

# UPSC CSE (Main) 2019

## General Studies Paper-III

- Q1.** Enumerate the indirect taxes which have been subsumed in the Goods and Services Tax (GST) in India. Also, comment on the revenue implications of the GST introduced in India since July 2017. (150 words) [10]

### Approach to question:

#### Indirect taxes subsumed in GST in India:

1. Central Excise Duty
2. Service Tax
3. Additional Customs Duty
4. Countervailing Duty

#### Revenue implications of GST in India since July 2017:

1. **Increased tax compliance:** GST has simplified the tax structure and reduced tax evasion, leading to improved tax compliance and revenue collection.
2. **Broader tax base:** The GST system has expanded the tax base by bringing previously unorganized sectors into the formal economy, resulting in higher revenue generation.

Overall, the implementation of GST in India has had positive revenue implications, with increased tax compliance, a broader tax base, improved efficiency, and sustained economic growth.

### Answer:

Goods and Services Tax (GST), introduced in India in July 2017, is a comprehensive indirect tax reform that subsumed multiple indirect taxes.

#### Indirect Taxes Subsumed in GST:

1. Central Excise Duty
2. Service Tax
3. Additional Duties of Excise
4. Additional Duties of Customs
5. Special Additional Duty of Customs
6. Value Added Tax (VAT)
7. Central Sales Tax
8. Entertainment Tax
9. Octroi and Entry Tax
10. Luxury Tax
11. Taxes on Lottery, Betting, and Gambling

#### Revenue Implications of GST:

1. **Increased Compliance:** GST has improved tax compliance due to its transparent and standardized tax structure.
2. **Revenue Collection:** GST has facilitated higher revenue collection as it widened the tax base and reduced tax evasion.
3. **Simplified Taxation:** GST has reduced the cascading effect of taxes, making it beneficial for businesses and consumers.
4. **Economic Integration:** GST has promoted economic integration by creating a single national market.

GST's implementation has led to increased revenue collections, simplified taxation, and improved economic integration, making it a significant reform in India's indirect tax system.

- Q2.** Do you agree with the view that steady GDP growth and low inflation have left the Indian economy in good shape? Give reasons in support of your arguments. (150 words) [10]

### Approach to question:

Yes, steady GDP growth and low inflation have left the Indian economy in good shape. Here are the reasons in support of this view:

1. **Economic Stability:** Steady GDP growth indicates a stable and expanding economy, fostering investor confidence and attracting both domestic and foreign investments.
2. **Job Creation:** Robust GDP growth translates into increased employment opportunities, reducing unemployment rates and contributing to poverty alleviation.
3. **Improved Living Standards:** Steady growth allows for higher incomes and improved living standards, leading to enhanced purchasing power and overall economic well-being.
4. **Fiscal Strength:** A growing economy generates higher tax revenues, enabling the government to invest in infrastructure, social welfare programs, and development initiatives.

Overall, the combination of steady GDP growth and low inflation indicates a well-performing and stable economy, benefiting various stakeholders, promoting investment, and fostering economic development in India.

**Answer:**

The view that steady GDP growth and low inflation have left the Indian economy in good shape has its proponents and detractors. Let's explore the reasons in support of this argument.

**Reasons in Support:**

1. **Economic Stability:** Steady GDP growth and low inflation indicate economic stability and controlled price levels, fostering a conducive environment for investment and consumption.
2. **Fiscal Discipline:** Sound fiscal management contributes to low inflation, preventing overheating of the economy and maintaining a favorable business climate.
3. **Confidence Boost:** A stable economy boosts investor and consumer confidence, leading to increased economic activity and growth.
4. **Global Competitiveness:** A stable and growing economy enhances India's global competitiveness, attracting foreign investment and trade opportunities.

While steady GDP growth and low inflation are positive indicators, the overall health of the Indian economy should also consider other crucial factors like employment generation, social development, and fiscal reforms. A comprehensive assessment is necessary to gauge the economy's well-being.

**Q3. How far is Integrated Farming System (IFS) helpful in sustaining agricultural production? (150 words) [10]**

**Approach to question:**

Integrated Farming System (IFS) proves highly helpful in sustaining agricultural production:

1. **Diversification:** IFS promotes multiple agricultural activities, reducing dependence on a single crop and minimizing risks.
2. **Resource Optimization:** It optimizes resource utilization by recycling waste, reducing wastage, and improving nutrient cycling.
3. **Soil Health:** IFS enhances soil fertility through organic inputs from livestock and agroforestry components.

**Answer:**

Integrated Farming System (IFS) is an agricultural practice that combines various farming activities to enhance productivity and sustainability.

**Benefits of Integrated Farming System (IFS) in Sustaining Agricultural Production:**

1. **Diversification:** IFS encourages growing multiple crops and integrating livestock, reducing dependency on a single crop and minimizing risks.
2. **Nutrient Cycling:** IFS promotes recycling of organic matter and nutrients, improving soil fertility and reducing the need for external inputs.

3. **Pest and Disease Management:** IFS reduces pest and disease incidences through crop diversification and natural pest control mechanisms.
4. **Water Use Efficiency:** IFS optimizes water use by incorporating water-efficient crops and practices.
5. **Income Generation:** IFS diversifies income sources, ensuring year-round income for farmers.

Integrated Farming System (IFS) is a holistic approach that fosters sustainable agricultural production, addressing environmental, economic, and social aspects of farming. Its implementation can enhance resilience and productivity, contributing to the long-term sustainability of agriculture.

