

# UPSC CSE (Main) 2014

## General Studies Paper-III

- Q1. Normally countries shift from agriculture to industry and then later to services, but India shifted directly from agriculture to services. What are the reasons for the huge growth of services vis-a-vis industry in the country? Can India become a developed country without a strong industrial base?**

(200 words) [12½]

### Approach to question:

Reasons for the growth of services over industry in India (2014):

1. **Demographic advantage:** Large population provided a vast pool of skilled manpower for service sectors like IT, BPO, and financial services.
2. **Globalization:** Liberalization policies attracted foreign investment, leading to the expansion of service-based industries.
3. **Technological advancements:** India's proficiency in information technology and software development boosted the growth of service sectors.

### Answer:

India's unique economic trajectory has witnessed a significant shift from agriculture to services, bypassing a conventional industrial phase. Several factors contributed to the rapid growth of the services sector in India, leading to questions about its industrial base and development prospects.

### Reasons for the Growth of Services:

1. **Demographic Dividend:** A large and skilled English-speaking workforce attracted outsourcing and offshoring opportunities in IT and BPO services.
2. **Knowledge Economy:** Investment in education and technology fostered a knowledge-based economy, driving service sector growth.
3. **Economic Liberalization:** Market-oriented reforms since the 1990s facilitated private sector growth, including services.
4. **Globalization:** Integration with the global economy opened up service markets and export opportunities.

- Can India Become a Developed Country without a Strong Industrial Base?**

While services have driven economic growth and employment, a robust industrial base is crucial for sustained development. Industrialization promotes innovation, manufacturing, and value addition, generating inclusive growth and reducing income disparities. To achieve long-term development, India needs to balance its services dominance with a thriving and competitive manufacturing sector.

- Q2. "While we flaunt India's demographic dividend, we ignore the dropping rates of employability". What are we missing while doing so? Where will the jobs that India desperately needs come from? Explain.**

(200 words) [12½]

### Approach to question:

1. In 2014, the issue of dropping rates of employability was a concerning topic in India.
2. India's demographic dividend, the advantage of having a large working-age population, is often touted as a major strength of the economy.
3. However, recent studies have highlighted the declining rates of employability among job seekers in the country, indicating a mismatch between the skills demanded by employers and those possessed by potential employees.

### Answer:

India's demographic dividend is the advantage that the country possesses due to its large young population. However, this advantage is being overlooked as the rates of employability in India are dropping. In 2014, this was a significant concern, and it still is today.

1. **Quality education:** Despite having the world's largest education system, India's education quality is poor, and most graduates are not job-ready.
2. **Skill development:** There is a lack of emphasis on skill development, which has resulted in a gap between what the industry requires and what the education system provides.
1. **Manufacturing sector:** The government needs to focus on promoting the manufacturing sector and encourage foreign investment.

2. **Small and medium enterprises:** Encouraging the growth of small and medium enterprises can help create jobs and reduce the dependence on the agricultural sector.

In conclusion, India's demographic dividend can only be realized if the country's education system is improved, and there is a focus on skill development and entrepreneurship. Additionally, the government needs to promote the manufacturing sector, encourage the growth of small and medium enterprises, invest in infrastructure development, and focus on the digital economy to create the jobs that India desperately needs.

**Q3. There is also a point of view that Agricultural Produce Market Committees (APMCs) set up under the State Acts have not only impeded the development of agriculture but also have been the cause of food inflation in India. Critically examine. (200 words) [12½]**

**Approach to question:**

1. Agricultural Produce Market Committees (APMCs) were established to regulate the agricultural markets and prevent exploitation of farmers by intermediaries and traders.
2. However, the functioning of APMCs has been marred by issues like lack of transparency, cartelization, and restrictive market practices.
3. APMCs have restricted competition and inhibited private sector participation in agricultural marketing, leading to inefficiencies and higher transaction costs.
4. This has resulted in lower prices for farmers and higher prices for consumers, contributing to food inflation.
5. The lack of infrastructure and investment in cold storage facilities, transportation, and logistics has further exacerbated the problem.

However, supporters of the reforms argue that they will create a more competitive and efficient agricultural market, benefitting both farmers and consumers in the long run.

**Answer:**

Agricultural Produce Market Committees (APMCs) are state-regulated bodies that facilitate the buying and selling of agricultural produce. However, there is a perspective that APMCs have hindered agricultural development and contributed to food inflation in India.

**Critical Examination:**

1. **Market Restrictions:** APMCs impose geographical constraints on farmers, limiting their ability to access diverse markets and competitive prices.
2. **Monopoly and Cartels:** APMCs can lead to monopolistic practices and cartels, reducing price transparency and fair competition.

3. **Infrastructure Inefficiency:** Inadequate storage and transportation facilities in APMCs result in post-harvest losses, impacting prices and inflation.
4. **Higher Transaction Costs:** APMCs levy various fees and taxes, increasing transaction costs for farmers and consumers.
5. **Lack of Innovation:** APMCs may stifle innovation and private investment in agriculture due to bureaucratic control.

While APMCs were intended to protect farmers' interests, their functioning has faced criticism for creating market distortions and inhibiting agricultural growth. Reforms aimed at enhancing competition, reducing transaction costs, and encouraging private investment could address the concerns and promote agricultural development in India.

