

## General Studies Paper-III

**Q1. Faster economic growth requires increased share of the manufacturing sector in GDP, particularly of MSMEs. Comment on the present policies of the Government in this regard. (150 words) [10]**

### Approach to question:

1. Begin by briefly introducing the importance of the manufacturing sector for economic growth. Mention that a higher share of manufacturing, especially through MSMEs, can contribute significantly to economic development.
2. Discuss the role of manufacturing in economic growth.
3. Discuss key policies and initiatives that the government has introduced to promote the manufacturing sector.
4. Stress the importance of continuous monitoring and adaptability in policy implementation to ensure sustained and faster economic growth.

### Answer:

Micro, Small, and Medium Enterprises (MSMEs) play a significant role in the Indian economy. The MSME sector contributes around 30 per cent to India's GDP and over 40 per cent to its exports, while also generating 110 million job opportunities.

### The Role of Manufacturing in Economic Growth:

1. **Value Addition:** Manufacturing involves transforming raw materials and components into finished products. This value addition process generates higher economic value compared to primary activities like agriculture and extraction.
2. **Job Creation:** Manufacturing provides a substantial number of jobs, from factory workers to engineers and designers.
3. **Technology and Innovation:** Manufacturing often drives technological advancements and innovation. Research and development in manufacturing lead to the creation of new products, processes, and technologies, fostering economic competitiveness.
4. **Exports:** Manufactured goods are frequently exported, contributing to a nation's foreign exchange earnings.

**Present policies of government to boost manufacturing sector:**

1. **Make in India initiative:** 'Make in India' is an initiative which was launched in 2014 to facilitate investment, foster innovation, build best in class infrastructure and make India a hub for manufacturing, design and innovation.
2. **Industrial Corridor Development Programme:** In order to accelerate growth in manufacturing, Government of India (GoI) has adopted the strategy of developing Industrial Corridors in partnership with State Governments.
3. **Ease of Doing Business:** The objective is to improve Ease of Doing Business and Ease of Living by Simplifying, Rationalizing, Digitizing and Decriminalizing Government to Business and Citizen Interfaces across Ministries/States/UTs.
4. **Raising and Accelerating MSME performance (RAMP) programme:** This is a programme with an outlay of ₹ 6,000 crore to be rolled out in 2023-24 to provide financial and technical support to MSMEs.
5. **Production-Linked Incentive (PLI) Schemes:** The government introduced PLI schemes across various sectors, such as electronics, pharmaceuticals, and automobiles, to encourage domestic manufacturing.

The government has introduced several initiatives to promote manufacturing and MSMEs, recognizing their critical role in achieving faster economic growth. However, the effectiveness of these policies depends on their implementation and adaptability to changing economic conditions.

**Q2. What is the status of digitalization in the Indian economy? Examine the problems faced in this regard and suggest improvements. (150 words) [10]**

### Approach to question:

1. Start with a brief introduction to the topic, highlighting the significance of digitalization in India's economic landscape.
2. Discuss the current status of digitalization in the Indian economy.
3. Identify and examine the challenges and problems faced in the process of digitalization in India.

4. Provide concrete suggestions and recommendations to address the problems identified.
5. Summarize the key points made in your response, emphasizing the importance of addressing the challenges to further advance digitalization in India.

**Answer:**

The status of digitalization in the Indian economy has seen significant advancements in recent years. With initiatives like Digital India and increased internet penetration, India has become one of the world's largest digital markets.

**Status of Digitalization in the Indian Economy:**

1. **Digital Payments:** India had seen a significant increase in digital payments, largely driven by the growth of Unified Payments Interface (UPI) transactions. Unified Payments Interface (UPI) transactions grew 58 per cent by volume to 9.96 billion in July 2023, according to the National Payments Corporation of India (NPCI).
2. **E-commerce:** The e-commerce sector had experienced rapid expansion, with major players like Amazon, Flipkart, and others vying for market share. India's e-commerce market is projected to grow from \$83 billion in 2022 to \$150 billion in 2026, according to FIS 2023 Global Payments Report.
3. **Digital Governance:** The Indian government's Digital India initiative aimed to provide a wide range of government services online, promoting transparency and efficiency.

**Challenges:**

1. **Digital Divide:** Despite progress, rural-urban and socioeconomic disparities in access to digital infrastructure persist, limiting digital opportunities for marginalized communities.
2. **Cybersecurity Concerns:** As digital transactions grow, so do cybersecurity threats.
3. **Privacy Issues:** The collection and usage of personal data raise privacy concerns.
4. **Digital Literacy:** A substantial portion of the population lacks digital literacy.
5. **Infrastructure Challenges:** Inadequate internet connectivity and power supply.

**Suggestions for Improvement:**

1. **Infrastructure Expansion:** Prioritize extending digital infrastructure to underserved regions, including rural areas, to bridge the digital divide.
2. **Cybersecurity Measures:** Strengthen cybersecurity frameworks, promote awareness, and encourage businesses and individuals to adopt secure digital practices.
3. **Digital Literacy Programs:** Implement nationwide digital literacy initiatives to empower citizens with the skills needed for the digital age.

India has made substantial progress in digitalization, addressing the challenges of the digital divide, cybersecurity, privacy, and digital literacy remains crucial to ensure that the benefits of digitalization are accessible to all.

**Q3. How does e-Technology help farmers in production and marketing of agricultural produce? Explain it. (150 words) [10]****Approach to question:**

1. Start with a brief introduction to the role of e-technology in agriculture, highlighting its significance in transforming farming practices and marketing strategies.
2. Discuss how e-technology benefits farmers in the production of agricultural crops.
3. Explain how e-technology benefits farmers in the marketing of their agricultural produce.
4. Mention government initiatives to promote the use of e-technology in agriculture.
5. Summarize the key points, emphasizing that e-technology empowers farmers by optimizing production and enhancing marketing opportunities, contributing to the modernization and sustainability of agriculture.

**Answer:**

E-technology plays a pivotal role in modernizing and improving the agriculture sector, benefiting farmers in both production and marketing aspects.

