

General Studies Paper-III

Q1. The nature of economic growth in India in recent times is often described as jobless growth. Do you agree with this view? Give arguments in favour of your answer.

(200 words) [12½]

Approach to question:

Here are the arguments in favour of this view:

- 1. Automation and Technological Advancements:** With the advent of automation and technological advancements, many industries have adopted labour-saving technologies, leading to reduced demand for human labour and fewer job opportunities.
- 2. Informal Sector Dominance:** The majority of employment in India comes from the informal sector, which is characterized by low-productivity and low-wage jobs. The formal sector, which has the potential to create more quality jobs, has not expanded at a significant pace.

In conclusion, the nature of economic growth in India in recent times can indeed be described as jobless growth due to factors such as automation and technological advancements, dominance of the informal sector, skill mismatch, jobless growth in key sectors, and the lack of labour market reforms.

Answer:

The nature of economic growth in recent times in India has been a topic of discussion, with some experts labeling it as jobless growth. Let's examine the arguments in favor of this view:

Arguments in Favor of Jobless Growth:

- 1. Technological Advancements:** Rapid advancements in technology and automation have replaced labor-intensive tasks, leading to reduced employment opportunities.
- 2. Informal Sector Dominance:** A significant portion of employment in India comes from the informal sector, where job security and benefits are limited.
- 3. Skill Mismatch:** There is a mismatch between the skills possessed by the workforce and the skills demanded by the industries, resulting in a lack of suitable job opportunities.
- 4. Slow Manufacturing Growth:** The manufacturing sector's slow growth has failed to absorb the expanding labor force, contributing to jobless growth.

Considering the factors of technological shifts, informal sector predominance, skill mismatch, and sluggish manufacturing growth, the view of jobless growth in India holds weight. Addressing these challenges is crucial for achieving inclusive and sustainable economic growth with ample employment opportunities.

Q2. Livestock rearing has a big potential for providing non-farm employment and income in rural areas. Discuss suggesting suitable measures to promote this sector in India.

(200 words) [12½]

Approach to question:

Livestock rearing has significant potential for providing non-farm employment and income in rural areas. Here are some suitable measures to promote this sector in India:

- 1. Skill Development:** Implement skill development programs to enhance the knowledge and expertise of livestock farmers, focusing on modern farming practices, animal husbandry techniques, and healthcare management.
- 2. Access to Credit:** Provide easy access to credit facilities for livestock farmers to invest in animal rearing, purchase high-quality breeds, improve infrastructure, and expand their operations.

By implementing these measures, India can promote livestock rearing as a viable and sustainable source of non-farm employment and income in rural areas, contributing to rural development, poverty alleviation, and overall economic growth.

Answer:

Livestock rearing presents significant potential for generating non-farm employment and income in rural areas, contributing to rural development and poverty reduction.

Measures to Promote Livestock Rearing:

- 1. Skill Development:** Training programs to enhance livestock management skills and modern husbandry practices for rural communities.
- 2. Access to Credit:** Easy availability of credit and financial support to encourage investment in livestock rearing.

3. **Veterinary Services:** Strengthening veterinary services to ensure animal health and disease prevention.
4. **Market Linkages:** Facilitating better market linkages for livestock products, enabling farmers to get fair prices for their produce.
5. **Value Addition:** Promoting value addition through processing and marketing of livestock products.

Promoting livestock rearing in rural areas requires a multi-faceted approach involving skill development, financial support, better healthcare facilities, and market linkages. By empowering rural communities, the livestock sector can emerge as a key driver of non-farm employment and income, contributing to rural prosperity and economic growth.

Q3. In the view of the declining average size of land holdings in India which has made agriculture non-viable for a majority of farmers, should contract farming and land leasing be promoted in agriculture? Critically evaluate the pros and cons.

(200 words) [12½]

Approach to question:

Contract farming and land leasing can be potential solutions to address the challenges posed by the declining average size of land holdings in India. Here is a critical evaluation of the pros and cons of promoting these practices in agriculture:

Pros of Contract Farming and Land Leasing:

1. **Access to Technology and Expertise:** Contract farming allows farmers to benefit from the knowledge, technology, and expertise provided by the contracting companies. It can improve productivity and efficiency in agriculture.
2. **Risk Mitigation:** Contract farming offers a certain level of security as farmers have predetermined prices and markets for their produce. It reduces market uncertainties and price fluctuations.

Cons of Contract Farming and Land Leasing:

- (a) **Imbalanced Power Dynamics:** Contract farming may lead to an imbalance of power between farmers and contracting companies, with farmers having limited bargaining power and facing potential exploitation.
- (b) **Dependency on Contractors:** Farmers may become dependent on contract farming companies for inputs, credit, and marketing, limiting their independence and control over agricultural practices.

Therefore, promoting these practices in agriculture should be accompanied by robust safeguards, transparent regulations, and measures to protect the interests of farmers, especially small and marginal ones, to ensure their livelihood security and sustainable agriculture.

Answer:

The declining average size of land holdings in India has posed challenges for small and marginal farmers, making agriculture non-viable for many. To address this issue, the promotion of contract farming and land leasing has been suggested as potential solutions. Let's critically evaluate the pros and cons of these approaches.

Pros of Contract Farming and Land Leasing:

1. **Access to Technology and Capital:** Contract farming allows small farmers to access modern technology, better seeds, and capital from agribusiness companies.
2. **Risk Sharing:** Contract farming and land leasing can shift production risks to the contracting party or lessee.

Cons of Contract Farming and Land Leasing:

1. **Exploitation:** Small farmers may face exploitative contracts and unequal bargaining power in contract farming.
2. **Land Ownership Concerns:** Land leasing may lead to insecurity for tenants due to the lack of clear land rights.

