



Mains Marathon
Compilation

May, 2023

Mains Marathon Compilation for the Month of May, 2023

1. What are the key challenges India faces in achieving its Sustainable Development Goals (SDGs) by 2030, and how can lessons from its COVID-19 response be applied to address these challenges?
2. Trade and Economic Partnership Agreement between India and EFTA states will foster a strong partnership and increase trade between trusted democratic partners that share values. Discuss.
3. What are the challenges faced by gig workers in India, and how does the Code on Social Security, 2020, attempt to address their concerns?
4. How does the process of de-dollarisation affect the global economy, and what factors have contributed to the U.S. dollar's dominance as the global reserve currency?
5. In light of the present developments, how India's special operations' capability for rescue missions has progressed. How do these missions highlight the importance of strategic corporals and the need for specialized training and equipment in modern warfare?
6. Critically analyze the potential applications and implications of generative artificial intelligence in various sectors.
7. Critically analyze the role of the Master Plan of Delhi (MPD) in addressing the complex urbanization challenges faced by the city. Also, suggest possible solutions for a more inclusive and sustainable urban development strategy.
8. Analyze the impact of the current appointment process and the reliance on the Academic Performance Index (API) in some higher educational institutions.
9. The WMO's 2023 report shows that the years 2015-2022 were the eight warmest on record. Discuss the socio-economic implications of this global temperature rise.
10. Discuss the potential benefits and challenges associated with the Open Network for Digital Commerce (ONDC) initiative by the Indian government.
11. Discuss the impacts of the Government of National Capital Territory of Delhi (Amendment) Ordinance, 2023 on the federal structure of Delhi.
12. Discuss the role of social media in shaping public opinion. How can it be regulated to prevent the spread of hate and misinformation?
13. One of the key criticisms of the Census is the delayed release of the data collected. Discuss the causes and effects of this delay.
14. Discuss the impact of withdrawing the ₹2,000 note from circulation on the Indian economy, particularly on the cash-based informal sector.
15. Critically evaluate the effectiveness of focusing on improving a country's Doing Business scores as a strategy for economic growth.
16. What is the current state of trade between India and Australia? Discuss the potential for further growth in bilateral trade and investment.

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17. What are the key takeaways from Prime Minister Narendra Modi's recent visit to the PICs? Discuss the significance of India's engagement with Pacific Island Countries (PICs).
18. Discuss the potential benefits and challenges of bolstering the Andaman and Nicobar Command.
19. Describe the historical context and symbolic meaning of the sceptre, or "sengol", in Indian political history. What does the sceptre's installation in the new Parliament building symbolize.
20. Discuss the feasibility of the Narendra Modi government's goal of achieving "developed country" status for India by 2047. What would be the key challenges in reaching this target?
21. Enumerate the salient features of the second-generation NavIC satellite. Also, highlight the significance of regional satellite-based navigation systems for a country.
22. According to research, investing in agricultural research, development, education, and extension (ARDE) yields much greater returns compared to other areas like fertilizer subsidy, power subsidy, education, or roads. Elaborate on this and suggest ways to increase the emphasis on ARDE in India.
23. In the light of the recent developments, critically analyze the Chief Justice of India's power as a master of the roster.
24. Workplace violence against doctors is a rising trend in developing countries like India. Discuss the contributing factors to this issue, and propose policy measures that could mitigate this problem.
25. Why is it crucial for India to become a leader in graphene technology? Describe the challenges that have been encountered in producing high-grade large-scale graphene.
26. What is the significance of Vande Bharat trains in the context of India's infrastructure development?
27. Analyze the reasons behind the slow growth of the manufacturing sector in India despite policy initiatives like 'Make in India' and Production-Linked Incentive schemes.
28. Discuss the potential impact of a global carbon market on India's domestic carbon market. How can a global carbon market level the playing field for developing countries?
29. What is the Carbon Border Adjustment Mechanism (CBAM) and why has it raised concerns in India regarding its impact on exports?
30. What is the purpose of India's strategic petroleum reserves (SPR) program? Discuss the difference between salt cavern-based reserves and rock cavern-based reserves for storing crude oil.

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1. **What are the key challenges India faces in achieving its Sustainable Development Goals (SDGs) by 2030, and how can lessons from its COVID-19 response be applied to address these challenges?**

Introduction: Provide a brief introduction on “The challenges India faces in achieving its Sustainable Development Goals (SDGs) by 2030”

Body: Write 4-5 points on the key challenges India faces in achieving its Sustainable Development Goals (SDGs) by 2030. Write 3-4 points on lessons from its COVID-19 response to be applied to address these challenges.

Conclusion: Provide a conclusion on how India can make significant progress towards meeting its SDGs and improving the well-being of its population.

India's Prime Minister, Narendra Modi, expressed concerns about the slowing progress on Sustainable Development Goals (SDGs) during a meeting of Finance Ministers and Central Bank Governors under India's G20 Presidency. India's success in achieving SDGs is crucial due to its large population size and projected economic growth.

What are the key challenges India faces in achieving its Sustainable Development Goals (SDGs) by 2030?

- **Uneven Progress:** India has made progress in some areas, but there are disparities across districts. While certain indicators, such as neonatal and under-five mortality, improved sanitation, and electricity access, are on track at the national level, many districts still lag.
- **Inadequate Pace of Improvement:** For several SDG indicators, the current pace of improvement is insufficient to meet the targets. Issues such as clean cooking fuel, improved water, and handwashing facilities, and women's well-being require accelerated progress.
- **Gender Inequality:** India struggles with gender inequality, particularly concerning indicators like girl-child marriage, teenage pregnancy, and partner violence. The prevalence of child marriage remains high, and achieving the SDG target by 2030 seems unlikely in most districts.
- **Environmental Sustainability:** India faces significant challenges in achieving environmental sustainability goals. Factors such as air and water pollution, deforestation, and inadequate waste management contribute to the degradation of natural resources and pose obstacles to achieving SDGs related to climate action and environmental preservation.

How can lessons from its COVID-19 response be applied to address these challenges?

- **Strong Political Leadership:** India's successful COVID-19 response was driven by strong political leadership and a responsive administrative structure. Similar leadership is needed to achieve SDGs, with a focus on district-level implementation and course corrections when necessary.
- **Digital Infrastructure:** India leveraged its existing digital infrastructure and developed new platforms like Co-WIN and Aarogya Setu for COVID-19 management. Consolidating these platforms into a comprehensive, integrated digital resource could support population health management for SDGs.
- **Timely and Targeted Strategies:** India's COVID-19 relief package was timely and targeted, providing direct support to vulnerable populations and revitalizing the

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economy. Applying a similar approach to SDGs, with a proactive government-supported program, could improve people's well-being.

Conclusion:

To achieve its SDG targets by 2030, India must address the key challenges it faces, including uneven progress, inadequate pace of improvement, and gender inequality. Drawing lessons from its COVID-19 response, India should prioritize strong political leadership, enhance its digital infrastructure, and implement timely and targeted strategies. By adopting a comprehensive, pioneering approach similar to the COVID-19 response, India can make significant progress toward meeting its SDGs and improving the well-being of its population.

2. Trade and Economic Partnership Agreement between India and EFTA states will foster a strong partnership and increase trade between trusted democratic partners that share values. Discuss.

Introduction: Provide a brief introduction on the "Trade and Economic Partnership Agreement between India and EFTA states"

Body: Write 5-6 points on how the Trade and Economic Partnership Agreement between India and EFTA states fosters a strong partnership and increases trade between trusted democratic partners that share values. Write a point on the way forward.

Conclusion: Provide a conclusion on how India and EFTA states can deepen their economic ties and advance their shared values of sustainable development and gender equality.

Introduction:

High-level delegates from EFTA states (Iceland, Liechtenstein, Norway, and Switzerland) and India met to discuss the prospects of resuming negotiations towards a Trade and Economic Partnership Agreement (TEPA). The joint statement reflects the shared desire to conclude a mutually beneficial TEPA at the earliest.

How will Trade and Economic Partnership Agreement between India and EFTA states to foster a strong partnership and increase trade between trusted democratic partners that share values?

- **Economic Benefits:** EFTA states' economies have imports and exports close to \$1.3 trillion, making them significant merchandise and services traders globally. This offers substantial trade potential for India.
- **Complementary Strengths:** India's economic growth and leadership in green technologies can be complemented by EFTA states' trade and investment ties, promoting technology transfer, R&D, innovation, and business collaboration.
- **Market Access and Export Potential:** A trade agreement would enhance market access for goods, boosting India's export potential to EFTA markets, where EFTA's export products frequently serve as inputs in Indian export industries.
- **Investment Opportunities:** EFTA states have already invested over \$35 billion in India, spanning various sectors. A trade pact is expected to significantly increase investments, fostering economic growth and bilateral relations.
- **Skilled Labor and Services Sector:** EFTA states benefit from the highly skilled Indian workforce, particularly in the services sector. India, in turn, benefits from EFTA

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companies generating jobs and contributing to economic growth. A trade agreement would create more business opportunities for skilled Indian service providers.

- **Collaboration on Green Growth:** EFTA states possess cutting-edge technologies that can contribute to India's green growth aspirations, aligning with India's aim to meet 50% of its energy needs with renewables by 2030.

Way Forward:

Both India and EFTA states should prioritize these trade talks, aiming for a swift process toward a balanced agreement with strong political involvement and guidance. Strengthen collaboration in areas of sustainable development and gender equality, promoting shared values between trusted democratic partners.