**Production benefits:**

1. **Precision Farming:** E-technology offers tools like sensors, drones, and GPS-guided equipment that enable precise monitoring and management of crops.
2. **Crop Management:** Digital platforms provide real-time information on crop diseases, weather forecasts, and best practices.
3. **Access to Information:** Farmers can access vital agricultural information, including weather forecasts, crop management practices, and market trends, through mobile apps and online platforms.

**Marketing benefits:**

1. **Online Marketplaces:** Digital platforms allow farmers to connect directly with buyers, eliminating intermediaries and ensuring fair prices for their produce. Online marketplaces like e-NAM in India enable transparent and efficient selling.
2. **Price Transparency:** E-technology platforms often display real-time market prices for various agricultural commodities.
3. **Reduced Intermediaries:** Digital platforms enable farmers to sell directly to buyers, eliminating middlemen and commission costs.

The Government of India has launched several initiatives to promote the use of e-technology in Agriculture:

1. **e-NAM (National Agriculture Market):** e-NAM is a pan-India electronic trading portal that connects wholesale agricultural markets.
2. **PM-KISAN:** The Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme leverages e-technology to provide direct income support to farmers.

In conclusion, e-technology empowers farmers with information, tools, and access to markets, ultimately increasing productivity and income.

**Q4. State the objectives and measures of land reforms in India. Discuss how land ceiling policy on landholding can be considered as an effective reform under economic criteria. (150 words) [10]**

**Approach to question:**

1. Begin by introducing the topic of land reforms in India, emphasizing their historical significance in addressing land inequalities and improving the socio-economic conditions of rural populations.
2. State the primary objectives of land reforms in India.
3. Enumerate the key measures or initiatives that were implemented to achieve these objectives.
4. Discuss how the land ceiling policy, which limits the maximum extent of land an individual or family can hold, can be considered an effective reform under economic criteria.
5. Summarize the key points, emphasizing the critical role of land reforms, particularly land ceiling policies, in achieving equitable land distribution and driving economic development in India.

**Answer:**

Land reforms in India have been a crucial policy initiative aimed at addressing historical land inequalities and improving the socio-economic conditions of rural populations.

**Objectives:**

1. **Redistribution of Land:** To reduce land concentration and provide land to landless and marginalized farmers.
2. **Tenancy Reforms:** To protect the rights of tenant farmers, ensuring fair rents and preventing eviction.
3. **Consolidation of Holdings:** To consolidate fragmented landholdings, making agriculture more efficient.

**Measures:**

1. **Land Redistribution:** Governments acquired surplus land from large landowners and distributed it to landless and marginalized farmers.

2. **Tenancy Protection:** Laws were enacted to safeguard the rights of tenants, control rents, and prevent unfair eviction.
3. **Land Consolidation:** The process of land consolidation involved reorganizing landholdings to create larger, more manageable plots.
4. **Land Ceiling:** Land ceiling laws were enacted to limit the maximum amount of land that an individual or family could own.

**Effectiveness of Land Ceiling Policy:** Land ceiling policies are effective under economic criteria as they:

1. Promote equitable distribution of land resources.
2. Prevent excessive land concentration, improving land use efficiency.
3. Enhance agricultural productivity and food security.
4. Reduce wealth inequality by limiting land ownership.

In conclusion, land ceiling policies, among other land reforms, have been instrumental in addressing economic disparities in landownership, promoting efficient land use, and contributing to rural development and economic growth in India.

**Q5. Introduce the concept of Artificial Intelligence (AI). How does AI help clinical diagnosis? Do you perceive any threat to privacy of the individual in the use of AI in healthcare? (150 words) [10]**

**Approach to question:**

1. Begin by introducing the concept of Artificial Intelligence (AI), briefly explaining that it involves the simulation of human intelligence in machines to perform tasks that typically require human cognition.
2. Describe the ways AI assists in clinical diagnosis.
3. Discuss potential privacy threats in the use of AI in healthcare.
4. Summarize the key points, acknowledging the immense potential of AI in clinical diagnosis while underscoring the importance of addressing privacy concerns through responsible data handling and ethical AI practices in healthcare.

**Answer:**

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines, enabling them to perform tasks that typically require human cognitive functions.

**AI's Role in Clinical Diagnosis:** AI assists clinical diagnosis in several ways:

1. **Medical Imaging:** AI algorithms analyze medical images such as X-rays, MRIs, and CT scans to detect anomalies, tumors, or fractures with high accuracy.

2. **Disease Prediction:** AI uses patient data to predict disease risks and outcomes, facilitating early intervention.
3. **Treatment Personalization:** AI helps tailor treatment plans based on patient data, optimizing therapies and reducing adverse effects.

**Privacy Concerns:** The use of AI in healthcare raises privacy concerns:

1. **Data Security:** Protecting patient data from breaches is crucial.
2. **Informed Consent:** Patients may not fully understand how their data is used in AI applications.
3. **Data Misuse and Profiling:** AI algorithms have the potential to misuse patient data for profiling and targeted advertising purposes.

While AI brings significant advancements to clinical diagnosis, it must be implemented with strong data security, informed consent, and fairness considerations to mitigate privacy threats and ensure responsible and ethical use in healthcare.

**Q6. Discuss several ways in which microorganisms can help in meeting the current fuel shortage. (150 words) [10]**

**Approach to question:**

1. Provide a brief introduction to the global fuel shortage.
2. Mention the importance of seeking sustainable and renewable alternatives to conventional fuels.
3. Explain the ways in which microorganisms address the fuel shortage.
4. Summarize the key points discussed in the answer, emphasizing the role of microorganisms in offering sustainable and eco-friendly alternatives to conventional fuels.
5. Highlight the importance of ongoing research, development, and policy support to harness the full potential of microorganisms in meeting the current fuel shortage.
6. Emphasize the need for a transition toward renewable and environmentally friendly energy sources to address global energy challenges.

**Answer:**

Microorganisms, including bacteria, algae, and fungi, have shown tremendous potential in addressing the current fuel shortage by offering sustainable and eco-friendly alternatives to conventional fossil fuels. By 2050, global energy use increases nearly 50% compared with 2020, as per International Energy Outlook Report 2022.

**Ways in Which Microorganisms Address the Fuel Shortage:**

1. **Biodiesel Production:** Microalgae and certain bacteria can be utilized to produce biodiesel,

a renewable alternative to fossil diesel. India's National Biofuel Policy (2018) encourages the use of algae-based biodiesel.