**Q4. Elaborate the impact of National Watershed Project in increasing agricultural production from water-stressed areas. (150 words) [10]**

**Approach to question:**

**Impact of National Watershed Project in Increasing Agricultural Production from Water-Stressed Areas:**

1. **Water Conservation:** The National Watershed Project plays a crucial role in conserving water in water-stressed areas. By implementing techniques such as contour bunding, check dams, and rainwater harvesting, it helps in augmenting water availability for agricultural purposes.
2. **Improved Soil Health:** The project focuses on soil conservation and rejuvenation. Through measures like afforestation, contour ploughing, and terracing, it helps prevent soil erosion and improves soil fertility. This leads to enhanced water holding capacity and nutrient availability, resulting in increased agricultural production.
3. **Efficient Water Management:** The project promotes efficient water management practices such as drip irrigation and sprinkler systems. By reducing water wastage and ensuring optimal utilization, it enables farmers to cultivate crops even in areas with limited water resources.

In conclusion, the National Watershed Project has a significant impact on increasing agricultural production in water-stressed areas. By conserving water, improving soil health, promoting efficient water management, and supporting crop diversification, the project contributes to higher crop yields, improved livelihoods, and sustainable development. Its success and replication highlight its effectiveness in addressing water stress and enhancing agricultural productivity in these regions.

**Answer:**

The National Watershed Project has been a crucial initiative in increasing agricultural production from water-stressed areas in India.

**Impact of National Watershed Project:**

1. **Soil and Water Conservation:** The project promotes soil and water conservation measures like contour bunding, check dams, and afforestation, improving water availability.
2. **Increased Crop Productivity:** Efficient water management enhances crop productivity and allows farmers to cultivate multiple crops in water-stressed regions.
3. **Livelihood Improvement:** Increased agricultural production creates livelihood opportunities, reducing rural distress in water-scarce areas.
4. **Environment Protection:** Watershed development contributes to ecological restoration and biodiversity conservation.

The National Watershed Project has been instrumental in transforming water-stressed areas into productive agricultural regions. It not only boosts agricultural output but also improves socio-economic conditions, making it a significant step towards sustainable development in such regions.

**Q5. How was India benefitted from the contributions of Sir M. Visvesvaraya and Dr. M. S. Swaminathan in the fields of water engineering and agricultural science respectively? (150 words) [10]**

**Approach to question:**

India has greatly benefitted from the contributions of Sir M. Visvesvaraya in water engineering and Dr. M. S. Swaminathan in agricultural science:

**Sir M. Visvesvaraya:**

1. **Water Engineering:** His expertise led to the design and implementation of major irrigation and dam projects, including the Krishna Raja Sagar dam and the Mysore State flood protection system, enhancing water availability for agriculture and electricity generation.

**Dr. M. S. Swaminathan:**

1. **Green Revolution:** Swaminathan played a pivotal role in the Green Revolution, introducing high-yielding varieties of crops and promoting modern agricultural techniques. This revolutionized Indian agriculture, significantly increasing food production.

In conclusion, India has benefited tremendously from the contributions of Sir M. Visvesvaraya in water engineering and Dr. M. S. Swaminathan in agricultural science. Their work in these fields has had a transformative impact on water management, irrigation, agricultural productivity, and rural development, significantly contributing to India's agricultural growth and overall progress.

**Answer:**

Sir M. Visvesvaraya and Dr. M. S. Swaminathan are two eminent personalities who have made significant

contributions to India's development in the fields of water engineering and agricultural science, respectively.

**Contributions of Sir M. Visvesvaraya:**

1. **Water Management:** Sir M. Visvesvaraya pioneered water engineering projects, including the design and construction of dams, reservoirs, and irrigation systems, enhancing water availability for agriculture and industrial needs.
2. **Economic Planning:** He played a vital role in economic planning and served as the Chief Engineer during the construction of the Krishna Raja Sagar Dam, revolutionizing agriculture in the region.

**Contributions of Dr. M. S. Swaminathan:**

1. **Green Revolution:** Dr. M. S. Swaminathan is renowned for his contributions to the Green Revolution, introducing high-yielding crop varieties and advanced agricultural practices, significantly increasing agricultural productivity.
2. **Food Security:** His work helped India achieve food self-sufficiency, ensuring food security for millions of people and mitigating hunger and malnutrition.

The contributions of Sir M. Visvesvaraya and Dr. M. S. Swaminathan have been instrumental in India's agricultural and water resource development, leading to enhanced agricultural productivity, food security, and socio-economic progress.

**Q6. What is India's plan to have its own space station and how will it benefit our space programme? (150 words) [10]**

**Approach to question:**

India has formulated a plan to establish its own space station as a part of its ambitious space program. The plan includes the development of necessary technologies, infrastructure, and human resources. The establishment of a space station will bring several benefits to India's space program:

1. **Technological Advancement:** Building a space station requires the development of advanced technologies and capabilities, which will contribute to the overall technological growth of the country.
2. **Research and Innovation:** The space station will provide a platform for conducting scientific research, experiments, and studies in microgravity conditions. This will facilitate advancements in various fields such as biology, material science, astronomy, and human physiology.

The space station project represents a significant milestone in India's journey towards becoming a leading space-faring nation.

**Answer:**

India's space agency, ISRO (Indian Space Research Organisation), has plans to establish its own space station, reflecting the country's ambitious space program.

**India's Plan for a Space Station:**

1. **Gaganyaan Mission:** The first step towards a space station is the Gaganyaan Mission, aiming to send Indian astronauts to space by 2022.
2. **Incremental Approach:** ISRO plans to build the space station in incremental phases, leveraging experience gained from previous missions.

**Benefits to India's Space Program:**

1. **Technological Advancement:** A space station will drive the development of advanced space technologies and infrastructure.
2. **Research and Collaboration:** A space station will enable continuous scientific research and international collaboration in space exploration.
3. **Strategic Advantage:** Possessing a space station will enhance India's standing in the global space community and reinforce its strategic capabilities.