Conclusion:

A Trade and Economic Partnership Agreement between India and EFTA states holds great potential for fostering a strong partnership and increasing trade between these trusted democratic partners. The agreement would leverage the complementary strengths of both parties, enhance market access, stimulate investments, promote skilled labour exchanges, and facilitate collaboration in green growth. By prioritizing these negotiations and ensuring a balanced agreement, India and EFTA states can deepen their economic ties and advance their shared values of sustainable development and gender equality.

3. What are the challenges faced by gig workers in India, and how does the Code on Social Security, 2020, attempt to address their concerns?

Introduction: Provide a brief introduction on "Gig workers in India"

Body: Write 4-5 points on the challenges faced by gig workers in India. Write 3-4 points on How does the Code on Social Security, 2020, attempt to address their concerns?

Conclusion: Provide a conclusion on attempts to address the concerns of Gig workers in India.

Introduction

The rapidly expanding gig economy in India, involving non-traditional employment setups, has brought with it a set of unique challenges. Gig workers, including platform workers who connect with customers through digital platforms, lack the job security and benefits that conventional employees enjoy. The recent strikes by Zomato-owned Blinkit delivery agents highlight the prevalent issues.

What are the challenges faced by gig workers in India?

- **Decreased earnings:** The strikes started when Blinkit reduced the minimum payout per delivery from ₹25 to ₹15, resulting in the daily earnings of delivery agents falling from around ₹1,200 to ₹600-700. This incident underscores the precarious income stability of gig workers.
- **Unclear employment status:** The status of gig workers, whether they should be regarded as employees or independent contractors, is a contentious issue. Due to this ambiguity, gig workers fall outside the ambit of certain laws and are consequently denied statutory benefits.
- **Exclusion from labour codes:** Of the four new labour codes proposed, only the Code on Social Security includes gig work, excluding gig workers from essential protections

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such as minimum wage and occupational safety. They also can't form legally recognized unions and lack an effective mechanism to redress grievances.

- **Deplorable working conditions:** A 2022 report by Fairwork India highlighted the poor working conditions of gig workers, emphasizing the need for statutory affirmation of their rights.

How does the Code on Social Security, 2020, attempt to address their concerns?

- **Legal recognition:** The Code on Social Security, 2020, for the first time, brings gig workers within the purview of labour laws. It provides a legal definition of gig workers and differentiates them from traditional employees.
- **Provision for benefits:** While the Code does not provide gig workers with benefits like gratuity, insurance, and provident fund that are available to traditional employees, it mandates that the central and state governments create suitable social security schemes for gig workers, including health and maternity benefits, provident funds, and accident benefits.
- **Mandatory registration:** The Code also necessitates compulsory registration of all gig workers and platform workers, enabling them to avail themselves of the benefits offered by these schemes.

Conclusion

Despite some efforts, like the Code on Social Security, 2020, to address gig workers' rights, their challenges persist. Legal petitions are seeking recognition for gig workers as unorganised workers, and for them to fall under the Unorganised Workers' Social Security Act, 2008. However, the response from the Centre remains pending. While the Labour Codes have received Presidential assent, their implementation is delayed due to pending rules by the States. Hence, a concrete solution for the challenges faced by India's gig workers is still awaited.

4. How does the process of de-dollarisation affect the global economy, and what factors have contributed to the U.S. dollar's dominance as the global reserve currency?

Introduction: Provide a brief introduction to the concept of de-dollarisation and the U.S. dollar's role as the global reserve currency.

Body: Write 3-4 points on How does the process of de-dollarisation affect the global economy? Write 3-4 points on What factors have contributed to the U.S. dollar's dominance as the global reserve currency?

Conclusion: Provide a conclusion on the evolving dynamics of global finance, and how de-dollarisation could reshape the future economic order

Introduction

De-dollarisation refers to the process where the U.S. dollar is replaced by other currencies as the global reserve currency. Reserve currencies are widely used in cross-border transactions and are held as reserves by central banks. Over time, several countries have attempted to displace the dollar's dominant position for varied reasons.

How does the process of de-dollarisation affect the global economy?

- **Instigating De-dollarisation:** Notably, Russia's invasion of Ukraine has intensified de-dollarisation attempts. The imposed U.S. sanctions that limited the use of the

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dollar to purchase oil and goods from Russia have been seen as weaponising the dollar, leading to a global rethink.

- **Dollar Influence:** The global economy is interconnected, and the dollar's status as the international reserve currency grants the U.S. significant power over global transactions since these transactions are cleared by American banks.
- **The emergence of Alternatives:** As de-dollarisation gathers pace, currencies such as the Chinese yuan emerge as alternatives due to China's rising economic prowess. This shift could redefine the dynamics of the global economy, impacting trade, investments, and geopolitical relations.

What factors have contributed to the U.S. dollar's dominance as the global reserve currency?

- **Historical Precedence:** The reserve currency mantle has historically been shouldered by economic superpowers. As the U.S. rose to global economic prominence in the 20th century, the dollar took over from the British pound as the global reserve currency.
- **Perceived Advantage:** The U.S. dollar's reserve currency status is seen as conferring undue privileges, allowing the U.S. to purchase goods and assets by simply creating a new currency. While this can lead to currency debasement, as long as the U.S. doesn't debase its currency faster than others, the dollar's value and status may remain stable.
- **Global Trust:** Despite several countries employing expansionary monetary policy, the dollar's popularity stems from global trust in U.S. financial markets and the U.S. rule of law. This trust encourages investment in U.S. assets, bolstering the dollar's position.
- **Trade Deficits and Surpluses:** U.S. trade deficits have led to the global accumulation of dollars, often reinvested in U.S. assets. Interestingly, countries with trade surpluses, like China, also vie for their currency to gain reserve status. Yet, restrictions and doubts about the rule of law can hinder such ambitions.

Conclusion

De-dollarisation signals a shift in the global economic order. While the U.S. dollar has enjoyed dominance for decades, emerging economies and geopolitical shifts challenge this status. Understanding the factors contributing to the dollar's dominance helps identify what might shape future reserve currency contenders.

5. **In light of the present developments, how India's special operations' capability for rescue missions has progressed. How do these missions highlight the importance of strategic corporals and the need for specialized training and equipment in modern warfare?**

Introduction: Provide a brief introduction on the advancement of India's special operations capability for rescue missions.

Body: Write 2 points on how India's special operations' capability for rescue missions has progressed. Write 3 points on some Successful rescue missions, Write 3 points on how these missions highlight the importance of strategic corporals and the need for specialized training and equipment in modern warfare.

Conclusion: Provide a conclusion on the significance of India's special operations capability for rescue missions.

Introduction:

Recent evacuation missions highlight the advancement of India's special operations capability. Special operations play a crucial role in modern warfare, emphasizing the importance of strategic corporals and specialized training.

In light of the present developments, how India's special operations capability for rescue missions has progressed?

- **Overcoming past challenges:** Recall the 'Kandahar' incident in 1999, where limitations hindered a rescue operation. Lack of aircraft capable of avoiding restricted airspace and refueling constraints limited response options.
- **Acquisition of vital aircraft:** Introduction of the C-130J Super Hercules and C-17 Globemaster enhanced India's capabilities. The C-130J's range, versatility, and advanced instrumentation provided critical advantages. These aircraft enable operations to be conducted avoiding restricted airspace and tackling difficult landing conditions.

What are some Successful rescue missions?

- **Wadi Seidna, Sudan (April 2023):** The evacuation of 121 Indians showcased the IAF's capabilities and professionalism. The C-130J's advanced instrumentation and confident crew ensured a successful mission.
- **Herat, Afghanistan (April 2020):** Safe evacuation of Indian Embassy personnel amid challenging conditions. Garud commandos provided security, emphasizing the importance of specialized training.
- **Kabul, Afghanistan (August 2021):** Risky evacuation mission amid uncontrolled airspace and chaotic ground situation. Pilots demonstrated exceptional skills, avoiding multiple aircraft and utilizing night vision goggles.

How do these missions highlight the importance of strategic corporals and the need for specialized training and equipment in modern warfare?

- **Strategic Corporals:** Actions of enlisted personnel on the frontlines can have significant strategic effects. Failure or success in special operations can impact a nation's reputation and policies.
- **Specialized Training:** Special operations require extensive training to handle complex situations. Special forces crews must bear the weight of a nation's prestige,

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ensuring successful outcomes. Ethos and training should not be diluted by diverting resources to routine tasks or VIP carriage.

- **Importance of Specialized Equipment:** Advanced aircraft like the C-130J enable operations in challenging environments. Synthetic runway generation, electro-optical night vision, and other equipment enhance situational awareness. Special operations crews must have access to state-of-the-art equipment to accomplish their missions effectively.

Conclusion:

India's special operations capability for rescue missions has progressed significantly, evident by successful evacuation missions. These operations underscore the importance of strategic corporals and the need for specialized training and cutting-edge equipment. It is crucial to preserve the ethos and training of special operations units to ensure their continued effectiveness in modern warfare.

6. Critically analyze the potential applications and implications of generative artificial intelligence in various sectors.

Introduction: Provide a brief introduction on the potential applications and implications of generative artificial intelligence in various sectors

Body: Write 4-5 points critically analyzing the potential applications and implications of generative artificial intelligence in various sectors. Write 3 points on Implications and Concerns, Write 3 points on Way Forward.