While contract farming and land leasing offer potential benefits in terms of technology access and risk sharing, careful regulation and safeguards are necessary to protect the interests of small farmers and prevent exploitation and land concentration.

Q4. How can the Digital India program help farmers to improve farm productivity and income? What step has the government taken in this regard? (200 words) [12½]

Approach to question:

The Digital India program can play a crucial role in improving farm productivity and income for farmers. Here are some ways in which the program can help:

1. **Access to Information:** Digital platforms can provide farmers with timely and accurate information on weather forecasts, market prices, crop management practices, and government schemes. This knowledge empowers farmers to make informed decisions and adopt best practices.
2. **Market Linkages:** Digital platforms enable farmers to connect directly with buyers, eliminating middlemen and ensuring fair prices for their produce. Online marketplaces and e-commerce platforms facilitate efficient and transparent trade, expanding market access for farmers.

By leveraging the Digital India program, farmers can harness the benefits of digital technologies, access vital information and services, improve farm practices, connect with markets, and ultimately enhance their productivity and income.

Answer:

The Digital India program aims to transform India into a digitally empowered society. This program has the potential to significantly benefit farmers and enhance farm productivity and income.

Ways Digital India can help farmers:

1. **Access to Information:** Digital platforms can provide real-time access to weather forecasts, market prices, and agricultural practices, aiding informed decision-making.
2. **E-commerce Platforms:** Online marketplaces enable farmers to sell their produce directly to consumers, eliminating intermediaries and increasing profits.
3. **Mobile Apps:** Farming-related mobile apps offer valuable guidance on crop management, pest control, and best practices.
4. **Digital Payments:** Facilitating digital transactions reduces cash dependence and ensures timely payments to farmers.

Government Initiatives:

1. **e-NAM:** The National Agricultural Market (e-NAM) platform promotes online trading of agricultural produce, benefitting farmers with better price realization.
2. **Kisan Suvidha App:** The app provides critical information on weather, market prices, and agriculture-related services.

Through the Digital India program and initiatives like e-NAM and Kisan Suvidha App, the government is leveraging digital technology to empower farmers and improve their productivity and income prospects, contributing to agricultural growth and rural development.

- Q5. In what way could replacement of price subsidy with Direct Benefit Transfer (DBT) change the scenario of subsidies in India? Discuss. (200 words) [12½]**

Approach to question:

The replacement of price subsidy with Direct Benefit Transfer (DBT) has the potential to change the scenario of subsidies in India in the following ways:

1. **Targeted Approach:** DBT enables subsidies to be targeted directly to the intended beneficiaries, eliminating leakages and ensuring that the benefits reach the deserving individuals or households.
2. **Cost Efficiency:** DBT reduces administrative costs associated with the distribution of subsidies by eliminating middlemen and reducing paperwork. It promotes efficiency by directly transferring funds to the bank accounts of beneficiaries.
3. **Financial Inclusion:** DBT promotes financial inclusion as it requires beneficiaries to have bank accounts, encouraging them to access formal financial services and participate in the digital economy.

Overall, the replacement of price subsidy with Direct Benefit Transfer can lead to a more efficient, transparent, and targeted subsidy system in India. It promotes financial inclusion, reduces leakages, empowers beneficiaries, encourages policy reforms, and enhances the overall effectiveness of subsidy programs.

Answer:

The replacement of price subsidies with Direct Benefit Transfer (DBT) has the potential to transform the subsidy scenario in India.

Ways DBT can change the subsidy scenario:

1. **Targeted Approach:** DBT enables subsidies to reach the intended beneficiaries directly, avoiding leakages and ensuring better targeting.
2. **Financial Inclusion:** DBT promotes financial inclusion by encouraging beneficiaries to open bank accounts.
3. **Cost Efficiency:** DBT reduces administrative costs and wastage associated with traditional price subsidies.
4. **Choice to Beneficiaries:** DBT gives beneficiaries the freedom to choose products or services based on their needs.

By replacing price subsidies with DBT, India can achieve better subsidy targeting, financial inclusion, cost efficiency, and beneficiary empowerment. This transformation in the subsidy framework holds promise for more effective and transparent subsidy delivery systems, benefitting both the government and the recipients.

- Q6. What are the impediments in marketing and supply chain management in developing the food processing industry in India? Can e-commerce help in overcoming this bottleneck? (200 words) [12½]**

Approach to question:

Impediments in marketing and supply chain management in developing the food processing industry in India include:

1. **Infrastructure Gaps:** Inadequate storage facilities, transportation networks, and cold chains hinder the smooth movement of perishable goods, leading to post-harvest losses and quality degradation.
2. **Fragmented Supply Chain:** The presence of multiple intermediaries and lack of coordination among stakeholders result in inefficiencies, delays, and increased costs along the supply chain.

E-commerce can help overcome these bottlenecks in the following ways:

1. **Market Access:** E-commerce platforms provide a direct link between food processors and consumers, enabling wider market reach and eliminating the need for multiple intermediaries.

2. **Real-time Information:** E-commerce platforms can provide real-time market data, trends, and consumer preferences, enabling food processors to make informed decisions on production and marketing strategies.

Complementary measures such as infrastructure development, skill enhancement, and supportive policies are also crucial to fully leverage the potential of e-commerce in overcoming the bottlenecks in marketing and supply chain management in the food processing sector.

Answer:

The food processing industry in India faces several challenges in marketing and supply chain management, hindering its development and growth.

Impediments in Marketing and Supply Chain Management:

1. **Inadequate Infrastructure:** Poor transportation and storage facilities result in high post-harvest losses.
2. **Fragmented Supply Chain:** Lack of integration between farmers, processors, and retailers leads to inefficiencies.
3. **Lack of Standardization:** Inconsistent quality and lack of standardization impact market acceptability.
4. **Limited Cold Chain Facilities:** Insufficient cold chain infrastructure affects perishable products' shelf life.