Establishing a space station will propel India's space program to new heights, fostering technological innovation, scientific research, and international partnerships, ultimately positioning India as a prominent player in the realm of space exploration.

- Q7. Coastal sand mining, whether legal or illegal, poses one of the biggest threats to our environment. Analyse the impact of sand mining along the Indian coasts, citing specific examples. (150 words) [10]**

**Approach to question:**

Coastal sand mining, both legal and illegal, poses a significant threat to the environment along the Indian coasts. The impacts of sand mining include erosion and coastal degradation, loss of coastal vegetation, groundwater depletion, disruption of marine life, increased vulnerability to coastal flooding, and socio-economic consequences. Specific examples of the impact of sand mining in India include erosion in Chennai, Kollam, and Mumbai beaches, destruction of mangroves in coastal ecosystems, depletion of groundwater reserves, and the disruption of marine habitats and fish populations. Robust regulation, enforcement, and sustainable alternatives are essential to mitigate these harmful effects.

**Answer:**

Coastal sand mining, whether legal or illegal, has emerged as a significant environmental concern, posing threats to coastal ecosystems and communities.

**Impact of Sand Mining along Indian Coasts:**

1. **Coastal Erosion:** Excessive sand mining disrupts natural sediment balance, leading to coastal erosion and vulnerability to natural disasters.

2. **Biodiversity Loss:** Sand mining destroys coastal habitats, impacting marine and bird species, and disrupting the food chain.
3. **Groundwater Depletion:** Sand mining can lower the water table, affecting groundwater availability and quality in nearby areas.
4. **Coastal Flooding:** Reduced sand availability exacerbates the impact of coastal flooding during storms and high tides.
5. **Economic Impact:** Disruption of coastal ecosystems impacts fishing, tourism, and livelihoods of coastal communities.

**Example:** Sand mining in Kerala's Alappad region resulted in severe coastal erosion, threatening villages and livelihoods.

Addressing the impact of coastal sand mining is essential for the conservation of coastal ecosystems, safeguarding biodiversity, and ensuring the sustainable development of coastal regions in India.

- Q8. Vulnerability is an essential element for defining disaster impacts and its threat to people. How and in what ways can vulnerability to disasters be characterized? Discuss different types of vulnerability with reference to disasters. (150 words) [10]**

**Approach to question:**

Vulnerability is a crucial element in understanding disaster impacts and the threat they pose to people. It can be characterized in various ways:

1. **Physical Vulnerability:** This refers to the susceptibility of physical infrastructure, buildings, and lifelines to damage or destruction during a disaster. It includes factors such as building design, construction quality, and location in hazard-prone areas.
2. **Social Vulnerability:** Social vulnerability considers the socio-economic factors that influence a community's ability to prepare for, respond to, and recover from disasters. It includes factors such as poverty, inequality, access to resources, social cohesion, and marginalized populations.

Understanding these vulnerabilities is crucial for designing effective disaster risk reduction strategies, enhancing resilience, and promoting sustainable development.

**Answer:**

Vulnerability is a crucial factor in understanding the impacts of disasters and the threats they pose to people. It refers to the susceptibility of individuals and communities to the adverse effects of disasters.

**Characterization of Vulnerability to Disasters:**

1. **Social Vulnerability:** It pertains to factors like poverty, inequality, and social exclusion that affect



a community's ability to cope with and recover from disasters.

2. **Economic Vulnerability:** It relates to the economic capacity of individuals and regions to withstand and recover from disaster impacts.
3. **Environmental Vulnerability:** It considers ecological factors like deforestation, land degradation, and climate change, which influence disaster susceptibility.
4. **Institutional Vulnerability:** It assesses the efficiency of disaster management institutions and governance in preparing for and responding to disasters.

Understanding the different types of vulnerability is essential for effective disaster risk reduction and preparedness. Addressing vulnerabilities can enhance resilience and reduce the impacts of disasters on people and communities.

- Q9. The banning of 'Jamaat-e-Islami' in Jammu and Kashmir brought into focus the role of over-ground workers (OGWs) in assisting terrorist organizations. Examine the role played by OGWs in assisting terrorist organizations in insurgency affected areas. Discuss measures to neutralize influence of OGWs. (150 words) [10]**

#### Approach to question:

The banning of 'Jamaat-e-Islami' in Jammu and Kashmir highlighted the significant role of over-ground workers (OGWs) in supporting terrorist organizations. The role of OGWs in insurgency-affected areas is as follows:

1. **Logistics Support:** OGWs provide logistical support to terrorist organizations by facilitating communication, transportation, and safe houses for militants.
2. **Recruitment and Radicalization:** OGWs assist in the recruitment and radicalization of individuals by identifying potential recruits, spreading extremist ideologies, and providing logistical support during the recruitment process.

To neutralize the influence of OGWs, several measures can be implemented:

1. **Intelligence-Based Operations:** Strengthening intelligence networks and conducting targeted operations to identify and apprehend OGWs can disrupt their activities and networks.
2. **Community Engagement:** Engaging with local communities to build trust, address grievances, and provide alternative avenues for socio-economic development can reduce the susceptibility of individuals to support or collaborate with OGWs.

3. **Legal Measures:** Implementing stringent legal measures to prosecute and convict OGWs involved in assisting terrorist organizations, ensuring quick trials and appropriate punishment as per the law.

By implementing these measures, the influence of OGWs can be neutralized, leading to a significant reduction in their assistance to terrorist organizations and overall improvement in the security situation in insurgency-affected areas.

#### Answer:

The banning of 'Jamaat-e-Islami' in Jammu and Kashmir highlighted the significant role of over-ground workers (OGWs) in aiding terrorist organizations in insurgency-affected areas.