Conclusion: Provide a conclusion on the potential applications and implications of generative artificial intelligence in various sectors.

Introduction:

A breakthrough in machine learning and artificial intelligence, generative AI creates new forms of media like text, audio, video, and animation. Advanced machine learning capabilities enable the generation of creative content based on simple text prompts.

Critically analyze the potential applications and implications of generative artificial intelligence in various sectors:

- **Marketing and Branding:** Crafting personalized sales, marketing, and brand messaging using generative AI. Generating social media posts, blogs, and marketing copies by providing text prompts to engage with the audience effectively.
- **Software Development and Productivity:** Generative AI services like GitHub, Copilot, and ChatGPT facilitate code generation, snippets, and entire functions, improving developer productivity.
- **Data Augmentation and AI Training:** Generating synthetic data for data augmentation to enhance the training and testing of AI models. Enabling large-scale experimentation by creating additional training data. Reducing human research hours by summarizing legal research materials effectively.
- **Design and Architecture:** Creating and simulating complex engineering, design, and architectural concepts. Allowing engineers and consumers to design and iterate over floor plans and architectures using text prompts or vocal commands.

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- **Medical Diagnosis and Treatment:** Generating potential personalized treatments based on patient symptoms and medical history. Enhancing medical diagnosis through AI systems like DeepMind AlphaFold, which predicts protein structures.

What are the Implications and Concerns?

- **Bias and Exclusion:** Generative AI systems can perpetuate existing biases if trained on biased or non-inclusive data. Efforts must be made to address biases and ensure fairness in the generated outputs.
- **Misuse and Inappropriate Content:** Generative AI can be exploited to create deep fakes, disinformation, and offensive content. There is a need to regulate and mitigate the potential misuse of AI-generated media.
- **Accuracy and Accountability:** Ensuring the accuracy and quality of generated information, particularly in complex engineering and medical contexts. Challenges arise in determining responsibility and accountability for the content produced by generative AI systems.

Way Forward:

- **Rigor and Responsibility:** The development of AI technology should adhere to ethical guidelines and undergo regular fairness audits. Privacy and security concerns should be protected.
- **Policy and Regulation:** Implementing policies and regulations to promote the ethical and responsible use of generative AI. Raising awareness and education to address the potential harms and threats associated with its use.
- **Inclusive AI Development:** Encouraging diverse representation in AI design teams to avoid biases and exclusion.

Conclusion:

Generative AI holds immense potential across sectors like marketing, software development, research, and architecture. However, its applications come with concerns related to biases, misuse, and accountability. By embracing responsible development, regulation, and inclusive practices, society can leverage the benefits of generative AI while mitigating potential risks.

7. **Critically analyze the role of the Master Plan of Delhi (MPD) in addressing the complex urbanization challenges faced by the city. Also, suggest possible solutions for a more inclusive and sustainable urban development strategy.**

Introduction: Provide a brief introduction on the challenges of urbanization faced by Delhi and the role of the Master Plan of Delhi (MPD) in addressing these challenges.

Body: Write 2-3 points Critically analyzing the role of the Master Plan of Delhi (MPD) in addressing the complex urbanization challenges faced by the city. Write 2-3 points suggesting possible solutions for a more inclusive and sustainable urban development strategy

Conclusion: Provide a conclusion on the need for a more inclusive and sustainable urban development strategy in Delhi, highlighting the importance of changing mindsets, empowering the have-nots, and engaging with ground realities for effective urban planning.

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Introduction:

Delhi's development is marred by the recurring demolitions of illegal constructions, highlighting the failure of urban planning rather than a mere law and order issue. The Master Plan of Delhi (MPD) serves as a legal instrument defining the illegality of land use, shifting the blame to the inadequate MPD instead of addressing urban planning deficiencies.

Critically analyze the role of the Master Plan of Delhi (MPD) in addressing the complex urbanization challenges faced by the city:

- **Inversion of Objectives:** MPD falls short of meeting the needs of all residents it should serve, leading to illegal developments and subsequent demolitions. The MPD authors need to objectively analyze the problem, focusing on formulating redressal mechanisms and effective strategies for future urban development.
- **Misguided Urban Planning Model:** The present MPD and planning ideology in India are modeled after post-war European and American strategies, unsuitable for India's socio-economic and cultural complexities. The inadequacy of this model contributes to the recurrent demolitions, failing to address the expectations and urbanism of new migrants.
- **Lack of Self-Reflexive Reform:** The insights gained from the failures of MPD have not triggered self-reflection or reform in the urban planning profession or civic governance. The rigidity of MPD continues to be defended as immutable certainty in courts, disregarding the need for adaptive and creative urban planning approaches.

Suggest possible solutions for a more inclusive and sustainable urban development strategy:

- **Pragmatic Creativity:** Urban planners in Delhi should adopt pragmatic and creative approaches, learning from successful examples worldwide, rather than relying on state police powers. Mediating processes for slum development and managing commercial and industrial activities should be integrated into subsequent MPD revisions.
- **Acknowledging Political Economy:** Recognize the role of a robust developing political economy in Delhi, reflecting the aspirations and needs of both the haves and have-nots. Modify the MPD to accommodate and regulate the growth of these sectors, avoiding the need for demolition as the primary urban planning strategy.
- **Empowering the Have-Nots:** The needs and aspirations of both the haves and have-nots are equally legitimate and should be addressed in an inclusive urban planning framework. The self-help achievements of the have-nots, despite facing societal and governmental hostility, should be recognized and integrated into urban planning strategies.

Conclusion:

The Master Plan of Delhi (MPD) has been unable to effectively address the complex urbanization challenges faced by the city. To achieve inclusive and sustainable urban development, a change in mindset is required, emphasizing ethical considerations over legal issues. Civic authorities must engage with the people and ground realities of Delhi to develop an inclusive and sustainable urban development strategy, rather than relying on the judiciary or superficial aesthetics to create a "world-class" city.

8. Analyze the impact of the current appointment process and the reliance on the Academic Performance Index (API) in some higher educational institutions.

Introduction: Provide a brief introduction on the impact of the current appointment process and the reliance on the Academic Performance Index (API) in some higher educational institutions

Body: Write 2-3 points on the Impact of the current appointment process and the reliance on the Academic Performance Index (API) in some higher educational institutions. Write 2-3 points on the Way forward.

Conclusion: Provide a conclusion on the need to reevaluate the current appointment process, considering a more holistic evaluation of candidates' capabilities and prioritizing the expansion of higher education opportunities.

Introduction:

The tragic death of a young ad-hoc lecturer at the University of Delhi highlights the deep-rooted issues in higher education institutions. The appointment process in some colleges, based on the Academic Performance Index (API), has led to controversial selections and the exclusion of experienced ad-hoc teachers.

What is the Impact of the current appointment process and the reliance on the Academic Performance Index (API) in some higher educational institutions?

- **Flawed Selection Process:** The current selection process focuses excessively on API scores, overlooking the holistic evaluation of candidates' capabilities as researchers and teachers. Perfunctory interviews with limited interaction lead to the exclusion of competent ad-hoc teachers who have been serving for years.
- **Questionable Merit Criteria:** The selection of candidates who have not cleared their Ph.D. confirmation and lack substantial research credentials raises doubts about the emphasis on academic merit. Anecdotal evidence suggests that recommendations from certain social and cultural organizations played a significant role in the selection process.
- **Displacement of Experienced Teachers:** The appointment of less-qualified candidates over experienced ad-hoc teachers disregards their competence and years of service. The bleak prospects of securing future teaching jobs due to limited opportunities in higher education further exacerbate the situation.

Way forward:

- **Sympathetic and Humane Approach:** Institutions should consider alternative ways to support and uplift existing ad-hoc teachers instead of outright exclusion. A more compassionate administration could devise creative solutions to ensure the inclusion and fair treatment of experienced teachers.
- **Holistic Evaluation:** The selection process should go beyond the narrow focus on API scores and incorporate comprehensive assessment methods. A balanced evaluation should consider research achievements, teaching experience, and the overall capabilities of candidates.
- **Focus on Expansion of Higher Education:** Governments should prioritize the expansion of higher education institutions to provide more opportunities for teachers and students. Relying solely on online courses may overlook the value of classroom interactions and peer group engagement in holistic education.

Conclusion:

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The current appointment process, heavily reliant on the Academic Performance Index (API), has resulted in questionable selections and the displacement of experienced ad-hoc teachers. It is crucial to reassess the merit criteria, adopt a more compassionate approach, and prioritize the expansion of higher education to ensure a fair and inclusive environment in higher educational institutions.

9. The WMO's 2023 report shows that the years 2015-2022 were the eight warmest on record. Discuss the socio-economic implications of this global temperature rise.

Introduction: Give brief statement about what is climate change and its causes

Body: Address the main issue regarding its effects on society, economic and environment

Conclusion: Give a brief conclusion on the future course of action to deal climate change.

Recently **World Meteorological Organization (WMO)** released its latest ***The State of the Global Climate 2022*** annual report highlighting the effects of climate change on planet Earth. Climate change is the phrase used to describe long-term changes in Earth's temperature and weather patterns that are mostly caused by human activity, especially the release of greenhouse gases into the atmosphere. Burning fossil fuels like coal, oil, and natural gas causes the atmosphere to be filled with greenhouse gases like carbon dioxide (CO₂), which is the main cause of climate change. Some of the recent events have caused new debates regarding the increase of climate change and its effect on communities.