E-commerce as a Solution:

1. **Direct Linkages:** E-commerce can establish direct connections between producers and consumers, reducing intermediaries.
2. **Market Reach:** Online platforms can expand the market reach for processed food products.
3. **Supply Chain Efficiency:** E-commerce can improve supply chain management by providing real-time information and tracking.

E-commerce can play a pivotal role in addressing the marketing and supply chain bottlenecks faced by the food processing industry in India. By leveraging technology, the industry can enhance efficiency, reduce wastage, and reach a wider consumer base, fostering its growth and competitiveness.

- Q7. Craze for gold in India has led to surge in import of gold in recent years and put pressure on balance of payments and external value of rupee. In view of this, examine the merits of the Gold Monetization scheme.**

(200 words) [12½]

Approach to question:

The craze for gold in India has resulted in a surge in gold imports, impacting the country's balance of payments and the external value of the rupee. The Gold

Monetization Scheme aims to address this issue and offers the following merits:

1. **Utilization of Idle Gold:** The scheme encourages individuals and institutions to deposit their idle gold holdings with banks, allowing the mobilization of this gold for productive purposes rather than keeping it as unproductive assets.
2. **Reduced Imports:** By mobilizing the existing gold reserves within the country, the scheme aims to reduce the reliance on gold imports, thereby easing the pressure on the balance of payments and the external value of the rupee.

Furthermore, addressing cultural and emotional attachment to gold and building trust in the scheme are important considerations for its widespread adoption and success.

Answer:

The craze for gold in India has resulted in a surge in gold imports, putting pressure on the country's balance of payments and the external value of the rupee. In this context, the Gold Monetization Scheme has been introduced as a potential solution.

Merits of Gold Monetization Scheme:

1. **Reducing Import Dependency:** The scheme encourages people to deposit idle gold with banks, reducing the need for importing gold.
2. **Mobilizing Gold for Economic Growth:** The monetization of idle gold resources can be used for productive purposes, contributing to economic growth.
3. **Improving Balance of Payments:** Lower gold imports through the scheme can ease the pressure on the country's balance of payments.
4. **Boosting Financial Inclusion:** The scheme provides an opportunity for people to earn interest on their gold deposits, promoting financial inclusion.

The Gold Monetization Scheme offers several advantages, including reducing gold imports, mobilizing idle gold resources, and enhancing financial inclusion. Implementing the scheme effectively can help alleviate the pressure on the balance of payments and strengthen the external value of the rupee.

- Q8. "Success of 'Make in India' program depends on the success of Skill India programme and radical labour reforms". Discuss with logical arguments.** (200 words) [12½]

Approach to question:

The success of the 'Make in India' program is indeed closely intertwined with the success of the Skill India program and radical labour reforms. Here are the logical arguments supporting this view:

1. **Skilled Workforce:** The 'Make in India' program aims to transform India into a global manufacturing hub. To achieve this, a skilled workforce is essential. The Skill India program focuses on enhancing the skills of the Indian workforce, providing them with the necessary training and capabilities to meet the demands of the manufacturing sector.
2. **Enhanced Productivity:** Skilled workers are more productive and efficient, leading to higher-quality outputs and increased competitiveness. By investing in skill development, the 'Make in India' program can leverage a skilled workforce to attract domestic and foreign investments and drive economic growth.

By emphasizing the importance of skill development and labour reforms, the 'Make in India' program can create a virtuous cycle of increased productivity, employment generation, and inclusive growth, leading to the overall success of India's manufacturing sector.

Answer:

The 'Make in India' program aims to boost manufacturing and promote India as a global manufacturing hub. However, its success is contingent on the effectiveness of the Skill India program and radical labor reforms.

Logical Arguments:

1. **Skill India:** A skilled workforce is essential for successful manufacturing. Skill development initiatives can provide industries with competent workers.
2. **Labor Reforms:** Flexible labor laws can attract investment and enable businesses to operate efficiently, fostering industrial growth.
3. **Enhancing Competitiveness:** A skilled and flexible workforce can make Indian industries more competitive globally.
4. **Job Creation:** Skill development and labor reforms can generate employment opportunities, improving socio-economic conditions.

The symbiotic success of 'Make in India' and Skill India programs depends on a skilled and flexible workforce through skill development and radical labor reforms. Together, they can drive manufacturing growth and position India as a manufacturing powerhouse.

- Q9. To what factors can be the recent dramatic fall in equipment cost and tariff of solar energy be attributed? What implications does the trend have for thermal power producers and related industry? (200 words) [12½]**

Approach to question:

The recent dramatic fall in equipment cost and tariffs of solar energy can be attributed to the following factors:

1. **Technological Advancements:** Advances in solar panel manufacturing and installation techniques have led to increased efficiency and reduced costs, making solar energy more affordable and accessible.
2. **Economies of Scale:** The growing demand for solar energy globally has led to increased production volumes, resulting in economies of scale and cost reductions in manufacturing.

The implications of this trend for thermal power producers and the related industry are as follows:

1. **Increased Competition:** The declining cost of solar energy poses a competitive challenge to thermal power producers. Solar energy is increasingly becoming a viable alternative, potentially leading to reduced demand for thermal power and lower utilization rates for thermal power plants.
2. **Financial Viability:** The falling cost of solar energy makes it an attractive investment option, leading to a shift in capital investments away from thermal power projects. This could impact the financial viability of existing and planned thermal power plants.

Additionally, upgrading existing thermal power plants to improve efficiency and reduce emissions can help mitigate the challenges posed by the declining cost of solar energy.

Answer:

The recent dramatic fall in equipment cost and tariff of solar energy can be attributed to several factors, which have significant implications for thermal power producers and related industries.