**Q4. "In the villages itself no form of credit organization will be suitable except the cooperative society". — All India Rural Credit Survey.**

**Discuss this statement in the background of agricultural finance in India. What constraints and challenges do financial institutions supplying agricultural finance face? How can technology be used to better reach and serve rural clients?**

**(200 words) [12½]**

**Approach to question:**

1. Cooperative societies have been a crucial source of credit for rural agriculture in India since the early 20<sup>th</sup> century.
2. The All India Rural Credit Survey emphasized the importance of cooperatives in providing credit to rural areas, as other credit organizations may not be suitable due to factors such as high transaction costs and low-profit margins.
3. However, despite the existence of cooperatives, access to credit remains a challenge for many farmers in India due to a variety of constraints, such as lack of collateral, inadequate financial literacy, and limited outreach of financial institutions.
4. Financial institutions supplying agricultural finance face the challenge of balancing the need for profitability with the social objective of supporting rural development.
5. Technology can be used to better reach and serve rural clients by enabling digital payments, mobile banking, and e-KYC (know your customer) verification, among other things. The use of big data analytics and artificial intelligence can also help in assessing creditworthiness and designing customized financial products. However, these initiatives require extensive infrastructure and investment.

**Answer:**

The All India Rural Credit Survey emphasized the significance of cooperative societies for providing credit in rural areas. In the context of agricultural finance in India, this statement highlights the importance of community-based credit organizations.

**Points:**

1. **Cooperative Societies:** Cooperative credit societies serve as suitable credit channels in villages due to their localized approach, understanding of farmers' needs, and democratic structure.
2. **Constraints and Challenges:** Financial institutions supplying agricultural finance face issues like limited outreach, high transaction costs, and lack of collateral, resulting in inadequate credit availability.
3. **Technology Integration:** Leveraging digital technology can enhance financial inclusion by enabling mobile banking, digital payments, and online loan applications, making financial services accessible to rural clients.
4. **Customized Products:** Tailoring financial products for farmers, such as crop-specific loans and insurance, can better address their needs and risks.

The role of cooperative societies remains crucial for agricultural finance in rural India. Overcoming challenges and leveraging technology will promote financial inclusion and support the growth of the agricultural sector.

**Q5. The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, has come into effect from 1<sup>st</sup> January, 2014. What are the key issues which would get addressed with the Act in place? What implications would it have on industrialization and agriculture in India? (200 words) [12½]**

**Approach to question:**

Key issues addressed with the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, (LARR Act) are:

1. **Consent:** The LARR Act makes it mandatory to obtain the consent of 80% of the landowners in case of private projects and 70% for public-private partnership projects.
2. **Compensation:** The Act increases compensation for land acquisition up to four times the market value in rural areas and twice the market value in urban areas.

**Implications of the Act on industrialization and agriculture in India are:**

1. **Industrialization:** The LARR Act has made land acquisition more transparent and fair, which will help to boost industrialization in the country.

2. **Agriculture:** The Act provides for rehabilitation and resettlement of affected families, which will help to mitigate the adverse impact of land acquisition on agriculture and farmers.

**Challenges faced by the Act are:**

1. **Delay in implementation:** The Act has faced challenges in implementation due to bureaucratic hurdles and lack of political will.
2. **Opposition from industry:** The Act has faced opposition from industry groups who argue that it will delay the process of land acquisition and affect industrial growth.

**Answer:**

The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, came into effect on 1st January 2014, aiming to address key issues related to land acquisition in India.

**Key Issues Addressed by the Act:**

1. **Fair Compensation:** Ensures fair and just compensation for landowners and affected families.
2. **Rehabilitation and Resettlement:** Provides safeguards and assistance for displaced families to ensure their well-being and livelihood restoration.
3. **Consent Clause:** Requires the consent of a majority of affected families for acquiring land for private projects and all affected families for public-private partnership projects.

**Implications on Industrialization and Agriculture:**

1. **Industrialization:** The Act may lead to increased transparency and social acceptance, facilitating smoother land acquisition for industrial projects.
2. **Agriculture:** The Act offers better protection to farmers' interests and may reduce forced displacement, safeguarding agriculture-based livelihoods.

The Act strikes a balance between development and safeguarding the interests of landowners and affected families. It can positively impact industrialization by ensuring transparency and social welfare while protecting agriculture-based livelihoods.

**Q6. Capitalism has guided the world economy to unprecedented prosperity. However, it often encourages short-sightedness and contributes to wide disparities between the rich and the poor. In this light, would it be correct to believe and adopt capitalism for bringing inclusive growth in India? Discuss. (200 words) [12½]**

**Approach to question:**

1. Capitalism has been instrumental in the unprecedented economic growth of many countries, but it also comes with its own set of challenges.
2. Capitalism encourages competition and innovation, which can lead to economic growth, but it can also encourage short-term thinking and lead to unsustainable practices.
3. In a capitalist system, there is a tendency for wealth to concentrate in the hands of a few, leading to wide disparities between the rich and the poor.
4. However, some argue that a well-regulated capitalist system can lead to inclusive growth and benefit all segments of society.

**Answer:**

Capitalism is an economic system that is guided by private ownership of the means of production and their operation for profit. It has been credited with generating unprecedented prosperity across the world. However, it is also known to encourage short-sightedness and contribute to wide disparities between the rich and the poor.

**Pros of capitalism:**

1. **Incentives for innovation and entrepreneurship:** Capitalism creates a system that rewards innovation and entrepreneurship.
2. **Efficiency:** Capitalism promotes efficiency by allowing market forces to allocate resources based on supply and demand.

**Cons of capitalism:**

1. **Short-sightedness:** Capitalism often encourages short-term thinking, which can lead to a focus on short-term profits at the expense of long-term sustainability.
2. **Income inequality:** Capitalism can contribute to wide disparities between the rich and the poor.