#### Role of OGWs in Assisting Terrorist Organizations:

1. **Logistics Support:** OGWs provide logistical support to terrorists, including shelter, food, and communication.
2. **Recruitment:** They assist in recruitment by identifying and radicalizing potential recruits for terrorist outfits.
3. **Information Sharing:** OGWs gather intelligence and pass it to terrorists, aiding in planning and execution of attacks.
4. **Propaganda:** OGWs disseminate propaganda to create an atmosphere of fear and dissent.

#### Measures to Neutralize Influence of OGWs:

1. **Intelligence Gathering:** Strengthening intelligence networks to identify and apprehend OGWs.
2. **Community Engagement:** Building trust with local communities to discourage support for OGWs and terrorists.
3. **Legal Action:** Stringent legal action against identified OGWs to curb their activities.
4. **Rehabilitation:** Offering rehabilitation programs for OGWs to reintegrate them into mainstream society.

Addressing the role of OGWs is crucial to counterterrorism efforts, as they play a significant role in sustaining terrorist networks. Implementing effective measures to neutralize their influence will aid in curbing insurgency and restoring peace in affected regions.

- Q10. What is the CyberDome Project? Explain how it can be useful in controlling internet crimes in India. (150 words) [10]**

#### Approach to question:

The CyberDome Project is an initiative launched by the Kerala Police in India to combat cybercrimes and enhance cybersecurity. It aims to create a secure cyberspace by establishing a centralized facility equipped with advanced technology and expertise. The project can be useful in controlling internet crimes in India in the following ways:

1. **Early Detection and Response:** CyberDome enables early detection of cyber threats and facilitates quick response measures, minimizing the impact of cybercrimes.
2. **Capacity Building:** The project focuses on training and capacity building of law enforcement agencies, enabling them to effectively investigate and tackle cybercrimes.
3. **Collaboration and Information Sharing:** CyberDome promotes collaboration among various stakeholders, including law enforcement, government agencies, industry experts, and academia, to share information, intelligence, and best practices.

By leveraging technology, expertise, and collaboration, the CyberDome Project can play a crucial role in controlling internet crimes in India. It enhances the capabilities of law enforcement agencies, promotes public awareness, and facilitates a proactive and coordinated approach to cybersecurity.

#### Answer:

The CyberDome Project is an initiative by the Kerala Police to combat cybercrimes in India and create a secure cyber ecosystem.

#### Usefulness of CyberDome Project in Controlling Internet Crimes:

1. **Advanced Technology:** CyberDome utilizes cutting-edge technology and expertise to monitor and respond to cyber threats effectively.
2. **Cyber Security Awareness:** It raises awareness among individuals and organizations about cybersecurity best practices to prevent falling victim to cybercrimes.
3. **Quick Response:** CyberDome enables swift response to cyber incidents, reducing the impact of cybercrimes on victims.
4. **Collaboration:** It fosters collaboration with private industries, academia, and other law enforcement agencies to share intelligence and resources for better cyber defense.

The CyberDome Project plays a crucial role in enhancing India's cybersecurity capabilities and curbing internet crimes by leveraging technology, collaboration, and awareness initiatives.

**Q11. It is argued that the strategy of inclusive growth is intended to meet the objectives of inclusiveness and sustainability together. Comment on this statement.**

(250 words) [15]

#### Approach to question:

The strategy of inclusive growth aims to achieve both inclusiveness and sustainability simultaneously. Here are the key points to support this statement:

1. **Inclusiveness:** Inclusive growth focuses on reducing poverty, inequality, and social disparities by ensuring equitable access to opportunities and benefits of economic growth. It aims to uplift marginalized and vulnerable sections of society by providing them with education, healthcare, and employment opportunities.
2. **Sustainability:** Inclusive growth recognizes that economic development must be sustainable to protect natural resources, mitigate environmental degradation, and address climate change. It emphasizes sustainable practices that promote long-term economic, social, and environmental well-being.

It recognizes the interdependence between social progress, economic development, and environmental protection. By integrating inclusive policies and sustainable practices, inclusive growth strives for holistic and balanced development that benefits present and future generations.

#### Answer:

Inclusive growth is a development strategy that aims to ensure that the benefits of economic growth are shared by all sections of society, particularly the marginalized and vulnerable groups. It seeks to address the issues of poverty, inequality, and social exclusion while promoting sustainable and equitable development.

**Comment on the Statement:** The statement is accurate as inclusive growth strives to achieve the dual objectives of inclusiveness and sustainability.

1. **Inclusiveness:** Inclusive growth focuses on reducing income disparities, providing equal opportunities, and improving access to basic services like education, healthcare, and housing for all segments of society. It aims to uplift the economically and socially marginalized, fostering social cohesion and stability.
2. **Sustainability:** Inclusive growth is mindful of environmental concerns and promotes sustainable development practices. It seeks to minimize the negative impact of growth on the environment and natural resources, ensuring intergenerational equity.
3. **Poverty Alleviation:** By focusing on inclusive growth, countries can address poverty effectively, reducing income disparities and enhancing social welfare programs to uplift the poor and vulnerable.
4. **Social Harmony:** Inclusive growth fosters social harmony by ensuring equal opportunities and social inclusion, leading to reduced social tensions and conflicts.
5. **Sustainable Development Goals (SDGs):** Inclusive growth aligns with the SDGs, which encompass both social and environmental aspects of development.

Inclusive growth is a comprehensive strategy that aims to strike a balance between economic development, social inclusion, and environmental sustainability. By embracing inclusiveness and sustainability together, countries can create a more equitable and resilient society, fostering sustainable and holistic development for all.