Factors for the Fall in Solar Energy Costs:

1. **Technological Advancements:** Improved solar technologies and innovations have led to higher efficiency and reduced costs.
2. **Scale of Production:** Increased demand and larger-scale production have contributed to cost reduction.
3. **Government Policies:** Supportive policies and incentives for solar energy have encouraged investments and development.

Implications for Thermal Power Producers and Related Industry:

1. **Competition:** Cheaper solar energy poses tough competition for thermal power producers, affecting their viability.
2. **Energy Transition:** The trend accelerates the transition towards renewable energy sources, impacting the thermal power sector.
3. **Market Dynamics:** Power prices may see fluctuations due to the increasing share of solar energy in the energy mix.

The falling costs and tariffs of solar energy have positive implications for renewable energy growth, but they pose challenges for the thermal power industry. Policy makers must ensure a smooth energy transition while promoting sustainable and affordable power generation.

Q10. There is a clear acknowledgement that Special Economic Zones (SEZs) are a tool of industrial development, manufacturing and exports. Recognising this potential, the whole instrumentality of SEZs require augmentation. Discuss the issue plaguing the success of SEZs with respect to taxation, governing laws and administration.

(200 words) [12½]

Approach to question:

The success of Special Economic Zones (SEZs) as tools of industrial development, manufacturing, and exports has been acknowledged. However, there are several issues plaguing their success, particularly in the areas of taxation, governing laws, and administration. These issues can be summarized as follows:

1. **Taxation Challenges:** SEZs face complex tax regulations, including issues related to the applicability of indirect taxes, such as the Goods and Services Tax (GST), and the eligibility for tax benefits and exemptions. Lack of clarity and frequent changes in tax policies create uncertainty for businesses operating in SEZs.
2. **Regulatory Framework:** The governing laws and regulations governing SEZs need to be streamlined and made more investor-friendly. There is a need for a clear and consistent policy framework, including simplified procedures for setting up and operating SEZs, obtaining approvals, and complying with regulatory requirements.

Ensuring transparent governance, effective coordination between government agencies, and proactive measures to address the concerns of stakeholders can contribute to the augmentation and success of SEZs in promoting industrial development, manufacturing, and exports.

Answer:

Special Economic Zones (SEZs) are considered essential for industrial development, manufacturing, and exports in India. However, the success of SEZs is plagued by various issues related to taxation, governing laws, and administration.

Issues Affecting SEZs:

1. **Taxation:** Ambiguities in tax laws and frequent changes in tax policies create uncertainty for SEZ investors.
2. **Governing Laws:** Complex regulatory frameworks and bureaucratic procedures hinder the ease of doing business in SEZs.

3. **Administration:** Inefficient and cumbersome administrative processes delay project approvals and clearances.
4. **Land Acquisition:** Difficulties in acquiring land for SEZs create challenges in establishing the necessary infrastructure.

To harness the full potential of SEZs, there is a need to address taxation-related ambiguities, simplify governing laws, and streamline administrative processes. This will create a conducive environment for SEZ development, bolster industrial growth, and enhance exports in India.

Q11. What do you understand by "Standard Positioning System" and "Precision Positioning System" in the GPS era? Discuss the advantage India perceives from its ambitious IRNSS programme employing just seven satellites. (200 words) [12½]

Approach to question:

The "Standard Positioning System" (SPS) and "Precision Positioning System" (PPS) are two categories of positioning systems in the GPS era:

Standard Positioning System (SPS):

1. SPS is the basic positioning service available to the general public.
2. It provides accurate positioning information with an average accuracy of around 10 meters.
3. SPS signals are freely accessible and widely used in various industries, including navigation, transportation, and personal devices.

Precision Positioning System (PPS):

1. PPS is an advanced positioning service primarily used by authorized users, such as military and government agencies.
2. It offers higher accuracy and reliability compared to SPS, with positioning accuracy reaching sub-meter or even centimeter-level.

This allows India to leverage the advantages of both systems and cater to a wide range of applications, benefiting various sectors of the economy and ensuring self-reliance in positioning and navigation capabilities.

Answer:

In the GPS era, two main positioning systems are used: Standard Positioning System (SPS) and Precision Positioning System (PPS). India's ambitious Indian Regional Navigation Satellite System (IRNSS) aims to leverage satellite technology for positioning and navigation.

Standard Positioning System (SPS):

1. SPS is the civilian-grade GPS signal available for public use worldwide.
2. It provides positioning accuracy of around 15 meters.
3. SPS signals are freely available to all users.

Precision Positioning System (PPS):

1. PPS is a highly accurate GPS signal used for military and authorized government users.
2. It offers superior positioning accuracy, typically within a few centimeters.
3. PPS signals are encrypted and restricted to authorized users.

Advantages of India's IRNSS Programme:

1. **Regional Autonomy:** IRNSS ensures India's self-reliance in satellite-based positioning and navigation.
2. **Enhanced Accuracy:** IRNSS offers better accuracy (20 meters) compared to GPS in India and its neighboring regions.
3. **Strategic Importance:** IRNSS enhances India's strategic capabilities for military applications.
4. **Disaster Management:** IRNSS aids in timely disaster management and emergency response.
5. **Socio-Economic Benefits:** The system facilitates improved transportation, agriculture, and infrastructure development.

India's IRNSS program, with just seven satellites, provides significant strategic and socio-economic advantages, enhancing the country's positioning capabilities and fostering development across various sectors.

Q12. What are the areas of prohibitive labour that can be sustainably managed by robots? Discuss the initiatives that can propel the research in premier research institutes for substantive and gainful innovation.

(200 words) [12½]

Approach to question:

Areas of prohibitive labour that can be sustainably managed by robots:

1. **Hazardous Environments:** Robots can be used in industries such as mining, nuclear power plants, and chemical manufacturing, where human presence poses risks to safety and health.
2. **Manufacturing and Assembly:** Robots can automate repetitive tasks in manufacturing processes, including assembly line operations, material handling, and quality control, leading to increased efficiency and productivity.