**Inclusive growth in India:**

1. India has adopted a mixed economic model that incorporates elements of both capitalism and socialism.
2. The Indian economy is characterized by wide income inequality, with a large proportion of the population living in poverty.

The government needs to play an active role in promoting inclusive growth by implementing policies and programs that address income inequality and promote sustainable development.

**Q7. Explain how Private Public Partnership arrangements, in long gestation**

**infrastructure projects, can transfer unsustainable liabilities to the future. What arrangements need to be put in place to ensure that successive generations' capacities are not compromised?**

**(200 words) [12½]**

**Approach to question:**

1. Private Public Partnership (PPP) is a model of infrastructure development that involves private sector participation and investment in public sector projects.
2. PPPs are used for long gestation infrastructure projects, such as highways, airports, and power plants, which require large amounts of capital investment and have a long payback period.
3. One of the criticisms of PPPs is that they can transfer unsustainable liabilities to the future.
4. In a PPP, the private sector partner is often responsible for designing, building, financing, operating, and maintaining the infrastructure asset.
5. The private sector partner may have an incentive to cut costs and maximize profits, which can lead to shortcuts in design and construction, or inadequate maintenance of the asset over time.
6. This can result in a substandard infrastructure asset that requires costly repairs or replacement in the future, creating a burden for future generations.

**Answer:**

Private Public Partnership (PPP) arrangements in long gestation infrastructure projects can transfer unsustainable liabilities to future generations if not carefully managed.

**Transfer of Unsustainable Liabilities:**

1. **Long-term Contracts:** PPP projects often involve long-term contracts with financial commitments that may become a burden for future generations.
2. **Cost Overruns:** Delays and cost overruns in projects can lead to higher financial burdens passed on to future generations.
3. **Maintenance and Operations:** Future generations may inherit poorly maintained assets, leading to additional costs for repairs and upgrades.

**Arrangements for Sustainable Development:**

1. **Robust Cost-Benefit Analysis:** Thorough cost-benefit analysis before initiating PPP projects to ensure economic viability.
2. **Risk Allocation:** Clearly defining and allocating risks between public and private partners to prevent future liabilities.
3. **Adequate Contingency Plans:** Having contingency plans to address potential cost overruns and delays.



4. **Performance Monitoring:** Regular monitoring and evaluation of project performance to maintain asset quality.

Proper risk management, transparent agreements, and prudent planning can ensure that PPP arrangements do not compromise future generations' capacities and promote sustainable development.

**Q8. National Urban Transport Policy emphasises on 'moving people' instead of 'moving vehicles'. Discuss critically the success of the various strategies of the Government in this regard. (200 words) [12½]**

**Approach to question:**

1. The National Urban Transport Policy (NUTP) was launched in 2006 to address the challenges of urban transport in India, including congestion, air pollution, and road safety, and to promote sustainable and equitable mobility.
2. The NUTP recognizes the need to shift from car-centric to people-centric modes of transport, such as walking, cycling, and public transport, and to integrate land use and transport planning.
3. The NUTP proposes a range of strategies and measures to achieve these goals, such as improving public transport services and infrastructure, promoting non-motorized transport, managing demand and pricing of transport services, and enhancing institutional and regulatory frameworks.
4. Some of the key initiatives taken by the Government to implement the NUTP include the Smart Cities Mission, the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), and the Metro Rail Policy.
5. These initiatives have resulted in the development of new metro rail networks, bus rapid transit systems, and non-motorized transport infrastructure in many cities, as well as the adoption of sustainable transport plans and policies.

**Answer:**

The National Urban Transport Policy (NUTP) was launched in 2006 with the objective of promoting sustainable and equitable mobility in urban areas. The policy focuses on the principles of moving people, rather than vehicles, and emphasizes the need for a multi-modal transport system.

**Encouraging public transport:** The government has taken various steps to promote public transport, such as the introduction of lowfloor buses, metro rails, and suburban railways in some cities. These measures have

led to increased usage of public transport in some areas, but challenges remain, such as overcrowding, poor last-mile connectivity, and inadequate frequency.

**However, there are challenges in implementing the NUTP strategies effectively, such as:**

**Limited funding:** The implementation of sustainable and equitable mobility systems requires significant financial resources, which may be a challenge in a country with limited resources.

In conclusion, while the NUTP has led to some positive developments in the urban transport sector, there are several challenges that need to be addressed for the effective implementation of its strategies. A sustained effort by all stakeholders, including governments, transport agencies, and citizens, is necessary to achieve sustainable and equitable mobility in India's urban areas.

**Q9. Foreign Direct Investment (FDI) in the defence sector is now set to be liberalized. What influence this is expected to have on Indian defence and economy in the short and long run? (200 words) [12½]**

**Approach to question:**

**Short-term implications:**

1. The move is expected to attract foreign investment in the defence sector, which will boost India's defence capabilities.
2. It is also expected to create employment opportunities in the sector.
3. It will provide access to advanced technology and help in the development of indigenous capabilities.

**Long-term implications:**

1. Liberalization of FDI in the defence sector is expected to boost the domestic defence industry and promote the development of indigenous capabilities.
2. It will encourage the development of a robust defence ecosystem, including R&D, manufacturing, and servicing.
3. It will also provide a fillip to India's Make in India initiative, which aims to promote domestic manufacturing.

Overall, liberalization of FDI in the defence sector is expected to have a positive impact on India's defence and economy, both in the short and long run.

**Answer:**

The liberalization of Foreign Direct Investment (FDI) in the defence sector is expected to have significant implications for both the Indian defence industry and the economy at large.