**Q12. The public expenditure management is a challenge to the government of India in the context of budget making during the post-liberalization period. Clarify it.**

(250 words) [15]

**Approach to question:**

The public expenditure management has been a challenge for the government of India during the post-liberalization period in the context of budget making. Here are the key points to clarify this statement:

1. **Increasing Fiscal Pressures:** The post-liberalization period has witnessed rapid economic growth and increased public expenditure demands. Meeting these demands within the constraints of fiscal discipline poses a challenge for the government.
2. **Allocative Efficiency:** The government needs to allocate resources effectively and efficiently to meet the diverse needs of the economy, such as infrastructure development, social welfare programs, and economic reforms. Balancing these priorities while managing limited resources is a challenge.

Balancing competing priorities, addressing implementation challenges, managing fiscal deficit, improving revenue mobilization, controlling non-development expenditure, and strengthening financial management systems are key aspects that need attention. By adopting prudent fiscal policies, institutional reforms, and effective expenditure planning, the government can navigate these challenges and ensure optimal allocation of resources for inclusive and sustainable development.

**Answer:**

Public expenditure management in India has been a challenge during the post-liberalization period due to various factors affecting budget-making and implementation.

**Challenges in Public Expenditure Management:**

1. **Fiscal Deficit:** Maintaining fiscal discipline and managing the fiscal deficit has been a recurring challenge for the government, impacting public expenditure priorities.
2. **Revenue Collection:** Ensuring adequate revenue collection to meet expenditure demands and fund critical sectors remains a concern.
3. **Allocative Efficiency:** Efficient allocation of resources to achieve developmental goals, address

social issues, and promote inclusive growth poses a challenge.

4. **Implementation Capacity:** Weak implementation capacity at various levels of government affects the effective utilization of allocated funds and hampers project execution.
5. **Subsidy Management:** Rationalizing subsidies without adversely impacting the vulnerable sections of society requires careful consideration.
6. **Infrastructure Development:** Addressing the country's infrastructural needs demands substantial financial resources and efficient project management.

To clarify, Post-liberalization, the government faced increased demands for public expenditure to promote economic growth, social welfare, and infrastructure development. Balancing competing demands while adhering to fiscal prudence has been a challenge. Additionally, the need to address developmental disparities among different regions and sections of society further complicates the budget-making process.

Efficient public expenditure management is critical to achieving sustainable development and economic growth. The government of India must focus on enhancing revenue collection, improving implementation capacity, and prioritizing allocations to address the challenges faced during budget making in the post-liberalization era. By addressing these issues, the government can foster inclusive growth and meet the diverse needs of a dynamic and diverse nation.

**Q13. What are the reformative steps taken by the government to make food grain distribution system more effective? (250 words) [15]**

**Approach to question:**

The government has taken several reformative steps to make the food grain distribution system more effective. Here are the key measures:

1. **National Food Security Act (NFSA):** The implementation of NFSA aims to provide subsidized food grains to eligible beneficiaries through the Targeted Public Distribution System (TPDS), ensuring food security for the vulnerable sections of society.
2. **Aadhaar-Based Biometric Authentication:** The government has introduced Aadhaar-based biometric authentication to ensure transparency and eliminate duplicate or ghost beneficiaries, reducing leakages and improving targeting efficiency.
3. **End-to-End Computerization:** The food grain distribution system has been computerized to enhance efficiency, minimize manual errors, and improve accountability in the allocation and distribution process.



These reformative steps aim to improve the effectiveness of the food grain distribution system, ensure efficient targeting, reduce leakages, enhance transparency, and strengthen the overall food security framework in the country.

**Answer:**

The government of India has undertaken several reformative steps to enhance the effectiveness of the food grain distribution system, aiming to ensure food security for all citizens.

**Reformative Steps in Food Grain Distribution System:**

1. **National Food Security Act (NFSA):** The NFSA, implemented in 2013, aims to provide subsidized food grains to two-thirds of the population, covering almost 81 crore people.
2. **Aadhaar Integration:** Linking Aadhaar with the Public Distribution System (PDS) helps in eliminating duplicate beneficiaries and leakages, ensuring targeted delivery.
3. **End-to-End Computerization:** Implementing end-to-end computerization of PDS operations enhances transparency, efficiency, and accountability.
4. **One Nation, One Ration Card (ONORC):** ONORC enables beneficiaries to access their entitled food grains from any fair price shop across the country, promoting portability.
5. **Direct Benefit Transfer (DBT):** In certain states, cash transfers are being piloted, empowering beneficiaries to purchase food grains from open market.
6. **Targeted Approach:** Identification and exclusion errors are minimized through proper targeting and regular verification of beneficiaries.

The reformative steps taken by the government have significantly improved the efficiency and transparency of the food grain distribution system. By leveraging technology, targeting, and inclusive policies, the government aims to strengthen food security and ensure that food grains reach those who need them the most.

**Q14. Elaborate the policy taken by the government of India to meet the challenges of the food processing sector. (250 words) [15]**

**Approach to question:**

The government of India has implemented several policies to address the challenges faced by the food processing sector. Here are the key policy measures:

1. **Pradhan Mantri Kisan Sampada Yojana (PMKSY):** The PMKSY aims to modernize and strengthen the food processing industry by providing financial assistance for infrastructure development, capacity building, and technology upgradation.

2. **Food Safety and Standards Act (FSSA):** The FSSA ensures the safety and quality of processed foods by setting standards and regulations. It focuses on improving food processing practices, hygiene, and product labeling to enhance consumer trust.
3. **Make in India Initiative:** The Make in India campaign promotes investment in the food processing sector, encouraging domestic and foreign companies to establish processing units and promote value addition in agricultural produce.
4. **Foreign Direct Investment (FDI) Policy:** The government has liberalized the FDI policy in the food processing sector, allowing greater foreign investment, technology transfer, and market access, thereby boosting growth and innovation.

