth -Shipbuilding, port logistics, marine engineering, and allied sectors are major employment generators. Developing marine equipment supply chains also boosts domestic manufacturing.

India's Historic Maritime Depth

India's maritime heritage is centuries old,

Indus Valley Civilization -The dockyard at Lothal (2400 BCE) is considered one of the world's earliest known dock systems.

Chola Naval Expansion -One of the greatest maritime powers in medieval Asia, they maintained naval dominance over Sri Lanka and Southeast Asia.

Bombay Dockyard -Built by the Wadia shipbuilders in the 18th and 19th centuries, it produced some of the finest wooden ships of the British Empire.

This rich heritage, however, declined over the 20th century. Post-Independence industrial focus shifted inland, and India lost momentum in commercial shipbuilding.Today's maritime revival seeks to reconnect with this historical strength and match modern technological standards.

Why Maritime Policy is Strategically Important Now

a) India's Low Share in Global Shipbuilding -Despite an 11,000 km coastline, India contributes just 0.06% of global shipbuilding. This is negligible compared to China, South Korea, and Japan, who together command over 95% of the market.

b) Ageing Indian Fleet -Many Indian ships are old, inefficient, and expensive to maintain. This creates an over-dependence on foreign-flagged vessels.

c) Global Order Backlogs -Leading shipbuilding countries are saturated with orders. This gives India a rare opportunity to attract global shipbuilding contracts.

d) Indo-Pacific Security -India must enhance naval and commercial maritime capabilities to safeguard trade routes and counterbalance China's growing naval expansion.

e) Decarbonization of Maritime Transport -The world is shifting to green propulsion. India risks falling technologically behind if it does not invest in next-generation shipbuilding.

Government Measures to Revive the Sector

1. ₹69,725 crore Maritime Revitalization Package

Includes -₹25,000 crore Maritime Development Fund (MDF) for long-term, low-cost financing. ₹24,736 crore Shipbuilding Financial Assistance Scheme (SFAS) to support domestic shipyards. This aims to remove the biggest barrier in shipbuilding—high capital cost.

2. Vision 2047 for Shipbuilding -India aims to become one of the top five shipbuilding nations. Focus areas include,

1. Advanced propulsion technologies
2. Digital navigation systems
3. Autonomous shipping capabilities

3. Technology Partnerships -Collaboration between Cochin Shipyard Ltd (CSL) and HD Korea Shipbuilding and Offshore Engineering is a major step toward absorbing global expertise.

4. Single-Window Clearance Mechanism (proposed) -To tackle the current maze of regulatory approvals that slow down shipbuilding.

5. Expansion of Indian-Flagged Fleet -Policy incentives aim to,

1. increase the size of India's merchant fleet
2. ensure ships carrying Indian cargo are owned and flagged by India

6. Maritime Skill Development -Training institutes and seafarer skilling initiatives are being expanded to meet global demand for Indian maritime professionals.

Conclusion

India's maritime transformation is not simply another industrial revival project; it is a strategic necessity. As global trade patterns shift and competition intensifies in the Indo-Pacific, India must build both economic and security capabilities. The recent government package marks one of the most ambitious maritime reform programmes since Independence. India now stands at a crossroads. Its historical maritime legacy, geographical advantage, and demographic potential provide a strong foundation. Yet success will depend on coordinated implementation, technological modernisation, institutional efficiency, and sustained political commitment. If executed well, India's maritime policy could transform the nation into a major shipbuilding hub, strengthen economic sovereignty, and establish India as a leading maritime power by 2047.

Main Practice Question

"India's maritime policy is shifting from a trade-supporting framework to a strategic, industrial, and geopolitical instrument. Analyse the key drivers of this shift and evaluate the government's recent measures to revive shipbuilding." (30 words)

I. Introduction (10–15% of answer) -Briefly define India's maritime policy. Mention why maritime capabilities matter for a coastal nation that moves 95% of its trade by sea. Indicate the recent policy push (₹69,725 crore package).

Keywords -Maritime revival, shipbuilding, strategic autonomy, Indo-Pacific.

2. Body

A. Key Drivers Behind the Shift (35%)

1. Economic Drivers

1. India's negligible share (0.06%) of global shipbuilding.
2. High dependence on foreign vessels for energy and trade.
3. High freight outflow in foreign exchange.
4. Job creation potential in maritime manufacturing.

2. Geopolitical & Security Drivers

1. Indo-Pacific power competition; need for maritime deterrence.
2. Countering China's naval and shipbuilding dominance (95% with Korea & Japan).
3. Ensuring energy and supply-chain security.

3. Technological Drivers

1. Global shift towards green propulsion, digital navigation, autonomous shipping.
2. India must modernize to stay relevant.

4. Strategic Opportunity Drivers

1. Overloaded Chinese/Korean shipyards create space for India.
2. India's Vision 2047 and global re-shoring trends.

B. Government Measures to Revive Shipbuilding (35%)

1. Massive Financial Push

1. ₹25,000 crore Maritime Development Fund for low-cost capital.
2. ₹24,736 crore Shipbuilding Financial Assistance Scheme.

2. Capacity Expansion & Modernization

1. Upgrading shipyards like Cochin, Goa, L&T, Hindustan Shipyard.
2. Collaboration with HD Korea for tech transfer.

3. Regulatory Reforms

1. Planned single-window clearance.
2. Streamlining environmental and procurement norms.

4. Expanding Indian-Flagged Fleet

1. Incentives for owning and operating Indian ships.
2. Reducing foreign vessel dependency.

5. Maritime Skill Ecosystem -Seafarer training, marine engineering courses, logistics skilling.

6. Vision 2047 Roadmap

1. Target -Top five global shipbuilders by 2047.
2. Focus on propulsion tech, indigenous marine equipment, digital systems.

C. Critical Evaluation (10%)

Strong financial push but challenges remain -

1. Long gestation period
2. Global competition
3. Execution delays
4. Need for clearer industrial strategy

Partnerships and technology adoption will be critical for success.

3. Conclusion (5–10%) -India's maritime policy marks a strategic shift aligning economic growth with national security. With sustained investment, institutional reform, and technological modernization, India can reclaim its historic maritime strength and become a major Indo-Pacific maritime power by 2047.

41. The Digital Personal Data Protection (DPDP) Act

The Digital Personal Data Protection (DPDP) Act, 2023, and its subsequent Rules represent a foundational shift in India's digital governance architecture. As India's first comprehensive legislation on data privacy, this framework is crucial for balancing economic innovation with the constitutional right to privacy. For Civil Services aspirants, understanding this Act is essential, not only for its legal framework but also for its profound implications on digital commerce, state accountability, and fundamental rights.

Introduction and Main Features of the DPDP Act

The DPDP Act was enacted to provide a clear and responsible framework for the processing of digital personal data (DPD). Its foundation rests on the 2017 Supreme Court judgment that declared the Right to Privacy a fundamental right, rooted in Article 21 of the Constitution (Right to Life and Liberty).

The Act operates on the principles of privacy-by-design and data minimization, ensuring that personal data is handled securely and only for the specific purpose for which consent was taken.

Key Features

1. Data Principal and Data Fiduciary -The law establishes obligations primarily on the Data Fiduciary (the entity, usually a company, that processes data) and grants rights to the Data Principal (the individual whose data is being processed).
2. Consent as the Foundation -Consent must be free, specific, informed, and unambiguous, requiring a clear affirmative action from the user. Data Fiduciaries must provide a clear, standalone notice detailing what data is collected and why. Crucially, withdrawing consent must be made as easy for the user as giving it [Passage].
3. Enforcement Body -The Data Protection Board of India (DPBI) has been established as the dedicated regulator. The DPBI is designed to function as a fully digital institution, managing virtual hearings, digital filings, and electronic orders to ensure efficiency.
4. Penalties -The law imposes stringent financial penalties, with fines for major breaches of compliance obligations potentially reaching up to ₹250 crore per instance.
5. Staggered Compliance Timeline -Companies are currently operating within an 18-month transition period for full compliance, set to end around May 2027, although the government is pushing large firms to adopt standards sooner.

Significance of the Act

The DPDP Act marks a transformative era for India's digital economy by instilling confidence and driving compliance -

1. Global Alignment -The Act brings India's data protection standards in line with international regimes, such as the European Union's GDPR, making it easier for global entities to operate in the Indian market.
2. Accountability and Trust -By imposing high penalties and strict obligations, the Act compels companies to invest heavily in security safeguards like encryption and risk assessments. This elevated level of accountability is essential for building public trust in the digital ecosystem.
3. Protection for Vulnerable Groups -The law places a strong emphasis on protecting minors (under 18). Platforms, particularly in the EdTech, Gaming, and Social Media sectors, must implement verifiable parental consent and are strictly prohibited from tracking minors' behaviour or engaging in targeted advertising directed at them.Similar verification measures are extended for processing data of persons with disabilities.
4. Flexible Cross-Border Data Flows -The Act adopts a "negative list" approach for cross-border data transfer, meaning data can flow to any country unless the government specifically restricts a destination.[13]

This is considered innovation-friendly compared to previous proposals for mandatory data localization, although local storage may still be required for data related to national security or critical infrastructure.

The Critical Relationship with the Right to Information (RTI) Act

One of the most debated aspects of the DPDP Act is its direct amendment to the Right to Information (RTI) Act, 2005. Section 44(3) of the DPDP Act amends Section 8(1)(j) of the RTI Act.

The Change -The original RTI provision was a cornerstone of public accountability, allowing for the disclosure of personal information—even if it invaded privacy—if the larger public interest was deemed to outweigh the right to privacy. The new amendment effectively removes this "public interest override".

The Conflict -Critics argue that by removing this provision, the DPDP Act makes it more difficult for citizens and investigative journalists to access personal information about public officials, such as asset declarations or performance reviews.

The Asymmetry -This creates a significant asymmetry -while the private sector (Data Fiduciaries) faces unprecedented scrutiny and penalties under the DPDP Act, the State has simultaneously utilized the privacy framework to restrict its own accountability mechanisms, limiting public access to key governance information. This conflict, which was operationalized immediately, poses a challenge to transparency and democratic oversight.

Implications and Way Forward

The implementation of the DPDP Act holds vast implications for various stakeholders -

Stakeholder	Positive Implication	Challenge
Data Principals (Citizens)	Greater control over personal data, clear consent mechanisms, and the right to seek correction/erasure. Immediate and mandatory breach notification [Passage].	Potential decrease in transparency regarding public officials due to the RTI amendment.
Data Fiduciaries (Companies)	Clear legal framework facilitates long-term digital strategy and global integration. Tiered oversight (SDFs) mandates higher standards.[1]	High compliance cost, particularly for Significant Data Fiduciaries (SDFs), who must appoint a Data Protection Officer (DPO) and conduct annual audits.[9]
Regulator (DPBI)	Equipped with high punitive power (up to ₹250 crore) and a fully digital infrastructure for efficient enforcement.	Requires robust technical capacity to handle mass compliance issues and manage complex digital evidence.[5]

Way Forward and Conclusion

The DPDP Act is a landmark step towards guaranteeing digital rights in India. Moving forward, success depends on several factors.

1. Effective Enforcement -The DPBI must be fully constituted and operate efficiently to handle complaints and enforce penalties rigorously.
2. Clarity on Grey Areas -The government needs to define the scope of the "negative list" for cross-border transfers and the precise criteria for designating Significant Data Fiduciaries.
3. Balancing Test -The most crucial long-term challenge is resolving the RTI-DPDP conflict. For the Act to truly foster democratic confidence, mechanisms must be found to ensure that enhanced privacy protection for individuals does not inadvertently become a shield for official opacity.

In conclusion, the DPDP Act secures the constitutional right to privacy in the digital age, imposing rigorous standards on corporations. Its enduring legacy will depend on how effectively India navigates the delicate balance between robust data protection and the fundamental requirements of governmental transparency.

Main Practice Question

1. “Assess the conflicting provisions in the Digital Personal Data Protection (DPDP) Act between the stringent corporate privacy standards and public accountability via the RTI Act”.

Answer Guidelines

The candidate should address the question by defining the dual nature of the DPDP Act -its role as a robust regulator for the private sector, and its function in amending the transparency mechanism provided by the Right to Information (RTI) Act, 2005.

1. Introduction (30–40 words) -Define the DPDP Act, 2023, as India's first comprehensive data privacy law, rooted in the constitutional right to privacy. State the core thesis -The Act creates an inherent asymmetry, establishing high accountability for Data Fiduciaries (private entities) while simultaneously relaxing transparency obligations for the State (public bodies).

2. Body

Body 1 -Enforcing Stringent Corporate Privacy Standards (Pillar of Protection)

High Penalties -Mention the severity of the financial risk (up to ₹250 crore per breach) which mandates proactive compliance from companies, elevating data governance to an enterprise risk.

Heightened Obligations -Detail specific compliance requirements -

Consent -Must be "free, specific, informed, and unambiguous," delivered through clear, standalone notices. Withdrawal must be as easy as giving consent [Passage, 16].

Vulnerable Groups -Strict mandates for minors (under 18) and persons with disabilities, including verifiable parental/guardian consent and the prohibition of tracking or targeted advertising directed at children.

Significant Data Fiduciaries (SDFs) -Requirement to appoint a Data Protection Officer (DPO) and conduct mandatory annual audits and Data Protection Impact Assessments (DPIAs), mirroring tiered global oversight.

Body 2 -Restricting Public Accountability via the RTI Act (Pillar of Conflict)

The Amendment -Explain that Section 44(3) of the DPDP Act immediately operationalizes an amendment to Section 8(1)(j) of the RTI Act.

Removal of the Public Interest Override -The critical point is that the amendment removes the clause that allowed disclosure of personal information if the "larger public interest justified disclosure," even if it invaded privacy.

Implications -Analyze the consequence of this structural change -

It shields personal information of public servants (e.g., asset disclosures, performance records) from scrutiny. It is criticized for undermining the RTI Act's effectiveness, potentially hindering civil society oversight and investigative journalism.[7]

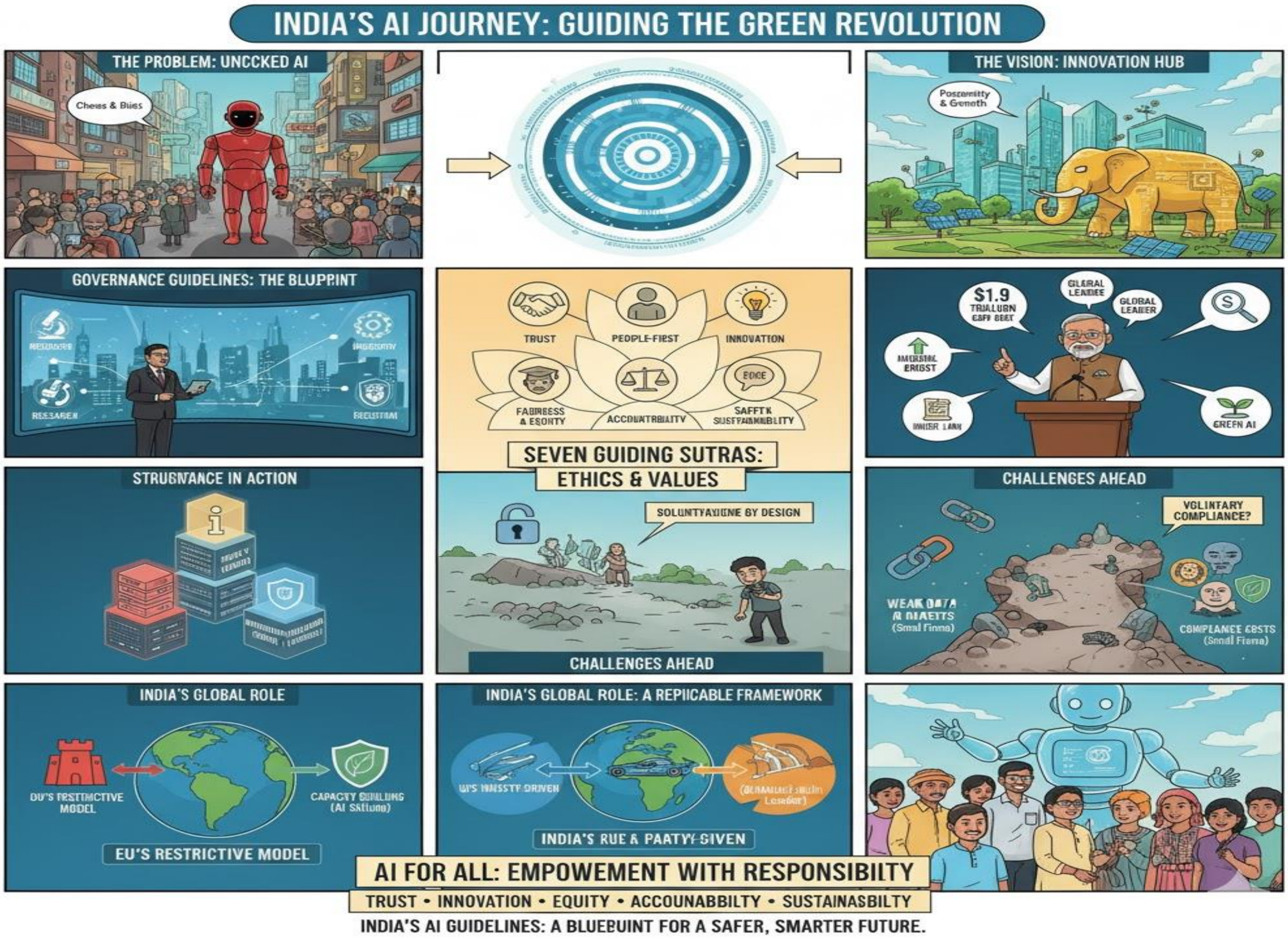
3. Conclusion and Way Forward (40–50 words)

Critical Assessment -Conclude that the DPDP Act is a progressive step for data rights but introduces an asymmetrical governance risk. It successfully regulates private power but uses the privacy mandate to limit transparency regarding state action [Passage].

Way Forward -The successful implementation hinges on the Data Protection Board of India (DPBI) and the judicial system developing a robust balancing test to ensure the Act fulfills its privacy mandate without unduly compromising the constitutional principle of government transparency.

42. Governance Guidelines for Artificial Intelligence in India

Artificial Intelligence (AI) has rapidly transformed the global technological landscape, reshaping governance, industry, service delivery, and social interaction. As India positions itself to become a major AI innovation hub, the government has released the Governance Guidelines for Artificial Intelligence, marking a significant step toward responsible, forward-looking regulation. These guidelines are not a full-fledged law but a blueprint for balancing innovation with safety—an important approach at a time when the world is debating the risks and moral limits of AI. This article examines the necessity, components, and implications of the guidelines in a manner useful for Civil Services aspirants.



Necessity of AI Governance Guidelines

(a) Rapid Expansion of AI -India is witnessing exponential growth in AI applications across,

1. healthcare (diagnostics, predictive modelling),
2. agriculture (precision farming),
3. finance (fraud detection, automated analysis),
4. governance (citizen services, predictive policing).

Without clear guidelines, the use of such powerful tools can lead to misuse, discrimination, and vulnerabilities.

(b) Rising Risks and Safety Concerns -AI systems, if unregulated, may,

1. amplify social biases,
2. violate privacy,
3. produce misinformation at scale,
4. create cybersecurity threats,
5. lead to job displacement.

These risks call for a framework that mitigates harm without stifling emerging technologies.

(c) Absence of a Comprehensive AI Law -India does not yet have a dedicated AI Act like the EU's AI Act. Thus, governance must operate through anticipatory guidelines that offer direction until formal legislation is introduced.