Initiatives to propel research in premier research institutes for innovation:

1. **Collaborative Partnerships:** Foster collaboration between research institutes, industry, and government agencies to pool resources, share expertise, and promote interdisciplinary research.
2. **Funding Support:** Allocate adequate funding for research institutes to undertake long-term research projects, acquire cutting-edge technology, and support the development of innovative robotic solutions.

3. **Industry-Academia Collaboration:** Encourage closer ties between research institutes and industry by facilitating technology transfer, joint research projects, and industry-sponsored research programs.
4. **Skill Development:** Focus on developing a skilled workforce in robotics and automation by providing training programs, workshops, and internships to students and researchers in premier institutes.

By implementing these initiatives, premier research institutes can create an ecosystem that fosters substantive and gainful innovation in robotics, leading to advancements in technology, addressing societal challenges, and driving economic growth.

Answer:

With the advancement of technology, robots are increasingly being employed to manage areas of prohibitive labor. To promote substantive and gainful innovation, research initiatives in premier research institutes play a crucial role.

Areas of Prohibitive Labor Suitable for Robots:

1. **Hazardous Environments:** Robots can be used to work in dangerous conditions, such as nuclear facilities or disaster-stricken areas.
2. **Manufacturing:** Robotics can enhance efficiency and precision in manufacturing processes, reducing manual labor requirements.
3. **Agriculture:** Robotic automation can assist in tasks like planting, harvesting, and crop monitoring, alleviating labor-intensive farming practices.
4. **Healthcare:** Robots can aid in surgeries and patient care, improving healthcare services.
5. **Mining:** Robots can be deployed in mining operations, eliminating the risk to human workers.

Initiatives for Innovation in Premier Research Institutes:

1. **Funding Support:** Increased financial support for research institutes can bolster innovative projects.
2. **Collaboration:** Encouraging collaboration between research institutes and industry promotes practical research.
3. **Skill Development:** Training programs can equip researchers with cutting-edge knowledge and skills.
4. **Technology Transfer:** Facilitating technology transfer from research to industry encourages implementation.
5. **Intellectual Property Protection:** Strengthening IP protection ensures researchers' benefits and promotes innovation.

Promoting research initiatives in premier research institutes and leveraging robotic technology in areas of prohibitive labor can drive sustainable development, enhance productivity, and improve the quality of life

for individuals working in hazardous or laborious environments.

Q13. Discuss the advantage and security implication of cloud hosting of servers vis-a-vis in-house machine-based hosting for government business. (200 words) [12½]

Approach to question:

Advantages of Cloud Hosting for Government Business:

1. **Scalability and Flexibility:** Cloud hosting allows easy scalability, enabling government agencies to quickly adapt to changing demands and scale up or down server resources as needed.
2. **Cost-Efficiency:** Cloud hosting eliminates the need for upfront investments in hardware and infrastructure, reducing capital expenses. It also offers pay-as-you-go pricing models, allowing agencies to pay only for the resources they use.

Security Implications of Cloud Hosting for Government Business:

1. **Data Security:** Cloud hosting requires careful consideration of data security measures, such as encryption, access controls, and data loss prevention mechanisms, to protect sensitive government information from unauthorized access.
2. **Data Sovereignty:** Government agencies must ensure that their data hosted in the cloud remains within the country's legal jurisdiction to maintain control over data governance and comply with regulatory requirements.

However, it also raises security implications that need to be carefully addressed to ensure the protection of sensitive government data and compliance with privacy and regulatory requirements.

Answer:

In recent years, cloud hosting of servers has gained popularity, offering advantages and posing security implications for government business compared to traditional in-house machine-based hosting.

Advantages of Cloud Hosting:

1. **Cost Efficiency:** Cloud hosting reduces infrastructure and maintenance costs, allowing cost-effective scalability.
2. **Flexibility:** Cloud services offer the flexibility to scale resources as per demand, ensuring optimal performance.
3. **Accessibility:** Cloud hosting allows remote access, promoting collaboration and easy data sharing.
4. **Disaster Recovery:** Cloud providers offer robust disaster recovery mechanisms, ensuring data safety.

Security Implications:

1. **Data Security:** Concerns exist regarding data security and control in third-party cloud environments.

2. **Privacy Risks:** Sensitive government data may face privacy risks due to external hosting.
3. **Dependence on Providers:** Relying on cloud providers could lead to service disruptions if providers face technical issues.
4. **Regulatory Compliance:** Government data often requires strict compliance with regulations, which may be challenging with cloud hosting.

While cloud hosting offers advantages of cost efficiency and flexibility, it poses security implications concerning data privacy and regulatory compliance. A balanced approach, considering critical data requirements and proper risk management, is crucial for government businesses choosing between cloud and in-house hosting options.

Q14. India's Traditional Knowledge Digital Library (TKDL) which has a database containing formatted information on more than 2 million medicinal formulations is proving a powerful weapon in country's fight against erroneous patents. Discuss the pro and cons of making the database available publicly available under open source licensing. (200 words) [12½]

Approach to question:

Pros of making the TKDL database publicly available under open source licensing:

1. **Accessible Knowledge:** Making the TKDL database publicly available allows researchers, scientists, and traditional knowledge practitioners worldwide to access and utilize the wealth of traditional knowledge for research, innovation, and development purposes.
2. **Preventing Erroneous Patents:** By providing access to accurate and documented traditional knowledge, the TKDL database helps prevent the granting of erroneous patents on existing traditional medicinal formulations, protecting the interests of traditional knowledge holders and preventing misappropriation.