2. **Bioethanol Production:** Yeasts and bacteria can ferment agricultural feedstocks, such as sugarcane and corn, to produce bioethanol, a cleaner substitute for gasoline. India's Ethanol Blending Program promotes the blending of ethanol.
3. **Biogas Generation:** Anaerobic microorganisms can break down organic waste, including agricultural residues and sewage, to produce biogas for cooking and electricity.
4. **Algal Biofuels:** Algae can be cultivated to produce oils suitable for biofuel production, with the added benefit of wastewater treatment and carbon capture.
5. **Microbial Fuel Cells (MFCs):** MFCs use bacteria to convert organic matter into electricity.

In conclusion, microorganisms are not just the tiniest creatures on Earth; they also hold the key to addressing one of humanity's most significant challenges—the energy crisis. By harnessing the power of microorganisms, we can unlock a sustainable and renewable energy future that benefits both the planet and its inhabitants.

**Q7. Dam failures are always catastrophic, especially on the downstream side, resulting in a colossal loss of life and property. Analyze the various causes of dam failures. Give two examples of large dam failures. (150 words) [10]**

**Approach to question:**

1. Begin by acknowledging the catastrophic nature of dam failures, particularly the devastating consequences downstream.
2. Analyze the various causes of dam failures, categorizing them into different types.
3. Provide details of two significant dam failures, including their location, causes, and consequences. Emphasize the scale of the disasters and the loss of life and property.
4. Summarize the importance of learning from past failures to ensure the safety of dams and downstream communities.

**Answer:**

Dams are crucial infrastructure for water storage, power generation, and flood control, but their failure can lead to severe consequences.

**Causes of Dam Failures:**

1. **Hydraulic Failures:** These occur due to the inability of the dam to manage excess water. Causes include:
  - (a) Over-topping
  - (b) Erosion
  - (c) Piping

2. **Geological Factors:**
  - (a) Earthquakes
  - (b) Landslides
3. **Structural Failures:** These result from flaws in the dam's construction or materials, such as:
  - (a) Poor Design
  - (b) Construction Issues
4. **Foundation Failures:** A weak foundation or geological instability can lead to dam failure.
 

**Seepage:** Excessive seepage through the dam's foundation can weaken it over time.
5. **Overtopping of Spillways:** When a dam's spillways are not properly managed or maintained, overtopping can occur, leading to failure.

Two notable examples of large dam failures :

1. **Morvi Dam Failure (1979):**
  - (a) **Location:** Morbi, Gujarat.
  - (b) **Cause:** Excessive rainfall from Cyclone 06B resulted in the dam's reservoir reaching full capacity.
  - (c) **Consequences:** The floodwaters engulfed the town of Morbi, causing widespread destruction and loss of life. Reports estimate that around 2,000 people lost their lives in the disaster.
2. **Mettur Dam Failure (2008):**
  - (a) **Location:** Mettur, Tamil Nadu.
  - (b) **Cause:** Heavy rainfall in the catchment area.
  - (c) **Consequences:** The flooding affected thousands of people, causing displacement and loss of property. It highlighted the challenges of managing water release during heavy rainfall events.

These incidents emphasize the importance of effective dam management, including early warning systems, maintenance, and preparedness for extreme weather events. Dam safety measures are crucial to prevent such catastrophic events and protect downstream communities and infrastructure.

**Q8. What is oil pollution? What are its impacts on the marine ecosystem? In what way is oil pollution particularly harmful for a country like India? (150 words) [10]**

**Approach to question:**

1. Start by defining what oil pollution is, briefly explaining that it involves the release of crude oil or petroleum-based products into water bodies like oceans and seas.
2. Detail the various negative effects of oil pollution on marine ecosystems.
3. Explain why oil pollution is particularly harmful to a country like India.

4. Provide an overview of the steps taken by the Indian government to address oil pollution.
5. Summarize the key points, reiterating the significant threat oil pollution poses to India's coastal and marine environments and the importance of ongoing efforts to mitigate these risks.

**Answer:**

Oil pollution refers to the release of oil or petroleum-based substances into the environment, typically water bodies like oceans, seas, or rivers. It can occur due to various sources, including oil spills from tankers, offshore drilling accidents, or improper disposal of oil products.

**Impacts on the Marine Ecosystem:**

1. **Toxicity:** Oil pollutants contain toxic chemicals that harm marine life. They disrupt the functioning of organisms, causing cellular damage and often leading to death.
2. **Coating of Marine Life:** Oil leaks on the water's surface can coat marine animals and birds, reducing their ability to regulate body temperature and making them vulnerable to hypothermia or overheating.
3. **Contamination of Food Chains:** Oil enters the food chain when small organisms absorb it and are then consumed by larger organisms.

**Oil pollution is particularly harmful to a country like India for several reasons:**

1. **Coastal Vulnerability:** India has a vast coastline, making it susceptible to oil spills from shipping accidents or offshore drilling operations.
2. **Biodiversity:** India's coastal waters are rich in biodiversity, and oil pollution threatens the diverse marine ecosystems and the livelihoods of coastal communities.
3. **Fisheries:** India heavily relies on fisheries, and oil pollution can devastate fish populations, affecting both food security and the livelihoods.
4. **Tourism:** Many of India's coastal areas are popular tourist destinations. Oil pollution can harm tourism.
5. **Mangroves and Coral Reefs:** Oil pollution can harm these sensitive ecosystems.

To address the perils of oil pollution, the Indian government has introduced several initiatives, including:

1. **National Oil Spill Disaster Contingency Plan:** A comprehensive strategy to expedite responses to oil spills and minimize their ecological impact.
2. **Marine Pollution Control Cells:** Established in coastal states to facilitate coordination and swift responses to oil spill incidents.
3. **Research and Monitoring:** Support for research and monitoring programs to assess the health of marine ecosystems and enhance preparedness.

4. **Awareness and Training:** Initiatives aimed at raising awareness among coastal communities.

Oil pollution can have significant economic and environmental consequences for a country like India due to its extensive coastline and reliance on marine resources. Mitigation and preventive measures are essential to protect these valuable coastal environments.