What are the socio-economic implications of this global temperature rise?

- **Drought and other extreme events:** There has been below-average rainfall in Eastern Africa which has led to crop failures and people facing acute food insecurity. Extreme heatwaves have affected mainland Europe and China leading to excess deaths and extreme dry conditions. On the other hand, Pakistan witnessed heavy rainfall impacting livelihood and agriculture.
- **Food insecurity:** As of 2021, 2.3 billion people faced food insecurity, of which 924 million people faced severe food insecurity with the majority of these living in Asia and Africa. Heatwaves in 2022 have impacted crop yield in both India and Pakistan causing economic distress and reducing crop yield.
- **Health and well-being:** Climate change events have led to the spread of vector-borne diseases, such as malaria and dengue fever impacting the overall well-being of the individual.
- **Displacement and Migration:** Climate change has led to forced migration and displacement of communities who have relied on farming and animal husbandry which are impacted adversely due to continuous drought and extreme rainfall. This has led to social tensions, refugee crises, and conflicts over resources.
- **Environment:** climate change has led to the melting of glaciers in high mountains and has impacted the availability and quality of water resources coming from natural springs from the Himalayas. This leads to adverse impacts on agriculture, industry, and human health. Climate change has also affected events like the migration of birds and the blooming of trees.

Conclusion:

The world must come together to act against climate change, cutting Green House gas emissions to limit global temperature rise to 1° Celsius. There is a need for urgent support from developed nations to increase investment and technology transfer to developing countries to help them adapt and mitigate the impact of climate change.

10. Discuss the potential benefits and challenges associated with the Open Network for Digital Commerce (ONDC) initiative by the Indian government.

Introduction: Give a brief description about ONDC.

Body: Highlight the challenges and benefits related to ONDC.

Conclusion: Conclude the answer by giving positive opinion on ONDC.

Open Network for Digital Commerce (ONDC) is a government-backed, not-for-profit entity, whose funders include the Quality Council of India, the Small Industries Development Bank of India (SIDBI), the National Bank for Agriculture and Rural Development (NABARD), several financial institutions including State Bank of India, ICICI Bank, and Kotak Bank. It aims to promote open networks for all aspects of the exchange of goods and services over digital or electronic networks. It is being developed in response to the existing duopoly of both Amazon and Flipkart in e-commerce to provide an open network to buyers and sellers which can be independent of any medium. ONDC is being implemented on a pilot basis in cities like Delhi-NCR, Shillong, Bhopal & Coimbatore.

What are the intended benefits of ONDC?

- **Democratize e-commerce:** It provides alternatives to the existing platform-based e-commerce model and brings a new “open network model” to the Indian market. The purpose of the project is to ensure that buyers and sellers in the e-commerce market can transact regardless of their registration on any platform.
- **Technology and Investment:** Microsoft recently joined ONDC which will help small merchants to access new processes and technologies to enhance their market share. Other companies like Paytm, Phone-pe, Reliance, and Snapdeal will also join ONDC which will lead to large investments and help small merchants.
- **Level playing field:** Companies like Flipkart and Amazon have been accused of promoting sellers in which these companies have held stocks. With open-source networks like ONDC, such policies could be made redundant and make a level playing field for small merchants.
- **Increase in income:** ONDC will lead to an increase in income of people as goods and services will be offered at discount rates, and sellers will be able to save commissions which “platform model” companies take for their service.

What are the challenges associated with ONDC?

- **Large investment:** There is a need for considerable investment to break the monopoly of big companies as they possess huge amounts of data which offers them an advantageous position.
- **Expertise and innovation:** Government needs professional technocrats who could develop efficient alternatives to e-commerce platforms as was seen in UPI.
- **Cold start problem:** Major companies like Amazon and Flipkart are hesitant to join the platform which is a key requirement for a platform to succeed.
- **Need for seamless experience:** ONDC will have to focus on the seamless delivery of goods, prompt customer service, and interactive user-based experience.

Conclusion:

ONDC-like platform may enable many sellers to be digitally visible and can help consumers to get products at reasonable prices and maintain healthy competition in the e-commerce market.

11. Discuss the impacts of the Government of National Capital Territory of Delhi (Amendment) Ordinance, 2023 on the federal structure of Delhi. (15 marks)

Introduction: Give a brief background of the ordinance

Body: Highlight the main features and their impact on federalism.

Conclusion: Conclude the answer on a positive note.

Recently, a constitution bench led by CJI upheld the claim of the elected government of Delhi to make laws and administer civil services in Delhi barring three specific areas- public order, police, and land. In response to this judgement, the President of India promulgated the Government of National Capital Territory of Delhi (Amendment) Ordinance, 2023 which restores the previous position where the Lieutenant Governor (LG) was given power over the appointment of bureaucrats.

What are the features of this ordinance?

- National Capital Civil Service Authority (NCCSA) is formed with **the Chief Minister as chairperson**, and the Chief Secretary and Principal Home Secretary as Member and Member Secretary.
- NCCSA exercises authority over bureaucrats working with the Government of Delhi except for those officers who are in **public order, police, and land departments** where ultimate control lies with the Centre.
- NCCSA would decide transfers, postings, prosecution sanctions, disciplinary proceedings, vigilance issues, etc, of civil service officers, deputed to Delhi government departments.
- All the decisions of the authority are decided by a majority of votes of the members present and voting.
- In case of a difference of opinion, Lieutenant Governor's decision would be final.

Impact of the Ordinance on the federal structure of Delhi

- **Constitutional Provision:** The ordinance impacts Article 239AA which provides the elected government a clear say in the institutional governance of Delhi and gives bureaucrats a prominent role in the governance of Delhi.
- **Accountability:** Officers appointed would be accountable to Union Government and not to the Chief Minister of Delhi who represents the **"will of the people"**.
- **Cooperative Federalism:** The ordinance would impact the principle of cooperative federalism and state government would become wary of the extensive power given to LG/Governors by the Union Government.
- **Challenges authority of courts:** The ordinance challenges the authority of the Supreme Court and impacts the federal structure of the Constitution where the Supreme Court has the final say in interpreting the Constitution.
- **Asymmetric model of federalism:** The ordinance challenges the asymmetric model where under Article 239AA, the Government of National Capital Territory of Delhi represents the will of people at the regional level and the union government at the national level.
- **Parliamentary democracy:** The power to veto a decision of the Chief Minister in the National Capital Civil Service Authority (NCCSA) goes against the principle of parliamentary democracy.

Conclusion:

There should be active cooperation between the Union and Delhi Government to resolve the issue of deadlock to provide accountable, democratic governance under the Constitution of India. It should also be kept in mind that the power to promulgate ordinance should be used in emergencies and not to achieve political ends as highlighted in **DC Wadhwa versus the State of Bihar**.

12. Discuss the role of social media in shaping public opinion. How can it be regulated to prevent the spread of hate and misinformation?

Introduction: Briefly describe social media.

Body: Describe role of social media in public opinion and how it can be regulated.

Conclusion: Conclude the answer by giving a balanced point of view.

Social media in recent times has become a powerful tool to influence public opinion and influence the prevailing discourse going on in society. Social media has emerged so powerful due to its low cost, wide reach, easy accessibility, and availability of smartphones. Social media has acted as a double-edged sword where it has broadened the avenues for democratic participation on one hand but has led to concerns regarding the spread of hate and violence in society.

Role of social media in shaping public opinion:

- **Democratization of public opinion:** Social media has democratized the public space by giving voice to oppressed, marginalized people and sharing their perspectives with a wider audience.
- **Dissemination of new information:** Social media has enabled rapid dissemination of information in new fields like investigative journalism, environment, freedom of the press, and citizen-centric journalism.
- **Influence on public policy:** social media has been used by politicians, and governments to gather support for their initiatives and broaden their support by use of debates, advertisements, and social campaigns.
- **Polarization of public opinion:** Social media algorithm collect user preferences and use them to personalize the content where individuals are exposed to the same type of content which lead to reinforcing existing beliefs and contribute to polarization of opinion.

How can social media be regulated to prevent the spread of hate and misinformation:

- **Regulate hate speech and violence:** There is an urgent need to define what constitutes “hate speech” clearly with, effective enforcement mechanisms and active collaboration between government, civil society & social media companies.
- **Data Protection:** As social media collects a huge amount of personal data there is a need for strong data protection law which ensures informed consent, transparency in usage, and the right to privacy.
- **Spread of misinformation and disinformation:** Misinformation and disinformation inhibit the decision-making process and leads to confirmation bias. There is a need of promoting media literacy, fact-check platforms like Alt News and ensure accountability of platform providers.
- **Stringent law mechanism:** New IT rules laid down by the government put a greater obligation on companies regarding hate speech, and misinformation being posted on their platforms.
- **International cooperation:** Since most of these social media platforms are foreign-based with their data control centres outside India, there is a need for cooperation with foreign governments and big tech companies to fight fake news, hate speech, and disinformation.
- **Grievance redressal:** Courts should take cognizance of the rising cases of hate speech, fake news, and violence very stringently. There is a need to establish Fast track courts with a quick disposal of cases to address this issue.

Conclusion:

There is a need to maintain a balance between freedom of speech and public interests in the use of social media. There is urgent need to revive social interactions between communities and individuals to rebuild the social fabric of our society.

13. One of the key criticisms of the Census is the delayed release of the data collected.

Discuss the causes and effects of this delay.