Cons of making the TKDL database publicly available under open source licensing:

1. **Misuse and Exploitation:** There is a risk of the TKDL database being misused or exploited for commercial purposes without proper acknowledgement or benefit-sharing with the traditional knowledge holders and communities.
2. **Intellectual Property Protection:** Open source licensing may weaken intellectual property protection for traditional knowledge, making it susceptible to unauthorized use or misappropriation by individuals or entities.

However, it also necessitates addressing concerns related to misuse, intellectual property protection, and the ethical and legal considerations surrounding traditional knowledge.

Answer:

India's Traditional Knowledge Digital Library (TKDL) is a valuable repository of over 2 million medicinal formulations from traditional knowledge systems. It has been instrumental in challenging erroneous patents and protecting India's traditional knowledge. The decision to make this database publicly available under open-source licensing has both advantages and disadvantages.

Pros of Making TKDL Publicly Available under Open Source Licensing:

1. **Wide Access:** Open source licensing enables global access, fostering research, and collaborations.
2. **Innovation:** Public access encourages innovation and development of new products based on traditional knowledge.
3. **Empowerment:** Open access empowers local communities and researchers to explore traditional knowledge for scientific advancements.
4. **Preventing Misuse:** Public availability aids in identifying and challenging erroneous patents, safeguarding traditional knowledge.

Cons of Making TKDL Publicly Available under Open Source Licensing:

1. **Intellectual Property Concerns:** Open source licensing may weaken intellectual property protection, leading to potential misuse.
2. **Commercial Exploitation:** Public access may lead to uncontrolled commercial exploitation of traditional knowledge.
3. **Misappropriation:** Making TKDL open source might expose traditional knowledge to misappropriation by foreign entities.
4. **Lack of Control:** India may lose control over the database's usage and dissemination once it is open source.

Balancing the advantages of wider access and innovation with the risks of exploitation and misappropriation is crucial in deciding the open-source licensing of TKDL. Proper regulations and safeguards must be in place to protect India's traditional knowledge and ensure its rightful utilization for the benefit of society and preservation of cultural heritage.

Q15. Discuss the Namami Gange and National Mission for Clean Ganga (NMCG) programmes and causes of mixed results from the previous schemes. What quantum leaps can help preserve the river Ganga better than incremental inputs?

(200 words) [12½]

Approach to question:

Namami Gange and National Mission for Clean Ganga (NMCG) programmes:

1. Namami Gange and NMCG are ambitious government initiatives aimed at rejuvenating the River Ganga by addressing pollution, improving

water quality, and promoting sustainable development along its banks.

2. The programs focus on various aspects such as wastewater treatment, solid waste management, riverfront development, and biodiversity conservation.

Causes of mixed results from previous schemes:

1. **Lack of Implementation:** Previous schemes often suffered from inadequate implementation due to bureaucratic delays, insufficient funds, and coordination challenges among multiple stakeholders.
2. **Inadequate Infrastructure:** Insufficient wastewater treatment plants, inadequate solid waste management systems, and ineffective riverfront development have hindered the progress of previous schemes.

Quantum leaps in governance, technology, public participation, and sustainable development can help preserve the River Ganga more effectively than incremental inputs.

Answer:

Namami Gange and the National Mission for Clean Ganga (NMCG) are flagship programs aimed at rejuvenating and cleaning the river Ganga, one of India's most sacred and polluted rivers. While these initiatives have made some progress, mixed results are attributed to several factors from previous schemes.

Namami Gange and NMCG Programmes:

1. **Objectives:** The programs aim to reduce pollution, improve water quality, and ensure sustainable management of the Ganga river basin.
2. **Interventions:** Various projects include sewage treatment plants, riverfront development, afforestation, and public awareness campaigns.

Causes of Mixed Results:

1. **Inadequate Funding:** Insufficient financial allocations have limited the scale and scope of projects.
2. **Technological Challenges:** Implementation hurdles and lack of advanced technology for waste management hinder progress.
3. **Coordination:** Fragmented efforts among multiple stakeholders have impacted effective project execution.

Quantum Leaps for Ganga Preservation:

1. **Integrated Approach:** Adopting a comprehensive approach to address pollution from various sources and improve river health.
2. **Technological Innovations:** Utilizing advanced technologies for waste treatment and river management.
3. **Community Participation:** Engaging local communities in preservation efforts to ensure long-term sustainability.

4. **Stringent Enforcement:** Strict enforcement of regulations to prevent industrial and sewage discharge into the river.

To preserve the river Ganga effectively, a holistic approach with innovative technologies, community participation, and stringent enforcement is essential. A quantum leap involving major investments and transformative strategies can bring about lasting change and rejuvenate the Ganga, ensuring its ecological health and cultural significance for generations to come.

Q16. The frequency of earthquakes appears to have increased in the Indian subcontinent. However, India's preparedness for mitigating their impact has significant gaps. Discuss various aspects. (200 words) [12½]

Approach to question:

1. India is highly vulnerable to earthquakes due to its location in the seismically active Himalayan belt and the North-Eastern region.
2. The frequency of earthquakes has increased in recent years, with some notable ones being the 2001 Bhuj earthquake and the 2015 Nepal earthquake.
3. Despite the increased frequency, India's preparedness for mitigating the impact of earthquakes remains inadequate.
4. There are gaps in the areas of seismic zoning, construction practices, early warning systems, and disaster response mechanisms.

Answer:

The Indian subcontinent has experienced an increase in the frequency of earthquakes in recent times, posing significant challenges to India's preparedness for mitigating their impact. Various aspects contribute to the gaps in earthquake preparedness in the country.