These policy measures demonstrate the government's commitment to promoting the growth and development of the food processing sector. By addressing infrastructure gaps, ensuring food safety, attracting investment, supporting R&D, and fostering skill development, the government aims to overcome the challenges faced by the sector and unlock its full potential for value addition, employment generation, and increased agricultural incomes.

**Answer:**

The food processing sector plays a vital role in India's economy, contributing significantly to employment generation and value addition. To address the challenges faced by this sector, the government of India has implemented various policies and initiatives.

**Policy Measures for the Food Processing Sector:**

1. **Food Processing Policy:** The government introduced a dedicated food processing policy to provide incentives, infrastructure support, and ease of doing business for food processing industries.
2. **Mega Food Parks Scheme:** The Mega Food Parks Scheme facilitates the creation of modern infrastructure and facilities to boost processing and storage capacities.
3. **Pradhan Mantri Kisan Sampada Yojana (PMKSY):** PMKSY aims to enhance food processing and preservation capacities, focusing on reducing wastage and increasing value addition.
4. **Foreign Direct Investment (FDI):** The government has liberalized FDI norms in the food processing sector, encouraging foreign investments and technology collaborations.
5. **Quality Standards and Research:** Implementation of quality standards and research support to ensure the production of safe and high-quality processed food products.



6. **Skill Development:** Skill development programs are initiated to create a skilled workforce for the food processing industry.

The government's policy measures for the food processing sector have fostered growth, increased value addition, and promoted food security. By addressing infrastructural and regulatory bottlenecks, these policies aim to make India a global food processing hub while ensuring farmers' welfare and reducing food wastage.

**Q15. How is the government of India protecting traditional knowledge of medicine from patenting by pharmaceutical companies?**  
(250 words) [15]

**Approach to question:**

The government of India has taken several measures to protect traditional knowledge of medicine from patenting by pharmaceutical companies. Here are some key steps:

1. **Traditional Knowledge Digital Library (TKDL):** The TKDL was established to document and digitize traditional medicinal knowledge, including Ayurveda, Unani, and Siddha systems. It acts as a repository of traditional knowledge accessible to patent examiners globally, enabling them to reject patent applications that claim traditional knowledge.
2. **Prior Art Search:** The TKDL database is used for conducting prior art searches during patent examination. This helps identify existing traditional knowledge and prevents the granting of patents on already known practices or formulations.

By leveraging the TKDL, collaborating with international patent offices, implementing legal frameworks, raising awareness, and actively opposing patents, the government works towards protecting traditional knowledge and preserving the heritage of Indian traditional medicine systems.

**Answer:**

Traditional knowledge of medicine in India, deeply rooted in Ayurveda, Yoga, and other ancient systems, has been vulnerable to misappropriation and patenting by pharmaceutical companies. To safeguard this valuable knowledge, the government of India has taken several measures.

**Protection of Traditional Knowledge of Medicine:**

1. **Traditional Knowledge Digital Library (TKDL):** The government established TKDL to document and digitize traditional knowledge related to medicine, making it accessible to patent offices worldwide.
2. **Prior Art Search:** TKDL facilitates prior art searches in patent databases globally, preventing the grant of patents for already existing traditional knowledge.

3. **Traditional Knowledge Resource Classification (TKRC):** TKRC is a comprehensive classification system for traditional knowledge, making it easier to search and prevent misappropriation.

4. **Advocacy and Awareness:** The government raises awareness about the importance of protecting traditional knowledge and sensitizes patent offices and international organizations.

5. **Intellectual Property Rights (IPR) Policy:** The National IPR Policy includes measures to protect traditional knowledge and promote its usage in the healthcare sector.

Through a combination of digital documentation, prior art searches, and awareness campaigns, the government of India is making concerted efforts to protect its rich traditional knowledge of medicine from being patented by pharmaceutical companies. These measures preserve the country's cultural heritage, support indigenous healthcare systems, and prevent exploitation of traditional knowledge.

**Q16. How can biotechnology improve the living standards of farmers?**  
(250 words) [15]

**Approach to question:**

Biotechnology can significantly improve the living standards of farmers in the following ways:

1. **Enhanced Crop Productivity:** Biotechnology offers genetically modified crops that are resistant to pests, diseases, and environmental stresses. This leads to higher crop yields, reducing losses and increasing farmers' income.
2. **Improved Crop Quality:** Biotech crops can be engineered to possess improved nutritional content, taste, and texture, meeting consumer demands and fetching higher prices in the market. This enhances the profitability of farmers.
3. **Reduced Input Costs:** Biotech crops can be designed to require fewer chemical inputs such as pesticides and herbicides. This reduces the financial burden on farmers and minimizes the environmental impact of agriculture.

Overall, biotechnology offers innovative solutions to address the challenges faced by farmers. By enhancing crop productivity, reducing input costs, improving crop quality, and promoting sustainable farming practices, biotechnology has the potential to uplift the living standards of farmers and contribute to their overall well-being.

**Answer:**

Biotechnology offers immense potential to revolutionize agriculture and improve the living standards of farmers by enhancing crop productivity, sustainability, and resilience to climate change.

### Ways Biotechnology can Improve Farmers' Living Standards:

1. **High-Yielding Varieties:** Biotechnology enables the development of genetically modified crops with higher yields, ensuring increased income for farmers.
2. **Pest and Disease Resistance:** Biotech crops can be engineered to resist pests and diseases, reducing the need for chemical pesticides and lowering production costs.
3. **Drought Tolerance:** Biotechnology facilitates the creation of drought-tolerant crops, enabling farmers to cultivate in water-scarce regions and cope with climate variability.
4. **Enhanced Nutrition:** Biotech crops can be enriched with essential nutrients, addressing malnutrition and improving farmers' and consumers' health.
5. **Reduced Environmental Impact:** Biotechnology promotes sustainable agriculture practices, conserving soil, water, and biodiversity.
6. **Income Diversification:** Biotechnology offers opportunities for farmers to grow non-traditional crops, catering to niche markets and diversifying their income sources.
7. **Access to Better Markets:** Biotech products can meet stringent quality standards, opening doors to international markets and improving farmers' market access.