**Influence on Indian Defence and Economy:****Short Run:**

1. **Technology Transfer:** FDI infusion can bring advanced technologies and expertise to enhance India's defence capabilities.
2. **Increased Investment:** Foreign investments may lead to increased production capacity and modernization of defence infrastructure.

**Long Run:**

1. **Indigenization:** Collaboration with foreign firms can boost domestic defence manufacturing and indigenization efforts.
2. **Employment Generation:** FDI-led expansion can create job opportunities and boost the manufacturing sector.
3. **Export Potential:** Enhanced capabilities may lead to increased defence exports, contributing to the country's economic growth.

Liberalization of FDI in the defence sector is expected to boost India's defence capabilities, promote domestic manufacturing, and foster economic growth in the long run.

**Q10. Scientific research in Indian universities is declining, because a career in science is not as attractive as are business professions, engineering or administration, and the universities are becoming consumer-oriented. Critically comment.**

(200 words) [12½]

**Approach to question:**

1. Indian universities are facing challenges in attracting and retaining top talent in scientific research due to various factors such as low pay, lack of funding and infrastructure, and limited career opportunities.
2. Many students in India prefer to pursue careers in business, engineering, or administration, which are perceived as more lucrative and prestigious.
3. The consumer-oriented approach of universities, where the emphasis is on providing degrees and certifications rather than research, is also contributing to the decline in scientific research.
4. To address these issues, there is a need to increase funding for research and development, improve infrastructure and facilities, and provide better career opportunities and incentives for researchers.

Overall, there is a need to recognize the importance of scientific research and invest in it to promote innovation and development in the country.

**Answer:**

Scientific research in Indian universities is facing a decline due to various factors impacting the attractiveness of pursuing a career in science.

**Critical Comments:**

1. **Limited Funding:** Insufficient funding for research discourages young scholars from choosing scientific careers.
2. **Lack of Recognition:** The absence of adequate recognition and career prospects dampens the allure of scientific pursuits.
3. **Attractive Alternatives:** Lucrative opportunities in business, engineering, and administration divert potential talent away from scientific fields.
4. **Consumer-Oriented:** Universities focusing on quantity over quality, driven by consumer demand, may neglect research.
5. **Outdated Curriculum:** Universities must modernize the curriculum to align with cutting-edge research.

To revive scientific research, it is essential to address the challenges related to funding, recognition, and curriculum and promote a culture of innovation and excellence in Indian universities.

**Q11. Can overuse and free availability of antibiotics without Doctor's prescription, be contributors to the emergence of drug-resistant diseases in India? What are the available mechanisms for monitoring and control? Critically discuss the various issues involved.**

(200 words) [12½]

**Approach to question:**

1. Overuse and free availability of antibiotics without a doctor's prescription can contribute to the emergence of drug-resistant diseases in India, as it encourages antibiotic misuse and the development of antibiotic-resistant bacteria.
2. One of the major issues is the lack of awareness among the general public about the proper use of antibiotics and the risks associated with their misuse.
3. In addition, there is also a lack of regulation and enforcement of laws related to the sale and distribution of antibiotics.
4. Some of the available mechanisms for monitoring and control include surveillance of antibiotic use and resistance, development of guidelines for antibiotic use, and stricter enforcement of regulations related to the sale and distribution of antibiotics.

**Answer:**

Overuse and unrestricted availability of antibiotics without a doctor's prescription have emerged as significant contributors to the rise of drug-resistant diseases in India.

**Contributors to Drug-Resistant Diseases:**

1. **Self-Medication:** Easy access to antibiotics leads to self-medication practices, often without appropriate dosage or duration, promoting drug resistance.
2. **Inadequate Prescription:** Improper prescription practices by unqualified personnel may lead to inappropriate use of antibiotics.
3. **Agricultural Use:** Non-judicious use of antibiotics in agriculture may contribute to the development of drug-resistant pathogens.

**Mechanisms for Monitoring and Control:**

1. **Regulatory Measures:** Strengthening regulations to control the sale of antibiotics without prescriptions.
2. **Awareness and Education:** Educating the public about the consequences of antibiotic misuse and promoting responsible use.
3. **Surveillance:** Establishing robust surveillance systems to monitor antibiotic resistance patterns.
4. **Antibiotic Stewardship:** Encouraging rational and judicious use of antibiotics in healthcare settings.

**Critical Issues:**

1. **Enforcement Challenges:** Ensuring effective implementation of regulations and curbing unauthorized sales.
2. **Public Awareness:** Overcoming public misconceptions about antibiotics and encouraging responsible use.
3. **Multi-Sectoral Collaboration:** Collaborating with healthcare, agriculture, and veterinary sectors to combat antibiotic resistance collectively.

Addressing the issues of antibiotic overuse and unrestricted availability is crucial to combat drug-resistant diseases in India. Striking a balance between access and control is essential to preserve the efficacy of antibiotics for future generations.

**Q12. In a globalized world, Intellectual Property Rights assume significance and are a source of litigation. Broadly distinguish between the terms—Copyrights, Patents and Trade Secrets. (200 words) [12½]**

**Approach to question:**

1. Copyrights are exclusive legal rights given to the creators of literary, artistic, or musical works to control the use and distribution of their works.
2. Patents are exclusive legal rights given to inventors to produce, use, and sell their inventions for a limited period in exchange for disclosing the invention publicly.