(d) Economic Stakes Are High -AI is projected by NITI Aayog to add $1.4–1.9 trillion to India's GDP by 2035. Ensuring trust, safety, and interoperability is essential for attracting investment and building public confidence.

(e) Global Tech Competition -Countries across the world—from the US and EU to China—are racing to shape global AI norms. India must articulate its own model to avoid dependency and assert leadership in the Global South.

Components of the AI Governance Guidelines

The guidelines are built on Seven Guiding Sutras (Principles) and Six Structural Pillars that define India's approach.

A. Seven Guiding Sutras (Core Principles)

1. Trust -Ensuring AI systems are reliable, transparent, and aligned with public welfare.
2. People-First Design -AI must enhance human capabilities, not replace or harm them.
3. Innovation Over Restraint -Regulation must not hamper start-ups, research, or emerging technologies.
4. Fairness and Equity -Preventing algorithmic discrimination against caste, gender, region, or socioeconomic status.
5. Accountability -Developers, deployers, and institutions must be accountable at each stage of AI deployment.
6. Understandable by Design -AI systems must provide explanations for critical decisions, especially in health, justice, and finance.
7. Safety, Resilience, and Sustainability -AI must be robust against cyberattacks and must support sustainable development goals.

B. Six Structural Pillars (Operational Framework)

1. Infrastructure -Deployment of 38,000 GPUs for AI research. Creation of a national cloud infrastructure for AI development.
2. Capacity Building -AI skilling programmes in schools and universities. Upskilling for government staff handling AI-based governance tools.
3. Policy and Regulation -Guidelines act as soft law until a comprehensive legal framework is created. Focus on risk classification and sector-wise regulation.
4. Institutional Design -Establishment of an AI Safety Institute. Creation of a cross-ministry AI Governance Group. Collaboration among sectoral regulators (health, finance, telecom, etc.).
5. Accountability Mechanisms -New technical safeguards include -

1. watermarking of AI-generated content,
2. provenance tracking,
3. consent-management APIs,
4. real-time monitoring of high-risk systems.

6. Risk Mitigation

1. Creation of an AI-incident database to record harms.
2. Guidelines for bias testing, data safety, and ethical reviews.
3. Encouragement of "red-teaming" to test vulnerabilities.

Implications of the Guidelines

(a) Strengthening Public Trust -As AI becomes part of public services—like PM Gati Shakti, Digital Health Mission, and policing—these guidelines ensure ethical usage, enhancing trust in digital governance.

(b) Boost to Innovation -By avoiding excessive regulation and promoting early-stage flexibility, India protects the innovation potential of start-ups and research institutions.

(c) Strong Signal to Global Investors -Clear guidelines reduce regulatory uncertainty, making India an attractive AI investment hub.

(d) Increased Accountability -Embedding accountability into design ensures misuse can be traced. This protects citizens in sensitive areas such as -

1. credit scoring,
2. healthcare diagnostics,
3. legal decision support,
4. welfare beneficiary targeting.

(e) Challenges Remain -Despite the progress -

1. voluntary compliance may not be enough,
2. India still lacks strong data protection enforcement,
3. biases in datasets can persist,
4. small firms may struggle with compliance costs.

   Therefore, sustained institutional capacity is crucial.

(f) India's Global Role -India's model offers a middle path between -

1. the EU's highly restrictive approach,
2. the US's industry-driven model,
3. China's state-centric controls.

For many Global South nations, India's guidelines may become a replicable framework.

Conclusion

India's Governance Guidelines for Artificial Intelligence represent a significant step toward building a safe, ethical, and innovation-friendly AI ecosystem. They reflect a uniquely Indian approach—balancing technological ambition with social responsibility. The framework recognises the transformative power of AI while ensuring that its development remains human-centric and equitable.

Going forward, India must translate these guidelines into strong institutions, consistent oversight, and transparent data governance practices. If implemented effectively, these guidelines will not only secure India's position as a global AI leader but also ensure that AI becomes a tool of empowerment for all citizens.

Main Practice Question

1. "India's new Governance Guidelines for Artificial Intelligence attempt to balance innovation with ethical responsibility. Critically examine how these guidelines address risks while enabling technological growth in a rapidly evolving digital society."

Answering Guidelines

1. Introduction (30–40 words) -Define the Governance Guidelines for AI in brief. Mention the objective -balancing innovation, safety, responsibility, and inclusion. Highlight rising ethical concerns -bias, misinformation, accountability gaps, privacy issues.

2. Body

1. Need for Guidelines (40–50 words)

1. Rapid proliferation of AI in governance, finance, health, policing → need for risk mitigation.
2. Absence of a dedicated AI law.
3. Global examples of AI misuse (deepfakes, algorithmic discrimination).
4. Rising economic stakes -AI projected to add \$1.4–1.9 trillion to GDP by 2035.

2. Key Components of the Guidelines (80–90 words)

Seven "Guiding Sutras"

1. Trust & people-first design
2. Fairness & equity
3. Innovation over restraint
4. Accountability
5. Understandable by design (explainability)
6. Safety, resilience & sustainability

Six Structural Pillars

1. Infrastructure expansion (38,000 GPUs, AI Safety Institute)
2. Data ecosystem ("AI Kosha")
3. Institutional coordination (AI Governance Group)

4. Capacity building
5. Policy-regulatory coherence
6. Risk mitigation (watermarking, provenance tracking, incident database)

3. Implications (60–70 words)

Positive

1. Strengthens ethical AI ecosystem.
2. Encourages responsible innovation → attracts global investment.
3. Helps reduce algorithmic bias & misinformation.
4. Enhances data governance & user safety.

Concerns/Challenges

1. Voluntary compliance → risk of weak enforcement.
2. Capacity gaps in regulators & public institutions.
3. Data-protection framework still evolving.
4. SMEs may struggle with compliance costs.

3. Conclusion (30–40 words) -India's guidelines are a vital first step toward an inclusive, safe AI future. Their success depends on institutional capacity, collaboration with industry, and transparent data governance. Ethical AI must evolve alongside innovation, not behind it.

43. Supreme Court Verdict on Stray Dogs

Introduction

Stray dogs have long been a part of India's urban and rural landscape — symbols of coexistence for some, sources of fear and danger for others. The Supreme Court's recent order directing the immediate removal of stray dogs from public spaces such as schools, hospitals, and transport hubs has reignited the debate between public health concerns and animal rights protections. While the menace of dog bites and rabies cases is undeniable, the question remains -how can a densely populated country like India manage stray dogs humanely yet effectively? The verdict touches upon sensitive intersections of law, ethics, governance, and community responsibility.

The Menace of Stray Dogs in India

a. Scale of the Problem -India has an estimated 62 million stray dogs, among the largest free-roaming canine populations in the world. According to the Union Health Ministry, over 3.7 million dog-bite cases were recorded in 2024 alone — roughly one every ten seconds.

b. Public Health Concerns -Dog bites are not only traumatic but are also a primary vector for rabies transmission, a disease with a near-100 per cent fatality rate once symptoms appear. India accounts for about 36 per cent of global rabies deaths, according to WHO data.

c. Socio-Economic Dimensions

Vulnerable groups — children, sanitation workers, and the urban poor — face higher exposure. Waste mismanagement, open dumping, and unregulated feeding in colonies create ideal conditions for canine proliferation. Unchecked breeding from abandoned or unsterilized pets aggravates the issue.

The menace, therefore, is not merely a civic nuisance but a public-health crisis intertwined with governance failures.

The Supreme Court's Recent Verdict (2025)

a. The August 2024 Order -In August 2024, the Supreme Court adopted a balanced stance, allowing stray dogs to be -

1. Sterilized and vaccinated, and
2. Released back into their original habitats, unless proven aggressive or infected with rabies.

This was consistent with the Animal Birth Control (ABC) Rules, 2023, issued under the Prevention of Cruelty to Animals Act, 1960, which promote humane population control rather than mass removal.

b. The November 2025 Reversal -In a sharp turn, the Court, noting "alarming frequency" of dog-bite incidents, ordered that stray dogs be removed forthwith from premises of schools, hospitals, sports complexes, bus stands, and railway stations, to be housed in designated shelters after sterilizations and vaccination. This decision effectively suspends the earlier release-back clause, introducing a containment-oriented approach rather than community coexistence.

c. Core Reasoning -Persistent reports of bites despite previous orders. Failure of municipal bodies to implement sterilizations and vaccination drives effectively. Immediate need to protect citizens, especially children and the elderly, in public spaces. While the Court's concern is legitimate, the directive raises questions of practicality and sustainability, given India's limited animal-shelter infrastructure.

Implications for Domestic Dogs and Urban Pet Ownership

a. Impact on Pet-Keeping Practices -The verdict may indirectly influence pet owners' responsibilities, reinforcing the need for -Mandatory registration and sterilizations of pets by local bodies. Prohibition of abandonment, which is a key cause of street-dog proliferation. It may also encourage community adoption models, where vaccinated street dogs are cared for collectively.

b. Legal Accountability -Urban local bodies (ULBs) may now impose stricter penalties for non-compliance with pet registration, vaccination, and waste-disposal norms. Welfare organizations fear misuse of the order to harass responsible pet owners or relocate harmless street dogs arbitrarily.

c. Urban Governance Implications -Sheltering lakhs of dogs demands -Vast land resources and trained veterinary staff. Significant financial outlay — many municipalities already struggle to manage stray cattle, pigs, and monkeys. Without adequate planning, such mass relocation could create welfare disasters and strain local budgets.

Significance of the Verdict

a. A Public-Safety-First Approach -The verdict underscores the judiciary's duty to protect citizens' right to life and safety (Article 21). In prioritizing human safety in public spaces, the Court reflects growing urban anxieties over dog-bite incidents.

b. Judicial Frustration with Governance Gaps -The Court explicitly blamed "administrative apathy" and "systemic failure" for the continuing menace. This signals a demand for greater accountability from municipal and state authorities, not just welfare activists.

c. A Shift in Jurisprudence -Earlier judgments — notably Animal Welfare Board of India v. People for Elimination of Stray Dogs (2016) — leaned toward animal protection and sterilize-and-release policies. The current verdict tilts the balance toward human-centric welfare, reflecting an evolving judicial pragmatism.

d. Moral and Ethical Dimensions -The ruling forces policymakers to confront a moral dilemma -Can humane treatment and public safety coexist? The answer lies in a scientifically informed, community-based model, not in polarized activism.

Way Forward

a. Strengthen Animal Birth Control (ABC) Implementation -Scale up mass sterilization and vaccination through public-private partnerships. Deploy mobile veterinary units and adopt GIS mapping to monitor progress.

b. Build Humane Shelter Infrastructure -Establish region-wise shelters with minimum welfare standards. Encourage NGO participation with government funding support.

c. Promote Responsible Pet Ownership -Enforce registration, microchipping, and sterilizations of pets. Launch nationwide campaigns on adoption instead of abandonment.

d. Improve Urban Waste Management -Unmanaged garbage sustains stray populations. Segregated waste collection and elimination of open dumps are essential preventive measures.

e. Encourage Community Participation -Resident welfare associations (RWAs) can -

1. Maintain local feeding zones.
2. Monitor sterilization drives.
3. Mediate conflicts between feeders and residents.

f. Integrate Law and Science -Any durable policy must combine legal mandates, veterinary science, and behavioral studies rather than emotional or ad-hoc responses.

Conclusion

The Supreme Court's latest verdict on stray dogs highlights the complex interplay between human safety, legal responsibility, and animal welfare. While the order responds to real dangers posed by dog bites, it also exposes the deep governance gaps that fuel the crisis. India's challenge lies not in choosing between compassion and control, but in institutionalizing humane, evidence-based management of its stray population. For pet owners, municipalities, and courts alike, the ruling is a reminder that rights — whether human or animal — must be balanced by responsibilities. If implemented with empathy, efficiency, and accountability, this verdict could mark a turning point toward safer cities and kinder societies.

Mains Practice question

1. "The Supreme Court's recent verdict on removing stray dogs from public spaces reflects a conflict between compassion for animals and duty toward human safety." Discuss this ethical dilemma in governance, citing principles of empathy, justice, and responsibility. (10 marks)

1. Introduction (25–30 words | 2 marks) -Briefly introduce the context — SC verdict on stray dogs; the ethical dilemma it raises between animal welfare and human safety. Define the nature of the dilemma as a conflict of moral duties.

Example -The Supreme Court's order on removing stray dogs to protect citizens revives a moral dilemma — balancing empathy toward animals with the state's responsibility to ensure public safety and health.

2. Body

I. Ethical Dilemma and Stakeholders (40–50 words | 2 marks)

Core dilemma -Compassion and protection for animals (a moral duty under Article 51A(g)) vs. Prevention of harm and protection of life (a constitutional duty under Article 21).

Stakeholders -Citizens (especially children, elderly), stray animals, local authorities, judiciary, animal welfare organizations, and pet owners.

II. Ethical Dimensions (60–70 words | 4 marks)

Ethical Principle	Application to the Issue
Utilitarianism (Greatest good for greatest number)	Prioritizing human safety may seem justified if lives are at risk.
Compassion & Ahimsa (Moral duty)	Humane treatment of animals is a sign of civilized society.
Justice & Equity	Balancing rights of citizens and voiceless beings is essential.
Accountability in Governance	Administrative negligence should not lead to cruelty as a quick fix.

Empathy & Ethical Leadership	Policymakers must act with emotional intelligence, not populist impulses.

III. Ethical Analysis / Way Forward (40–50 words | 2 marks) -Adopt a "middle-path approach" — humane sterilizations, vaccination, and safe zones. Strengthen civic infrastructure and citizen awareness. Uphold compassion while ensuring safety — reflecting Gandhian ethics of balance between man and nature.

Example -True ethical governance harmonizes compassion with justice. Protecting people and preserving life—human or animal—must go hand in hand through humane, scientific, and accountable measures.

IV. Ethical Takeaway Quote (for enrichment) -"The greatness of a nation and its moral progress can be judged by the way its animals are treated." -Mahatma Gandhi

44. India Skills Report 2026

India's labor market is undergoing one of the most significant transitions in its economic history. The India Skills Report 2026, titled "The Future of Work – Gig Workforce, Freelancing, AI-Supplemented Workforce, Remote Work & Entrepreneurship", provides a clear picture of how the country's workforce is adapting to new technologies, work models, and employer expectations. Prepared by ETS in collaboration with CII, AICTE and AIU, the report is a crucial guide for policymakers and civil services aspirants seeking to understand India's evolving human capital.

Highlights of the Report

a) Employability improving - India's employability score rose to 56.35%, up from 54.81% last year.

Key reasons include-

1. Increased digital learning
2. Better alignment of technical education
3. Expansion of industry–academia collaboration

States like Uttar Pradesh, Karnataka, Maharashtra, Telangana and Delhi lead in employability, reflecting better training ecosystems. However, Bihar, Jharkhand, and several Northeastern states continue to lag, reflecting regional disparities.

b) Rise of India's AI workforce - The report highlights India's rapid emergence as a global AI talent powerhouse-

1. India contributes 16% of global AI professionals
2. 600,000 Indians work in AI and data science
3. The number is expected to double by 2027

This strengthens India's position in global technology supply chains.

c) Gig and freelance economy expanding rapidly - India's gig workforce is projected to reach- 23.5 million workers by 2030

Growth is driven by-

1. E-commerce delivery
2. Ride-hailing
3. Digital freelancing
4. Edtech and content creation

d) AI-led recruitment systems - Workplaces are adopting AI at record speed-

1. 9 out of 10 employees use generative AI tools
2. AI-driven hiring, performance evaluation, and workflow management are becoming the norm

This marks a shift from traditional HR practices to data-driven systems.

Future Forecasts in the Report

a) Automation will reshape job profiles - AI is expected to take over-

1. Routine administrative tasks
2. Basic coding
3. Data entry
4. Customer support

Jobs will increasingly demand-

1. Creativity
2. Analytical reasoning
3. Emotional intelligence
4. Algorithmic thinking

b) More gig entrepreneurship - Flexibility and low entry barriers will push youth toward-

1. Freelancing
2. App-based services
3. Digital entrepreneurship
4. Remote global projects

c) Expanding skill gaps - The report warns of a digital divide-

1. Large corporates adopt AI faster than MSMEs
2. Urban centres outperform rural regions
3. Women participate less in high-growth tech sectors

Without targeted policy, inequalities may deepen.

d) Increasing demand for ethical and regulated AI - The workforce of 2030 will require-

1. AI governance
2. Algorithmic transparency
3. Data protection awareness
4. Verified skill credentials

Necessary Reforms for India - To convert employability into meaningful employment, India needs structural reforms-

a) Strengthening skill ecosystems

1. Expand Skill India, PMKVY, and apprenticeship programs
2. Focus on hands-on and project-based learning
3. Update curricula in engineering and arts colleges to match industry needs

b) Modernizing labor policies - The report stresses-

1. Social security for gig workers
2. Portable benefits (health, insurance, PF)
3. Clear contracts and grievance mechanisms

The four Labor Codes, once implemented, can address these issues.

c) Reducing regional imbalances - Government must-

1. Invest in skill centres in backward regions
2. Strengthen digital infrastructure
3. Encourage local industry–academia partnerships

d) Closing the gender gap - Measures required-

1. More women in STEM scholarships
2. Safe and inclusive workplaces
3. Remote and flexible work options

e) Building an AI-ready workforce - India needs-

1. AI and machine learning training in colleges
2. Public–private partnerships for upskilling
3. AI labs in universities
4. Short-term skill bootcamps for MSMEs

Government Measures Already in Place

India has taken several steps to prepare for the future workforce-

a) Skill India Mission - Trained over 1.5 crore youth in various sectors.

b) National Education Policy 2020 - Introduced-

1. Multidisciplinary learning

2. Coding from school level
3. Flexibility in higher education

c) Digital India

Enhanced-

1. Digital payments
2. Online services
3. Rural broadband

d) India AI Mission

Focuses on-

1. AI compute infrastructure
2. Datasets platform (AI Kosha)
3. AI in governance

e) Future Skills PRIME & Semiconductor Mission

Aims at-

1. Industry-ready digital workforce
2. Building India's chip manufacturing capability

Conclusion

The India Skills Report 2026 highlights that India is well placed to become a global talent powerhouse. With rising employability, rapid adoption of generative AI, and an expanding gig economy, India's workforce is becoming more flexible, digital, and globally relevant.

Yet challenges remain-

1. Gig workers lack social security
2. Skill gaps persist across regions
3. MSMEs lag in AI readiness
4. Women's participation remains unequal.

For India to harness its demographic dividend, policy must focus on equity, future skills, and worker protection. With the right reforms and sustained investment in human capital, India can turn its vast workforce into its greatest competitive advantage in the 21st century.

Main Practice question

1. "India Skills Report 2026 reveals both impressive advancements and deep structural vulnerabilities in the workforce. Discuss how India can convert rising employability into equitable, future-ready employment." (30 words)

Answer Guidelines

1. Introduction (2–3 lines) - Briefly introduce the India Skills Report 2026. Highlight its dual nature- rising employability but widening inequalities.

2. Body

I. Key Findings Relevant to the Question

1. Employability rises to 56.35% — improvement but uneven across regions.
2. Gig workforce expanding — projected 23.5 million by 2030.
3. AI adoption high (90% usage) — but training inadequate and uneven.
4. India holds 16% of global AI workforce — expected to double by 2027.
5. Gender parity improving — but women remain excluded from high-growth sectors.

II. Challenges & Vulnerabilities

1. Growing skill divides (digital vs non-digital).
2. Gig workers lack social security and institutional protections.
3. Regional disparities between leading and lagging states.
4. SME sector lagging behind in AI adaptation.
5. Risk of AI-induced inequality similar to past services-led growth.