Introduction: Briefly explain about Census.

Body: Explain criticism and effects of delay in census data

Conclusion: Conclude by highlighting its importance.

A population Census is a process of collecting, compiling, and analysing the socio-economic, religious, linguistic, and economic data of all people in the country. Census 2021 has been in the news because it has been postponed until further notice on account of the Covid pandemic. Census in India has been a regular exercise that is carried out every 10 years by the Registrar General and Census Commissioner of India under the Ministry of Home Affairs. The Census of India Act of 1948 provides a legal framework for carrying out the census but does not mention the timing or periodicity.

What criticism is associated with Census

- **Exclusion of caste data:** While the census usually contains details of a person's occupation, language & religion it still not uses caste details which have become major criticism of this exercise.
- **Cumbersome Process:** The process involves a huge support staff, the involvement of teachers, and months-long data collection. A large amount of paperwork is collected which becomes difficult to analyse. The process also becomes long due to the large size of India, and immense diversity in geography and culture.
- **Huge cost:** Heavy cost is incurred by the Union Government for conducting the census.
- **Incorrect information:** Due to illiteracy, or people fearing loss of benefits of schemes tend to furnish false information which leads to a wrongful analysis of data collected.
- **Inadequate training for enumerators:** There is a lack of professionalism in collecting information as there is inadequate training, and workshops to train them.
- **Delayed release of data:** There is a delay in the release of data due to political reasons, resource crunch, or pandemic-like events which hampers policy making.

What are the effects of the delay in the release of data?

- **Policy Paralysis:** Underutilisation and Non-utilisation of data leads to delays in policymaking and inefficient use of resources.
- **Alternative Surveys:** The government both at the centre and in states conducts alternate surveys to analyse the socio-economic situation of the nation. It helps them in policy making but it makes census data redundant.
- **Lack of nuanced approach:** There is a lack of interest in the exploration of census data beyond demographic information. There should be a focus on examining the data on various attributes like education, health, profession, consumer durables, and ownership of land.

Conclusion:

The census is the backbone of every statistical intervention which caters to planning, execution, and policy making. Step like making Census 2021 digital is a good step that will

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reduce delay in the final report and will help to enrich our understanding of demography with the census holding its relevance in the changing world.

14. Discuss the impact of withdrawing the ₹2,000 note from circulation on the Indian economy, particularly on the cash-based informal sector.

Introduction: Briefly describe the decision to withdraw currency.

Body: Give careful analysis on impact of decision and steps that could be taken to execute this decision.

Conclusion: Conclude the answer taking into account informal sector.

Recently, RBI announced that Rs. 2000 currency note would be withdrawn from the market and asked banks to stop issuing the same with immediate effect. It was in the wake of demonetisation in 2016 that the note was introduced as it was felt to infuse liquidity in the economy till other currency notes became available. Rbi has allowed citizens to exchange or deposit the Rs 2000 note till September 30, 2023.

Impact of Withdrawal of Currency Notes on India's Economy

- **Minimal impact:** Economists predict that the impact of such a decision would be minimal as the Rs.2000 note accounts for only 1.6% of the overall money supply.
- **Impact on digital transactions:** According to the BCG report, digital transactions are expected to increase 3 times from 2023 to 2026, thereby minimising the need for higher denomination currency.
- **Increase demand for high-end items:** There could be an increase in the purchase of high-end consumer items like electronic gadgets, phones, and home appliances.
- **Reduce fake currency notes:** Since high denomination currency is easier to be targeted by counterfeiters the government can tackle this problem after the withdrawal of currency.
- **Impact on the informal economy:** The informal economy which largely operates on cash-based transactions is bound to be hit by the decision. Day-to-day transactions of MSMEs, the transport sector, construction, agriculture, and small traders would be negatively impacted reducing in hand cash for them and impacting their daily budget. There would be less disposable income for housewives, and old age persons as they are genuine hoarders of currency notes.

What steps can RBI take to ensure formalization of the economy post withdrawal ?

- **Strict enforcement:** RBI should ensure that high currency notes are not exchanged in banks which rely on physical records and not digital records particularly regional rural banks and urban cooperative banks. These banks are prone to corruption and influence of local politicians.
- **Vigilance on banks:** RBI must ensure that banks maintain vigilance on amount of notes exchanged daily.
- **Strict legal action:** RBI should take strict legal action against bank officials who are found suspected of corruption. Random inspections and sensitising bank official on how to deal with the public during this phase is very crucial.

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- **Cooperation among agencies:** RBI should actively cooperate with the Government of India, the Central Board of Direct Taxes, and the National Financial Reporting Authority to nab shell companies and corrupt officials.

Conclusion:

Government should ensure that adequate steps are taken to cushion the informal sector from this decision and ensure that daily workers, farmers, and MSMEs are properly compensated for any loss of income.

15. Critically evaluate the effectiveness of focusing on improving a country's Doing Business scores as a strategy for economic growth.

Introduction: Briefly describe EODB.

Body: Summarise the flaws associated with EODB

Conclusion: Suggest alternatives briefly.

The Ease of doing business Index was an index published by World Bank. It was introduced in 2003 and includes different parameters that define the ease of doing business in a country. The latest report, published in **October 2019, placed India at 63rd in Doing Business, compared with 77th in 2018 and 100 in 2017.** Following an inquiry that revealed "data irregularities" in its 2018 and 2020 editions, as well as potential "ethical matters" involving bank staff, the World Bank, decided to stop publishing this report.

What were the inherent flaws in the EODB report?

- **Actual Implementation:** World Bank was complacent in overseeing the timely implementation of projects and took the word of the government as final. This could be seen in the implementation of the GST and Insolvency & Bankruptcy Code.
- **Small sample size:** India's ranking was based on parameters collected from only 2 cities Mumbai and Delhi. No 2 cities can be representative of such a diverse country as India.
- **Data Irregularities:** World Bank found data irregularities made in the case of four countries — China, Azerbaijan, Saudi Arabia, and the UAE. This severely impacted the credibility of the report.
- **Neglect of agriculture and manufacturing:** Since there are fewer regulations in the service sector, it made doing business in metro cities is easier as compared to other cities. This did not give the full picture of the economy as India has a large population dependent on agriculture.
- **Unrealistic Assumptions:** World Bank used standard metrics to assume that all businesses are subject to similar tax treatment. This does not take into account surcharges, cess, and additional levies on "sin goods" or tax exemptions for doing business in North East and SEZs.
- **Labour Laws:** EODB does not include labour regulations as a parameter. If these were included India would have a low ranking because of highly restrictive labour laws.

Way Forward:

A revised framework should consider both costs to the business of regulatory policies alongside socio-environmental benefits. Hence, it would be appropriate to develop Sustainable Business Policy Index which would be consistent with SDG. Another option is using the Index of Economic Freedom published by the Heritage Foundation as a metric to get a more accurate picture of the economy.

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16. What is the current state of trade between India and Australia? Discuss the potential for further growth in bilateral trade and investment.

Introduction: Brief outline of the visit.

Body: Explain the significance and challenges in relations

Conclusion: Suggestions to improve the relationship.

Recently PM Modi went on a 3-day visit to Australia which led to the deepening of ties between the two nations. Both leaders felt the need to sign Comprehensive Economic Cooperation Agreement to deepen trade relations. India is Australia's sixth largest trading partner with two-way trade in goods and services valued at \$46.5 billion in 2022.

Significance of the relationship:

- Both nations agree on the principle of a “ free, open, inclusive, and prosperous Indo-Pacific”.
- Australia's geo-strategic location in the Indian Ocean acts as a gateway for Pacific Islands and other small islands.
- There is a significant population of Indians in Australia at about 3% which is crucial for maintaining people-to-people ties and enhancing trade relations.
- Australia is key to India's energy security needs as both have signed nuclear cooperation agreements and India can secure LNG supply from Australia reducing dependence on the Middle East.
- Both nations can cooperate in multilateral forums like QUAD, Commonwealth, Indian Ocean Rim Association (IORA) & ASEAN Regional Forum on issues like the environment, China's Belligerent policy in Indo-Pacific, and ensuring rules-based International order.

What are the challenges in India-Australia Relations?

- **Ukraine crisis:** Both nations differ in their strategy regarding Ukraine Russia conflict. Australia has taken a position against Russia while India has refrained from open criticism.
- **China's Pressure:** China has dubbed QUAD as “Asian NATO” and has threatened Australia with an impact on trade relations. China is Australia's largest trading partner.
- **Sentiments against India:** Recently, there has been witnessed a rise in anti-Indian slogans, and graffiti across Australia with attacks on Indians, their property, and temples vandalized.
- **Miscellaneous issues:** issues like the Adani coal energy project, and visa restrictions for Indian professionals and students have caused strain in relationships.

Way forward:

- **Enhance diplomatic cooperation:** The decision has been taken to open an Australian consulate in Bengaluru and an Indian consulate in Brisbane.
- **People to People ties:** An agreement has been finalized on Migration and Mobility to increase opportunities for students and businesspeople to enhance cooperation between two nations. PM Modi has spelled out the “three D's” - Democracy, Diaspora, and Dosti to strengthen relationships.
- **Energy Cooperation:** Both nations should pursue active cooperation in nuclear energy fulfilling the terms of the Nuclear agreement. The establishment of the India-Australia Hydrogen Task Force will advise on opportunities to accelerate the manufacture and deployment of clean hydrogen.
- **India-Australia Economic Cooperation Trade Agreement (ECTA):** This has resulted in an immediate reduction of duty to zero on 96% of Indian exports to Australia and zero duty on 85% of Australia's exports to India.