3. Trade secrets refer to confidential information that businesses use to gain a competitive edge over their competitors, and they can include formulas, customer lists, and manufacturing processes.
4. Copyrights and patents are registered with government agencies, while trade secrets are kept secret by the owner.
5. Copyrights and patents have a limited duration, while trade secrets can be maintained indefinitely as long as they remain secret.
6. Copyrights and patents provide legal protection against infringement, while trade secrets rely on contractual obligations and confidentiality agreements.

**Answer:**

Copyrights, Patents and Trade Secrets are all forms of Intellectual Property Rights (IPRs), which provide legal protection to creators and innovators of new ideas and products. However, they differ in terms of what they protect and how they protect it.

**Copyrights:**

1. Copyrights protect original creative works such as books, music, films, and software.
2. They give the creator of the work the exclusive right to reproduce, distribute, and perform the work.
3. Copyright protection typically lasts for the life of the creator plus a certain number of years (usually 70 years) after their death.
4. Copyright registration is not mandatory, but it can provide evidence of ownership and can help in legal proceedings.

**Patents:**

1. Patents protect inventions and processes that are new, non-obvious, and useful.
2. They give the inventor the exclusive right to manufacture, use, and sell the invention for a certain period of time (usually 20 years).
3. Patents are granted by the government after a thorough examination process to ensure that the invention is novel and non-obvious.
4. Patents can be licensed or sold to others, and they can be enforced through legal action against infringers.

**Trade Secrets:**

1. Trade secrets protect confidential information that gives a business a competitive advantage.
2. They can include formulas, processes, customer lists, and other proprietary information.
3. Trade secret protection is not granted by the government, but rather maintained by the

business through various means such as non-disclosure agreements and restricted access.

In summary, copyrights protect creative works, patents protect inventions and processes, and trade secrets protect confidential business information. Each form of IPR serves a different purpose and provides different legal protections for creators and innovators.

**Q13. Should the pursuit of carbon credits and clean development mechanisms set up under UNFCCC be maintained even though there has been a massive slide in the value of a carbon credit? Discuss with respect to India's energy needs for economic growth.**

(200 words) [12½]

**Approach to question:**

1. Carbon credits and clean development mechanisms (CDMs) were introduced to incentivize greenhouse gas reduction and mitigation efforts in developing countries like India.
2. Carbon credits are a tradable permit or certificate that represents the right to emit one tonne of carbon dioxide or its equivalent, and can be bought and sold in international carbon markets.
3. However, the value of carbon credits has declined significantly in recent years due to various factors such as oversupply, weak demand, and lack of new projects.
4. Despite this, some argue that pursuing carbon credits and CDMs can still have benefits for India such as generating additional revenue, attracting foreign investment, and promoting sustainable development.
5. Others argue that relying on carbon credits alone may not be enough to address India's energy needs and that a more comprehensive and long-term strategy is required.
6. India has set ambitious targets for renewable energy generation and carbon emissions reduction under the Paris Agreement, and has implemented various policies and initiatives to support this transition.

**Answer:**

The pursuit of carbon credits and clean development mechanisms (CDMs) under the United Nations Framework Convention on Climate Change (UNFCCC) has been aimed at promoting sustainable development and reducing greenhouse gas emissions. However, the massive slide in the value of carbon credits raises questions about their effectiveness and relevance, particularly concerning India's energy needs for economic growth.

**Points:**

1. **Declining Value:** The decreasing value of carbon credits diminishes their financial attractiveness and effectiveness as an incentive for emission reduction projects.
2. **Economic Growth:** India's rapid economic growth necessitates increased energy consumption, posing challenges to achieve emission reduction targets.
3. **Technological Constraints:** Dependency on fossil fuels and limitations in clean energy technologies hinder a rapid transition away from carbon-intensive energy sources.
4. **Need for Alternatives:** Exploring alternative mechanisms and incentives for green energy investments and emission reductions is essential.
5. **Climate Commitments:** Despite challenges, India must balance energy needs with its climate commitments and explore innovative solutions to foster sustainable development.

While the decline in the value of carbon credits calls for reevaluation, sustainable development and emission reduction remain critical priorities. India must strike a balance between meeting energy demands for economic growth and adopting clean technologies to address climate change concerns effectively.

**Q14. Drought has been recognized as a disaster in view of its spatial expanse, temporal duration, slow onset and lasting effects on vulnerable sections. With a focus on the September 2010 guidelines from the National Disaster Management Authority (NDMA), discuss the mechanisms for preparedness to deal with likely El Nino and La Nina fallouts in India.**

(200 words) [12½]

**Approach to question:**

1. The September 2010 guidelines from the National Disaster Management Authority (NDMA) recognize drought as a disaster and provide guidelines for preparedness, response, and relief measures.
2. The guidelines require the establishment of a Drought Management Centre (DMC) at the state level to manage and coordinate drought-related activities.
3. The DMC is responsible for monitoring drought situations, initiating mitigation measures, and coordinating relief efforts with various government agencies and stakeholders.



4. The guidelines also emphasize the importance of developing early warning systems, contingency plans, and risk assessments to deal with drought situations.
5. The NDMA guidelines suggest measures such as soil and moisture conservation, promotion of drought-resistant crops, and efficient water management to minimize the impact of drought on agriculture.
6. To deal with the impacts of El Nino and La Nina, the NDMA guidelines emphasize the need to strengthen forecasting systems, promote better water management practices, and ensure adequate stockpiling of essential commodities in drought-prone areas.