III. Measures Needed to Convert Employability into Equitable Employment

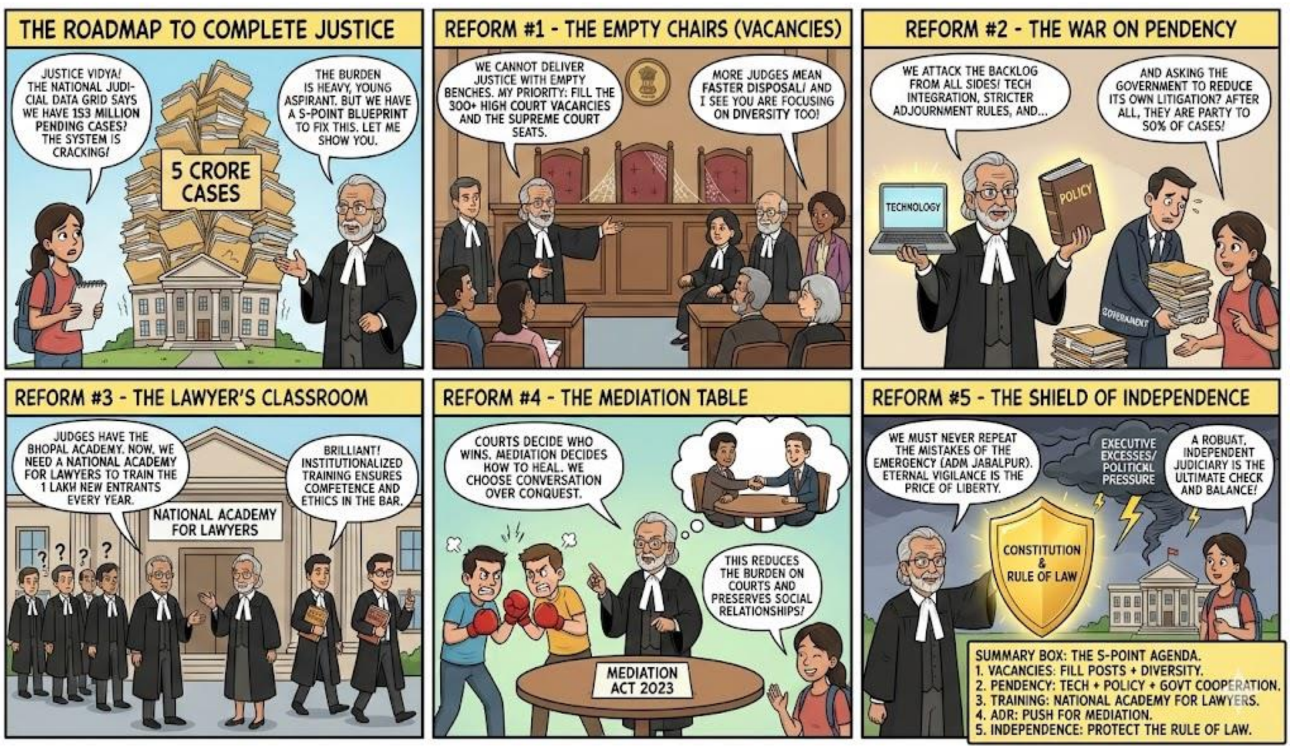
1. Modernise labour laws - Implement pending four Labour Codes. Introduce portable benefits for gig workers.
2. Strengthen skilling ecosystems - Mandatory AI & digital literacy training in all sectors. Public–private skill centres aligned with future jobs. Skill mapping at district and state level.
3. Technology governance reforms - Ethical AI guidelines, algorithmic transparency in hiring. Fair-work certification for digital platforms.
4. Education reforms -Shift to industry-linked, project-based learning. Mandatory internships and apprenticeship programmes. Upgrade ITIs, polytechnics & community colleges.
5. Focus on equity - Scholarships & digital skilling programmes for women. Targeted skilling missions in Bihar, Northeast & aspirational districts. Support SMEs with digital transition funds.

V. Government Measures Already Underway - Digital India, Skill India Mission, PMKVY 4.0. National Education Policy 2020. Digital apprenticeship schemes and Startup India initiatives.

3. Conclusion - India stands at a demographic and technological inflection point. Rising employ. A coordinated approach—linking skills, social security, education reforms, and technology regulation—is essential to convert India's expanding talent pool into a truly equitable, future-ready workforce capable of driving national development.

45. The Indian Judiciary at a Crossroads - A Roadmap for the 53rd Chief Justice.

On November 24, Justice Surya Kant assumes office as the 53rd Chief Justice of India (CJI). His 15-month tenure comes at a pivotal moment when democracies globally face institutional erosion. However, the Indian judiciary remains a robust pillar of democracy, entrusted by the Constitution to interpret laws and check executive actions.



The Unique Position of the Supreme Court

The framers of the Indian Constitution placed immense faith in the judiciary. Unlike other institutions, the Supreme Court (SC) has the unique power to evaluate the constitutionality of actions taken by the Legislature and the Executive. A key constitutional provision highlighted in this context is Article 142.

What it is - It empowers the Supreme Court to pass any decree or order necessary for doing "complete justice" in any matter pending before it.

Significance - This concept allows the Court to transcend the rigid limitations of statutory law to ensure fairness, making the SC not just a court of law, but a court of equity and justice.

The Necessity of Judicial Reforms - The Core Issues

Despite its robust framework, the Indian judiciary is burdened by systemic issues that threaten the delivery of timely justice. The necessity for reform is driven by two alarming statistics -

Pendency of Cases - According to the National Judicial Data Grid (NJDG), as of September, the numbers are staggering -

1. District/Subordinate Courts - ~47.56 million cases.
2. High Courts - ~6.38 million cases.
3. Supreme Court - ~88,000 cases.
4. Total - Approximately 153 million cases are pending across the country.

The Government as a Litigant - A crucial data point for exam answers is that the Government (Centre and States) is a party to nearly 50% of pending cases. This clogs the system and highlights the need for better litigation policies within the executive. As Justice Surya Kant has noted, pendency is a direct threat to constitutional guarantees. Even the strongest legal aid serves no purpose if "justice arrives too late."

The Five Immediate Reforms

To address these challenges and shape the future of the judiciary, five specific areas require immediate attention during the new CJI's tenure.

1. Filling Vacancies and Ensuring Diversity - The most pressing administrative task is the appointment of judges.

The Challenge - There are over 300 vacancies in various High Courts. The new CJI will also lead the Collegium to appoint six new judges to the Supreme Court.

The Objective - The focus must be on balancing judicial independence with accountability.

Diversity - There is a critical need to increase the representation of women in the higher judiciary. A diverse bench improves the quality of justice by bringing different lived experiences to the adjudication process.

2. A Multi-Pronged War on Pendency - Solving the backlog requires more than just hiring judges; it requires a structural overhaul. The approach must include -

Technology - leveraging AI and digitization for case management.

Adjournment Culture - Revisiting policies to curb frequent adjournments which delay trials.

Appeals Reform - Reimagining the practice of appeals to prevent frivolous cases from reaching the higher courts.

Collaboration - Since the government is the largest litigant, the judiciary and the executive must work together to reduce avoidable litigation.

3. Establishing a National Academy for Lawyers - This is a novel reform idea. Currently, India has the National Judicial Academy (Bhopal) to train judges, but no corresponding national body for lawyers.

The Need - With 1.8 million lawyers in India and 1 lakh entering annually, the Bar Council of India acts as a regulator but not strictly as a trainer.

The Solution - A dedicated National Academy for Lawyers is needed to train independent practitioners (who lack corporate training programs) in ethics, efficiency, and modern legal practices.

4. Promoting Mediation (Alternative Dispute Resolution) - Justice Surya Kant is a proponent of the Mediation Act, 2023.

The Philosophy - While courts focus on "victory" and "conquest," mediation focuses on "healing" and "preserving relationships."

Significance - Moving disputes to mediation reduces the burden on formal courts. For this to succeed, there must be a consensus among the Bar (lawyers) to encourage clients toward mediation rather than litigation.

5. Protecting the Rule of Law and Institutional Independence - The Supreme Court must remain the sentinel of liberty.

Historical Context - The article references the ADM Jabalpur case (1976) during the Emergency, where the SC failed to protect habeas corpus rights—a "blot" on its record.

The Lesson - This serves as a reminder that the judiciary must maintain "eternal vigilance." It must act as a check against executive excesses to protect the fundamental rights of citizens.

Significance of These Reforms

1. Restoring Public Faith - The legitimacy of the judiciary rests on public trust. By addressing delays (pendency) and filling vacancies, the judiciary reassures the common man that justice is accessible.

2. Economic Impact - A sluggish judicial system hurts the economy. Contract enforcement and dispute resolution are key metrics in the "Ease of Doing Business." Efficient courts attract investment.

3. Strengthening Democracy - By emphasizing the "Rule of Law" and learning from past mistakes (like the Emergency era), the judiciary reinforces the system of checks and balances, ensuring India does not slide into authoritarianism.

4. Future-Proofing the System - Creating a National Academy for Lawyers and integrating technology ensures that the legal system evolves to meet modern challenges, creating a "next generation" of competent legal professionals.

Conclusion

The tenure of a Chief Justice is not just about administrative continuity; it is an opportunity for institutional course correction. Justice Surya Kant's focus on the "five pillars"—Appointments, Pendency reduction, Lawyer training, Mediation, and Judicial Independence—offers a holistic blueprint.

For a Civil Services aspirant, these reforms highlight the shift from merely *interpreting* the law to *managing* the justice delivery system. If successful, these initiatives will move the Indian judiciary closer to the constitutional ideal of "Complete Justice" under Article 142, ensuring that the institution remains robust, inclusive, and efficient.

Mains Answer Writing Practice

1. "The concept of complete justice empowers the Supreme Court to transcend the limitations of law." Discuss this statement in light of Article 142, and analyze the structural challenges that hinder the effective delivery of justice in India.

Answer guidelines

1. Introduction

Constitutional Basis - Start by mentioning that Article 142 provides unique and extraordinary powers to the Supreme Court to pass any decree or order necessary for doing "complete justice" in any cause or matter pending before it.

Nature of Power - Explain that unlike other courts which are bound strictly by statutory laws (written laws), the SC acts as a Court of Equity under this article. It bridges the gap between the "letter of the law" and the "spirit of justice."

2. Body

1. "Transcending Limitations of Law" - Decoding Article 142

Supplementing, Not Supplanting - Clarify that Article 142 does not allow the SC to ignore substantive law, but empowers it to fill the vacuum where law is silent or where strict adherence to statutory procedure would lead to gross injustice.

Key Instances (Case Laws for Substantiation)

The Ayodhya Verdict (2019) - The SC used Article 142 to grant 5 acres of land to the Sunni Waqf Board, recognizing that strict property law might not address the unique sensitivities of the dispute.

Union Carbide Case (Bhopal Gas Tragedy) - The Court used this power to enhance compensation for victims beyond the statutory caps.

A.G. Perarivalan Case (2022) - The SC ordered the release of the convict (involved in the Rajiv Gandhi assassination case) due to prolonged delay by the Governor, bypassing procedural hurdles to ensure human rights.

Irretrievable Breakdown of Marriage - Until recently, this was not a statutory ground for divorce under the Hindu Marriage Act, but the SC frequently granted divorce under Article 142 to end "dead marriages."

2. Structural Challenges Hindering Effective Justice Delivery

Transition - While the SC can deliver complete justice in specific high-profile cases, the broader judicial system faces systemic roadblocks.

A. Massive Pendency of Cases - Cite data (e.g., ~5 crore/50 million pending cases across India as per National Judicial Data Grid). Highlight that "Justice delayed is justice denied."

B. Government as the Biggest Litigant - The Executive (Centre and States) accounts for nearly 50% of pending litigation. This burdens the courts with avoidable cases (e.g., appeals against own employees or tribunal orders).

C. Judicial Vacancies - High vacancy rates in High Courts (often >30%) and Subordinate courts. Delays in the Collegium system and friction between the Executive and Judiciary regarding appointments.

D. Infrastructure & Digital Divide - Lack of courtrooms and support staff in lower judiciary. While the SC is digitizing, district courts often lag in e-filing and digital evidence handling.

E. Adjournment Culture - Frequent adjournments extend the life of cases by years, increasing the cost and emotional burden on litigants.

3. Conclusion & Way Forward

The Balance - Conclude that Article 142 is a powerful tool for "corrective justice" in individual cases, but it cannot be a substitute for systemic governance.

The Reforms - Emphasize the need for the "Five Reforms" (as discussed in the source material) -

1. Time-bound filling of vacancies.
2. Establishing a National Judicial Infrastructure Authority.
3. Promoting ADR (Alternative Dispute Resolution) and Mediation.
4. Reducing government litigation.

Final Thought - A robust justice delivery system ensures that "complete justice" is the norm for the common citizen, not just an extraordinary exception granted by the apex court.

46. Paris Agreement @10th Year

Introduction - Paris Agreement

The Paris Agreement, adopted in 2015 at COP21, is the most important global climate treaty in modern history. It aims to limit global temperature rise to well below 2°C and ideally below 1.5°C. Unlike earlier climate regimes, Paris is based on universal participation, where every country—developed or developing—submits a climate action plan called a Nationally Determined Contribution (NDC). These commitments must be updated every five years with increasing ambition, making it a dynamic, evolving pact rather than a static treaty. Ten years later, the world is taking stock of how much the Paris Agreement has achieved — and how far we still need to go.

Why the Paris Agreement is Historically Significant

1. Universal Climate Action - Paris moved the world away from the Kyoto model, which placed obligations only on developed countries. This was the first time all countries agreed to act, making global climate governance more inclusive.

2. No Backsliding Principle - The Agreement created a rule that every updated NDC must be more ambitious than the previous one. This prevented countries from weakening their commitments.

3. The Global Stock Take System - A five-year review mechanism was introduced to assess global progress. It ensures transparency, accountability, and course correction.

4. Recognition of Equity and CBDR - Paris embedded the principle of Common but Differentiated Responsibilities (CBDR) while recognizing national capacities. Developed countries would lead in deep decarbonization and provide finance, technology, and support to developing nations.

5. Flexibility Through Article 6 - Countries were allowed to use -

1. carbon markets
2. cooperative approaches
3. non-market mechanisms

This expanded options for achieving emission reduction targets.

Ten Years On - Appraisal of the Paris Agreement

Successes

A. The world avoided a catastrophic warming path

1. Before Paris, the world was heading toward 4–5°C warming by 2100.
2. Today, with NDCs, projected warming has reduced to 2.1–2.8°C.
3. This is not enough, but it shows the curve has bent.

B. Long-term strategies and net-zero commitments - More than 140 countries have now adopted net-zero goals, providing -

1. policy stability
2. investment certainty
3. technology direction

This is a major structural shift.

C. Climate institutions strengthened - The Paris Agreement directly or indirectly enabled -

1. establishment of the Loss and Damage Fund
2. negotiations for a New Collective Quantified Goal for Climate Finance
3. rise of global alliances of cities, industries, and civil society

D. Resilience of the Agreement - Even when the US withdrew under Donald Trump, the Agreement held firm. This demonstrated that Paris was built to survive political shocks.

Role of Developed and Developing Countries

1. Role of Developed Countries - Paris expected developed countries to -

1. reduce emissions quickly
2. reach net-zero earlier
3. provide $100 billion per year in climate finance (missed)
4. support technology transfer

However, the results have been mixed.

Many advanced economies have -

1. expanded fossil fuel production
2. delayed climate finance
3. resisted deeper carbon cuts

Developed countries must reach net zero by around 2040 to keep 1.5°C alive. Current pledges fall far short.

2. Role of Developing Countries - Developing nations argue that -

1. they contributed the least to historical emissions
2. development needs cannot be sacrificed
3. they need finance and technology support

Yet several emerging economies have shown leadership through -

1. renewable energy expansion
2. climate-resilient development
3. regional alliances

India is a major example of such leadership.

India's Role in the Paris Agreement Framework

1. Active Leadership in Global Climate Governance - In the last decade, India has led or co-led global initiatives such as -

1. International Solar Alliance (ISA)
2. Coalition for Disaster Resilient Infrastructure (CDRI)
3. Global Biofuels Alliance

A study shows India mobilises 47 countries on average in each initiative — comparable to COP presidencies.

2. Exceeding Commitments - India is on track to surpass its NDC target of reducing emission intensity of GDP by 45% by 2030, likely reaching 48–57%.

3. Expanding Renewable Energy - India is among the fastest-growing renewable energy markets, with large-scale solar, wind, and green hydrogen programmes.

4. Climate Goals Integrated with Development - Schemes such as -

1. UJALA
2. Faster Adoption of Electric Vehicles (FAME)
3. Smart Cities Mission
4. PM-KUSUM

show India's emphasis on jobs + growth + sustainability.

Concerns and Gaps

1. Inadequate Global Ambition - Developed countries are not decarbonising fast enough, pushing the world toward exceeding 1.5°C.

2. Climate Finance Crisis - The promised $100 billion was delayed and insufficient.

The new requirement is $1.3 trillion annually — a massive gap.

3. Technology Transfer Still Weak - High costs, patents, and geopolitics slow down clean tech diffusion.

4. Growing Adaptation and Loss & Damage Challenges - Developing nations face rising climate risks without adequate support.

5. Political Instability and Energy Security Pressures - Conflicts and changing global priorities have weakened momentum.

Suggestions for the Way Forward

1. Developed countries must lead by example

1. Faster fossil fuel phase-out
2. Earlier net-zero targets
3. Massive scaling up of climate finance

2. Reform of climate finance architecture - Climate funds need -

1. easier access
2. faster disbursement
3. lower interest rates

3. Global Technology Partnerships - India can help lead South–South climate technology collaboration.

4. Strengthening transparency and accountability - Countries must meet their commitments without creative accounting.

5. Moving from incrementalism to transformation - Climate change demands systemic, not marginal action -

1. green grids
2. urban redesign
3. sustainable agriculture
4. circular economy

Conclusion

Ten years after its adoption, the Paris Agreement remains humanity's most important climate framework — flexible, resilient, and universal. It has reduced warming projections, mobilised global cooperation, and created long-term climate pathways. But ambition, equity, and finance remain the biggest obstacles. Whether Paris becomes a turning point or a missed opportunity will depend on how seriously the world — especially the developed world — acts in the next decade. For developing nations like India, it is both a responsibility and an opportunity to shape a sustainable, equitable global future.

Main Practice Question

1. "Ten years after its adoption, the Paris Agreement remains central to global climate governance, yet significant gaps persist in ambition, equity, and climate finance. Critically analyse the achievements and shortcomings of the Paris Agreement at its 10-year mark, with special reference to India's role and concerns." (~30 words)

Answer Guidelines

1. Introduction (2–3 lines) - Briefly introduce the Paris Agreement (2015). State its objective - limit warming to well below 2°C, preferably 1.5°C. Mention its importance after 10 years.

2. Body

1. Achievements of the Paris Agreement

Universal participation through NDCs — first global climate pact involving all nations.

No-backsliding rule ensuring each updated NDC must be more ambitious.

Global Stocktake mechanism institutionalized periodic review.

Bending the emissions curve - projected warming reduced from 4–5°C to 2.1–2.8°C.

Triggered net-zero commitments and long-term strategies by 140+ countries.

Strengthened global climate institutions such as the Loss & Damage Fund.

Resilience - survived US withdrawal under Trump.

2. Shortcomings / Concerns

Gap in ambition - Developed countries slow in phasing out fossil fuels.