**Q9. Winning of Hearts and Minds' in terrorism-affected areas is an essential step in restoring the trust of the population. Discuss the measures adopted by the Government in this respect as part of the conflict resolution in Jammu and Kashmir. (150 words) [10]**

**Approach to question:**

1. Provide a brief introduction to the concept of "Winning of Hearts and Minds" as a crucial strategy in counterinsurgency and conflict resolution.
2. Mention the significance of this strategy in terrorism-affected areas like Jammu and Kashmir for restoring trust and stability.
3. Explain the Measures Adopted by the Government.
4. Highlight the comprehensive approach that encompasses socio-economic development, political engagement, and security considerations to achieve conflict resolution and restore trust among the local population.

**Answer:**

"Winning of Hearts and Minds" is a vital strategy in counterinsurgency and conflict resolution, particularly in terrorism-affected areas. Over the years, the Indian government has implemented a range of measures aimed at achieving these objectives and building lasting peace in the region.

**Measures adopted by Government:**

1. **Socio-Economic Development:** The government has initiated numerous development projects focusing on infrastructure, healthcare, education, and employment generation. The "Special Package for Jammu and Kashmir" announced in 2015 allocated significant funds for infrastructure development, skill development, and employment generation.
2. **Employment Generation:** Special employment schemes have been introduced to reduce unemployment rates in the region. The "Udaan" and "Himayat" programs are examples of initiatives designed to provide training and employment opportunities to the youth of Jammu and Kashmir.
3. **Education and Skill Development:** Investment in education and skill development programs is a priority to empower the youth. The "PM

Scholarship Scheme" and "Maulana Azad National Fellowship" support students from Jammu and Kashmir in pursuing higher education.

4. **Infrastructure Development:** The government is investing in the construction and improvement of roads, bridges, and other essential infrastructure to enhance connectivity and quality of life.

These measures, coupled with ongoing efforts, aim to create a conducive environment for conflict resolution, build trust among the local population, and address their grievances. The government's approach encompasses socio-economic development, political engagement, and security considerations to achieve lasting peace in Jammu and Kashmir.

**10. The use of unmanned aerial vehicles (UAVs) by our adversaries across the borders to ferry arms/ammunitions, drugs, etc., is a serious threat to the internal security. Comment on the measures being taken to tackle this threat. (150 words) [10]**

**Approach to question:**

1. Provide a brief introduction to the growing threat of UAVs used for smuggling arms, ammunition, drugs, and other illegal activities across borders.
2. Explain the measures taken to tackle the threat.
3. Emphasize the importance of ongoing efforts and collaboration among government agencies, security forces, and international partners to stay ahead of evolving threats and maintain internal security.

**Answer:**

The use of unmanned aerial vehicles (UAVs), commonly known as drones, by adversaries to ferry arms, ammunition, drugs, or engage in other illicit activities poses a significant threat to internal security for many countries. To address this evolving security concern, various measures are being taken to tackle the threat posed by rogue drone operations

1. **Regulatory Frameworks:** Governments are developing and strengthening regulations governing the operation of drones.
2. **Detection Technologies:** Advanced detection technologies are being deployed to identify and track rogue drones. Indian Border Security Force (BSF) employs radar systems along the Indo-Pak border.
3. **Jamming and Disruption:** Anti-drone systems capable of jamming drone communication and control signals are being employed to disrupt unauthorized drone flights. The Indian Armed Forces utilize anti-drone systems like 'DroniX' for countermeasures.
4. **Drone Defense Systems:** Drone defense systems can physically capture rogue drones using nets or other mechanisms to neutralize the threat.

5. **Counter-Drone Training:** Security forces and law enforcement agencies are receiving specialized training to detect, intercept, and respond to rogue drone threats effectively.

To ensure effective mitigation of this threat, continued collaboration among government agencies, security forces, law enforcement, and relevant stakeholders is crucial. Regular updates to policies and regulations, investment in cutting-edge technology, and a proactive approach to surveillance and detection will be essential in maintaining the security and integrity of India's airspace.

- 11. Most of the unemployment in India is structural in nature. Examine the methodology adopted to compute unemployment in the country and suggest improvements. (250 words) [15]**

**Approach to question:**

1. Provide an introduction to the nature of unemployment in India, with a focus on the prevalence of structural unemployment.
2. Explain the methodology for computing unemployment in India.
3. Propose specific improvements to the methodology for computing unemployment in India.
4. Summarize the key points made in the answer, highlighting the significance of addressing structural unemployment in India.

**Answer:**

Unemployment in India is a complex issue, with a significant portion being attributed to structural factors. Structural unemployment refers to a mismatch between the skills, qualifications, or geographic location of job seekers and the requirements or locations of available job opportunities.

**Key methodology adopted to compute unemployment in India:**

1. **NSSO (National Sample Survey Office) Surveys:** The NSSO conducts large-scale sample surveys on employment and unemployment in India. These surveys are crucial in understanding the employment situation in the country.
2. **PLFS (Periodic Labor Force Survey):** The PLFS is a significant source for estimating employment and unemployment in India. PLFS provides detailed information on labor force participation, employment status, and other relevant factors. It's conducted annually.
3. **Usual Principal and Subsidiary Status (UPSS):** The UPSS approach is used to determine the employment status of individuals.

**Suggestions for Improvement:**

1. **Frequent Surveys:** Increase the frequency of labor force surveys. The PLFS is conducted annually, but

more frequent data collection (example, quarterly) would provide a better understanding of the dynamic labor market.

2. **Skill Development Programs:** Assess the effectiveness of skill development programs and their impact on reducing skill mismatches and unemployment.
3. **Include Underemployment:** Incorporate measures of underemployment, which account for individuals working part-time involuntarily or in jobs that do not fully utilize their skills and qualifications.
4. **Real-time Data:** Incorporate real-time data sources, such as mobile phone usage or online job portals, for more timely and accurate employment statistics.
5. **Regional Granularity:** Analyze unemployment data at the regional or state level to identify regional disparities in employment opportunities and tailor policies accordingly.

Addressing structural unemployment is not only crucial for reducing joblessness but also for enhancing the overall productivity and competitiveness of the Indian workforce on the global stage.