**Answer:**

Some key points to consider while discussing the mechanisms for preparedness to deal with likely El Nino and La Nina fallouts in India, as per the September 2010 guidelines from the National Disaster Management Authority (NDMA), are:

1. **Understanding the phenomenon:** The first step towards preparedness is to understand the characteristics and impacts of El Nino and La Nina on different regions of the country. This information can be used to develop region-specific strategies to mitigate the impact of these phenomena.
2. **Early warning systems:** The NDMA guidelines stress the importance of setting up early warning systems for droughts, which can help in timely and effective response. This involves monitoring of weather patterns, water availability, crop conditions, and other indicators of drought.
3. **Contingency planning:** Based on the early warning systems, contingency plans should be developed at the national, state, and district levels to respond to the drought situation. These plans should be reviewed and updated periodically based on the changing situation.
4. **Capacity building:** The NDMA guidelines emphasize the need for capacity building at all levels, from the community to the national level, to respond effectively to drought situations. This includes training in drought management, water conservation, and livelihood diversification.

Overall, the NDMA guidelines provide a comprehensive framework for preparedness and response to droughts, including those caused by El Nino and La Nina. By implementing these guidelines, India can mitigate the impact of droughts and reduce the vulnerability of its population to this recurring natural disaster.

**Q15. Environmental Impact Assessment studies are increasingly undertaken before a project is cleared by the Government. Discuss the environmental impacts of coal-fired thermal plants located at coal pitheads.**

(200 words) [12½]

**Approach to question:**

1. Coal-fired thermal power plants are known to be a major contributor to air pollution, particularly in terms of greenhouse gas emissions and particulate matter.
2. Coal mining and transportation for power generation can lead to land degradation and deforestation, causing harm to the local ecosystems and biodiversity.
3. Thermal power plants require large quantities of water for cooling, which can cause stress on the local water resources and aquatic life.
4. The disposal of ash generated from the burning of coal can also lead to pollution of nearby water bodies and soil, as well as pose health risks for nearby communities.
5. The environmental impacts of coal-fired thermal plants can have negative implications for the health and well-being of nearby communities, particularly those living in low-income or marginalized areas.
6. Environmental Impact Assessment studies can help to identify potential environmental impacts and ensure that appropriate mitigation measures are put in place to minimize the harm caused by coal-fired thermal plants.

**Answer:**

Environmental Impact Assessment (EIA) studies are mandatory for any project seeking government clearance, including coal-fired thermal power plants located at coal pitheads. Here are the environmental impacts of such plants:

1. **Air Pollution:** Coal-fired thermal plants are a significant source of air pollution, releasing pollutants such as sulfur dioxide, nitrogen oxide, and particulate matter. These pollutants can cause respiratory problems and even premature deaths.
2. **Water Pollution:** Thermal plants use large quantities of water for cooling, which is often discharged back into water bodies as hot wastewater. This discharge can harm aquatic life and alter water quality.
3. **Land Degradation:** Coal mining activities required to fuel the thermal plants lead to soil erosion, land subsidence, and changes in topography.
4. **Greenhouse Gas Emissions:** Coal-fired thermal plants are a major source of greenhouse

gas emissions, particularly carbon dioxide, contributing to climate change and its associated impacts, such as extreme weather events, sea-level rise, and loss of biodiversity.

**To mitigate these environmental impacts, the following measures can be taken:**

1. **Use of Cleaner Technologies:** Advanced technologies like supercritical and ultra-supercritical technologies can help reduce the emissions of pollutants like sulfur dioxide, nitrogen oxide, and particulate matter.
2. **Efficient Water Management:** Thermal plants can adopt water conservation practices and use recycled wastewater for cooling instead of discharging it back into the environment.
3. **Land Restoration:** Reclamation and restoration of mined land can help reduce the environmental impacts of coal mining.

In conclusion, while coal-fired thermal power plants have been a significant source of energy in India, their environmental impacts cannot be ignored. Proper mitigation measures must be taken to ensure sustainable development.

**Q16. "The diverse nature of India as a multi-religious and multi-ethnic society is not immune to the impact of radicalism which is seen in her neighbourhood". Discuss along with strategies to be adopted to counter this environment. (200 words) [12½]**

**Approach to question:**

1. India's multi-religious and multi-ethnic society is not immune to radicalism, which can lead to social unrest and national security threats.
2. Radicalism can be fueled by various factors such as religious intolerance, political and economic marginalization, and external influences.
3. To counter this environment, India needs a comprehensive approach that includes promoting religious tolerance, addressing political and economic grievances, strengthening security measures, and countering external influences through diplomacy and international cooperation.
4. India also needs to enhance its intelligence gathering capabilities and improve its law enforcement and judicial systems to prevent and punish radical activities.
5. Public awareness campaigns, community engagement programs, and education initiatives can help in promoting tolerance and countering radical narratives.

6. India can also learn from the experiences of other countries in countering radicalism and terrorism, and adopt best practices accordingly.

**Answer:**

India is renowned for its rich diversity, encompassing various religions, languages, and ethnic groups, which have coexisted for centuries. However, this diversity has not shielded India from the influence of radicalism, particularly evident in its neighbouring regions.

**Impact of Radicalism:**

1. **Cross-border Radicalism:**
  - (a) Proximity to regions with extremist ideologies like Pakistan and Afghanistan has led to the infiltration of radical elements.
  - (b) This has contributed to incidents of terrorism and communal tension in India.
2. **Communal Divide:**
  - (a) Radical ideologies have sometimes exacerbated existing communal tensions within India.
  - (b) Fringe groups have exploited these divisions, leading to violence and social discord.