Climate finance crisis - $100 billion goal delayed; $1.3 trillion now needed.

Weak technology transfer due to patents and geopolitics.

1.5°C target slipping away due to insufficient global cuts.

Political instability and energy security pressures weakening commitments.

3. India's Role

1. Achieved and exceeded NDC targets on emission intensity.
2. Leading global alliances - ISA, CDRI, Global Biofuels Alliance.

3. Among fastest-growing renewable energy markets.
4. Advocates equity, climate justice, and CBDR.
5. Still faces adaptation burdens and finance gaps.

4. Way Forward / Suggestions

1. Developed countries must reach net zero earlier (≈2040).
2. Reform global climate finance architecture for accessibility and scale.
3. Strengthen technology sharing and South–South cooperation.
4. Move from incremental to transformational climate action.
5. Enhance transparency, accountability, and real-time emissions tracking.

3. Conclusion - Paris Agreement is a framework that works, but global leadership and equity must improve. The next decade will decide whether Paris becomes a turning point or a missed opportunity.

47. Supreme Court's Opinion on Governors' and President's Time Limits for Assent to Bills - A Constitutional Analysis.

The Supreme Court of India, in its recent unanimous opinion delivered in response to a Presidential Reference, has provided significant clarity on the constitutional role of Governors and the President with regard to assenting to State legislation. The judgment, dealing with the contentious issue of whether the judiciary can prescribe time limits for constitutional authorities to act on Bills, has deep implications for Centre–State relations and India's federal structure. This article examines the core findings of the judgment, its historical context, associated judicial precedents, and its wider significance for governance and the functioning of the Indian polity.

What Is the Opinion Judgment About?

The central question placed before the Supreme Court was -

Can the judiciary prescribe a time limit for Governors or the President to decide on Bills placed before them under Articles 111, 200, and 201 of the Constitution?

The Court held NO—the judiciary cannot impose rigid timelines on constitutional authorities unless the Constitution itself explicitly provides such a limit.

This opinion arose from increasing friction between State governments and Governors, where some Bills were kept pending for long durations. States argued that this undermined democratic governance and demanded judicial intervention. The Presidential Reference sought clarity to avoid breakdowns in the constitutional scheme.

Key Opinions Expressed by the Supreme Court

(a) No "Deemed Assent" - The Court categorically stated that there is no concept of deemed assent by the Governor or President, except where explicitly provided in the Constitution (and none exists for Articles 200 & 201). Courts cannot invent such mechanisms.

(b) Judiciary Cannot Fix Timelines - The Court held that - Fixing a time frame amounts to judicial legislation, which violates separation of powers. Constitutional silences are deliberate design, not gaps to be filled by courts.

(c) Governors Must Act Within a "Reasonable Time" - Though timelines cannot be judicially imposed, the Court clarified that - Governors cannot indefinitely delay decisions. Unexplained, excessive delay may invite judicial scrutiny, but only in rare cases.

(d) Three Constitutional Options for the Governor - Under Article 200, the Governor has three choices -

1. Assent to the Bill
2. Return the Bill (except money bills)
3. Reserve it for the President

The Governor cannot refuse assent outright.

(e) President's Powers Are Independent - Under Articles 111 & 201, the President exercises -

1. Independent constitutional authority
2. Not bound to seek advisory opinions unless the President chooses to invoke Article 143

(f) No Mandatory Consultation with the Supreme Court - Requiring Presidential references for every reserved Bill would -

1. Create procedural bottlenecks
2. Distort the executive–judicial balance
3. Undermine the President's constitutional role

Previous Judicial Approach to the Issue

There have been earlier judgments where the Supreme Court attempted to address gubernatorial delays.

(a) Punjab vs. Union of India (2024) - The Court observed -

1. Governors cannot sit on Bills indefinitely
2. It suggested a "reasonable time" of three months

This was widely interpreted as a judicially imposed time limit.

The latest opinion overrules this and clarifies that -

1. Courts cannot prescribe strict timelines
2. Only "reasonableness" can serve as the guiding principle

(b) Nabam Rebia Case (2016) - Held that -

1. Governors cannot exercise discretion arbitrarily
2. They are bound by the aid and advice of the Council of Ministers except in limited cases

The new opinion is consistent with restraining gubernatorial overreach, while also respecting constitutional boundaries.

Significance of the Judgment

(a) Preserves Separation of Powers - The judgment prevents the judiciary from -

1. Entering legislative or executive domains
2. Creating new procedural requirements

This reinforces constitutional discipline.

(b) Reasserts the Neutral Role of Governors - The Court reminds Governors that they are -

1. Constitutional heads
2. Not political actors
3. Expected to uphold democratic functioning

(c) Strengthens Federal Stability - In politically polarised environments, Governors often become friction points. The judgment brings clarity and reduces potential flashpoints.

(d) Protects Democratic Legislative Processes - By discouraging prolonged inaction, the judgment ensures

1. State legislatures can function effectively
2. Governance is not halted by executive delays

Implications for Centre–State Relations

(a) Reduces Political Conflict - Many States accused Governors of acting as agents of the Centre.

The judgment signals that -

1. Governors must act responsibly
2. Centre cannot indirectly stall State laws through gubernatorial delay

(b) Clarifies Constitutional Boundaries - State autonomy in legislation is reaffirmed. The Centre cannot interfere using constitutional silence.

(c) Prevents Misuse of the "Reservation Power" - Governors must justify -

1. Why a Bill is sent to the President
2. Why it is delayed

This reduces arbitrary use of Article 200.

Impact on Indian States

The judgment will -

1. Encourage smoother passage of State laws

2. Promote cooperative federalism
3. Ensure predictable governance structures
4. Strengthen institutional integrity
5. Reduce friction between elected governments and nominated constitutional authorities

States facing delays (Tamil Nadu, Kerala, Telangana, Punjab) will particularly benefit from clearer norms and accountability standards.

Conclusion

The Supreme Court's opinion marks an important moment in reinforcing the constitutional balance among India's institutions. By refusing to impose rigid timelines yet discouraging indefinite delays, the Court has upheld both constitutional morality and institutional restraint. It preserves the federal equilibrium, prevents judicial overreach, and sends a strong message that constitutional functionaries must act with responsibility and respect for democratic principles.

For civil services aspirants, this judgment is a case study in federalism, constitutional design, judicial limits, and the ongoing evolution of India's governance framework.

Main Practice question.

1. "The Supreme Court's recent opinion on gubernatorial and presidential assent powers reinforces constitutional boundaries while addressing federal tensions. Analyse the judgement's implications for Centre-State relations and legislative functioning in India." (≈30 words)

1. Introduction (2–3 sentences) - Briefly state what the Supreme Court's opinion was about. Mention that it clarified constitutional roles under Articles 111, 200, and 201.

Example - The Supreme Court's opinion on the President and Governors' discretion in granting assent to bills clarified that courts cannot impose rigid timelines and rejected the concept of "deemed assent", while still discouraging undue delays.

2. Body

1. Key Elements of the Judgement (Bullet Points Ideal)

1. Judiciary cannot prescribe time-limits for assent.
2. No "deemed assent" permissible.
3. Governors have three constitutional options - assent, return for reconsideration, or reserve for President.
4. President has independent authority; no mandatory reference to SC under Article 143.
5. Judicial review possible only in cases of extreme, unexplained delay.

2. Context & Previous Judgments

1. Earlier judgments (e.g., Punjab 2024 case) indirectly pushed for time-bound action.
2. Discussion on judicial activism vs constitutional silence.

3. How the Court corrected past tendencies to fill constitutional gaps.

3. Implications for Centre–State Relations

1. Reduces friction caused by indefinite bill pendency.
2. Curbs misuse of gubernatorial offices as political tools.
3. Strengthens cooperative federalism by restoring balance.
4. Ensures legislatures' will cannot be stalled arbitrarily.
5. Reinforces federal autonomy of states.

4. Impact on Legislative Functioning

1. Encourages smoother processing of state bills.
2. Enhances predictability in legislative procedures.
3. Aligns functioning with constitutional design rather than judicially-created timelines.
4. Clarifies when judicial intervention is legitimate.

5. Critical Analysis

Positive outcomes

1. Restores constitutional discipline by clarifying boundaries of executive discretion.
2. Prevents judicial overreach into legislative/executive domains.
3. Reduces politicisation of gubernatorial offices.
4. Strengthens federal trust between States and the Union.

Concerns / Limitations

1. Absence of any outer limit may still allow political delays.
2. States may continue to face uncertainty if Governors sit on bills.
3. Judicial review remains narrow, offering limited remedy in real-time governance crises.

6. Implications for the Indian State

1. Strengthens democratic process by ensuring legislative intent cannot be indefinitely stalled.
2. Promotes institutional balance by reasserting constitutional design.
3. Reduces friction in Centre–State relations, especially in opposition-ruled states.
4. Clarifies roles of constitutional authorities, preventing procedural confusion.
5. Enhances accountability, as Governors must act with "constitutional reasonableness".

3. Conclusion (2–3 sentences) - The Supreme Court's opinion judgment marks a significant reaffirmation of the constitutional scheme governing assent powers. By refusing rigid court-mandated timelines yet discouraging indefinite delays, the Court has strengthened cooperative federalism and the integrity of legislative functioning. Its impact will likely foster a more mature Centre–State relationship grounded in constitutional propriety.

48. India's Labor Reforms - A Shift Towards Modernization and Inclusion

India's labor market, governed by an intricate web of nearly three dozen central and state laws dating back to the colonial era, is undergoing its most significant overhaul since Independence. The government has consolidated 29 Central labor laws into four comprehensive Labor Codes, which were notified on November 21. With the Centre expecting them to be fully operational by the beginning of the next financial year (FY 2026-27), these codes are set to fundamentally redefine the relationship between employers, employees, and the state, particularly in the context of the rapidly expanding gig economy.

Explaining the Four Labor Codes

The four Codes are designed to simplify compliance, enhance social security, and harmonize India's labor ecosystem.

1. The Code on Wages, 2019 - This Code replaces four laws related to wages and bonus payments. Its primary goal is the universalization of minimum wages for all employees across organized and unorganized sectors. It introduces a National Floor-Level Wage, ensuring that no state can fix minimum wages below this threshold, thereby reducing geographical disparities and strengthening the right to fair compensation.
2. The Industrial Relations Code, 2020 (IRC) - Replacing three laws, the IRC aims to bring flexibility to the labor market. It mandates that employers must provide formal appointment letters to all employees. Critically, it increases the minimum workforce threshold for seeking prior government approval for layoff, retrenchment, and factory closure from 100 workers to 300 workers. This move, while criticized by unions, is intended to provide businesses with the flexibility to scale up operations without the fear of rigid exit rules.
3. The Code on Social Security, 2020 (CSS) - This is the most transformative code, consolidating nine laws related to social security. Its main goal is the universalization of social security benefits, regardless of the size of the establishment or the sector. It is notable for legally recognizing gig and platform workers for the first time.
4. The Occupational Safety, Health and Working Conditions Code, 2020 (OSH) - This Code replaces 13 laws related to safety and working conditions. It mandates better health and safety standards in workplaces, defines rules regarding annual leave, and introduces flexibility in working hours, allowing for a 12-hour workday (with compulsory overtime pay) provided the weekly limit remains at 48 hours.

Significance in the Context of Labor Welfare

The new Codes mark a paradigm shift, moving the focus from restrictive regulation to inclusive welfare.

Universalization of Rights - The Codes provide a statutory right to minimum wages and timely wage payments to all workers, formal and informal, something previously limited to specific "scheduled" employments.

Flexible Working Conditions - The provision for a 12-hour workday (up to four days a week), balanced by a 48-hour weekly cap and three mandatory paid holidays, aligns India's labour laws with global best practices, offering flexibility to both employers and workers.

Expansion of Social Security - The government aims to extend social security coverage to 1 billion workers by March 2026, up from 940 million currently. This expansion is crucial for providing a safety net in a country where a vast majority of the workforce remains in the informal sector.

The New Labor Codes and the Gig Economy

The rising gig economy—fueled by e-commerce, food delivery, and quick commerce—is a central focus of the reforms. India had about 10 million gig workers in 2024–25, a number projected to rise to 23.5 million by 2029–30.

Recognition and Entitlements - The CSS Code recognizes gig and platform workers as a separate category, bringing foot-soldiers gig workers like the deliverymen, under a framework of protection for the first time.

Welfare Provisions - The Code empowers the Central government to frame welfare schemes for this category, covering critical needs like health, pension, education, and disability cover—benefits previously inaccessible to them.

Funding Mechanism - The Code includes provisions for a Social Security Fund for these workers, potentially requiring contributions from aggregators (the platform companies). This is a crucial step toward recognizing their contribution to the economy and providing them with basic entitlements.

Problems in Enforcement and Gaps

Experts caution that the success of the Codes hinges entirely on their execution, which faces several hurdles -

Concurrent Subject Conflict - Labor is a concurrent subject, granting states the flexibility to adapt rules to their local contexts. This has already led to significant divergence in state-framed rules, potentially undoing the goal of a unified framework and creating a "maze of rules" across state lines.

Exclusionary Thresholds - The Codes fail to lower the threshold for mandatory coverage under the Employees' Provident Fund and Employees' State Insurance (currently 20 and 10 workers respectively). By maintaining these high limits, the OSH Code, for example, risks excluding nearly 80 per cent of India's labor force, which comprises home-based, micro-enterprises, and informal workers.

Weak Enforcement Record - Enforcing minimum wages has been historically weak (e.g., up to 70 per cent of construction workers were reportedly not paid minimum wages in 2022). Without strengthening inspection and enforcement systems, ensuring compliance in the sprawling informal sector remains questionable.

Gig Worker Contribution Clarity - The mechanism for tracking contributions for gig workers and the process for disbursing benefits remain unclear, raising concerns that the system could become a new bureaucracy, ineffective in reaching the intended beneficiaries.

Digital Divide - The Codes place heavy reliance on digital compliance, electronic filing, and online grievance systems. This could potentially burden small businesses and MSMEs lacking the necessary digital capacity.

Suggestions and Way Forward

To realize the Codes' transformative potential, the following measures are essential -

Harmonization of State Rules - The Centre must work closely with states through the Labor Ministers' conference to ensure uniformity and harmonization in state-specific rules, preventing regulatory arbitrage and a maze of differing regulations.

Strengthening the Inspectorate - The shift from 'Inspector' to 'Inspector-cum-Facilitator' must be supported by adequate staff training, technology, and autonomy to ensure both guidance and robust enforcement, especially in the informal sector.

Simplified Digital Platforms - The government should develop extremely simple, mobile-first digital compliance systems tailored for small businesses and platform aggregators to ease the compliance burden.

Transparent Gig Worker Board - The proposed 'gig workers board' must ensure complete transparency regarding the collection and disbursement of welfare funds, learning from past failures and guaranteeing that benefits reach the workers efficiently.

Conclusion

The four Labor Codes represent a bold and necessary move to modernize India's labor laws, offering a comprehensive framework for welfare, especially for the previously ignored gig workers. However, legislative intent is only the first step. The true test of these codes—and the fate of millions of workers of unorganized will depend on the efficiency, commitment, and uniformity of their enforcement across the complex federal structure of India. The government must iron out the creases in the rule-making process to ensure that these reforms genuinely translate into dignity and security for every worker.

Main Practice Questions

1. "Critically evaluate the new Labor Codes' potential to universalize social security for gig workers, contrasting its legislative intent with the structural hurdles of concurrent jurisdiction and low enforcement capacity".

Answer Guidelines

The answer should dissect the reforms' dual nature - the progressive inclusion of gig workers versus the systemic challenges of federalism and implementation.

1. Introduction - Legislative Intent (Approx. 50 words)

Define the Shift - Identify the core reform (consolidation of 29 laws into four Codes, focusing on Social Security Code, 2020 - CSS).

Intended Goal - To move from fragmented, restrictive laws to a unified, welfare-centric framework, with the key target being the extension of social security to the vast informal sector and the emerging gig economy (projected to reach 23.5 million workers by 2029–30).

2. Body

1. Analysis of Intent - Universalizing Social Security (Approx. 120 words)

Recognition of Gig Work - Highlight that the CSS Code legally recognizes gig and platform workers for the first time, bringing previously excluded foot-soldiers under the protection framework (health, pension, disability).

Funding Mechanism - Mention the provision for a Social Security Fund for gig workers, potentially funded by contributions from aggregators. This signifies a progressive move toward employer accountability in the digital economy.

Universal Rights - Briefly note the universalization of rights like minimum wages and the introduction of better working condition rules (like the 48-hour weekly cap under the OSH Code), benefiting all workers.

2. Structural Hurdles and Gaps (The Concurrent Subject Challenge) (Approx. 130 words)

Concurrent Subject Conflict - Explain that Labor is a Concurrent Subject, allowing states to notify their own rules. This leads to divergence in state rules, undermining the Codes' primary goal of uniformity. Example - A worker's benefits may differ across state lines, creating a "maze of rules" for compliance and enforcement.

Enforcement Capacity and Record - Argue that legislative changes are useless without capacity. Historically, the enforcement of minimum wages has been weak (up to 70% non-compliance in some sectors). The new Codes must strengthen the 'Inspector-cum-Facilitator' role.

Exclusionary Thresholds - Point out the structural flaw of maintaining high thresholds for mandatory PF and ESI coverage (20 and 10 workers respectively). This excludes nearly 80% of the workforce, including micro-enterprises and home-based workers, from the full social security net.

Digital Divide - Note the reliance on digital compliance systems, which can burden small businesses and the vast number of digitally illiterate informal workers.

3. Conclusion and Way Forward (Approx. 50 words) - Conclude that the Labor Codes represent a necessary but incomplete revolution. Their success depends less on the Central Act and more on the uniformity, commitment, and capacity of state governments to frame clear, harmonious rules and deploy effective, technology-backed enforcement mechanisms that truly reach the most vulnerable, like gig workers.

49. The Hayli Gubbi Eruption and its Shadow Over India

Introduction

In the realm of physical geography and disaster management, the recent eruption of the Hayli Gubbi volcano in Ethiopia stands as a significant event. Dormant for nearly 12,000 years, this shield volcano in the Erta Ale Range of the Afar Region awakened in November 2025, sending shockwaves through geological and meteorological monitoring systems. For Civil Services aspirants, this event offers a live case study connecting plate tectonics, atmospheric circulation, and disaster preparedness.

The Geographical Phenomena - Hayli Gubbi Volcano

Hayli Gubbi is a shield volcano, characterized by its broad, gently sloping profile formed by the eruption of low-viscosity basaltic lava.

Tectonic Setting - It is situated in the Afar Triangle, a geological depression caused by the Afar Triple Junction. Here, three tectonic plates—the Nubian, Somali, and Arabian plates—are pulling apart. This divergence creates a rift valley, thinning the earth's crust and allowing magma to rise to the surface, making the region one of the most volcanically active on Earth.

The Eruption - The eruption in November 2025 ended a Holocene-era dormancy. Unlike typical shield volcano effusions, this event was explosive, propelling a massive column of ash and gas 10–15 km (approx. 33,000–49,000 feet) into the atmosphere.

The Geographical Phenomena - Ash Plume Movement

The "Ash Plume" refers to the cloud of superheated ash, gas, and rock fragments ejected during an eruption.

Composition - The plume from Hayli Gubbi is composed primarily of Volcanic Ash (pulverized rock and glass), Sulfur Dioxide (SO_2), and other aerosols.