- 12. Distinguish between 'care economy' and 'monetized economy'. How can care economy be brought into monetized economy through women empowerment? (250 words) [15]**

**Approach to question:**

1. Briefly introduce the concepts of the "care economy" and the "monetized economy".
2. Distinguishing the 'care economy' from the 'monetized economy'.
3. Explain the significance of integrating the care economy into the monetized economy.
4. Provide examples of government schemes and programs that promote women's economic empowerment and bridge the gap between the care and monetized economies.
5. Emphasize the importance of recognizing and valuing women's contributions in the care economy and integrating it into the monetized economy through women empowerment, leading to a more inclusive and prosperous society.

**Answer:**

The concepts of the "care economy" and the "monetized economy" represent two distinct spheres of economic activity, each with its characteristics and implications for individuals and society.

**Care Economy:**

1. The care economy refers to the unpaid and often invisible work of caregiving, which includes activities like taking care of children, the elderly, the sick, or disabled family members.

- It encompasses activities that provide emotional and physical support, nurture, and maintenance of individuals and households.
- This work is typically performed within families or communities and isn't directly compensated in the traditional sense of receiving a salary.

#### Monetized Economy:

- The monetized economy refers to the formal, paid work that is a part of the market economy.
- It includes activities where individuals provide goods or services in exchange for financial compensation, such as manufacturing, services, and other economic transactions.
- The monetized economy is what's commonly measured in terms of GDP and economic productivity.

#### Integrating the Care Economy into the Monetized Economy through Women Empowerment:

- Recognition and Valuation:** Society must recognize and value caregiving as legitimate work. For example, Under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), women are entitled to worksite facilities for child care.
- Formal Employment Opportunities:** Creating formal employment opportunities in the care sector, such as home healthcare jobs or daycare centers.
- Education and Training:** Empowering women through education and training programs equips them with the skills needed to participate in monetized economy roles, including those in caregiving professions. For example, Udaan is a special initiative aimed at empowering and skilling women.
- Gender Equality:** Promoting gender equality in all aspects of society ensures that women have the same opportunities as men to participate in the monetized economy. For example, Mahila Shakti Kendra (MSK).

By implementing these strategies, societies can bridge the gap between the care economy and the monetized economy, recognizing and valuing the essential contributions of women in both spheres. This not only promotes gender equality but also contributes to economic growth and social well-being.

- 13. Explain the changes in cropping pattern in India in the context of changes in consumption pattern and marketing conditions. (250 words) [15]**

#### Approach to question:

- Provide an overview of the changes in cropping patterns in India.

- Explain how consumer preferences in India have evolved over time.
- Describe how marketing conditions have transformed in India.
- Describe key government policies and initiatives that have played a role in shaping cropping patterns.
- Emphasize that the dynamic nature of cropping patterns in India is a result of the intricate relationship between consumption patterns, marketing conditions, and government policies.
- Highlight the importance of adapting agriculture to meet the diverse and evolving demands of consumers and markets while ensuring sustainability.

#### Answer:

The cropping pattern in India has undergone significant transformations in response to shifts in consumption patterns and changes in marketing conditions. These changes are integral to the country's evolving agricultural landscape.

#### Changes in Cropping pattern:

- Shift from Food Grains to High-Value Crops:** Historically, India's agriculture was centered around food grains like rice and wheat. However, there has been a shift towards the cultivation of high-value crops such as fruits, vegetables, spices, and cash crops like cotton and oilseeds.
- Crop Diversification:** Farmers are diversifying their crop portfolios to reduce risk and improve income stability.
- Government Policies:** Government policies play a crucial role in shaping cropping patterns. Minimum support prices (MSPs), procurement mechanisms, and subsidies influence farmers' choices.

#### Changes in Consumption pattern:

- Diversification of Diets:** Over the years, there has been a significant shift in consumer preferences towards more diversified diets. People are increasingly incorporating fruits, vegetables, and protein-rich foods into their meals for a balanced and nutritious diet.
- Urbanization:** The rapid urbanization of India has resulted in changes in eating habits. Urban consumers often seek convenience foods, processed products, and ready-to-eat meals.
- Income Levels:** Rising income levels have allowed consumers to afford a more diverse range of foods. As a result, there is increased demand for high-value crops such as fruits, nuts, and specialty vegetables.

#### Changes in Marketing Conditions:

- Access to Markets:** Improved transportation infrastructure and connectivity to markets have



expanded farmers' access to regional and distant markets.

2. **Export Opportunities:** Access to international markets and export opportunities has encouraged farmers to grow crops with high export potential, such as basmati rice, spices, cotton, and fruits.

#### Government Policy:

1. **Minimum Support Prices (MSPs):** MSPs are set for various crops by the government to ensure farmers receive a minimum price for their produce.
2. **National Mission on Horticulture (NHM):** NHM promotes horticultural crops, including fruits and vegetables, by providing financial assistance and technical support.

In conclusion, the adaptability of India's agriculture sector in response to changing consumption patterns and marketing conditions is essential for ensuring food security, economic growth, and environmental sustainability.

14. **What are the direct and indirect subsidies provided to farm sector in India? Discuss the issues raised by the World Trade Organization (WTO) in relation to agricultural subsidies. (250 words) [15]**

#### Approach to question:

1. Provide a brief introduction to the significance of subsidies in India's agriculture sector.
2. Mention that India offers both direct and indirect subsidies to support its farmers and ensure food security.
3. Discuss the various direct subsidies provided to the farm sector in India.
4. Describe the indirect subsidies offered to farmers.
5. Discuss the concerns raised by the WTO in relation to India's agricultural subsidies.
6. Emphasize the complexity of balancing domestic agricultural priorities with international trade rules.
7. Conclude by highlighting the ongoing challenge for policymakers to ensure fair trade practices while supporting farmers and food security in India.

#### Answer:

In India, the farm sector receives both direct and indirect subsidies. These subsidies are aimed at supporting farmers, promoting agricultural productivity, and ensuring food security.

#### Direct Subsidies:

1. **Minimum Support Prices (MSPs):** The government sets MSPs for various crops to ensure that farmers receive a minimum price for their

produce. When market prices fall below MSPs, the government procures the crops at MSP rates.