Aspects of India's Earthquake Preparedness:

1. **Seismic Zoning:** Inadequate implementation of seismic zoning maps and guidelines hampers proper assessment of earthquake-prone areas.
2. **Building Codes:** Non-compliance with earthquake-resistant building codes in construction exacerbates the vulnerability of structures.
3. **Early Warning Systems:** Limited investment in early warning systems hinders timely alerts to minimize casualties and damage.
4. **Public Awareness:** Insufficient public awareness and preparedness campaigns lead to ineffective response during earthquakes.
5. **Retrofitting:** The lack of retrofitting existing structures to meet seismic standards compromises their resilience.
6. **Disaster Response:** Gaps in disaster response mechanisms affect timely and efficient rescue and relief operations.

7. **Regional Cooperation:** Limited regional co-operation for sharing earthquake data and knowledge restricts preparedness efforts.

India's increased vulnerability to earthquakes necessitates urgent attention to address gaps in earthquake preparedness. Strengthening seismic zoning, enforcing building codes, investing in early warning systems, enhancing public awareness, retrofitting structures, and bolstering disaster response mechanisms are critical measures to minimize the impact of earthquakes and protect lives and property in the Indian subcontinent. Regional cooperation and collaborations in earthquake research and preparedness will further reinforce the country's resilience to seismic events.

Q17. Human right activists constantly highlight the fact that the Armed forces (Special Powers) Act, 1958 (AFSPA) is a draconian act leading to cases of human right abuses by security forces. What sections of AFSPA are opposed by the activists? Critically evaluate the requirement with reference to the view held by Apex Court. (200 words) [12½]

Approach to question:

Sections of AFSPA opposed by activists:

1. Section 4(a) grants special powers to the armed forces to use force, including lethal force, and to arrest without a warrant in "disturbed areas".
2. Section 4(c) provides immunity to the armed forces from prosecution for their actions during operations.

Critically evaluating the requirement with reference to the view held by the Apex Court:

1. The Supreme Court has acknowledged the concerns raised by activists and emphasized the need to strike a balance between national security and human rights.
2. The court has called for exercising restraint and ensuring accountability in cases of human rights abuses by the armed forces.

In conclusion, activists oppose sections of AFSPA that grant extensive powers and immunity to the armed forces, leading to concerns of human rights abuses. The Supreme Court has acknowledged these concerns and stressed the importance of striking a balance between security and human rights, emphasizing accountability and oversight mechanisms.

Answer:

The Armed Forces (Special Powers) Act, 1958 (AFSPA), has been a subject of contention, with human rights activists raising concerns over its draconian provisions and alleged human rights abuses by security forces. Let's discuss the sections of AFSPA opposed by activists and critically evaluate the requirement with reference to the view held by the Apex Court.

Sections Opposed by Activists:

1. **Section 4:** Empowers security forces to use force, even to the extent of causing death, in disturbed areas.
2. **Section 6:** Provides legal immunity to armed forces personnel for actions taken under AFSPA.
3. **Section 7:** Permits arrests without a warrant and allows for detention and search operations.
4. **Section 5:** Granting broad powers to officers in charge, leading to allegations of abuse of authority.

Critical Evaluation:

1. **Activists' Concerns:** AFSPA's provisions have been criticized for human rights abuses, lack of accountability, and excessive use of force.
2. **Apex Court's View:** The Supreme Court of India has upheld the constitutionality of AFSPA while emphasizing the need for accountability and adherence to humanitarian law.
3. **Security Imperative:** AFSPA is considered necessary to grant special powers to deal with insurgency and maintain law and order in disturbed areas.
4. **Balance Needed:** Striking a balance between security concerns and human rights protection is crucial for effective governance.

While AFSPA's provisions are essential for maintaining security, the potential for human rights abuses demands careful implementation and adherence to the rule of law. It is imperative to address activist concerns and ensure accountability, respecting human rights while safeguarding national security interests.

Q18. Religious indoctrination via social media has resulted in Indian youth joining the ISIS. What is ISIS and its mission? How can ISIS be dangerous to the internal security of our country? (200 words) [12½]

Approach to question:

ISIS (Islamic State of Iraq and Syria), also known as ISIL (Islamic State of Iraq and the Levant), is a jihadist extremist group that emerged in the early 2000s with the aim of establishing a caliphate based on their interpretation of Islamic law.

ISIS's mission:

1. **Establishing a caliphate:** ISIS seeks to create an Islamic state governed by its extremist ideology, rejecting national borders and advocating for strict adherence to its version of Sharia law.
2. **Spreading its ideology:** ISIS aims to expand its influence globally by recruiting individuals and promoting its extremist ideology, using propaganda and social media as key tools for recruitment and indoctrination.

Why ISIS is dangerous to India's internal security:

1. **Radicalization of Indian youth:** ISIS's effective use of social media and online platforms has led to the radicalization of the Indian youth, making them susceptible to their extremist ideology and recruitment efforts.
2. **Terrorist attacks:** ISIS has inspired or directed terrorist attacks around the world, including India. Individuals who have been radicalized may carry out attacks within the country, posing a threat to public safety and security.

It is crucial for India to address the root causes of radicalization, enhance intelligence and security measures, strengthen international cooperation, and engage in countering extremist propaganda to counter the threat posed by ISIS to internal security.

Answer:

The Islamic State of Iraq and Syria (ISIS) is a radical jihadist group that emerged in the early 2000s and gained prominence in 2014. It aims to establish a global Islamic caliphate governed by its strict interpretation of Islamic law. The group's use of social media for religious indoctrination has attracted the Indian youth, posing a significant threat to the internal security of the country.

ISIS and its Mission:

1. **Origin:** ISIS originated from Al-Qaeda in Iraq and expanded its influence into Syria and other regions.
2. **Caliphate:** Its primary mission is to establish a caliphate ruled by its leader (Caliph) as the sole legitimate authority for all Muslims.
3. **Violence and Terrorism:** ISIS employs violence and terrorism as a means to achieve its goals, including attacks on civilians and religious minorities.
4. **Online Propaganda:** The group utilizes social media to propagate its ideology and recruit followers globally.