Atmospheric Transport - Once ejected into the upper troposphere and stratosphere (altitudes of 15,000–45,000 feet), the plume was caught in the high-altitude Westerly winds. These prevailing winds, which flow from west to east in the northern hemisphere, acted as a conveyor belt, transporting the ash cloud across the Arabian Peninsula, over the Arabian Sea, and towards the Indian subcontinent at speeds of 100–120 km/h.

Implications of the Ash Plume

Volcanic ash plumes have multi-dimensional implications -

Aviation Safety (Primary Concern) - Volcanic ash is abrasive and melts at high temperatures. If ingested by a jet engine, the ash melts and fuses onto the turbine blades, causing engine failure. This necessitates the closure of airspace and re-routing of flights.

Meteorological Impact - The suspension of fine particles and SO_2 can scatter incoming solar radiation. While this specific plume may not cause long-term cooling, it leads to atmospheric haze and "darker skies," reducing visibility.

Environmental Health - Fine particulate matter (PM 2.5 and PM 10) can degrade air quality. However, since this plume is traveling at high altitudes, the impact on ground-level Air Quality Index (AQI) in India is expected to be minimal, though acid rain remains a theoretical risk if the SO_2 mixes with precipitation.

Impact on India

The trajectory of the ash cloud has brought it directly over Western and Northern India.

Affected Regions - The plume entered Indian airspace via Gujarat, subsequently drifting over Rajasthan, Northwest Maharashtra, Delhi, Haryana, and Punjab, before heading towards the Himalayan region.

Operational Disruptions - The aviation sector faced immediate hurdles. Major airlines like IndiGo and Akasa Air cancelled flights or suspended services to West Asian destinations (e.g., Jeddah, Kuwait). Flights were diverted to avoid the "ash corridor," leading to delays and increased fuel consumption.

Visual Impact - Residents in the affected states may witness unusual sunsets and hazy skies due to the scattering of light by the suspended volcanic particles.

Government Measures and Disaster Management

India's approach to such trans-boundary disasters relies on coordination between scientific bodies and administrative agencies.

Early Warning & Monitoring -The India Meteorological Department (IMD) closely monitors the plume using satellite data and coordinates with global Volcanic Ash Advisory Centres (VAAC) (specifically the Toulouse VAAC for this region). "Significant Meteorological Information" (SIGMET) warnings are issued to alert pilots and airlines of hazardous atmospheric conditions.

Aviation Safety Protocols -The Directorate General of Civil Aviation (DGCA) issues strict advisories. Measures include inspecting runways for ash deposits (which can make them slippery) and mandating engine checks for aircraft flying through affected zones.

Air Traffic Control (ATC) re-routes flights to safe altitudes or alternative paths to bypass the ash cloud.

Disaster Preparedness (NDMA Framework) - While India does not have active volcanoes (barring Barren Island), the National Disaster Management Authority (NDMA) guidelines for airborne hazards apply. This involves inter-agency coordination to manage potential fallout, although for high-altitude ash, the focus remains on aviation and transport safety rather than evacuation.

Conclusion

The eruption of Hayli Gubbi serves as a potent reminder of the Earth's dynamic nature and the interconnectedness of global geography. For India, a non-volcanic mainland, the event underscores the necessity of robust disaster resilience against trans-boundary hazards. The swift response by Indian agencies like the IMD and DGCA highlights the effectiveness of modern meteorological early warning systems. For a Civil Services aspirant, understanding this event requires integrating concepts of plate tectonics, atmospheric circulation (Westerlies), and the administrative machinery of disaster management.

Mains Practice Question

1. "Geological hazards are rarely localized in an interconnected global atmosphere. Analyze the trans-boundary implications of the Hayli Gubbi eruption on India, elucidating the role of Westerlies and the requisite aviation disaster resilience." (15 marks)

Answer Guidelines (Structure & Key Points)

1. Introduction (Contextualizing the Event) -Briefly introduce the Hayli Gubbi eruption (Ethiopia) ending its 12,000-year dormancy. Establish the premise - While the tectonic event is local (Afar Triangle), the atmospheric impact is trans-national, turning a geographical phenomenon into a geopolitical and economic concern for India.

2. Body

1. The Geographical Mechanism (The "How")

Atmospheric Transport - Explain how the ash plume was ejected into the upper troposphere/stratosphere.

Role of Westerlies - explicitly link the movement of the ash cloud from West Asia to North-West India (Gujarat to Himalayas) to the Sub-Tropical Westerly Jet Streams. This demonstrates conceptual understanding of climatology.

2. Trans-boundary Implications (The "Impact")

Aviation Sector - Highlight that the primary impact is not ground-level destruction, but airspace disruption. Mention the melting point of volcanic glass in jet engines and the resulting flight cancellations/re-routing (economic cost).

Meteorological - Mention the "haze" and atmospheric scattering (darker skies) affecting visibility in North India.

3. Disaster Resilience Framework (The "Response")

International Coordination - Discuss the reliance on Volcanic Ash Advisory Centres (VAAC) and data sharing between nations.

Institutional Response - Highlight the role of IMD (monitoring) and DGCA (issuing SIGMET warnings and safety protocols) in mitigating risks despite India not having active mainland volcanoes.

3. Conclusion - Conclude by stating that disaster management in India must evolve beyond "local" threats (floods/cyclones) to include "remote" hazards. Emphasize the importance of technological integration (satellite monitoring) in safeguarding the economy against such trans-boundary geological shocks.

50. Citizenship Reforms in Canada - In Comparison to India.

Canada's recent approval of Bill C-3 marks a significant shift in its citizenship-by-descent laws, offering a major relief to thousands of foreign-born children of Canadian citizens, including a substantial number from Indian-origin families. This reform, amending the *Citizenship Act (2025)*, addresses long-standing issues of exclusion and aims to make the law more inclusive while acknowledging the global mobility of modern Canadian families.

The Necessity of Canadian Citizenship Reforms

The primary necessity for Bill C-3 was the need to resolve the unconstitutional nature and unfair outcomes of the "first-generation limit," which was introduced in 2009.

The First-Generation Limit (FGL) - This rule prevented a child born or adopted abroad from automatically receiving Canadian citizenship if their Canadian parent was also born or adopted outside the country. Essentially, citizenship could not pass down past the first generation born abroad.

The Problem - The FGL created significant difficulties for Canadians, particularly those who moved abroad for work, education, or other reasons, and had children overseas. It effectively "stateless" or excluded children whose connection to Canada was through a parent who was also foreign-born, even if that parent was a full Canadian citizen.

The Court Challenge - The law faced a challenge in the Ontario Superior Court of Justice, which ruled key parts of the FGL unconstitutional on December 19, 2023, agreeing that the law created unacceptable outcomes. The Canadian government's decision not to challenge the ruling and to introduce Bill C-3 signifies a commitment to modernizing the law to reflect contemporary family life and uphold the value of Canadian citizenship without the element of arbitrary exclusion.

Impact on Indian Migrants to Canada

The Indian-origin community in Canada is one of the largest and most influential immigrant groups. This community is significantly affected by the new reforms.

Automatic Eligibility - Under the new law, if an Indian-born Canadian citizen is living in Canada and their children were born outside Canada, those children will now be automatically eligible for Canadian citizenship, resolving the issues created by the FGL.

Substantial Connection Clause - Crucially, Bill C-3 also allows a Canadian parent born or adopted abroad to pass on citizenship to a child born or adopted abroad *after* the Bill comes into force, provided the parent can show a "substantial connection" to Canada. This connection could be demonstrated through factors like physical presence in Canada.

Addressing the Backlog - It is estimated that this reform could affect around 115,000 foreign-born children, many of whom are of Indian origin. The amendment resolves their long-running problems and brings fairness to their families. In summary, the reform acknowledges the diasporic nature of the Indian-Canadian community and ensures that their global movement does not involuntarily strip their descendants of a right to Canadian citizenship.

The Concept of Citizenship in Historical Context

Historically, the concept of citizenship has evolved around two main principles -

1. Jus Soli (Right of the Soil) - Citizenship is acquired by birth within the territory of the state, regardless of the parents' nationality. This is the primary basis for citizenship in countries like the United States and, to a large extent, Canada before the 2009 reforms.
2. Jus Sanguinis (Right of Blood) - Citizenship is acquired by being born to a citizen parent, regardless of the place of birth. This is common in many European and Asian countries.

Modern citizenship laws, including Canada's, often use a mix of both. The 2009 FGL was an attempt to limit Jus Sanguinis by introducing a generation limit, preventing citizenship from being passed indefinitely through descent for those born abroad. Bill C-3 relaxes this limit, especially for those who can prove a substantial connection to the country, thus restoring a fairer balance between the two principles.

Citizenship in India

Indian citizenship is primarily governed by the Citizenship Act, 1955, and the principles enshrined in Part II, Articles 5 to 11 of the Constitution of India. India, like most nations, does not recognize Dual Citizenship. The major ways to acquire Indian citizenship are -

By Birth (Jus Soli) - Governed by changes to the Citizenship Act over time. Currently, a person born in India on or after July 1, 1987, is a citizen if either parent is a citizen at the time of birth. For those born after December 3, 2004, both parents must be Indian citizens, or one must be a citizen and the other not an illegal migrant.

By Descent (Jus Sanguinis) - A person born outside India on or after December 3, 2004, is a citizen only if their birth is registered at an Indian consulate within one year and one of the parents is an Indian citizen.

By Registration - For persons of Indian origin, spouses of Indian citizens, etc., who apply after meeting residency requirements.

By Naturalization - For foreigners who have legally resided in India for a stipulated period and meet other criteria.

Relevance in the Context of Special Intensive Review of Election Commission

The concept of citizenship is directly linked to voting rights. In India, only a citizen who is 18 years of age or older is eligible to be registered as an elector for elections to the Lok Sabha and the State Legislative Assemblies, as per Article 326 of the Constitution. The Special Intensive Review by the Election Commission of India (ECI) is the process of updating the voter list to ensure its accuracy.

Relevance of Citizenship - This review is vital to remove the names of non-citizens (like illegal migrants or foreigners) from the electoral roll, as their inclusion would compromise the integrity of the democratic process. Furthermore, the ECI's review must ensure that all newly eligible citizens (those turning 18 or those who have successfully applied for citizenship through registration/naturalisation) are duly added to the roll, ensuring maximum and accurate participation in elections. The legal definition and proof of Indian citizenship are fundamental to maintaining a legitimate electoral roll.

Conclusion

Canada's Bill C-3 represents a vital step towards a more humane and modern citizenship law, correcting historical anomalies that unfairly penalized families due to the global nature of their lives. This reform offers significant relief to Indian-origin families, cementing their status within the Canadian social fabric. Comparing this with the Indian system highlights the differing approaches—Canada, with its history of immigration, focuses on correcting descent-based exclusions, while India, with its non-recognition of dual citizenship, focuses on ensuring that citizenship and voting rights are strictly conferred only upon those who meet the stringent constitutional and statutory criteria, a necessity underscored by the role of the Election Commission. The Canadian move is a testament to the dynamic nature of citizenship laws adapting to the realities of a mobile, globalized world.

Main Practice Question

1. "Critically analyse how Canada's Bill C-3, by modifying the "first-generation limit," balances the principles of Jus Sanguinis and national interest against the democratic value of inclusive citizenship for the Indian diaspora".

Answer Guidelines

The answer should be structured to address the three core components of the question - the mechanism of Bill C-3, the citizenship principles involved, and the specific impact on the Indian diaspora, concluding with an analytical balance.

1. Introduction - The Core of Bill C-3 (Approx. 50 words)

Define Bill C-3 - Mention it amends the *Citizenship Act (2025)* to remove the discriminatory "first-generation limit" (FGL).

Purpose - To restore citizenship to those previously excluded and to set clear, fairer rules for future generations born abroad.

2. Body

1. Analytical Shift - Balancing Jus Sanguinis and National Interest (Approx. 150 words)

Jus Sanguinis (Right of Blood) - Explain that the FGL was a restriction on Jus Sanguinis, preventing citizenship from passing beyond the first generation born outside Canada. The reform expands this principle by allowing citizenship to pass to the second generation born abroad.

National Interest/Democratic Value -

Old Concern - The FGL was intended to prevent the indefinite transmission of citizenship to individuals with little meaningful "connection" to the Canadian political community, safeguarding the value of citizenship.

New Balance - Bill C-3 replaces the arbitrary FGL with a new condition for the second generation - a parent must demonstrate a "substantial connection" to Canada (e.g., 1,095 cumulative days of physical presence). This condition serves the national interest by ensuring that citizenship-by-descent is tied to a real, recent commitment to Canada, thereby strengthening democratic inclusion.

2. Impact on the Indian Diaspora (Approx. 100 words)

Relief and Fairness - Highlight that the Indian-origin community is a major beneficiary, as many Indian-born Canadian citizens living globally can now automatically ensure their foreign-born children qualify for citizenship.

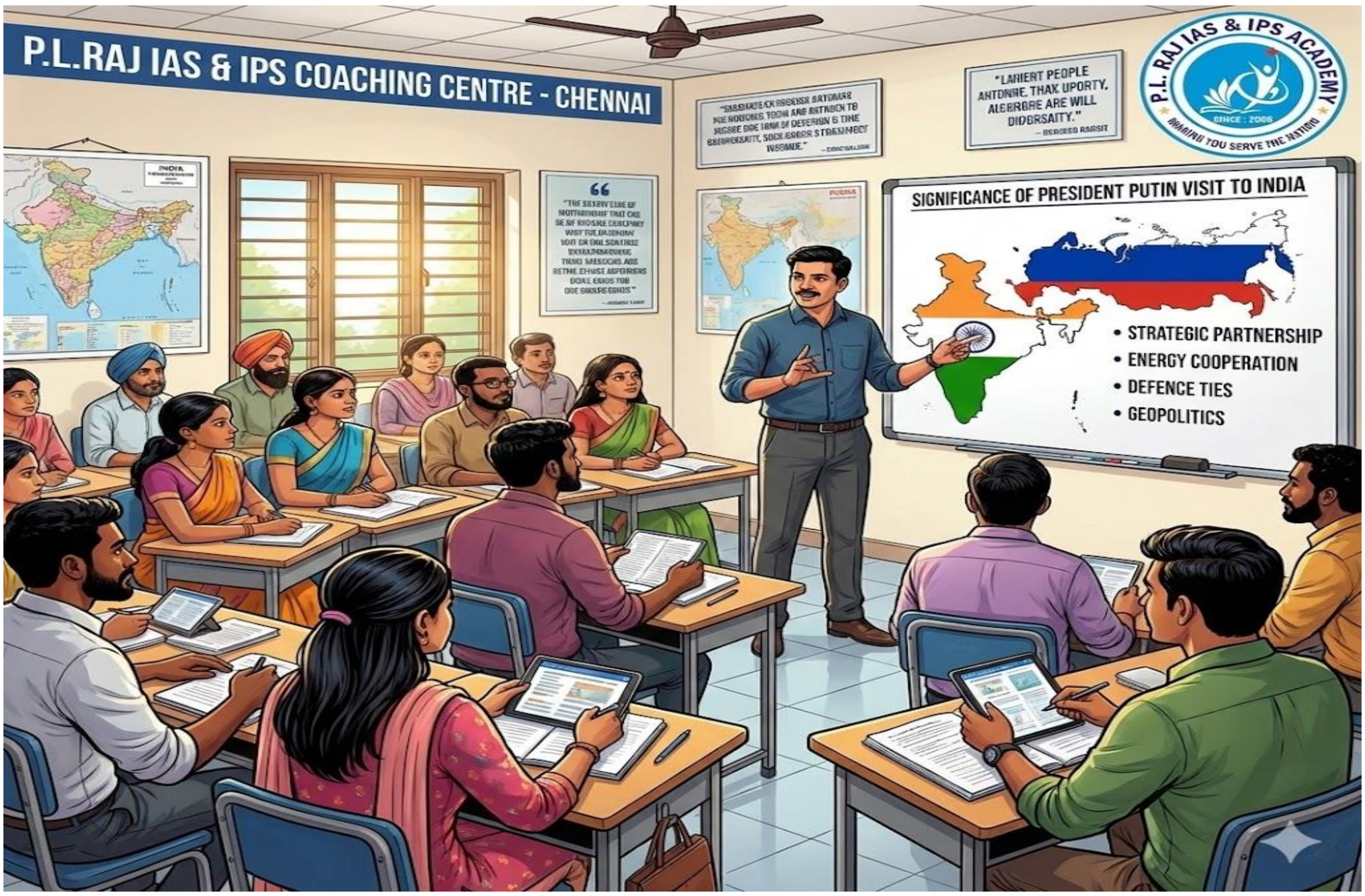
Mobility and Family Unity - The reform acknowledges the reality of highly-mobile, modern Indian families (NRIs, professionals) and ensures that their global movement does not involuntarily strip their children of their Canadian identity, promoting family unity and a stronger diaspora network.

3. Conclusion - Critical Analysis of Inclusiveness (Approx. 50 words) - Conclude that Bill C-3 represents a move toward a more hybrid and inclusive citizenship regime (Jus Sanguinis with a "connection" caveat).

51. India-Russia Relations - A Time-Tested Partnership in a Changing World.

Introduction

The India-Russia relationship has often been described as one of the most stable geopolitical partnerships in the post-World War II era.1 Officially termed a "Special and Privileged Strategic Partnership," this bond is currently under the spotlight due to Russian President Vladimir Putin's two-day visit to India in December 2025 for the Annual Summit.2 While the geopolitical landscape has shifted significantly due to the Ukraine crisis and subsequent Western sanctions, the core of this bilateral relationship remains resilient, albeit evolving.



1. Evolution of Ties - Historical Phases

To understand the present, aspirants must look at the trajectory of this friendship through four distinct phases -

Phase I - Early Caution to Strategic Warmth (1947–1971) - Initially, independent India maintained a non-aligned stance. However, the Cold War dynamics and US support for Pakistan pushed India closer to the Soviet Union. The watershed moment was the 1971 Indo-Soviet Treaty of Peace, Friendship, and Cooperation, which provided India crucial diplomatic and military support during the liberation of Bangladesh.

Phase II - The Golden Era (1971–1991) - This period saw the peak of bilateral ties. The USSR became India's reliable supplier of defense hardware, affordable technology, and space cooperation (launching Aryabhata).5 Culturally, Bollywood and Russian literature created a strong people-to-people bridge.

Phase III - The Post-Soviet Drift (1991–2000) - Following the collapse of the USSR, relations faced a "strategic drift." Russia focused on the West, while India liberalized its economy and diversified its foreign policy. Defense supplies faced disruptions due to the fragmentation of the Soviet military-industrial complex.

Phase IV - Strategic Partnership (2000–Present) - The relationship was revitalized with the signing of the "Declaration on Strategic Partnership" in 2000.9 Since then, despite India's growing proximity to the US, Russia has remained a critical pillar of India's strategic autonomy.

2. Relations in the Post-Ukraine Crisis Era

The conflict in Ukraine (since 2022) has been a stress test for Indian diplomacy.[11] India has successfully maintained a nuanced stance—refusing to condemn Russia explicitly while calling for "diplomacy and dialogue."

Economic Shift - The most visible change has been in energy. Russia, previously a marginal energy supplier, became India's top oil source as India took advantage of discounted prices to ensure domestic energy security.

Balancing Act - India has faced pressure from the West (specifically US sanctions mentioned in the current context).[13] The upcoming visit is significant because it happens against the backdrop of US sanctions on Russian energy imports, testing India's ability to pursue its national interest without alienating Western partners.[14]

3. Significance of Putin's Visit (2025)

The 2025 Annual Summit carries immense weight for three reasons -

Symbolism of Continuity - The regularity of these summits signals that despite global isolation attempts by the West, Russia remains a priority for India.