2. **Fertilizer Subsidy:** The government provides subsidies on fertilizers to reduce the cost of inputs for farmers.
3. **Crop Insurance Subsidy:** The government promotes crop insurance by subsidizing the premiums paid by farmers. The Pradhan Mantri Fasal Bima Yojana (PMFBY) offers crop insurance at subsidized premiums to protect farmers against crop loss.

#### Indirect Subsidies:

1. **Electricity Subsidy:** Many states provide subsidized electricity to farmers for irrigation purposes. This reduces the cost of pumping water for agriculture.
2. **Water Subsidy:** In some regions, farmers receive subsidized or free access to irrigation water, often through government-funded irrigation projects.
3. **Credit Subsidy:** The government provides a subsidy on agricultural loans, which reduces the cost of borrowing for farmers.

#### Issues Raised by the WTO (World Trade Organization) in Relation to Agricultural Subsidies:

1. **Domestic Support Limits:** The WTO has set limits on the amount of domestic support that member countries can provide to their agriculture sectors. India, like other countries, must adhere to these limits.
2. **Market Distortion:** Subsidized agriculture can lead to overproduction and lower global prices for agricultural commodities.
3. **Amber Box Subsidies:** The WTO categorizes certain domestic support measures as "Amber Box" subsidies, which have a higher potential for distorting trade. India has faced scrutiny regarding its use of Amber Box subsidies.

In summary, while subsidies are essential for supporting India's agricultural sector and ensuring food security, they also raise concerns at the global level, particularly regarding their impact on international trade and market distortions. India, like other WTO member countries, must strike a balance between supporting its farmers and adhering to international trade agreements and commitments.

15. **The adoption of electric vehicles is rapidly growing worldwide. How do electric vehicles contribute to reducing carbon emissions and what are the key benefits they offer compared to traditional combustion engine vehicles? (250 words) [15]**

**Approach to question:**

1. Begin with a concise introduction highlighting the global growth of electric vehicle adoption and its significance in reducing carbon emissions and transitioning to sustainable transportation.
2. Explain the Contribution to Reducing Carbon Emissions.
3. Describe the key Benefits Compared to Traditional Combustion Engine Vehicles.
4. Mention government policies.
5. Summarize the key points, emphasizing that electric vehicles play a vital role in reducing carbon emissions, improving air quality, and promoting sustainable transportation. Emphasize their numerous advantages over traditional combustion engine vehicles, and underscore the importance of their continued adoption for a greener and more environmentally friendly future.

**Answer:**

The rapid adoption of electric vehicles (EVs) represents a pivotal shift in the automotive industry and a critical response to the global climate crisis.

**Contribution to Reducing carbon Emissions:**

1. **Zero Tailpipe Emissions:** Unlike internal combustion engine vehicles that emit pollutants like carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM) from their tailpipes, EVs produce zero tailpipe emissions.
2. **Lower Greenhouse Gas Emissions:** The greenhouse gas emissions associated with EVs depend on the source of the electricity used for charging. When powered by electricity generated from clean and renewable sources like wind, solar, or hydropower, EVs can have significantly lower greenhouse gas emissions compared to gasoline or diesel vehicles.
3. **Energy Efficiency:** EVs are more energy-efficient than traditional combustion engine vehicles. They convert a higher percentage of the electrical energy from the grid to power at the wheels, resulting in less energy waste.
4. **Reduced Oil Dependence:** Shifting from gasoline and diesel to electricity as a transportation fuel reduces the dependence on fossil fuels.

**Benefits compared to traditional combustion engine vehicles:**

1. **Reduced Carbon Emissions:** EVs produce zero tailpipe emissions, significantly reducing air pollution and greenhouse gas emissions.
2. **Energy Efficiency:** EVs are more energy-efficient than internal combustion engine vehicles. They convert a higher percentage of the electrical energy from the grid to power at the wheels, resulting in less energy waste.

3. **Lower Operating Costs:** EVs have fewer moving parts than traditional vehicles, leading to reduced maintenance costs over their lifetime. Electricity is generally cheaper than gasoline or diesel, resulting in lower fueling costs.
4. **Energy Independence:** Increased adoption of EVs reduces dependence on imported fossil fuels, enhancing energy security and reducing vulnerability to oil price fluctuations.

**Government Initiatives:**

1. **FAME India (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles):** It offers subsidies and incentives to manufacturers and buyers of EVs and aims to promote the development of charging infrastructure.
2. **EV Charging Infrastructure Development:** The government has been actively supporting the development of EV charging infrastructure, both through public and private investments.

As the world accelerates the transition to electric mobility, EVs are poised to play a central role in achieving sustainable and eco-friendly transportation systems.

- 16. What is the main task of India's third moon mission which could not be achieved in its earlier mission? List the countries that have achieved this task. Introduce the subsystems in the spacecraft launched and explain the role of the Virtual Launch Control Centre at the Vikram Sarabhai Space Centre which contributed to the successful launch from Sriharikota. (250 words) [15]**

**Approach to question:**

1. Introduce with the India's 3<sup>rd</sup> moon mission Chandrayaan-3 highlighting its unique objectives.
2. Mention the Mission objectives for the Chandrayaan-3 mission.
3. Mention the countries that have achieved this task.
4. Introduce the subsystems in the spacecraft launched.
5. Explain the role of the Virtual Launch Control Centre at the Vikram Sarabhai Space Centre.
6. Conclude with the significance of the mission.

**Answer:**

Recently, India became the 4<sup>th</sup> nation to land a spacecraft on the moon. India's 3<sup>rd</sup> moon mission Chandrayaan-3 is a follow-on mission to Chandrayaan-2. It's main task is to demonstrate end-to-end capability in safe Landing and roving on the lunar surface especially at the Moon's south pole.

**Mission objectives for the Chandrayaan-3 mission are:**

1. Engineering and implementing a lander to land safely and softly on the surface of the Moon.

2. Observing and demonstrating the rover's driving capabilities on the Moon.
3. Conducting and observing experiments on the materials available on the lunar surface to better understand the composition of the Moon.

**The countries that have Achieved this task:**

1. **United States:** The United States, through NASA, has achieved several lunar rover landings as part of the Apollo missions. The most famous of these missions is Apollo 11, which saw the first human landing on the Moon in 1969.
2. **Soviet Union (Russia):** The Soviet Union achieved lunar rover landings as part of its Luna program.
3. **China:** China's space agency, the China National Space Administration (CNSA), successfully landed the Chang'e 3 mission on the Moon in 2013.