**Strategies to Counter the Environment:**

1. **Strengthen Intelligence:**
  - (a) Enhance intelligence-sharing and cooperation with neighbouring countries to combat cross-border terrorism.
  - (b) Improve surveillance and monitoring of radical elements within India.
2. **Promote Inter-faith Harmony:**
  - (a) Encourage dialogue and understanding among different religious communities.
  - (b) Promote educational initiatives to foster tolerance and pluralism.
3. **Counter Radical Propaganda:**
  - (a) Monitor online platforms and social media to detect and counter radical propaganda.
  - (b) Engage in counter-radicalization efforts through community outreach and counseling programs.
4. **Legal Framework:**
  - (a) Enforce stringent laws against hate speech, incitement to violence, and radicalization.
  - (b) Ensure swift and fair legal action against those involved in extremist activities.

India's multi-religious and multi-ethnic society is indeed vulnerable to the impact of radicalism. However, through a combination of intelligence cooperation, social harmony promotion, counter-propaganda measures, and a robust legal framework, India can effectively counter this environment and preserve its diversity and unity.

**Q17. International civil aviation laws provide all countries complete and exclusive sovereignty over the airspace above their territory. What do you understand by 'airspace'? What are the implications of these laws on the space above this airspace? Discuss the challenges which this poses and suggest ways to contain the threat. (200 words) [12½]**

**Approach to question:**

1. Airspace refers to the portion of the atmosphere above a particular location, including the airspace over land and water within a country's territorial boundaries.
2. International civil aviation laws give each country exclusive sovereignty over the airspace above their territory, which includes the right to regulate the use of the airspace and to control the entry and exit of aircraft.
3. However, with the rise of unmanned aerial vehicles (UAVs) or drones, airspace security has become a major challenge for countries. Drones can pose a threat to national security and privacy, as well as interfere with commercial flights and other operations.
4. Countries need to adopt a multi-faceted approach to address the challenges posed by drones, including the development of effective regulatory frameworks, the deployment of technology-based solutions, and public awareness campaigns to encourage responsible drone use.
5. Some of the technology-based solutions that can be used to secure airspace include anti-drone systems, radar systems, and geofencing technologies. Additionally, countries can work together to establish international norms and standards for drone use to ensure a coordinated response to the challenges posed by drones.

**Answer:**

International civil aviation laws grant nations full and exclusive sovereignty over the airspace above their territory. 'Airspace' refers to the portion of the atmosphere above a nation's land and territorial waters, where it exercises control over aircraft and flight operations. These laws acknowledge that each country has the right to regulate and control the use of its airspace.

**Implications of these laws on airspace:**

1. **National Security:** Nations can monitor and regulate air traffic to protect their borders from potential security threats.
2. **Control Over Flight Paths:** Countries can determine the routes and altitudes for commercial and military flights passing through their airspace.

3. **Economic Benefits:** States can charge fees for using their airspace, generating revenue and facilitating economic growth.

**Challenges posed by these laws:**

1. **Airspace Sovereignty Conflicts:** Overlapping flight paths may lead to disputes between countries, potentially causing diplomatic tensions.
2. **Airspace Intrusions:** Unidentified or unauthorized aircraft violating a country's airspace can create security risks.
3. **Global Air Traffic Management:** The seamless coordination of airspace use worldwide requires complex international cooperation.

**Ways to contain the threat:**

1. **Diplomacy and Cooperation:** Nations should engage in dialogue to resolve airspace disputes peacefully and foster cooperation in managing global airspace.
2. **Advanced Surveillance Systems:** Utilizing cutting-edge technology can help identify and address airspace intrusions swiftly.
3. **International Agreements:** Stricter enforcement of existing international aviation treaties can discourage violations.
4. **Joint Air Traffic Management:** Collaborative efforts to streamline air traffic control systems can enhance airspace security and efficiency.

In conclusion, international civil aviation laws recognize national sovereignty over airspace, ensuring safety, security, and economic benefits. However, challenges like conflicts and airspace intrusions demand collaborative solutions to effectively manage global airspace and maintain peace in the skies.

**Q18. How does illegal transborder migration pose a threat to India's security? Discuss the strategies to curb this, bringing out the factors which give impetus to such migration. (200 words) [12½]**

**Approach to question:**

1. Illegal transborder migration poses a significant threat to India's security as it allows for the entry of individuals who may have links to terrorist organizations or other criminal activities.
2. Such migration also increases the burden on India's resources, including healthcare, education, and housing.
3. One of the main factors that give impetus to transborder migration is the economic disparity between neighbouring countries.



4. The government must adopt a multi-pronged approach, including better border management, stronger law enforcement, and bilateral agreements with neighbouring countries to address the issue.

#### Answer:

Illegal transborder migration poses a threat to India's security in the following ways:

1. **Infiltration of terrorists:** The porous borders make it easy for terrorists to enter India, which poses a significant security threat to the country.
2. **Illegal activities:** Illegal migrants engage in illegal activities like drug trafficking, arms smuggling, and human trafficking, which have a negative impact on India's security.
3. **Demographic changes:** The influx of illegal migrants can lead to changes in the demographic composition of the region, which can have long-term implications for the region's security and stability.

#### Strategies to curb illegal transborder migration are:

1. **Border surveillance:** The border forces need to strengthen the surveillance system to prevent illegal migration.
2. **Bilateral agreements:** India needs to strengthen its bilateral agreements with neighbouring countries to curb illegal migration.
3. **Technology-based solutions:** Technology-based solutions such as using drones and other advanced surveillance systems can aid in border control.

#### Factors that give impetus to illegal transborder migration are:

1. **Economic reasons:** Lack of economic opportunities in neighboring countries drives people to migrate to India in search of better opportunities.
2. **Political instability:** Political instability and conflict in neighboring countries force people to flee to India.
3. **Cultural and ethnic ties:** People who share cultural and ethnic ties with India tend to migrate illegally to the country.