Addressing Sanctions - With new US sanctions on Russian energy imports looming, the leaders need to find payment mechanisms (beyond the stalled rupee-ruble arrangement) to keep trade flowing.

Strategic Logistics - The discussions on the RELOS (Reciprocal Exchange of Logistics Agreement) are vital.

This pact would simplify military logistics and could give India access to Russian facilities in the Arctic, a region of growing strategic importance.

4. Three Focus Areas of Bilateral Cooperation

A. Defense - From Buyer-Seller to Co-Production

Defence remains the bedrock of ties, but the nature is changing.[15]

Current Status - While negotiations for the Sukhoi-57 and S-400 systems continue, India is reducing dependency.

The Data - As noted in recent reports, India's reliance on Russian arms has fallen from 66% in 2000 to nearly 40% in 2024.

Future - The focus is shifting to "Make in India." Joint ventures like the BrahMos missile and the production of AK-203 rifles in Amethi are the templates for the future.[16]

B. Energy - The New Anchor

Energy has replaced defence as the most dynamic sector, though it faces volatility.

Oil Imports - Russia accounts for a massive chunk of India's oil basket, though imports have dipped recently (from ~30% in FY25 to 27.56% in the first seven months of FY26).

Nuclear Energy - Russia is the only country currently building nuclear plants in India (Kudankulam). The 2025 talks aim to expand this to Small Modular Reactors (SMRs).

C. Trade and Economic Imbalance

This is the weakest link.

The Deficit - The trade is heavily skewed.[18] As per H1FY26 data, India's imports from Russia were $31.11 billion (mostly oil), while exports to Russia were a meager $2.24 billion (just 1% of India's total exports).

The Challenge - A sustainable relationship cannot rely on one-way traffic. India needs to push pharmaceuticals, machinery, and agricultural goods into the Russian market to balance this deficit.[19]

5. Way Forward

For the relationship to thrive in the next decade, three steps are essential -

Diversify Trade - The "arms and oil" model is too narrow. Both nations must operationalize the Chennai-Vladivostok Maritime Corridor and the International North-South Transport Corridor (INSTC) to boost non-oil commerce.[20]

Technological Sovereignty - India should leverage Russia's willingness to share critical technologies (nuclear, hypersonic, space) which the West often denies.

Manage Geopolitics - India must skillfully manage the "China factor."[21] As Russia grows closer to China due to Western isolation, India must ensure this does not compromise its own security interests in Asia.

Conclusion

The India-Russia relationship is often termed an "all-weather friendship," but the weather is undeniably changing. The drop in arms dependence and the fluctuations in energy imports show a relationship in transition. However, President Putin's 2025 visit reaffirms that while India diversifies its partners, it does not intend to replace Russia. For a multipolar world—a core aspiration of Indian foreign policy—a strong, stable Russia remains indispensable.

Mains Practice Question

1. "Analyze the structural shift in India-Russia relations from a traditional 'buyer-seller' defense engagement to a comprehensive energy and logistical partnership. How does this evolution serve India's strategic autonomy amidst global polarization?" (31 words)

Answer Guidelines / Synopsis

Approach to the Answer -

Directive Word ("Analyze") - Break down the relationship into its constituent parts (Defense, Energy, Logistics) and examine how they are changing. Look at the *why* and *how* behind the shift.

Context - Start by referencing the 2025 Annual Summit and the backdrop of US sanctions to show relevance.

1. Introduction - Define the India-Russia relationship as a "Special and Privileged Strategic Partnership." State the core thesis - The partnership is transitioning from a uni-dimensional defense dependency to a multi-dimensional strategic engagement driven by energy security and logistics, essential for India's independent foreign policy.

2. Body

1. The Structural Shift (Data-Driven)

Defense (The Decline) - Highlight the transition from "Buyer-Seller" to "Co-production" (Make in India). Use the article's data - Russian arms imports dropped from 66% (2000) to ~40% (2024). Mention joint ventures like BrahMos or AK-203.

Energy (The New Anchor) - Discuss how energy has replaced defense as the immediate pillar. Cite the petroleum import data (approx. 30% of India's basket) and the move toward Small Modular Reactors (SMRs) in nuclear energy.

Logistics (The Strategic Reach) - Mention the significance of the RELOS pact and the Arctic trade routes (Chennai-Vladivostok corridor) as new areas of cooperation that go beyond simple trade.

2. Serving Strategic Autonomy

Balancing the West - By continuing engagement (e.g., Putin's visit) despite US sanctions, India signals it will not be coerced by Western pressure, upholding its "Strategic Autonomy."[1]

Balancing China - A weak Russia completely dependent on China is bad for India. Maintaining strong ties ensures Russia remains an independent pole in Asia, preventing a total China-Russia axis that could isolate India.

3. Challenges to Address - Briefly mention the Trade Deficit ($31bn imports vs $2bn exports) as a sustainability challenge. Mention the payment mechanism hurdles due to sanctions.

3. Conclusion - Summarize that the "evolution" is a sign of maturity. India is moving from "dependency" to "partnership." Conclude with a way forward - The relationship is vital for a multipolar world order, where India acts as a bridge between the Global South, the West, and Eurasia.

52. The Engine of Prosperity - Exports

The Pivotal Significance of Exports

Exports are often termed the "engine of growth" for a developing economy like India. Their significance extends far beyond mere trade balance, acting as a crucial driver for -

Economic Growth - Exports provide external demand for domestically produced goods and services, which is necessary for sustained high GDP growth. Historically, India's post-1991 GDP growth of over 6% was associated with real export growth of about 11%.

Employment Generation - Export-oriented industries, especially labour-intensive sectors like textiles, gems and jewellery, leather, and electronics, create millions of jobs, fostering inclusive growth and utilizing India's vast workforce.

Foreign Exchange Reserves - Export earnings are essential for maintaining stable foreign exchange reserves, which helps the nation finance necessary imports (like crude oil) and protects the economy from external shocks.

Technological Upgradation - To compete globally, domestic firms are incentivized to adopt advanced technology, improve quality, and achieve scale, leading to higher efficiency across the economy.

Status of Indian Exports - A Journey of Transformation

Pre-1991 - The Era of 'Import Substitution'

Before the 1991 economic reforms, India's trade policy was primarily inward-looking, focusing on Import Substitution Industrialisation (ISI). The prevailing 'License Raj' restricted industrial expansion, and quantitative restrictions and high tariffs shielded domestic industries from global competition. Consequently, India's share in global merchandise trade stagnated at a low level, hovering around 0.5%, contributing to the severe Balance of Payments (BoP) crisis in 1991.

Post-1991 - Global Integration

The liberalisation, privatisation, and globalisation (LPG) reforms fundamentally changed the trajectory. Trade policy was simplified, quantitative restrictions were removed, and tariff rates were progressively reduced.

Growth and Diversification - Exports grew substantially, and India's share in global trade improved, reaching around 1.8% in recent years.

Services Sector Leadership - The most remarkable transformation was the rise of the services sector, particularly Information Technology (IT) and IT-enabled services. India is now the world's second-largest exporter of IT services, driving global digital transformation.

Recent Status - Resilience Amidst Headwinds

In the last few years, India has demonstrated resilience, with total exports (merchandise and services) crossing the USD 770 billion mark in certain financial years. However, this growth has been uneven, with the electronics sector, boosted by schemes like Production Linked Incentive (PLI), showing robust growth, while traditional labour-intensive sectors have faced volatility.

Structural Problems Hindering Exports

Despite recent success, Indian exporters face deep-rooted structural challenges -

High Logistics Costs - India's logistics cost, as a percentage of GDP, remains significantly higher than global benchmarks. Inefficient port handling, procedural delays in customs, and poor last-mile connectivity contribute to higher costs and longer shipment turnaround times, reducing price competitiveness.

Limited Access to Credit (MSMEs) - Micro, Small, and Medium Enterprises (MSMEs), which contribute nearly half of India's exports, often struggle to access timely and affordable pre- and post-shipment credit. High interest rates and complex lending procedures squeeze their working capital.

Non-Tariff Barriers (NTBs) - Indian exporters increasingly face stringent quality and safety standards (Sanitary and Phytosanitary measures, Technical Barriers to Trade) in developed markets, which are costly and difficult for smaller firms to comply with.

Complex Documentation - The export process remains cumbersome, requiring high compliance and extensive documentation, which can be difficult for first-time or small-scale exporters to navigate.

Government Measures and Recent Schemes

The government has continuously revised its Foreign Trade Policy (FTP) and introduced targeted schemes to address these issues -

Remission of Duties and Taxes on Exported Products (RoDTEP) - This scheme, which replaced the MEIS (Merchandise Exports from India Scheme), refunds embedded central, state, and local taxes that are not refunded under any other mechanism, making exports more competitive.

NIRVIK Scheme - Launched by the Export Credit Guarantee Corporation (ECGC), this provides enhanced insurance cover (up to 90%) for export credit, reducing the risk for banks and promoting greater lending to the export sector, especially MSMEs.

The Credit-Guarantee Scheme - This recent intervention provides collateral-free credit assurance, directly tackling the liquidity and working capital issues faced by MSMEs, particularly those hit by geopolitical trade uncertainty.

Export Promotion Mission (EPM) - With a substantial outlay (e.g., ₹25,060 crore until 2030-31), this mission aims for medium-term growth. It integrates two sub-schemes - one focused on affordable credit and support to MSMEs, the other on non-financial enablers such as transport support, branding, and quality compliance to provide essential handholding for new exporters.

Present Challenges and Global Headwinds

Exporters currently face a 'triple squeeze' of global, geopolitical, and domestic pressures -

Geopolitical Uncertainty - The shift in US trade policy, particularly the imposition of high tariffs (e.g., 50% on certain labour-intensive Indian goods), has been a major source of volatility. This uncertainty makes planning difficult, especially for small firms reliant on the US market.

Global Demand Slowdown - Subdued global economic growth and high inflation in key markets have led to a sharp contraction in global demand, impacting Indian merchandise exports across several sectors like engineering and textiles.

Rising Protectionism - Global trade is becoming more fragmented, with rising non-tariff measures and regional protectionism. The European Union's Carbon Border Adjustment Mechanism (CBAM) poses a future compliance challenge for carbon-intensive Indian exports like steel and aluminium.

Underutilization of FTAs - Despite signing new Free Trade Agreements (FTAs) with partners like the UAE, the utilisation rate by Indian exporters remains low due to complex Rules of Origin (RoO) requirements and a lack of awareness, limiting the benefits of these agreements.

Way Forward and Conclusion

To achieve sustained export-led growth and realize the ambition of becoming a developed nation, India must prioritize structural and policy changes -

Integrate into Global Value Chains (GVCs) - Focus must shift from exporting finished goods to becoming a critical component of GVCs. This requires lowering import tariffs on necessary intermediate raw materials to reduce the cost of exports.

Structural Reforms - Expedite reforms in logistics (under the Gati Shakti National Master Plan) to reduce transaction costs. Labour law reforms are also crucial to provide flexibility to labour-intensive manufacturing units.

Innovation and Quality - Increase R&D investment and ensure alignment with global quality and technical standards to overcome NTBs effectively.

Trade Diplomacy - While seeking a mutually beneficial trade deal with the US remains an immediate priority, India must actively leverage its existing FTAs and swiftly conclude negotiations with key blocs like the EU and the UK to secure rule-based market access. By converting supportive measures like the Credit Guarantee Scheme and EPM into swift, on-ground realities and executing these structural reforms, exports can truly become the powerful engine supporting high economic growth and mass job creation for India.

Main Practice Question

1. Despite strategic policy interventions (RoDTEP, EPM), India's export growth faces structural headwinds. Critically analyze the 'triple squeeze' of challenges and suggest a strategic roadmap for achieving sustained, high-value global integration.

Answer Guidelines - Target Mark - 15 Marks | Word Limit - 250 Words

1. Introduction (30 words) - Define the role of exports as an "engine of growth" (Job creation, forex stability, economic multiplier). Acknowledge the positive policy focus but note that growth is often volatile and uneven.

2. Body

1. Critical Analysis of the 'Triple Squeeze' (100 words)

Acknowledge Strategic Interventions (Briefly) - Mention that RoDTEP addresses tax refund issues, and the Credit-Guarantee/EPM aims to support MSME finance and non-financial needs (transport/branding).

The Triple Squeeze (Focus of the answer) - Detail the key challenges -

1. Structural Inefficiency (Domestic) - High logistics costs, complex documentation, and the persistent credit gap for MSMEs (as highlighted by the Credit-Guarantee scheme's necessity).
2. Global Demand Headwinds - Slowdown in major economies (US, EU) leading to broad-based contraction in traditional sectors like textiles and engineering.
3. Rising Protectionism & Geopolitics (External) - Mention the high US tariffs creating market volatility and the challenge posed by Non-Tariff Barriers (NTBs) like the EU's CBAM, demanding high compliance/quality standards.

2. Strategic Roadmap for Sustained Integration (80 words)

Deepen Global Value Chain (GVC) Integration - Shift focus from merely exporting finished goods to becoming reliable suppliers of intermediate components. Lower import tariffs on inputs to boost export competitiveness.

Expedite Structural Reforms - Swiftly implement Gati Shakti to reduce logistics costs to global levels. Prioritize flexibility in labour laws for labour-intensive manufacturing.

Proactive Trade Diplomacy - Focus on high utilization of existing FTAs (e.g., UAE) and fast-track negotiations with key blocs (EU, UK) to secure diversified and rule-based market access.

Focus on 'Non-Financial Enablers' - Emphasize the EPM's role in providing quality compliance, testing facilities, and market awareness, especially for small firms to overcome NTBs.

3. Conclusion (40 words) - Reiterate that domestic policy execution (turning schemes into on-ground realities) combined with strategic external engagement is vital. Conclude that sustained high-value integration, rather than short-term subsidies, is the key to converting India's demographic dividend into global economic power.

53. Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)

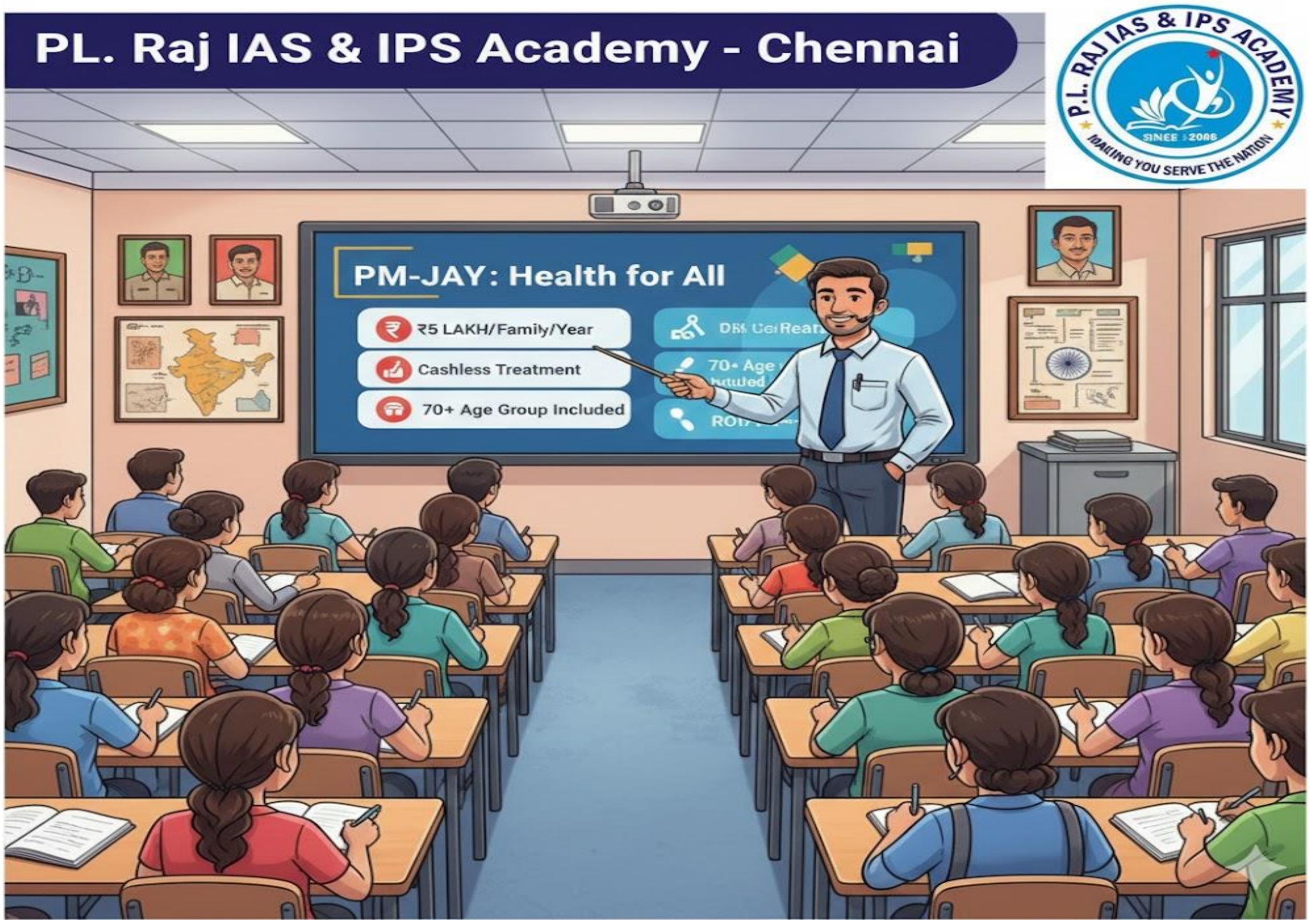
The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) stands as the world's largest government-funded health assurance scheme. Launched in 2018 under the overarching umbrella of the Ayushman Bharat Mission, it represents a significant move towards achieving Universal Health Coverage (UHC) in India, protecting millions from catastrophic health expenditure.

Explaining the Scheme and its Eligibility

The Ayushman Bharat Mission adopts a continuum of care approach, having two major components.

Health and Wellness centers (HWCs) - To provide Comprehensive Primary Health Care (CPHC) closer to the community.

Pradhan Mantri Jan Arogya Yojana (PM-JAY) - To provide health assurance for secondary and tertiary hospitalization.



Scheme Overview

PM-JAY provides a defined benefit cover of ₹5 lakh per family per year for secondary and tertiary care hospitalization. The key features include,

Cashless and Paperless - Treatment at any empanelled public or private hospital across the country.

Family Floater - The ₹5 lakh cover is for the entire family, with no restriction on family size, age, or gender.

Comprehensive Coverage - It covers over 1,929 medical procedures, including treatment costs, pre-hospitalization (up to 3 days), and post-hospitalization (up to 15 days) expenses.

Day-One Coverage - All pre-existing diseases are covered from the very first day of enrolment.

Portability - A beneficiary can avail services anywhere in India, ensuring national portability.

Eligibility Criteria - The scheme is entitlement-based, not enrolment-based, and is targeted at the poor and vulnerable population, identified based on deprivation and occupational criteria from the Socio-Economic Caste Census (SECC) 2011 data. It covers approximately 12 crore poor and vulnerable families (around 55 crore beneficiaries), representing the bottom 40% of the Indian population.

Recent Changes and Expansions

In a significant move to address the healthcare needs of the elderly and frontline workers, the scheme has been expanded -

Expansion to Senior Citizens (70 Years and Above)

Eligibility - All citizens aged 70 years and above are now eligible for the PM-JAY benefits, irrespective of their income (expanded in October 2024).

Benefit - They receive a cover of ₹5 lakh annually on a family basis.