**The spacecraft carried following subsystems:**

1. **Propulsion System:** Helps in maneuvering the spacecraft and placing it in the desired lunar orbit.
2. **Lander:** Designed for a soft landing on the moon. It houses the instruments and serves as a platform for the rover.
3. **Rover:** A vehicle that moves on the lunar surface, collecting data and sending it back to Earth.
4. **Communication Systems:** These subsystems ensured that data collected by the rover could be transmitted back to Earth, facilitating real-time control and data analysis.

**Role of the 'Virtual Launch Control Centre':** Its role is integral to ensuring the safety and precision of space missions conducted by the Indian Space Research Organisation (ISRO).

1. **Monitoring Systems:** The VLCC allows ISRO scientists and engineers to remotely Control and monitor various aspects of the launch process. This includes the countdown Sequence, fueling operations, and system checks.
2. **Decision-Making:** Launch controllers in the control center make critical decisions based on real-time data. They have the authority to hold or proceed with the launch based on weather conditions, technical parameters, and safety considerations.
3. **Communication Hub:** The VLCC serves as a central communication hub, connecting ISRO's experts, mission control teams, and ground stations across the country.

With successful landing of Chandrayaan-3, India has become the first country to reach the moon's uncharted south pole. The success of the Chandrayaan-3 Mission represents India's Space technology advancement and ISRO's capabilities and also boosting the confidence of Indian youth and space startups, propelling India to new heights in 2024.

17. **Comment on the National Wetland Conservation Programme initiated by the Government of India and name a few India's wetlands of international importance included in the Ramsar Sites.**

(250 words) [15]

**Approach to question:**

1. Briefly introduce the significance of wetlands as vital ecosystems that play a crucial role in biodiversity conservation, ecological balance, and human well-being.
2. Explain that NWCP is a government initiative designed to protect and conserve India's wetland ecosystems and Emphasize its key objectives.
3. List and briefly describe a few of India's Ramsar Sites.
4. Summarize by emphasizing the importance of the National Wetland Conservation Programme in preserving India's wetlands, which are not only crucial for nature but also for the well-being of local communities.
5. Conclude by recognizing the program's role in fulfilling India's international commitments under the Ramsar Convention and its contribution to global wetland conservation efforts.

**Answer:**

The National Wetland Conservation Programme (NWCP) initiated by the Government of India is a crucial environmental conservation effort aimed at preserving and protecting the invaluable wetland ecosystems in the country. India, as a signatory to the Ramsar Convention, recognizes the importance of conserving its wetlands, and the NWCP is a significant step in achieving this goal.

**The National Wetland Conservation Programme:** The NWCP, launched in 1985, is a centrally sponsored scheme aimed at conserving and preserving Wetlands across India. Its primary objectives include:

1. **Conservation and Management:** The primary objective is to conserve and effectively manage wetlands in India to ensure their ecological health and integrity.
2. **Biodiversity Conservation:** NWCP seeks to protect the biodiversity within wetlands, including various plant and animal species, many of which are endangered or of international importance.
3. **Sustainable Livelihoods:** The program recognizes the importance of wetlands in supporting the livelihoods of local communities, such as fishermen and farmers, and aims to balance conservation with sustainable use.

**India's Wetlands of International Importance (Ramsar Sites):** Several wetlands in India have been designated as Ramsar Sites, highlighting their global significance

for biodiversity and conservation. Some of the notable Ramsar Sites in India include:

1. **Chilika Lake, Odisha:** Chilika Lake is the largest coastal lagoon in India and one of the most important Ramsar Sites.
2. **Sundarbans Wetland, West Bengal:** The Sundarbans is the largest mangrove forest in the world and a critical habitat for the Bengal tiger.
3. **Keoladeo National Park, Rajasthan:** Formerly known as Bharatpur Bird Sanctuary, Keoladeo National Park is a vital avian habitat and a paradise for birdwatchers.

In conclusion, the National Wetland Conservation Programme is a crucial component of India's broader efforts to conserve its natural heritage, promote biodiversity, and ensure the sustainable use of its natural resources.

**18. The Intergovernmental Panel on Climate Change (IPCC) has predicted a global sea level rise of about one metre by AD 2100. What would be its impact in India and the other countries in the Indian Ocean region? (250 words) [15]**

**Approach to question:**

1. Briefly introduce the IPCC's projection of a global sea level rise of one meter by AD 2100 and its significance.
2. Mention the importance of understanding the regional impact, focusing on India and other Indian Ocean countries.
3. Discuss the impact in India and other countries in Indian Ocean region.
4. Mention government initiatives.
5. Emphasize the urgency of proactive measures, including adaptation, sustainable development, resilient infrastructure, and international cooperation, to mitigate these challenges and secure the region's future in the face of rising sea levels.

**Answer:**

The Intergovernmental Panel on Climate Change (IPCC) has issued a sobering prediction, forecasting a global sea level rise of approximately one meter by the year AD 2100. This alarming projection has profound implications for countries across the world, especially those in the Indian Ocean region.

**Impacts on India:**

1. **Coastal Flooding and Erosion:** India has a long coastline, and a one-meter sea level rise would lead to increased coastal flooding and erosion. Major cities like Mumbai, Kolkata, Chennai, and Kochi could experience frequent inundation.
2. **Saline Intrusion:** Rising sea levels could lead to the intrusion of saltwater into freshwater sources

along coastal areas, affecting drinking water supplies and agriculture.

3. **Displacement of Populations:** Coastal communities and low-lying islands in India would be at risk of displacement due to sea level rise.
4. **Impact on Biodiversity:** Coastal ecosystems, including mangroves and coral reefs, could be severely affected by submergence or increased stress from higher sea levels.
5. **Economic Consequences:** Industries, ports, and tourism infrastructure could be at risk, impacting livelihoods and economic growth.

**Impact on Other Indian Ocean Countries:**

1. **Maldives:** The Maldives is one of the most vulnerable nations to sea level rise due to its low-lying atolls.
2. **Bangladesh:** Bangladesh's vast coastal region and deltaic plains would face increased inundation, leading to displacement of populations and loss of arable land. Coastal cities like Dhaka and Chittagong would be at risk of frequent flooding.
3. **Sri Lanka:** Sri Lanka's coastline, including Colombo and Galle, would be vulnerable to coastal flooding and erosion, affecting infrastructure and communities.