In conclusion, illegal transborder migration poses a significant threat to India's security. The government needs to adopt a multi-pronged approach, including border surveillance, technology-based solutions, and enhanced legal framework, to curb illegal migration. Additionally, addressing the root causes of migration, such as lack of economic opportunities and political instability, can also help reduce illegal migration.

**Q19. In 2012, the longitudinal marking for high-risk areas for piracy was moved from 65 degrees east to 78 degrees east in the**

**Arabian Sea by the International Maritime Organization. What impact does this have on India's maritime security concerns?**

**(200 words) [12½]**

#### Approach to question:

1. The move of the longitudinal marking for piracy high-risk areas was done to reflect the expanding reach of piracy from the Gulf of Aden towards the west and south-west in the Arabian Sea.
2. The change of the marking to 78 degrees east means that the area between 65 and 78 degrees east, which includes India's west coast and Exclusive Economic Zone (EEZ), is now considered as a "relatively safe" zone, with a lower risk of piracy incidents.
3. However, piracy and maritime terrorism continue to pose a threat to India's maritime security, particularly in the waters near the Gulf of Aden and the Red Sea.

#### Answer:

The International Maritime Organization (IMO) in 2012, moved the longitudinal marking for high-risk areas for piracy from 65 degrees east to 78 degrees east in the Arabian Sea. This move has significant implications on India's maritime security concerns.

#### Impacts on India's Maritime Security:

1. **Increase in piracy threats:** The shift of the longitudinal marking has brought the high-risk piracy areas closer to India's western coast, increasing the threat of piracy attacks in the Indian waters.
2. **Economic impact:** Piracy attacks can have significant economic implications as it affects shipping routes, trade, and maritime tourism. India, being a major maritime nation, is vulnerable to the economic impact of piracy.
3. **Security challenges:** Piracy attacks not only affect the economy but also pose a significant security challenge to the country. With the high-risk piracy areas closer to India's coast, the Indian Navy and Coast Guard need to be more vigilant and prepared to tackle piracy threats.

#### Strategies to Address the Impacts:

1. **Strengthening maritime security:** India needs to strengthen its maritime security by increasing its surveillance capabilities, enhancing the capabilities of the Indian Navy and Coast Guard, and collaborating with other countries in the region to counter piracy.
2. **Enhancing regional cooperation:** India needs to enhance its cooperation with other countries in the region to share intelligence and information on piracy threats.



3. **Promoting sustainable development:** Addressing the root causes of piracy, such as poverty and unemployment, is essential to promote sustainable development in the region.

The shift in the longitudinal marking for high-risk areas for piracy has significant implications on India's maritime security concerns. India needs to adopt a multi-pronged approach to address the impacts of piracy and strengthen its maritime security.

**Q20. China and Pakistan have entered into an agreement for development of an economic corridor. What threat does this pose for India's security? Critically examine.**

(200 words) [12½]

**Approach to question:**

China-Pakistan Economic Corridor (CPEC), initiated in 2013, poses the following security threats to India in 2014:

1. **Strategic encirclement:** The CPEC enhances China's presence in the Indian Ocean region, allowing it to encircle India strategically, which may compromise India's maritime security.
2. **Border disputes:** The CPEC passes through Pakistan-occupied Kashmir (PoK), disregarding India's sovereignty claims. It strengthens Pakistan's grip in the disputed region, intensifying border tensions between India and Pakistan.
3. **Economic dominance:** China's investments in CPEC could lead to a disproportionate influence over Pakistan's economy, potentially making Pakistan dependent on China. This economic leverage may be exploited to gain political advantage against India.

In summary, the China-Pakistan Economic Corridor poses significant threats to India's security in terms of strategic encirclement, border disputes, economic dominance, terrorism, insurgency, and power asymmetry.

**Answer:**

China and Pakistan's agreement for the development of an economic corridor raises concerns for India's security. The

collaboration between these two neighboring countries has significant implications for India, particularly in the context of the year 2014. This critical examination will outline the potential threats that India faces as a result of this agreement, highlighting the key concerns.

1. **Strategic Encirclement:** The China-Pakistan Economic Corridor (CPEC) aims to connect the Chinese province of Xinjiang to the Pakistani port of Gwadar through a network of infrastructure projects. This corridor passes through the disputed territory of Gilgit-Baltistan, which is under Pakistani control but claimed by India. This development raises concerns about potential Chinese military presence and surveillance capabilities in the region, creating a strategic encirclement of India.
2. **Increased Chinese Influence:** The CPEC significantly enhances China's presence and influence in Pakistan. It strengthens their economic ties and deepens their strategic partnership, potentially enabling China to exert greater political influence in the region. This increased Chinese influence poses a threat to India's regional interests and can potentially undermine its own influence in South Asia.
3. **Security Challenges:** The CPEC traverses through areas affected by insurgency and separatist movements, such as Balochistan. This raises concerns about the security of the corridor, as well as the potential spillover of violence and instability into India. Terrorist organizations operating in Pakistan, such as Lashkar-e-Taiba, may exploit the corridor for their activities, posing a direct threat to Indian security.

In conclusion, the China-Pakistan Economic Corridor poses significant threats to India's security. The corridor's potential to create a strategic encirclement, increase Chinese influence, create security challenges, disrupt the economic balance, and impact the Kashmir issue are critical concerns. India needs to carefully evaluate and respond to these challenges to safeguard its security and regional interests effectively.