Top-up for Existing Beneficiaries - Elderly members of families already covered under PM-JAY get an additional top-up cover of ₹5 lakh exclusively for themselves, over and above the existing family cover.

Separate Card - A distinct Ayushman Vaya Vandana Card is issued to these senior citizens.

Inclusion of other Schemes - Senior citizens with private health insurance or under the Employees' State Insurance Corporation (ESIC) scheme are eligible, but those under CGHS or ECHS must choose one.

Inclusion of Frontline Workers

The scheme was also expanded to include 37 lakh Accredited Social Health Activists (ASHAs), Anganwadi Workers (AWWs), and Anganwadi Helpers (AWHs) and their families for free healthcare benefits.

Significance and Impact on Common People

PM-JAY has been instrumental in transforming India’s healthcare landscape -

Reduced Out-of-Pocket Expenditure (OOPE) - The scheme has significantly reduced the financial burden on poor families. The Economic Survey indicates that PM-JAY has saved beneficiary families over ₹1.52 lakh crore (as of October 2025), preventing millions from falling into poverty due to high medical costs.

Improved Access and Equity - It has improved access to quality secondary and tertiary care, especially in private hospitals, which were previously unaffordable. Its no-cap on family size and coverage of pre-existing diseases ensure comprehensive inclusion.

Gender Equity - Over 49% of Ayushman cards have been issued to women, and over 3.61 crore hospital admissions have been utilised by women, ensuring they have equitable access to healthcare.

Portability of Care - The pan-India portability allows migrant workers and their families to access care irrespective of their location, a crucial social security feature.

Issues and Challenges

Despite its success, the scheme faces several hurdles.

Low Enrolment Among New Beneficiaries - As highlighted in the provided text, the coverage rate for the expanded 70+ age group stands at around 15% (9.4 million out of a target of 60 million), indicating operational friction and awareness gaps.

Budgetary Constraints and Low Rates - The package rates for PM-JAY, approved in 2018, have not kept pace with medical inflation. This makes it difficult for states and empanelled hospitals, particularly for geriatric care, to sustain the additional load, as noted by the former Ayushman Bharat CEO.

The "Missing Middle" - A large section of the population that is not poor enough to qualify based on SECC data but cannot afford private insurance remains uncovered.

Inadequate Public Health Spending - Public health expenditure remains low (around 1.84% of GDP) against the National Health Policy 2017 target of 2.5%, straining the overall system.

Fraud and Misuse - Cases of fraudulent claims and registration of ineligible households have been reported, pointing to lapses in monitoring and accountability.

Infrastructure and Human Resource Gaps - Shortage of specialists and varying quality of care, especially in public and smaller private empanelled hospitals, affects the scheme's effectiveness.

Government Measures and Way Forward

To address these challenges, the government and the National Health Authority (NHA) are taking several steps -

Proactive Enrolment - Focus is on organizing proactive special enrolment camps and ensuring doorstep access for the elderly, as suggested by experts.

Beneficiary Assistance - Deployment of Pradhan Mantri Arogya Mitras (PMAMs) at empanelled hospitals to provide on-ground facilitation for enrolment, verification, and claim assistance.

Information, Education, and Communication (IEC) Programmes - Campaigns to increase awareness and improve beneficiary experience.

Operational Refinements - Enhancing the predictable and prompt financial settlement system for empanelled hospitals to ensure their sustained participation.

Revised Health Packages - NHA has revised the Health Benefit Package (HBP) with increased rates for many procedures to improve hospital participation.

Technology for Transparency - Continuous use of the Beneficiary Identification System (BIS) and Transaction Management System (TMS) to reduce leakages and ensure targeted benefits.

Conclusion

PM-JAY is a monumental step towards healthcare as a right, offering financial protection to the poorest segments and promoting equity. However, its ultimate success hinges on overcoming the operational, financial, and infrastructural challenges. The recent expansion to senior citizens is a commendable move towards a more inclusive health system, but continuous refinement of processes, effective fraud detection, increased budgetary allocation (targeting 2.5% of GDP), and strengthening the connection with primary care through Ayushman Arogya Mandirs (HWCs) will be critical to realize the dream of UHC and secure health for all Indians. For civil service aspirants, understanding PM-JAY's structure, impact, challenges, and the ongoing measures is essential for a comprehensive grasp of India's social sector initiatives.

Main Practice Question

The recent expansion of PM-JAY to cover all senior citizens (70+) signifies a pivotal step towards Universal Health Coverage. Critically analyze the operational challenges, particularly low enrolment and financial sustainability due to outdated package rates, and suggest measures for effective scheme realization. (15 marks)

Answer Guidelines

1. Introduction (Contextualizing PM-JAY's Expansion) - Define PM-JAY as the world's largest government-funded health assurance scheme and its aim for UHC. Mention the recent expansion (October 2024) to cover all citizens aged 70+ irrespective of income, highlighting it as a significant shift towards greater inclusivity.

2. Body

I. Critical Analysis of Operational Challenges

Low Coverage Rate (Enrolment Friction) - Cite the data - Only $\sim$15% achievement (9.4 million out of 60 million target for 70+ age group).

Reason - Operational friction, lack of awareness, difficulty in registration for the elderly (doorstep access issues).

Financial Sustainability and Package Rates

Issue - Package rates approved in 2018 have not been revised to match medical inflation (almost doubled since).

Impact - Difficult for states/empanelled hospitals to sustain the scheme, especially for complex and expensive geriatric care. (As cited by Indu Bhushan).

Budgetary Constraints - States facing difficulties in allocating resources for the additional load.[bv]

II. Suggested Measures for Effective Realization (Way Forward)

Proactive Enrolment Strategy (Based on Expert Opinion)

1. Organize proactive, special enrolment camps.
2. Ensure doorstep access for the elderly and infirm.
3. Leverage the Arogya Mitras (PMAMs) for on-ground enrolment and verification assistance at hospitals.

Financial and Rate Rationalization

1. Regularly revise and index package rates to keep pace with medical inflation, especially for specialized geriatric procedures.

2. Provide incentives/separate funding windows to states and hospitals for managing the additional senior citizen load.

Clear and Predictable Financial Settlement - Ensure a prompt and efficient system for settling claims with empaneled hospitals.

Awareness and Communication - Launch targeted Information, Education, and Communication (IEC) campaigns focusing on the 70+ age group and the difference between the Ayushman Card and the Ayushman Vaya Vandana Card.

Integration and Monitoring - Strengthen the technology platform (BIS/TMS) to prevent fraud and misuse. Ensure seamless integration of the scheme with existing health networks like Ayushman Arogya Mandirs (HWCs) for outreach.

3. Conclusion (Summarizing the Need for Timely Action) - Conclude that while the expansion is ideologically crucial for social security, timely intervention on rate revision and enrolment mechanisms is essential to prevent the scheme from being undermined by operational bottlenecks and hospital non-cooperation.

54. State of the World's Children (SWOC) 2025 - Indian Perspective

The SWOC 2025 report delivers a stark message - while global extreme child poverty shows a welcome decline, childhood itself is under unprecedented threat from multiple fronts. Globally, four out of five children are now exposed to at least one extreme climate hazard annually, posing a new and complex risk to health, nutrition, and education. Furthermore, conflict has doubled its reach since the mid-1990s, with about 19 per cent of the world's children living in affected areas in 2024. The report also warns that cuts in international development aid could lead to a catastrophic increase of 4.5 million under-five deaths and push six million children out of school by 2030, underscoring the interconnectedness of funding and survival.

India's Burden of Multidimensional Deprivation

Despite the global decline in extreme poverty, the report highlights that India carries one of the largest burdens of multidimensionally deprived children. Multidimensional deprivation goes beyond simple income poverty; it reflects a lack of essential services and rights.

The statistics are sobering - about 206 million Indian children experience at least one deprivation. More alarmingly, one-third of these (62 million) face two or more deprivations. The nature of this deprivation is systemic, reflecting gaps across critical sectors -

Nutrition and Health - This is a major concern, manifesting as malnutrition (stunting, wasting, anaemia) which permanently compromises a child's cognitive development and physical health.

Education - Lack of access to quality learning and high dropout rates.

Housing and Sanitation - Unsafe living conditions and lack of basic services like toilets.

Water - Inadequate access to safe drinking water.

Reasons for Persistent Gaps

The persistence of child deprivation in India stems from a mix of systemic, structural, and environmental factors.

Declining Policy Priority (Budgetary Cuts) - A critical factor is the falling political priority given to child welfare. The budget allocated for the Ministry of Women & Child Development (MWCD) for 2025-26, though substantial in absolute terms (₹26,890 crore), shows a significant drop in its share of the total central expenditure, falling from 0.96 per cent in 2015-16 to just 0.5 per cent in 2025-26. This reduction indicates that children's welfare has not gained greater priority in the overall governmental framework.

Gaps in Implementation - Even with allocations, programme effectiveness is hampered by delays. These include slow progress in upgrading anganwadi infrastructure and persistent shortages of trained staff and frontline workers. Such systemic shortfalls dilute the impact of even higher funding.

Structural Inequities and Digital Exclusion - Digital exclusion leaves millions of children behind, denying them access to online learning, crucial information, and skill-building opportunities—a gap particularly evident post-pandemic.

Vulnerability Hotspots - The most difficult combination of malnutrition, unsafe housing, pollution, and interrupted schooling is often found in urban slums. Furthermore, climate vulnerability disproportionately impacts the poorest families, disrupting essential services and forcing displacement.

Government Measures and the Way Forward

Current Interventions

The Government of India has several flagship programmes to address child welfare. The 2025-26 Union Budget allocates funds for -

1. Saksham Anganwadi & POSHAN 2.0 - This scheme focuses on improving nutrition outcomes, health, and early childhood care and development, with a major allocation of ₹21,960 crore.
2. Mission Vatsalya - Aimed at ensuring a safe and secure environment for children, with an allocation of ₹1,500 crore.

While these schemes form the backbone of child welfare, the core challenge remains the falling overall budgetary priority and the effectiveness of last-mile delivery.

Blueprint for Action - The Way Forward

To truly align with UNICEF's five-point framework and ensure that India's demographic dividend materialises, child poverty must be treated as a national mission. This requires a concerted, multi-sectoral approach -

Prioritising the Child in Policy - The budget share for children must be substantially increased and protected, reflecting a clear policy commitment.

Decentralisation and Community Ownership - States must play a crucial role in translating central policies into local results. The Kerala model, leveraging Panchayati Raj Institutions (PRIs) and strong decentralisation to establish Community-Based Organisations (CBOs) at the anganwadi level, is exemplary. These community-owned and -led committees foster a supportive social environment, strengthen child rights, and enhance welfare outcomes.

Strengthening Service Delivery - This involves immediate steps such as ensuring timely fund disbursement, maintaining fully functional anganwadis, and conducting regular on-the-spot inspections to improve accountability.

Technological Integration - Adopting technology-driven intervention and real-time monitoring systems can drastically improve accountability, track outcomes, and ensure that services reach the most vulnerable.

Addressing Structural Gaps - Universal access to essential services, including digital connectivity and stronger social protection measures, must be ensured to cover the last mile. This also calls for better coordination across ministries and states to avoid fragmented service delivery.

Conclusion

The SWOC 2025 report serves as a demanding call to action. India stands at a critical juncture where the health, education, and safety of its children will determine the nation's future trajectory. Without deeper reforms—from increasing financial allocation and strengthening frontline workers to embracing decentralisation and technology—millions of children will remain outside the arc of opportunity. The national mission must be to ensure that every Indian child is seen, heard, and served, guaranteeing their fundamental rights and enabling them to contribute fully to the country's progress.

Main Practice Question

"Despite increased budget allocations for core schemes, why is the declining share of child welfare in central expenditure and systemic implementation gaps hindering India's ability to address multidimensional child deprivation effectively, and what structural reforms are necessary to achieve UNICEF's vision"?

I. Introduction (Approx. 10% - 30 words)

Hook - Briefly introduce the context of the UNICEF SWOC 2025 Report and the finding that India carries a massive burden of multidimensionally deprived children (206 million, with 62 million facing multiple deprivations).

Thesis - State that the problem lies not just in a lack of schemes, but in the falling priority (budget share) and implementation failures that negate the impact of specific program funds.

2. Body

I. The Hindrances - Budgetary and Systemic Gaps (Approx. 40% - 100-120 words)

Analyze the reasons why India's efforts are being diluted, drawing directly from the provided text and core knowledge of governance -

A. Declining Budgetary Priority - Explain the paradox - Allocation for schemes like Saksham Anganwadi & POSHAN 2.0 (₹21,960 crore) is high, but the overall MWCD share in central expenditure has fallen (0.96% to 0.5%).

Analysis - This indicates that child welfare has lost priority in the overall policy framework, making it vulnerable to resource competition and demonstrating a lack of long-term, comprehensive commitment.

B. Systemic Implementation Gaps - Cite issues - Delays in upgrading anganwadi infrastructure, shortages of trained staff, and poor fund disbursement mechanisms.

Analysis - These functional deficiencies create a 'leakage' effect, diluting the impact of funds and preventing benefits from reaching the last mile, especially in urban slums and climate-vulnerable areas.

C. Structural Inequities - Mention digital exclusion and the disproportionate impact of climate vulnerability/pollution on the poorest, which further complicate service delivery.

II. Necessary Structural Reforms (Approx. 40% - 100-120 words)

Detail the structural and governance changes required to align with UNICEF's vision, focusing on the 'National Mission' approach -

A. Governance and Coordination - Need for closer coordination across ministries and states (e.g., Health, Education, WCD) to tackle the *multidimensional* nature of deprivation. Strengthening Frontline Workers (FLWs) - Ensure better training, resources, and timely pay for Anganwadi Workers/ASHAs.

B. Decentralisation and Accountability – Adopt the Kerala Model - Emphasize the crucial role of Panchayati Raj Institutions (PRIs) and Community-Based Organisations (CBOs) to foster local ownership and better monitoring. Implement Technology-driven interventions and real-time monitoring systems for enhanced accountability and service delivery tracking.

C. Universal Access and Social Protection - Treat child poverty as a National Mission requiring universal services - Universal digital access and robust, last-mile social protection schemes.

3. Conclusion (Approx. 10% - 30 words)

Summarise - Reiterate that addressing child deprivation is key to realising India's demographic dividend.

Final Thought - Conclude that without deep, sustained structural reforms that prioritize children both financially and functionally, millions will remain "unseen, unheard, and unserved."

55. Solar Energy in India - Harnessing the Power on Every Rooftop

India, blessed with abundant sunshine for over 300 days a year, is strategically poised to leverage solar energy as the backbone of its transition to sustainable power. While utility-scale solar parks demand vast, often contested, tracts of land, the concept of Rooftop Solar (RTS) presents an elegant, decentralized, and environmentally friendly alternative, transforming every available roof into a potential power plant.

Status of Solar Energy and the Rooftop Solar Scheme

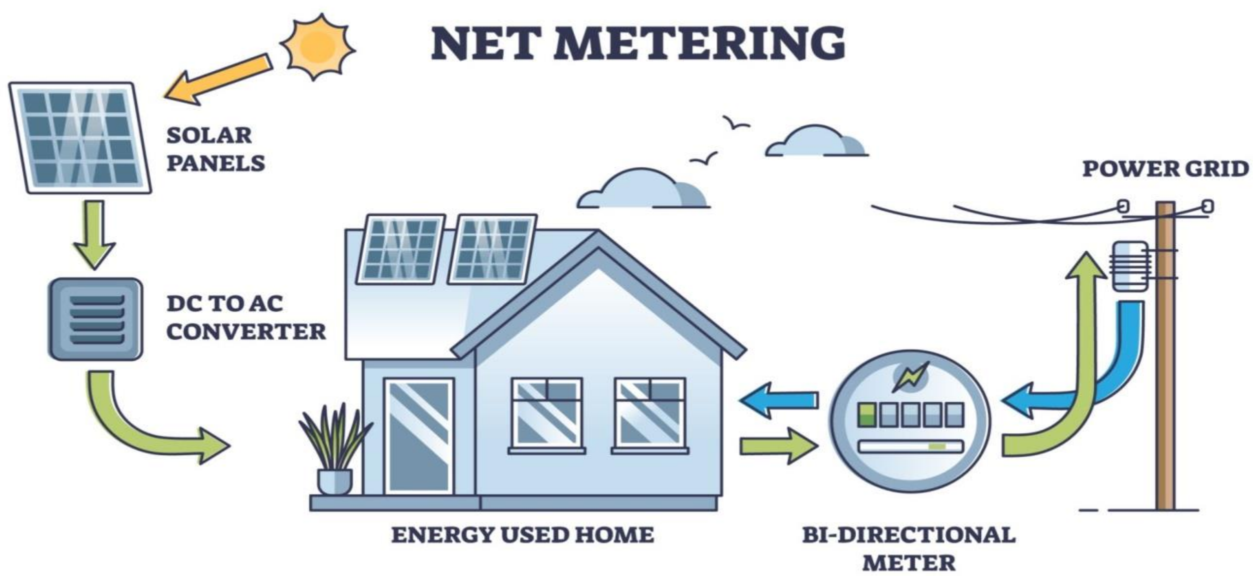
India has made significant strides in renewable energy capacity, but the potential of RTS remains largely untapped, despite strong policy intent.

Solar Status - Solar energy is a crucial component of India's ambitious climate goals (Panchamrit targets) and its pledge to achieve net-zero emissions.

The RTS Model (Decentralized Generation) - RTS is an uber-solution due to its modular nature. Panels can fit almost anywhere—homes, offices, factories—making each customer a potential generator, thereby decoupling energy generation from land scarcity.

Technical Features (Grid-Connected) - The ideal, most practical arrangement for RTS is grid-connected, involving -

1. Daytime Generation - Panels generate electricity when the sun shines.
2. On-site Consumption - Part of the generated electricity is consumed locally.
3. Export to Grid (Net Metering) - Excess power is "exported" to the distribution company (discom) grid.
4. Grid as Backup - Since solar is intermittent (zero generation at night), the grid serves as the free backup source for night-time consumption.



Advantages of Rooftop Solar

The inherent characteristics of RTS offer multi-dimensional benefits to the economy and environment -

1. Reduces Transmission Losses - By generating electricity at the point of consumption, RTS bypasses long-distance transmission, thereby reducing Transmission and Distribution (T&D) losses for the national grid.
2. Environmental Sustainability - It displaces fossil fuel-based electricity, directly contributing to air quality improvement and the reduction of carbon emissions.
3. Energy Security and Decentralization - It enhances local energy independence and resilience. In the event of grid failure, if paired with battery storage, it can provide backup power.

4. Financial Savings for Consumers - Consumers save money on electricity bills by meeting their own needs and earning revenue for surplus power fed back into the grid.

The Problem in Implementation - Discoms and Policy Gridlock

Despite clear advantages and government incentives, the RTS program has not reached a transformative scale. The central problem is the integration of this new, intermittent technology with the existing fossil fuel-based distribution system (discoms).

The Financial Squeeze (The Kerala Model) - The successful case of Kerala (1.5 GW installed capacity) illustrates the core issue. The Kerala State Electricity Board (KSEB) faced unsustainable financial losses because it was required to -

1. Buy excess solar power during the day when grid demand and rates were low.
2. Sell back an equivalent amount of power at night when grid costs were high.
3. Equity and Tariff Burden - This mismatch meant that the financial burden was shifted to the remaining 98% of consumers, who faced increased electricity bills to subsidize the net-metered solar users. This led to regulatory pushback.

Regulatory Responses and the Storage Mandate

The regulatory response attempts to fix the financial imbalance of discoms, often leading to a slowdown in installations.