**Government Initiatives in India:**

1. **National Coastal Zone Management Program (NCZMP):** This program, implemented by the Ministry of Environment, Forest and Climate Change, focuses on sustainable coastal development and the protection of coastal ecosystems.
2. **Mangroves for the Future (MFF):** India is a part of this regional initiative that focuses on the conservation and sustainable management of mangrove ecosystems, which act as natural buffers against coastal erosion and provide critical habitat for biodiversity.
3. **National Action Plan on Climate Change (NAPCC):** This comprehensive plan outlines India's strategy for addressing climate change, including adaptation measures for coastal areas.

Addressing these challenges will require proactive measures, including robust adaptation strategies, sustainable land use planning, investment in resilient infrastructure, and international cooperation to mitigate greenhouse gas emissions.

**19. What are the internal security challenges being faced by India? Give out the role of Central Intelligence and investigative agencies tasked to counter such threats.**

(250 words) [15]

**Approach to question:**

1. Briefly introduce the concept of internal security and its significance in maintaining a stable and secure nation.
2. Explain the internal security challenges.
3. Describe the role of Central Intelligence and Investigative Agencies.
4. Summarize by emphasizing the multifaceted nature of India's internal security challenges and the critical role that Central Intelligence and Investigative Agencies play in countering these threats.

**Answer:**

India faces a range of internal security challenges that necessitate a robust response from its security and intelligence agencies. These challenges are diverse and encompass various forms of threats, from terrorism and insurgency to cyberattacks and organized crime.

**Internal Security Challenges:**

1. **Terrorism:** India has been a victim of terrorism, both domestic and transnational, with various groups and actors targeting different regions of the country.
2. **Insurgency:** Several regions, such as Jammu and Kashmir and parts of Northeast India, have witnessed insurgencies demanding autonomy or separation from the Indian state.
3. **Naxalism:** Left-wing extremism, often referred to as Naxalism, poses a significant security challenge in several states, with Maoist groups engaging in violent activities.
4. **Cybersecurity Threats:** With the growing reliance on digital infrastructure, India faces threats from cyberattacks, including hacking, data breaches, and cyber espionage.
5. **Organized Crime:** Activities such as drug trafficking, human trafficking, and organized criminal gangs contribute to security concerns.

**Role of Central Intelligence and Investigative Agencies:**

1. **Intelligence Bureau (IB):** The IB is India's premier internal intelligence agency responsible for gathering intelligence within the country. It plays a critical role in counter-terrorism and counter-espionage efforts.
2. **Research and Analysis Wing (RAW):** RAW is India's external intelligence agency but also plays a role in gathering intelligence related to national security, especially in matters concerning neighbouring countries.
3. **National Investigation Agency (NIA):** NIA is tasked with investigating and prosecuting cases related to terrorism and other threats to national security. It has jurisdiction across the country.

4. **Central Bureau of Investigation (CBI):** The CBI is India's top investigative agency, handling complex cases, including those related to corruption, major crimes, and high-profile cases with national security implications.

In summary, India's internal security challenges are diverse and evolving, necessitating a multi-faceted response. Central Intelligence and Investigative Agencies, along with state-level counterparts, are instrumental in gathering intelligence, conducting investigations, and countering threats to safeguard the country's internal security.

20. **Give out the major sources of terror funding in India and the efforts being made to curtail these sources. In the light of this, also discuss the aim and objective of the 'No Money for Terror (NMFT)' Conference recently held at New Delhi in November 2022.**

(250 words) [15]

**Approach to question:**

1. Briefly introduce the significance of addressing terror funding as a critical component of counter-terrorism efforts in India.
2. Explain the major sources of terror funding in India.
3. Describe the efforts to curtail terror funding.
4. Explain the objectives of the 'No Money for Terror (NMFT)' Conference (November 2022).
5. Emphasize the role of international collaboration, as exemplified by initiatives like the 'No Money for Terror' Conference, in disrupting the financial networks that support terrorism and enhancing global security.

**Answer:**

Terrorism is a global threat, and funding is a critical element that sustains terrorist activities. In India, like many other countries, addressing the sources of terror funding is of utmost importance to enhance national security.

**Major Sources of Terror Funding in India:**

1. **External State Actors:** Some terrorist groups operating in India receive financial and logistical support from external state actors, with Pakistan being a significant source of such support.
2. **Hawala Channels:** The informal and illegal hawala system is frequently used to transfer funds across borders without a formal financial trail, making it challenging to trace and monitor.
3. **Extortion and Kidnapping:** Some terrorist groups engage in criminal activities such as extortion and kidnapping for ransom to generate funds.
4. **Cybercrime:** Cybercriminal activities, including online fraud, hacking, and identity theft, can serve as a source of funding for terrorist activities.

**Efforts to Curtail Terror Funding:**

1. **Financial Intelligence Units (FIUs):** India has established FIUs to monitor and analyze financial transactions, detecting suspicious activities related to terror funding.
2. **Anti-Money Laundering (AML) Laws:** India has enacted stringent AML laws and regulations to prevent the laundering of illicit funds.
3. **Enhanced Surveillance:** Increased surveillance and monitoring of financial transactions, particularly in border areas and conflict-prone regions, help identify and disrupt terror funding networks.
4. **Cybersecurity Measures:** Strengthening cybersecurity is crucial to prevent cybercrime-related terror funding.

**No Money for Terror (NMFT) Conference (November 2022):**

1. **International Cooperation:** Facilitating international cooperation among governments and organizations to combat terror financing globally.
2. **Information Sharing:** Encouraging the exchange of information and best practices in detecting and disrupting sources of terror funding.
3. **Legal Frameworks:** Discussing and enhancing legal frameworks and mechanisms for prosecuting those involved in terror financing.
4. **Technology and Innovation:** Exploring innovative technologies and approaches to identify and counter terror funding.

The 'No Money for Terror' initiative and similar international efforts reflect a collective determination to disrupt the financial lifelines of terrorist organizations, ultimately contributing to a safer and more secure world.