Danger to Internal Security:

1. **Radicalization:** Social media-based indoctrination has led Indian youth to sympathize with ISIS's ideology and join its ranks.
2. **Terrorist Activities:** Radicalized individuals returning to India after joining ISIS abroad pose a significant security threat with the potential to carry out terrorist activities.
3. **Sectarian Tensions:** ISIS's actions can fuel sectarian tensions within India's diverse religious and cultural fabric.
4. **Recruitment Networks:** The group's online presence facilitates the formation of sleeper cells and recruitment networks in India.

The allure of ISIS's extremist ideology through social media poses a considerable threat to India's internal security. Effective counter-radicalization measures, intelligence coordination, and monitoring online activities are crucial

to mitigating the impact of this dangerous trend and safeguarding the country's stability and security.

Q19. The persisting drives of the government for development of large industries in backward areas have resulted in isolating the tribal population and the farmers who face multiple displacements. With Malkangiri and Naxalbari foci, discuss the corrective strategies needed to win the Left Wing Extremism (LWE) doctrine affected citizens back into mainstream of social and economic growth. (200 words) [12½]

Approach to question:

Corrective strategies to integrate LWE-affected citizens into the mainstream:

1. **Inclusive development:** Promote inclusive and sustainable development that takes into account the specific needs and aspirations of tribal populations and farmers. Focus on improving livelihood opportunities, providing basic amenities, and ensuring equitable access to resources.
2. **Land and forest rights:** Recognize and secure the land and forest rights of tribal communities. Implement land reforms, facilitate community participation in decision-making processes, and protect their traditional rights over natural resources.

By implementing these corrective strategies, the government can address the root causes of discontent and marginalization, promoting social and economic growth that is inclusive and sustainable, and effectively combat Left Wing Extremism in areas like Malkangiri and Naxalbari.

Answer:

The government's focus on developing large industries in backward areas has often led to the displacement and isolation of tribal populations and farmers, resulting in the rise of Left Wing Extremism (LWE) in regions like Malkangiri and Naxalbari. To address this issue, corrective strategies are needed to integrate the affected citizens back into the mainstream of social and economic growth.

Corrective Strategies for LWE-Affected Citizens:

1. **Inclusive Development:** Prioritize inclusive and sustainable development projects that benefit local communities while respecting their cultural and environmental concerns.
2. **Land and Livelihood Security:** Ensure land and livelihood security for tribal populations and farmers through proper land acquisition and compensation mechanisms.
3. **Education and Skill Development:** Invest in education and skill development programs to empower youth from LWE-affected regions, providing opportunities for better livelihoods.

4. **Dialogue and Reconciliation:** Engage in dialogue with LWE groups to address grievances and promote peaceful solutions.
5. **Infrastructure Development:** Focus on building basic infrastructure like roads, healthcare facilities, and schools to improve living conditions.
6. **Decentralized Governance:** Strengthen local governance structures to empower communities in decision-making processes.
7. **Security Measures:** Adopt a balanced approach to security measures, ensuring the protection of citizens while respecting human rights.
8. **Community Participation:** Involve local communities in planning and implementation of development projects to foster ownership.

Winning LWE-affected citizens back into the mainstream requires a comprehensive approach that addresses their social, economic, and political concerns. By promoting inclusive development, ensuring land and livelihood security, investing in education and skills, and fostering dialogue, the government can create a conducive environment for the integration and upliftment of the marginalized sections, leading to sustainable peace and development in these regions.

Q20. Considering the threats cyberspace poses for the country, India needs Digital Armed Forces to prevent crimes. Critically evaluate the National Cyber Security Policy, 2013, outlining the challenges perceived in its effective implementation. (200 words) [12½]

Approach to question:

Challenges in the effective implementation of the National Cyber Security Policy, 2013:

1. **Lack of awareness and capacity:** There is a significant gap in awareness and capacity-building initiatives to address cyber threats at various levels, including individuals, organizations, and government agencies. Adequate training and education programs are required to enhance cyber security skills and knowledge.
2. **Fragmented approach:** The implementation of cyber security measures is often fragmented across different government agencies, resulting in a lack of coordination and collaboration. There is a need for a centralized authority or agency to oversee and coordinate cyber security efforts.

By addressing these challenges, India can strengthen its cyber security posture and develop robust Digital Armed Forces to prevent cyber crimes and protect its critical infrastructure and national interests in the cyberspace.

Answer:

With the increasing threats in cyberspace, the need for Digital Armed Forces to prevent cybercrimes has become crucial for India. In this context, the National Cyber Security Policy, 2013 plays a significant role in safeguarding the nation's digital assets. However, its effective implementation faces several challenges.

Challenges in the Implementation of National Cyber Security Policy, 2013:

1. **Lack of Coordination:** The policy involves multiple stakeholders, leading to coordination challenges among different agencies.
2. **Rapidly Evolving Threat Landscape:** The dynamic nature of cyber threats demands continuous updates and adaptability, which may be challenging to achieve.
3. **Cybersecurity Expertise:** The shortage of skilled cybersecurity professionals hinders the effective implementation of the policy.

4. **Regulatory Framework:** A comprehensive and up-to-date regulatory framework is necessary to support the policy's objectives.
5. **Data Localization:** Ensuring data localization and sovereignty presents technological and policy challenges.
6. **Budgetary Constraints:** Adequate funding and resource allocation are essential for the successful implementation of the policy.
7. **International Cooperation:** Cyber threats transcend borders, necessitating cooperation with other nations for collective defense.

The National Cyber Security Policy, 2013, lays the foundation for enhancing India's cybersecurity measures, but it faces significant challenges in terms of coordination, expertise, regulation, and funding. Addressing these challenges and developing robust Digital Armed Forces can strengthen India's cyber resilience and protect its critical infrastructure and digital assets from cyber threats.