Biotechnology's transformative potential in agriculture can uplift farmers' living standards by augmenting productivity, reducing production costs, and improving market opportunities. Embracing responsible and safe biotechnological applications can contribute to poverty alleviation, food security, and sustainable development in rural communities.

**Q17. Define the concept of carrying capacity of an ecosystem as relevant to an environment. Explain how understanding this concept is vital while planning for sustainable development of a region. (250 words) [15]**

#### Approach to question:

The carrying capacity of an ecosystem refers to the maximum number of individuals or species that can be sustained by the available resources and environmental conditions without causing long-term damage to the ecosystem. It is a measure of the ecosystem's ability to support life.

Understanding the concept of carrying capacity is crucial for planning sustainable development in a region because:

1. **Resource Management:** By understanding the carrying capacity, planners can assess the available resources in a region and manage them effectively. This helps in preventing overexploitation of resources, ensuring their long-term sustainability.

2. **Environmental Protection:** Recognizing the carrying capacity helps in avoiding the degradation and depletion of natural resources. It allows the identification of thresholds beyond which environmental damage can occur, enabling the implementation of measures to prevent such damage.
3. **Population Control:** Understanding the carrying capacity helps in managing population growth and density in a region. It provides insights into the optimal population size that can be supported sustainably by the available resources, preventing overcrowding and associated environmental problems.

By incorporating carrying capacity considerations, planners can ensure that development is pursued in a manner that respects ecological limits and supports long-term sustainability.

#### Answer:

Carrying capacity refers to the maximum number of individuals or species that an ecosystem can support without degrading its natural resources or compromising its ability to regenerate. Understanding this concept is crucial in sustainable development planning to ensure a region's long-term environmental, social, and economic well-being.

#### Importance of Understanding Carrying Capacity in Sustainable Development:

1. **Environmental Conservation:** Knowing the carrying capacity helps avoid overexploitation of resources, preventing ecological degradation and loss of biodiversity.
2. **Resource Management:** Planning within the carrying capacity ensures optimal use of resources, preventing resource depletion and promoting their sustainable management.
3. **Population Control:** Understanding carrying capacity aids in maintaining population levels that can be supported by available resources, avoiding issues of overpopulation.
4. **Resilience:** Staying within the carrying capacity strengthens the ecosystem's resilience to environmental changes and natural disasters.
5. **Sustainable Livelihoods:** Planning based on carrying capacity supports sustainable livelihoods, as it ensures resource availability for future generations.
6. **Climate Change Mitigation:** Adherence to carrying capacity helps reduce the carbon footprint, mitigating the adverse effects of climate change.

Considering carrying capacity in sustainable development planning is essential to strike a balance between development aspirations and environmental conservation. It ensures that the region's development trajectory remains within the limits of nature's

regeneration capacity, safeguarding the well-being of present and future generations.

**Q18. Disaster preparedness is the first step in any disaster management process. Explain how hazard zonation mapping will help in disaster mitigation in the case of landslides.**

(250 words) [15]

**Approach to question:**

Hazard zonation mapping plays a crucial role in disaster mitigation, especially in the case of landslides. Here's how it helps:

1. **Identification of High-Risk Areas:** Hazard zonation mapping allows the identification of areas that are prone to landslides. It helps in delineating high-risk zones based on factors such as slope steepness, soil type, geological conditions, and historical landslide data. This information helps authorities prioritize their efforts and resources towards these areas for mitigation measures.
2. **Early Warning Systems:** Hazard zonation maps assist in the development of early warning systems. By integrating real-time monitoring data with the zonation maps, authorities can detect precursory indicators of landslides and issue timely warnings to communities residing in high-risk zones.

By incorporating hazard zonation mapping into disaster preparedness efforts, the impact of landslides can be significantly reduced, leading to a safer and more resilient environment.

**Answer:**

Disaster preparedness is a critical aspect of effective disaster management, particularly in the case of landslides, which pose significant threats to lives and properties. Hazard zonation mapping plays a crucial role in disaster mitigation by identifying vulnerable areas and facilitating targeted preventive measures.

**Importance of Hazard Zonation Mapping in Landslide Disaster Mitigation:**

1. **Identifying High-Risk Areas:** Hazard zonation mapping helps identify regions prone to landslides, enabling authorities to focus resources on areas with the highest risk.
2. **Early Warning Systems:** By understanding landslide-prone zones, early warning systems can be established to alert communities and enable timely evacuation.
3. **Land-Use Planning:** Hazard zonation maps inform land-use planning, preventing constructions in high-risk areas and promoting safer settlements.
4. **Infrastructure Design:** Engineers can use hazard maps to design structures resilient to landslides, reducing potential damage.

5. **Mitigation Strategies:** Zonation maps aid in formulating targeted mitigation strategies such as afforestation, terracing, and slope stabilization, reducing landslide susceptibility.
6. **Public Awareness:** Maps raise public awareness about landslide risks, fostering community participation and preparedness.

Hazard zonation mapping is a vital tool in landslide disaster mitigation, enabling authorities to adopt a proactive approach by identifying vulnerable regions and implementing appropriate preventive measures. It fosters disaster resilience, safeguarding lives, infrastructure, and natural resources in landslide-prone areas.