Capping and Charges - Measures proposed in states like Kerala include capping net-metering capacity and introducing time-of-day tariffs and grid charges.

The Storage Mandate - To solve the night-time power purchase problem, the Kerala State Electricity Regulatory Commission (KSERC) mandated new connected systems above certain thresholds (e.g., 10 kW) to install battery storage.

Goal - This forces the consumer to internalize the backup cost, reducing reliance on the discom for night-time consumption and thereby stabilizing discom finances.

Challenge - Batteries remain expensive, making the up-front cost of installation prohibitive, which immediately stalls the program (as seen by the 50% drop in installations in Kerala).

Gross Metering - The introduction of gross metering mechanisms, which pay lower rates (₹2.79 per kWh) for surplus power compared to peak electricity rates, reduces the financial incentive for consumers, further slowing adoption.

Government Measures and Way Forward

The Union government has shown strong intent through programs to incentivize RTS, but a sustainable regulatory framework is the missing link.

1. Policy Clarity and Uniformity - The government needs to formulate a uniform national policy that standardizes net/gross metering rules, preventing regulatory uncertainty and the constant stalling of state-level programs.
2. Incentivizing Storage - Instead of mandating expensive storage, the government should massively incentivize it through Production Linked Incentive (PLI) schemes for Advanced Chemistry Cells (ACC) and capital subsidies for decentralized, small-scale battery systems. This is the only way to tackle intermittency without relying on the grid.
3. Smart Grid Integration - Investment in smart grid technology and real-time monitoring is crucial. This allows discoms to predict solar generation, manage fluctuations, and introduce dynamic pricing, ensuring fair rates for both the consumer and the utility.
4. Off-Grid Expansion - For regions lacking reliable grid infrastructure (echoing the Pakistan model), the focus should be on promoting off-grid solar systems coupled with battery storage. This solves the intermittency problem locally, enabling energy access without straining the discom infrastructure.
5. Financial Innovation - Implementing schemes that encourage third-party ownership (leasing models) for RTS, reducing the upfront cost barrier for homeowners.

Conclusion

Rooftop Solar is key to India's energy future, representing the ideal marriage of modular technology and decentralized power generation. The potential is immense, but progress remains gridlocked by the financial vulnerability of distribution companies. The path forward lies not in retreating from the technology, but in regulatory innovation—specifically, aggressively promoting battery storage as a decentralized solution to intermittency and reforming the metering policy to ensure financial fairness for discoms, thereby paving the way for a truly transformative energy future.

Main Practice Question

1. Analyze the Net Metering dilemma in India's rooftop solar scheme. How do discoms' financial viability and the high cost of battery storage create a policy gridlock for decentralized power generation?

Answer Guidelines

The answer should focus on the regulatory friction between promoting decentralized generation (RTS) and maintaining the financial health of the distribution utilities (discoms).

1. Introduction - The Promise vs. The Policy (Approx. 50 words)

RTS Promise - Briefly define Rooftop Solar (RTS) as the modular, decentralized solution that turns consumers into generators, reducing T&D losses.

The Gridlock - State that the real challenge is not technology or intent, but the Net Metering regulatory mechanism that pits consumer incentive against discom financial health.

2. Body

1. The Net Metering Dilemma and Discom Viability (Approx. 130 words)

Net Metering Mechanism - Explain how Net Metering works - consumers export cheap daytime power and import expensive night-time power (using the grid as a free battery/backup).

Discom Loss (The Kerala Case) - Illustrate how this leads to unsustainable financial losses for the discoms (e.g., KSEB). The discom effectively acts as a banker, paying high rates for power when it is not needed (daytime surplus) and selling it back at a loss, thus increasing the cross-subsidy burden on non-solar consumers.

Regulatory Friction - This financial pressure forces regulators to introduce caps, grid charges, and Gross Metering (paying lower rates for exported power), which immediately reduces the financial incentive for the consumer and stalls the program.

2. The Constraint of Battery Storage (Approx. 120 words)

Tackling Intermittency - Explain that solar's inherent challenge is intermittency (zero power at night). The ideal technical solution is on-site battery storage.

Cost Barrier - However, batteries are still prohibitively expensive. Mandating storage for new installations (as attempted in Kerala) solves the discoms' financial problem but transfers a huge upfront cost barrier to the consumer, drastically slowing adoption.

Policy Gridlock - The choice becomes –

1. Consumer-friendly Net Metering - (High adoption, financially cripples discoms).
2. Discom-friendly Storage Mandate/Gross Metering - (Low adoption, protects discoms).

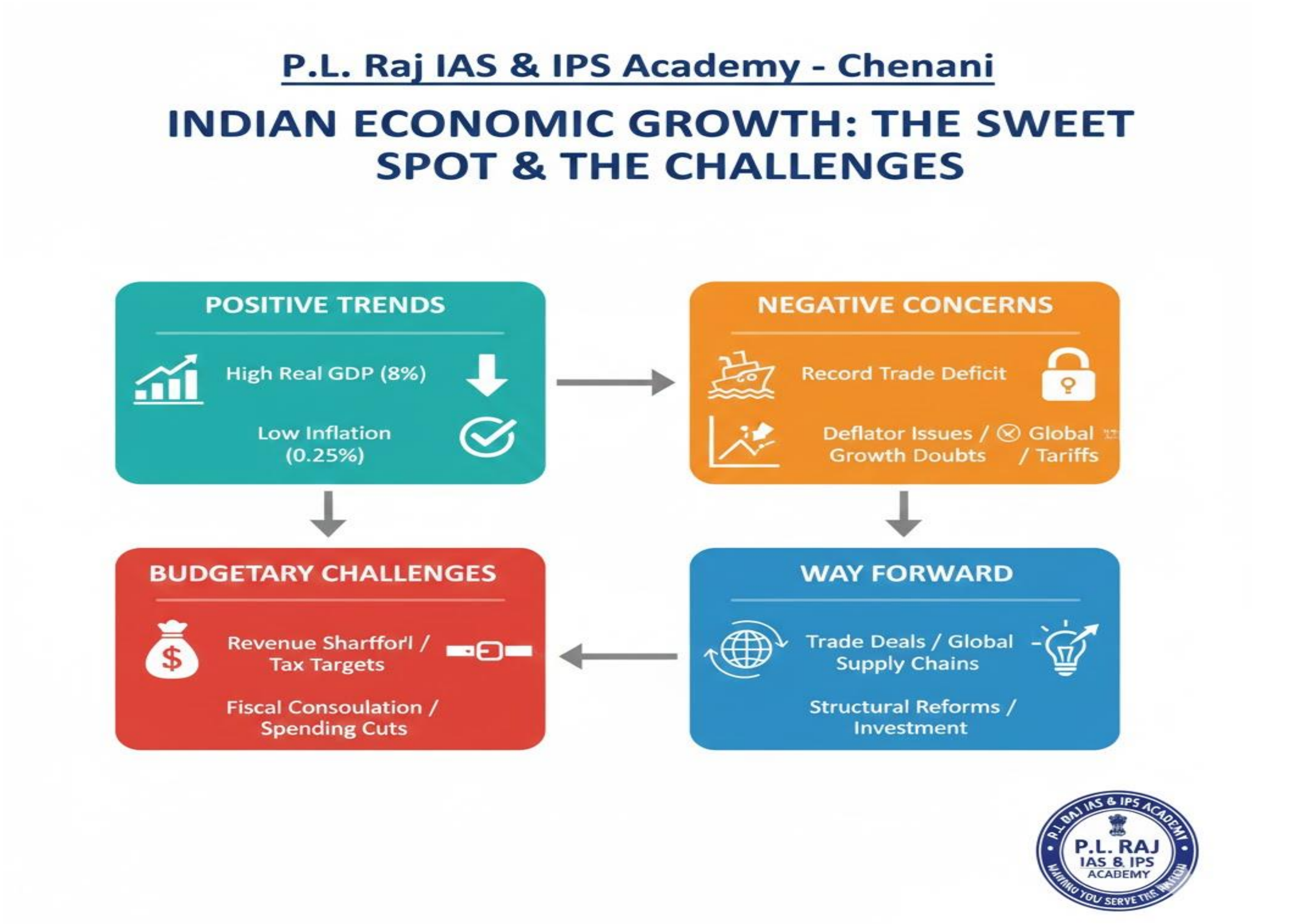
   The need to balance these two conflicting imperatives is the core policy gridlock.

4. Conclusion - Way Forward (Approx. 50 words)

Conclude that the way forward lies in breaking the storage cost barrier through aggressive PLI schemes and subsidies for decentralized batteries. Furthermore, shifting towards Smart Grid integration and dynamic Time-of-Day (ToD) tariffs can ensure fairer pricing, aligning the interests of the consumer, the discom, and the national energy transition goal.

56. India's Economy at the Crossroads - Analyzing the Paradoxical Sweet Spot

The Indian economy currently presents a complex, paradoxical picture - high growth (above 8 per cent), all-time low inflation (near zero), and a record high trade deficit ($42 billion in October). This shift, from hints of stagflation a year ago to a seemingly "sweet spot" today, demands nuanced analysis by civil services aspirants. While the headline numbers are encouraging, a deeper dive reveals underlying statistical quirks and external vulnerabilities that will shape the upcoming Budget and future policy decisions.



1. The Positive Trend - Strong Growth and Low Inflation

The two most compelling dynamics creating the "sweet spot" are the robust growth figures and the unprecedented low inflation.

Robust Real GDP Growth - The headline figure of 8.2 per cent growth in the last quarter (Q2) is undeniably strong. This growth has been supported by favorable cyclical factors -

1. Monetary easing (lower interest rates).
2. Increased fiscal spending and strong rains.
3. The temporary boost from Goods and Services Tax (GST) cuts.

Enduring Low Inflation - The near-zero Consumer Price Index (CPI) print of 0.25 per cent in October is crucial. Unlike past cycles where inflation was volatile, this downturn appears more enduring. The factors supporting sustained low core inflation include -

1. Global Disinflationary Forces - Price moderation stemming from major economies like China.

2. Credibility of RBI's Targeting - Greater market confidence in the Reserve Bank of India's commitment to its inflation-targeting framework.

This low inflation environment offers the RBI a "longer runway" for supportive policy actions, reinforcing its credibility as an inflation fighter even if it chooses to support growth.

2. The Negative Concerns - Statistical Quirks and External Imbalances

Despite the high headline growth, two details introduce significant uncertainty and risk.

Statistical Quirks in GDP - Economists caution that the 8.2 per cent figure may be exaggerated due to statistical anomalies -

Deflator Issues - The use of single, rather than double, deflation and an over-reliance on the Wholesale Price Index (WPI) data to deflate services have potentially understated the GDP deflator (the difference between nominal and real GDP), thereby overstating the real GDP number. Actual growth is estimated to be closer to 7 per cent.

Low Base Effect - The high Q2 number also benefited from a low base effect from the previous year.

Record Trade Deficit - The $42 billion trade deficit in October is a serious vulnerability.

Imports - Driven by consistently high gold imports, which are likely to remain elevated due to global price trends.

Exports - Export performance is weakening. Shipments to the US fell sharply (partly due to the new 50 per cent tariff), and exports to the rest of the world also declined in October, hinting at rising global competition and production disruptions (like Diwali).

3. Global Headwinds and Tailwinds Impact

The current economic landscape is shaped by conflicting global forces.

Headwinds (Tariffs and Trade Deficit) - The severe 50 per cent US tariffs on Indian goods act as a major headwind, directly hitting export competitiveness in critical sectors. This is the primary driver behind the widening trade deficit and the depreciating pressure on the Rupee (INR).

Tailwinds (Disinflation) - Global disinflationary pressures (from China) act as a strong tailwind, significantly aiding the RBI's battle against domestic inflation.

Exchange Rate as Automatic Stabilizer - The combination of a high trade deficit and weak foreign portfolio/direct investment inflows puts pressure on the INR, which has already depreciated by around 10 per cent on a trade-weighted basis this year. This depreciation, however, acts as the most fitting shock absorber, helping restore the competitiveness of Indian exports against rivals.

4. Implications for the Budget and Policy Outlook

The upcoming Budget faces difficult choices driven by these trends.

Fiscal Tightening - To meet mandated fiscal deficit targets, the government will likely have to tighten fiscal spending in the latter half of the year. This tightening, combined with the fading effect of the GST cuts, is expected to soften growth momentum in the coming quarter.

Revenue Uncertainty - The statistical ambiguity in real GDP growth and the low nominal growth rate create uncertainty for tax revenue projections. The Budget will have to be cautious in setting revenue targets, acknowledging that corporate earnings and tax collections rely on the uncertain nominal expansion.

Monetary Policy Call - Given the uncertainty surrounding growth (due to the deflator) but the conviction regarding low inflation, the recommended policy action for the RBI is a 25-basis point rate cut in the policy meeting. This would reinforce the RBI's commitment to inflation targeting when inflation is far below the target, while remaining supportive of growth.

Way Forward and Conclusions

India's current economic performance is a testament to domestic resilience, but policymakers cannot afford complacency regarding the quality of growth and external stability.

Structural Export Reform - The best long-term strategy is to prioritize integration with regional supply chains to structurally improve export prospects, moving beyond short-term exchange rate adjustments.

Addressing Statistical Anomalies - The government and the National Statistical Office (NSO) must resolve the methodological issues related to the GDP deflator to ensure public confidence in the reported growth figures.

Fiscal Prudence with Capital Spending - While fiscal consolidation is necessary, the government must ensure that tightening does not compromise essential capital expenditure, which has a higher multiplier effect on long-term growth.

In conclusion, India sits in a delicate economic sweet spot, characterized by the best possible inflation outcomes coinciding with strong domestic expansion. The policy challenge for the government and the RBI is to navigate the trade deficit risk and the statistical ambiguity in growth with measured monetary easing and targeted structural reforms, ensuring this sweet spot transitions into a sustained, stable growth trajectory.

Main Practice Question

1. Analyze why the simultaneous high real growth and record trade deficit create a policy headache for the RBI, given the misleading effects of GDP deflator anomalies. (15 marks)

1. Introduction - The Sweet Spot Paradox (Approx. 50 words)

Define the Paradox - Introduce the three conflicting signals - high Real GDP (8.2%), near-zero Inflation (0.25%), and a record-high Trade Deficit ($42 billion).

Policy Context - State that the RBI's core task is balancing inflation (primary mandate) with growth support, made difficult by these contradictory metrics.

2. Body

1. The Complication of the GDP Deflator (Approx. 130 words)

Deflator's Role - Explain that the GDP deflator (which measures inflation in the entire economy) is the difference between Nominal GDP and Real GDP.

The Anomaly - Due to issues like using WPI data to deflate services, the deflator has been understated, which overstates the Real GDP figure. This means the actual growth momentum on the ground might be closer to 7% (still strong, but less robust than the headline number).

RBI Headache - This ambiguity prevents the RBI from confidently relying on the high 8.2% growth figure. Policymakers must decide whether to address the statistical headline or the lower, underlying reality, making a growth-supportive policy decision risky.

2. The Structural Risk - Record Trade Deficit (Approx. 120 words)

Vulnerability - Explain that the record deficit, driven by high imports (e.g., gold) and weakened exports (due to global competition and 50% US tariffs), creates a structural vulnerability.

FX Pressure - This deficit, combined with weak Foreign Investment, puts immediate depreciating pressure on the Rupee (INR).

Monetary Choice - The RBI must decide if the low inflation allows for a rate cut (monetary easing) to support the underlying growth, or if the external deficit risk requires a pause to manage capital flows and currency stability. The resulting INR depreciation, while risky, does act as a shock absorber for exports.

3. Conclusion - Navigating the Trade-offs (Approx. 50 words) - Conclude that the RBI's recommended action (a rate cut) reflects a strong conviction in low inflation overriding the ambiguous growth and external risks. However, sustaining stability requires fiscal discipline (to manage the nominal growth/tax revenue link) and structural reforms to boost exports and address the high trade deficit structurally.

57. The Fading Threat - Analyzing the Decline of Left-Wing Extremism in India

Left-Wing Extremism (LWE), primarily perpetrated by Maoist groups like the Communist Party of India (Maoist), was once famously termed the "gravest internal security threat" to India. Rooted in ideological conflicts and the failure of inclusive development, LWE carved out a "Red Corridor" across central and eastern India. However, recent trends, underscored by the elimination of key leaders like Modiyam Vella and the surrender of top ideologues like Mallojula Venugopal Rao (alias Sonu), confirm that the threat is now significantly waning. Understanding this decline is crucial for aspirants preparing for the Civil Services Examination.

History and Nature of the LWE Threat

LWE traces its origins back to the Naxalbari village in West Bengal in 1967, when a peasant uprising, led by local CPI (M) leaders, rejected parliamentary politics in favour of armed struggle, drawing inspiration from Maoist ideologies.

Ideology - The movement believes in establishing a "People's Government" through a protracted armed struggle (Guerrilla Warfare), overthrowing the existing parliamentary democratic structure, which they view as exploitative.

Geographical Peak - The movement peaked in the early 2000s, affecting over 200 districts across multiple states, primarily in the forested and resource-rich regions of Chhattisgarh, Jharkhand, Odisha, and Maharashtra.

Internal Security Threat - LWE poses a fundamental threat to the Indian State by -

Challenging State Sovereignty - Creating parallel governments and control in remote areas (known as "liberated zones").

Impeding Development - Targeting infrastructure (roads, schools, police posts) and obstructing the delivery of welfare schemes.

Human Cost - Leading to immense loss of life among security forces, police, and civilians, exemplified by major attacks like the one Vella was involved in, which killed 22 security personnel in 2022.

The New Trend of Decline

The statistics clearly show the successful containment of the threat -

Contraction of Affected Area - The number of LWE-affected districts has dramatically shrunk, dropping from over 200 at its peak to just 11 currently, with only three districts now designated as "severely affected" by the Home Ministry.

Leadership Crisis - The death and capture of senior leaders (like Vella and Sonu) dismantle the movement's command structure, intelligence network, and ideological leadership, making recruitment and planning difficult.

Multi-Faceted Reasons for the Decline

The success in dismantling the "logic of violence" is attributed not to a single strategy, but to a multi-pronged approach that combines security measures, development, and democratic inclusion.

Enhanced Capacity of the Indian State (Security)

Kinetic Action - Targeted security operations and the establishment of new security force camps and police posts in inaccessible forested regions (Central India and the Deccan) have cut off supply lines and fragmented Maoist strongholds.

Intelligence and Technology - The use of advanced technology and coordinated, state-level intelligence sharing has improved the effectiveness of counter-insurgency operations.

Economic and Welfare Intervention (Development)

Targeted Welfare - The capacity of the Indian State to deliver welfare has grown significantly. Targeted schemes and a rights-based architecture (like MGNREGA and direct benefit transfers) have reached remote villages, fulfilling basic needs and reducing the pool of disillusioned youth susceptible to Maoist propaganda based on deprivation.

Infrastructure - Construction of roads, communication networks, and schools has reduced isolation, integrating remote populations with the mainstream economy.

Deepening of Democracy and Ideological Defeat (Governance)

Political Space - Perhaps the most crucial factor is the deepening of democracy and the recognition of the system's potential to address the needs of the most vulnerable through legal and political means.

Maoist Admission - Ideologues like Sonu admitted that the party "underestimated the power of the Indian state" and "rejected the legal opportunities to unite the broad masses." This acceptance of ideological failure shattered the "pipe dream of a violent revolution."

Surrender and Rehabilitation - Effective surrender and rehabilitation policies offer a safe exit strategy, encouraging disillusioned cadres to return to mainstream life.

Impact on the People and the Lessons Learned