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17. What are the key takeaways from Prime Minister Narendra Modi's recent visit to the PICs? Discuss the significance of India's engagement with Pacific Island Countries (PICs).

Introduction: Outline PM visit to island states

Body: Explain the positives and significance of this visit.

Conclusion: conclude how these island countries are crucial for India.

Recently PM Modi visited Port Moresby capital of Papua New Guinea which is seen as a very significant visit in engaging Pacific Island Countries (PIC) and the **Forum for India-Pacific Islands Cooperation (FIPIC)**. PIC is a group of 14 nations of the Southwestern Pacific that is located at the crossroads of strategically important maritime trade corridors.

What are the key takeaways from the PM visit?

- **Cooperation in technology:** India has played a significant role in providing technology and capacity building in areas like solar energy solutions, desalination, modern health facilities, and information systems.
- **Humanitarian Assistance:** India has acted as a reliable partner for PIC countries in dealing with the pandemic by supplying vaccines, sugar, and wheat.
- **Climate Change:** India can become a key player alongside Australia and New Zealand to help tackle climate change in island countries through the **Blue Pacific 2050 strategy** and South-South cooperation.
- **South-South cooperation:** India along with ASEAN through its Act East Policy is providing development assistance to island nations in the form of training, scholarships, grants-in-aid, and loans for the completion of community development projects.
- **FIPIC summit:** The PM took part in FIPIC summits which discussed challenges faced by people and improved their well-being and development.

What is the significance of India's engagement with PIC nations?

- **Contain Chinese influence:** India alongside ANZUS and PIC nations can help contain Chinese influence in the Pacific Region. India can be a key development partner for PIC nations.
- **Diaspora Connect:** India's connection with PIC has traditionally been because of the sizeable presence of Indians living in these countries. This has led to an increase in people-to-people ties, shared culture, and values. **About 37% of Fiji's population is of Indian origin, and about 3,000 Indians live in Papua New Guinea.**
- **Sustainable Development:** India and PIC nations are partners in tackling climate change. Projects like International Solar Alliance (ISA) and Coalition for Disaster Resilient Infrastructure (CDRI) & Infrastructure for Resilient Island States (IRIS) can help in mitigating the effects of climate change like rising sea levels which is a major concern for PIC nations.
- **Economic cooperation:** India's trade with PIC nation is only \$ 300 million which pales in comparison to China's trade with PIC. India needs to cooperate with the region and ensure sustainable economic development in response to China's checkbook diplomacy.

Conclusion:

India's cooperation with PIC will help build trust among countries of the global south for India's candidature on world platforms like G20, and UNSC. India can also be a credible alternative for those countries who don't want to align themselves with either China or USA.

18. Discuss the potential benefits and challenges of bolstering the Andaman and Nicobar Command.

Introduction: Explain what is Andaman and theatre command

Body: Briefly outline the challenges and benefits of ANC.

Conclusion: the future role of ANC.

A theatre command is a type of military organisation where a three-star general has operational command over all army, air force, and naval assets in a specific area of operations. India's strategic interests in Southeast Asia and the Strait of Malacca are covered by Andaman & Nicobar Command (ANC), the first and only tri-service theatre command of the Indian Armed Forces, which is situated in Port Blair. ANC is also in charge of protecting India's interests in the Eastern Indian Ocean by establishing an air defense identification zone (ADIZ) over the islands.

What are the challenges before ANC?

- **Relation with China:** strengthening the ANC can lead to China seeing it as a sign of belligerence which can lead to militarization of the Indian Ocean by the Chinese Navy.
- **Slow implementation of reform:** ANC model of theatre commands still has not been replicated successfully. Some committees have even suggested the abolition of ANC and the command be subsumed by Eastern Naval Command.
- **Chinese influence in the region:** Even if India manages to maintain dominance in the region the islands are located near Great Coco Island and Little Coco Island of Myanmar which is heavily influenced by China.
- **Bureaucratic mindset:** Concern in Delhi about armed forces becoming too powerful leads to neglect of military reforms and a lethargic attitude and restraining policymakers to take a proactive approach.
- **Build Capabilities:** Need to build capacities for defending against military intrusions, tracking hostile ships, submarines, and drones, and launching response attacks when needed.

What are the benefits of ANC?

- **Maritime Domain Awareness (MDA):** India has conceptualized its MDA which extends India's defense capabilities beyond its homeland and prepares India for expanding its role.
- **Net security provider:** India is seen by many nations like Australia, Small Island States, and the ASEAN group as being a net security provider as opposed to China's hegemony in the region.
- **Model for reform:** ANC model has tested the feasibility of joint commands, logistics, and operational procedures as proposed by defence committees which could lead to increased efficiency, rationalization of command structure and army organised on modern lines as in developed nations.
- **Cooperation with like-minded nations:** India can enhance military preparedness by doing military exercises like Malabar, and cooperating in QUAD, AUKUS.
- **Developing ANC:** ANC can be developed into headquarters for QUAD navies, with a focus on operations like disaster relief, humanitarian assistance, medical aid, submarine and aircraft rescue, and maritime security operations.

Conclusion:

ANC has a crucial role in India's maritime strategy to act as a power balancer in the Indian Ocean and keep sea lines of communication open in the Malacca Strait. ANC must be replicated in other parts of India and be maintained as independent theatre command.

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19. Describe the historical context and symbolic meaning of the sceptre, or “sengol”, in Indian political history. What does the sceptre’s installation in the new Parliament building symbolize.

Introduction: Give historical context of sengol

Body: what is its symbolic meaning in today’s context

Conclusion: Conclude by highlighting its importance

PM Modi will install “**sengol**” **historical sceptre from Tamil Nadu** in the new Parliament building. The “sengol” is believed to be received by PM Nehru on eve of independence from Viceroy Louis Mountbatten symbolising the transfer of power from British to Independent India.

Describe the historical context and symbolic meaning.

Tamil's **sengol** is derived from the term **semmai**, which means **righteousness**. The sengol is intended to convey a directive to the recipient to rule justly and honestly. The Right Sceptre, a chapter in the Thirukkural that contains 10 couplets, is an everlasting treasure mine of knowledge. The sengol will be presented to the PM after a religious ceremony accompanied by priests "**Adheenams, and Oduvars,**" or Tamil temple singers. placed in a glass case next to the Speaker's seat in the House. It was a customary practice **during Chola rule for Samayacharyas (spiritual authorities)** to preside over kings' coronations and sanctify the transfer of authority, which is also regarded as a form of acknowledgment for the ruler.

What is sengol symbolic meaning in the modern context?

- **Continuity with tradition:** Such kind of symbolic transfers show that Indian culture had forms of ceremonies that were deeply influenced by the country’s values and culture. It shows how India’s timeless traditions and civilizational heritage are honoured.
- **Respect for new symbols:** The sceptre is part of **India’s Azadi ka Amrit Mahotsav** where unsung heroes and symbols will get the recognition they deserve.
- **Disowning colonial symbols:** New Parliament building is seen as part of **Panch Pran of Amrit Kaal** to remove any colonial legacy. This is seen in the new parliament building and the renaming of **Rajpath (Kingsway) as Kartavya Path.**
- **Ek Bharat, Shrestha Bharat:** The new building and sceptre is witnessing deep civilizational unity between north and south India.
- **Technology and Culture:** The new parliament alongside “sengol” shows technology alongside culture and spiritual heritage. This represents the vision of the PM for inclusive India.
- **Speaker position:** “Sengol” in Tamil means “righteousness” and will be placed alongside the speaker symbolising his position to preside over Lok Sabha in a just and fair manner.

Conclusion:

Sengol will always represent dharma, the fundamental civilising principle that underlies the governance of India. It will also help the youth of the nation to be proud of our rich and diverse culture.

20. Discuss the feasibility of the Narendra Modi government’s goal of achieving “developed country” status for India by 2047. What would be the key challenges in reaching this target?

Introduction: Highlight PM vision and define developed nation.

Body: Challenges before India

Conclusion: How is it feasible to make India developed by 2047

PM Modi has ambitiously set the target of India being a “**developed country**” **by 2047**. There is no international standard to classify the developed or developing country but it is widely assumed that

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developed countries are high per capita income countries while developing nations have low or medium per capita income. India at present is described as a low-income country by the World Bank with an average income of Indian as **\$1935 in 2020**.

What are the challenges before India?

- **Population:** India is set to overtake China as the world's most populous country in 2023 according to 'The UN State of World Population Report 2022'. A country with such a high population requires immense resources and efficient management for a decent standard of living.
- **Hunger:** India suffers from the worst form of hunger according to Global Hunger Index 2022 in which India is ranked 107th among 121 countries. India fares worse than its South Asian neighbors and is behind even Rwanda, Burkina Faso, and Sudan on GHI.
- **Inequality:** As per Oxfam and World Inequality Report, India is among the most inequitable country in the world with 5 percent of Indians having more than 60 percent of the country's wealth, while the bottom 50 percent of the population possess only 3 percent of the wealth.
- **Human Development:** India fares poorly in UN Human Development Report 2022 ranking 132 out of 191 nations. The majority of Indians still are deprived of a healthy life, access to education, and a decent standard of living.
- **Illiteracy:** India still has the world's largest illiterate population despite immense growth in providing access to education. Millions of unemployed educated people are straddled across the country which can lead to a danger of demographic dividend turning into an unmitigated demographic disaster.
- **Agriculture:** India needs to make agriculture profit making and increase agri exports. There is an urgent need for investment in agriculture to increase productivity and production to make Indian exports competitive in the world market.
- **Exports:** India aims to raise the share of its exports in global trade to 3% by 2027 and 10% by 2047 from the current 2.1%, promoting hundred Indian brands as global brands.