**Q19. Indian Government has recently strengthened the anti-terrorism laws by amending the Unlawful Activities (Prevention) Act (UAPA), 1967, and the NIA Act. Analyze the changes in the context of prevailing security environment while discussing the scope and reasons for opposing the UAPA by human rights organizations.** (250 words) [15]

**Approach to question:**

The recent amendments to the Unlawful Activities (Prevention) Act (UAPA), 1967, and the National Investigation Agency (NIA) Act have strengthened anti-terrorism laws in India. Here are the key points:

1. **Scope of Amendments:** The amendments provide broader powers to the government and security agencies to tackle terrorism effectively. They allow the NIA to investigate and prosecute offenses related to terrorism beyond India's borders. The UAPA amendments allow for the designation of individuals as terrorists, enhanced powers of seizure, and expanded scope for declaring an organization as unlawful.
2. **Security Environment:** The changes reflect the evolving security environment in India, where the threat of terrorism remains a significant concern. The amendments aim to provide law enforcement agencies with stronger legal tools to prevent and combat terrorist activities. The government emphasizes the need for proactive measures to safeguard national security and protect citizens from the menace of terrorism.

While these amendments enhance the powers of law enforcement agencies, concerns raised by human rights organizations highlight the importance of striking a delicate balance between security imperatives and safeguarding individual rights and liberties. It remains crucial to ensure that the amendments are implemented in a manner that upholds the rule of law and protects the fundamental rights of all individuals.



**Answer:**

In response to the evolving security environment and the threat of terrorism, the Indian Government recently amended the Unlawful Activities (Prevention) Act (UAPA), 1967, and the NIA Act to strengthen anti-terrorism laws. However, these amendments have also been a subject of concern and opposition from human rights organizations.

**Changes in the UAPA and NIA Act in the Context of Security Environment:**

1. **Designation of Individuals as Terrorists:** The amendments empower the government to designate individuals as terrorists, enhancing the scope for preventive action against potential threats.
2. **Seizure of Property:** The amendments allow the government to seize the property of terrorists, targeting their funding sources.
3. **Expanded Jurisdiction of NIA:** The NIA's jurisdiction has been expanded to investigate offenses related to terrorism beyond India's borders, enabling more robust counter-terrorism efforts.

**Reasons for Opposition by Human Rights Organizations:**

1. **Potential for Misuse:** Human rights organizations fear that the broad scope of designating individuals as terrorists could be misused to target dissent and suppress political opposition.
2. **Lack of Safeguards:** Critics argue that the amendments lack adequate safeguards to protect the rights of individuals, potentially leading to violations of due process and abuse of power.
3. **Chilling Effect on Freedom of Expression:** The broad provisions of the amended laws may have a chilling effect on the freedom of expression and assembly, limiting the space for civil society and activism.

While the recent amendments to the UAPA and NIA Act demonstrate the government's commitment to addressing terrorism, it is crucial to strike a balance between security imperatives and safeguarding individual rights. Close scrutiny and oversight of these laws' implementation are necessary to ensure that they are not misused and that the government's counter-terrorism efforts remain in line with democratic principles and human rights standards.

**Q20. Cross-border movement of insurgents is only one of the several security challenges facing the policing of the border in North-East India. Examine the various challenges currently emanating across the India-Myanmar border. Also discuss the steps to counter the challenges. (250 words) [15]**

**Approach to question:****Challenges emanating across the India-Myanmar border:**

1. **Insurgency:** Cross-border movement of insurgents remains a significant challenge, with various insurgent groups taking advantage of the porous border to conduct activities, recruit members, and procure weapons.
2. **Illegal Trade:** The border region is plagued by smuggling of drugs, arms, and counterfeit currency, fueling criminal networks and funding insurgent groups. This illicit trade undermines security and hampers economic development.

**Steps to counter the challenges:**

1. **Strengthen Border Infrastructure:** Enhance border management infrastructure, including fencing, surveillance systems, and border outposts to curb unauthorized crossings and improve surveillance capabilities.
2. **Intelligence Sharing:** Enhance intelligence sharing and coordination between Indian and Myanmar security agencies to gather actionable information on insurgent activities, smuggling networks, and human trafficking syndicates.

By implementing these comprehensive measures, India can effectively address the challenges posed by the cross-border movement of insurgents and other security issues along the India-Myanmar border, promoting stability, security, and development in the region.

**Answer:**

The India-Myanmar border, particularly in the North-East region, presents unique security challenges for border policing due to its porous nature and complex topography. Cross-border movement of insurgents is just one of the several challenges faced in this region.

**Challenges Across the India-Myanmar Border:**

1. **Insurgency:** Cross-border movement of insurgents poses security threats and affects law and order in the North-Eastern states.
2. **Smuggling and Trafficking:** Illegal activities such as arms and drug smuggling, and human trafficking thrive due to the porous border.
3. **Porous Nature:** The difficult terrain and dense forests make border management and surveillance challenging.
4. **Lack of Infrastructure:** Inadequate infrastructure hampers effective border patrolling and monitoring.
5. **Ethnic and Communal Tensions:** The border regions experience ethnic and communal tensions, contributing to security concerns.

**Steps to Counter the Challenges:**

1. **Strengthening Border Infrastructure:** Developing roads, border outposts, and surveillance systems to enhance monitoring and patrolling.
2. **Enhanced Intelligence Sharing:** Improving intelligence-sharing mechanisms with Myanmar to track and neutralize cross-border insurgents.
3. **Community Engagement:** Building trust and cooperation with local communities to gain intelligence and prevent illegal activities.
4. **Bilateral Cooperation:** Strengthening cooperation with Myanmar authorities to address cross-border challenges jointly.
5. **Capacity Building:** Equipping security forces with advanced technology and training to counter threats effectively.

Addressing the security challenges along the India-Myanmar border requires a comprehensive approach involving infrastructure development, intelligence sharing, community engagement, and bilateral cooperation. Effective border policing and management are crucial to ensure peace and stability in the North-East region.

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