Conclusion:

India could achieve the target of developed country status by 2047 but it is a herculean task given our set of problems. India has to focus on various development parameters like income level, health and education standards, quality of life (e.g. access to electricity and safe drinking water), availability of work, levels of poverty and inequality, technological attainments, and gender equality.

India will need structural reforms in the manufacturing, service, and agriculture sector, reforming the tax structure, making MSME competitive, and reducing corruption to make India a \$5 trillion economy.

21. Enumerate the salient features of the second-generation NavIC satellite. Also, highlight the significance of regional satellite-based navigation systems for a country.

Introduction: Describe NavIC briefly

Body: What are its features and its significance

Conclusion: Conclude with short statement

NavIC is an Indian 'GPS' - Global Positioning System which aims to provide accurate and real-time navigation in India and a region extending to **1,500 km around the mainland**. ISRO launched the first of the second generation satellite for its Indian Regional Navigation Satellite System (IRNSS) constellation, also named NavIC (Navigation with Indian Constellation). **NVS-01 is a 2232 kg satellite with a mission life of 12 years powered by**

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two solar arrays capable of generating power up to 2.4kW and a lithium-ion battery during the eclipse. The satellite was launched on board a GSLV rocket which deployed the satellite in geosynchronous transfer orbit (GTO).

What are its salient features?

- **Heavier than 1 generation:** The second-generation satellites are comparatively heavier than the previous 1 generation satellites. 1 generation of satellites used the lighter PSLV vehicle while 2 generations use GSLV.
- **Long Life:** The mission life of the second-generation satellites will be greater than 12 years. The mission life of the current satellites is ten years.
- **Atomic Clocks:** The Rubidium atomic clock, an important piece of Indian technology, will be installed on the satellite. It is indigenously developed by Space Application Centre, Ahmedabad. The working of these clocks ensures that satellites can provide accurate locations for longer hours.
- **Use of L1 signals:** To improve interoperability with other satellite-based navigation systems, the second-generation satellites will transmit signals in a third frequency, L1, in addition to the L5 and S frequency signals that are currently provided by the present satellites.

What is the significance of Navic for India?

- **Useful in daily life:** NavIC is useful for projects like public vehicle safety, power grid synchronization, real-time train information systems, and fishermen's safety.
- **Mapping services:** Government is in talks with chipset and mobile phone manufacturers to integrate their headsets with the Navic system.
- **Defense:** NavIC provides a wide range of 1500km coverage useful for the country's security.
- **Covers inaccessible areas:** NavIC signals can reach devices located in dense forests, congested areas, and mountains.
- **Self-reliant:** India is one of the countries having its satellite-based navigation system. India will not have to depend on other nations for its commercial and military use.

Conclusion

India is the only country having a regional satellite-based navigation system that can be used as a tool of diplomatic engagement with SAARC nations and help in disaster management.

22. According to research, investing in agricultural research, development, education, and extension (ARDE) yields much greater returns compared to other areas like fertilizer subsidy, power subsidy, education, or roads. Elaborate on this and suggest ways to increase the emphasis on ARDE in India.

Introduction: Give a brief introduction about ARDE.

Body: Why is it useful and what are ways to increase ARDE emphasis in India

Conclusion: Conclude with ARDE being efficient in India.

According to **ICRIER research**, investing in agri-R&D generates substantially higher returns than, for example, spending on education, roads, fertilizer subsidies, or power subsidies. So, even in the face of climate change, **ARDE (agricultural research, development, education, and extension)** can assist achieve higher agricultural production.

Why ARDE is essential for India?

- **Efficient use of resources:** ARDE can help use scarce resources to best use especially natural resources like water, air, and soil.
- **New irrigation practices:** Large amounts of water can be saved with precision agriculture techniques like drip irrigation. For instance, implementing sensor-based

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irrigation systems provides automated control, increasing the effectiveness of resource use.

- **Innovation & Technology:** The use of nanotechnology and fertigation can help reduce fertilizer subsidies and carbon footprint.
- **New agriculture practices:** Research has shown that mulching contributes towards higher soil organic carbon (SOC), reducing GHG emissions and water consumption.

What are the ways to increase the emphasis on ARDE in India?

- **Fund allocation:** There is a crucial need to scale up the allocation of funds for ARDE. Research from ICRIER shows an increase in spending in absolute terms from 2005-06 to 2019-20. There is a need for more investment from the corporate sector in ARDE as the government is the largest spender. Various reports suggest that government needs to
- **Priority Areas:** Need to give priority to sectors like animal husbandry, dairy development, and fisheries sectors which have more growth potential and are carbon emissions generating sectors.
- **Political Will:** Rationalising the subsidies offered by both Centre and States for fertilizer and power can help channelise the savings to the ARDE sector. This requires immense political will, and dialogue with farmers and their organisations. The reduction of subsidies will help India to achieve its Panchamrit goals and SDG.

Conclusion:

ARDE is crucial for the efficient management of resources, improving water use efficiency, and innovative farming practices. Investment in ARDE can help India deal with food and nutritional security which can result in less GHG emissions.

23. In the light of the recent developments, critically analyze the Chief Justice of India's power as a master of the roster.

Introduction: Give a brief about CJI.

Body: Why this power of CJI is under criticism

Conclusion: What can be done to address this concern

The Chief Justice of India is the highest-ranking officer of the judiciary in India. He is in charge of administrative as well as judicial functions of the Supreme Court of India. The Chief Justice of India and other judges of the Supreme Court are appointed by the President of India under **Article 124** of the Indian Constitution. All judges of the Supreme Court are equal when adjudicating and hearing cases. However, concerning the administration of the court, it is CJI who is first among the equals as he decides when a case must be listed for hearing and which judge should hear it.

Why has this power of CJI come under criticism:

- **Irregularities in assigning cases:** Judges in the past have raised concerns regarding the administration and assigning of cases for hearing to benches in the court.
- **Divided Verdict:** Unlike in the USA where all judges exercise collective power and sit en bloc, judges in India sit in benches giving a divided verdict where sometimes CJI is part of the minority opinion. Eg, in the case of EWS reservation.
- **Sitting in Benches:** Judges of the Supreme Court sit in bench of two giving CJI more discretion in deciding who will hear the case.
- **Random selection of cases:** It is being observed that the allocation of cases is based on the preference of the "Judge" or "based on the will of CJI" ignoring the experience and seniority which are considered as legal precedents while hearing the cases.
- **Rise of PIL cases:** The rise of PIL cases has given more discretion to CJI in the allocation of cases forming multiple benches to hear maximum cases while ignoring legal precedents and giving way to more judgments based on personal beliefs.

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- **CJI acting as an intra-court appeal:** In many cases, it is found that if the order goes against the Government it applies to CJI who takes the matter suo motu and disposes of it without any review petition. This mechanism is against any legislative or constitutional precedent.

Way Forward:

The powers given to CJI are necessary for the smooth administrative functioning of the court. Hence, CJI should take caution in using his wide discretionary powers. Further, the practice of constituting benches and allocation of cases should be computerized to ensure transparency and accountability

24. Workplace violence against doctors is a rising trend in developing countries like India. Discuss the contributing factors to this issue, and propose policy measures that could mitigate this problem.

Introduction: Provide a brief introduction on the 'Workplace violence against doctors in India and the rising trend'

Body: Write 4-5 points on the Contributing Factors to this Issue. Write 4-5 points on the Policy Measures that Could Mitigate this Problem. Write 2-3 points on the ways this problem can be solved.

Conclusion: Provide a conclusion on Workplace violence against doctors, contributing factors, policy measures.

Introduction:

Workplace violence against doctors is a growing issue in developing countries like India. Doctors, especially female medical professionals, face both physical and verbal violence from patients or their relatives. The problem persists due to inadequate addressing of the issue and lack of protective legislation.

What are the Contributing Factors to this Issue?

- **Prevalence of Violence:** Studies show that over 50% of doctors in developing countries have experienced patient-led verbal and physical abuse.
- **Prevalence of Violence:** Junior doctors and residents are more likely to face violence compared to senior healthcare workers.
- **High-Stake Settings:** High-stake settings like emergency wings and intensive care units are prone to violence.
- **Perpetrators of Violence:** Perpetrators of workplace violence are usually family members or relatives of the patient.
- **Triggers for Violence:** Violence may be triggered by concerns about the patient's condition, payment dues, or waiting times.
- **Gender Disparities:** Female medical professionals, especially those with lesser experience, are more at risk of facing violence.

What are the Policy Measures that Could Mitigate this Problem?

- **Strengthen the healthcare system:** Invest more resources to reduce waiting periods for treatment, improve availability of medicines, tests, and financial aid for those in need.
- **Enhance communication skills and documentation:** Healthcare professionals should focus on effective communication and meticulous documentation to avoid misunderstandings and conflicts.
- **Institutional measures:** Install CCTV cameras, metal detectors, and robust security systems in healthcare facilities to deter violence. Restrict the number of relatives by a patient's bedside.

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- **Provide emotional support:** Employ counselors to assist patients and their relatives during times of high emotional distress. Ensure availability of translators for effective communication.
- **Enforce the law:** Strictly enforce laws to hold perpetrators accountable and ensure timely resolution of complaints. Consider the introduction of protective legislation for healthcare professionals.

Way Forward:

- **Learning from Successful Policies:** Learn from successful policies in other countries, such as China, to improve public trust in the healthcare system.
- **Addressing Contributing Factors:** Prioritize the implementation of policy measures that address the contributing factors to workplace violence against doctors.
- **Collaborative Approach:** Promote collaboration between healthcare professionals, policymakers, and the public to find effective solutions.
- **Continuous Evaluation and Updating:** Continuously evaluate and update policies based on feedback and evolving needs.

Conclusion:

Workplace violence against doctors in developing countries, including India, demands a comprehensive approach. Strengthening the healthcare system, improving communication, and providing institutional and legal support are necessary steps. Collaborative efforts and continuous policy evaluation are vital to effectively address this issue, fostering a safer and more trusting environment for healthcare professionals.

25. Why is it crucial for India to become a leader in graphene technology? Describe the challenges that have been encountered in producing high-grade large-scale graphene.

Introduction: Give a brief introduction to graphene.

Body: What are its applications and challenges?

Conclusion: Conclude with the progress made by India in this field

Graphene is a two-dimensional material discovered in 2004 with many unique properties. Graphene Technology is an emerging technology which has the potential to be a game-changer in the coming decades. It is the world's thinnest, strongest and most conductive material of both heat and electricity. It has the properties of being perfectly transparent and is impermeable to gases.

Why Graphene is so crucial for India?

- **Wide range of applications:** Graphene has a wide range of applications in fields like electricity, energy generation and sensors. It can be used in high-performance batteries, supercapacitors and touch screens.
- **Health:** Sensors based on graphene technology are used for health monitoring, environmental monitoring, and making wearable devices. Graphene also finds application in water purification and distillation.
- **Electronics:** Graphene-based transistors can enable communication in a terahertz frequency range which is useful in wireless communication and much faster than 4G, and 5G.
- **Environment:** Since it is extremely sensitive to the environment it is useful in detecting chemical, and biological pollutants, radiation, explosives and other hazardous substances.
- **Defence & Aerospace:** Graphene is used in the making of armour and ballistic protection vests due to its sheer strength. Due to its capacity to both absorb and

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dissipate electromagnetic waves, graphene is useful for creating stealth materials and coatings that lessen electromagnetic interference and radar signatures.

What are the challenges in producing high-grade large-scale graphene?

- **International Competition:** China, the USA, the UK, Korea, and Japan are leaders in research based on graphene technology. Brazil and China are global leaders in the production of graphene.
- **Structure:** The two-dimensional structure of graphene leads to contamination of graphene when it comes in contact with other materials which reduces the properties of graphene.
- **Limited production:** The scale of production of graphene-related products is very low in India. India produces about one-twentieth compared to China and one-third compared to Brazil. High-grade graphene has a high cost-to-volume ratio, therefore production may become centralised in a few places throughout the world.
- **No flagship programs:** India lacks the coherent structure and schemes which could aid in the production of graphene. India needs flagship missions related to graphene along the lines done in China and Europe.

Conclusion

India is a latecomer in graphene technology but it is still doing better than many nations with active support from pioneering institutes like Centre for Nano Science and Engineering at IISc. Institutes like IIT-Roorkee and IIT-Kanpur have done scientific research based on graphene-based ultracapacitors, and graphene-based nanotubes. Centre has been focussing on spurring large-scale innovation by setting up India Innovation Centre for Graphene in Kerala.

26. What is the significance of Vande Bharat trains in the context of India's infrastructure development?

Introduction: What are Vande Bharat trains

Body: Significance of Vande Bharat trains

Conclusion: Conclude with a short note

Vande Bharat Trains also referred to as Train 18 is a semi-high-speed, self-propelled train conceptualised, designed and manufactured by Integral Coach Factory. The first train of Vande Bharat was flagged off by PM Modi in 2019 between Delhi and Varanasi. During the Union Budget 2022, the government set the target of manufacturing 400 trains over the next three years. As of May 2023, 18 Vande Bharat trains are running in India.

What is the significance of Vande Bharat in India's infrastructure:

- **Enhanced Connectivity:** Vande Bharat Trains aim at improving connectivity and reducing travel time between major cities and regions. Such enhanced connectivity leads to growth in tourism, increase in economic growth and connecting people from different parts of the country.
- **Faster speed:** These trains are designed to run at 160km/hr which reduces travel time considerably and leads to faster movement of goods and people across the country. The railway is looking to increase the speed to 250km/hr.
- **Continuous upgradation:** The trains will be having better seating arrangements, an anti-bacterial system in AC, and less noise which will make the ride user-friendly and comfortable. There is a further plan to upgrade sitting coaches to sleeper coaches.
- **Make in India:** The trains are manufactured in India with indigenous technology, reducing import dependence. It highlights the country's vision to make India's railway infrastructure globally competitive with the best state of the art.
- **Professionalism:** The completion of the project in record time highlights the professionalism and teamwork of Integral Coach Factory. This will help in building a

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more professional attitude of the bureaucrats to execute the project in the stipulated time.

- **Energy and Cost efficient:** Specific energy consumption of Vande Bharat trains is comparatively less than those of other conventional trains. The cost of Vande Bharat is also less as compared to its counterparts in other developed countries.
- **Employment:** it is widely estimated that manufacturing 400 trains would create additional employment of around 10,500- 50000 jobs.

Conclusion:

The project of modernization should be replicated in conventional trains also at par with Vande Bharat trains which would lead to enhanced connectivity, employment generation and indigenous manufacturing capabilities.

27. Analyze the reasons behind the slow growth of the manufacturing sector in India despite policy initiatives like 'Make in India' and Production-Linked Incentive schemes.

Introduction: What is make in India and PLI scheme.

Body: Describe reasons for slow growth of manufacturing.

Conclusion: Conclude on positive effect of manufacturing.

Make in India is an initiative of the government of India launched in 2014 to encourage companies to invest, develop, manufacture, and assemble products made in India. Production-Linked Incentive scheme on the other hand aims to subsidise companies making products manufactured in India. While the focus of Make in India is centred around foreign companies investing in India, the PLI scheme focuses on the expansion of manufactured units by domestic companies.

What are the reasons for the slow growth of manufacturing

- **Demonetization:** Demonetisation impacted the manufacturing industry by reducing the cash supply from the economy, impacting small manufacturers, and reducing disposable income in the hands of people.
- **Necessities:** India is currently reeling under demand and supply side imbalance where the government has focussed on the supply side while ignoring the demand side. The necessities of life food, housing, health, and education take precedence against the demand for goods.
- **Infrastructure:** Poor infrastructure in terms of roads and long distances to reach ports constrict the movement of goods and raise production and logistics costs.
- **Lack of skilled workforce:** it is estimated that only 4.7% of the total workforce in India has undergone formal skill training as compared to 52% in the US, 80% in Japan, and 96% in South Korea. Skill training impacts the type of product which a country produces which impacts per capita income and foreign exchange of the country.
- **Poor educational outcomes:** Various reports of Pratham Ngo and the ranking of India in the PISA test highlights poor reading ability and numeracy of Indian children making them globally uncompetitive.
- **Complex labour laws:** The complicated labour laws makes it harder for investor to invest in India as it leads to red tape.
- **Chinese imports:** The surge and scale of Chinese imports have led to the flooding of the Indian market with Chinese goods and negatively impacting Indian manufacturers, particularly MSMEs.
- **Global Issues:** certain geopolitical issues like the USA-Iran tension, and Ukraine-Russia conflict have negatively affected the supply chain, increase in oil prices thereby increasing the cost of manufacturing.

Conclusion:

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India's manufacturing sector is in constant need of reforms to make the manufacturing sector globally competitive. The government needs to focus on the demand side of the economy by taking measures to raise the income of individuals which would lead to a cycle of production, consumption, and economic growth of the country. The government needs to address the concerns regarding the programs like Make in India and PLI schemes to enhance manufacturing share in India's GDP and achieve the target of 5 trillion by 2025.

28. Discuss the potential impact of a global carbon market on India's domestic carbon market. How can a global carbon market level the playing field for developing countries?

Introduction: Define carbon markets and carbon credits.

Body: Impact of global carbon impact on India and how can level playing field be achieved

Conclusion: Conclude on India can take leadership role.

Carbon markets are essentially a tool for putting a price on carbon emissions. They establish trading systems where carbon credits or allowances can be bought and sold. Carbon credits and carbon market was first set out in Article 17 of the Kyoto Protocol which allows countries that have emission units to spare can sell this excess capacity to countries that are over their targets of curbing GHG emissions.

What is the impact of global carbon impact on India's domestic market?

- **Technology Transfer:** Indian carbon market can gain access to the latest technology to reduce emissions, and mitigate climate change.
- **Fulfilment of International Goals:** The positive impact can lead to a commitment to the NDC goals of India announced in the Paris Agreement. This would help India achieve carbon neutrality by 2070.
- **Address the imbalance between developed and developing nations:** Global carbon market is expected to cross \$100 billion by 2030 which could impact India's carbon market in terms of increased competition and pricing mechanism. A rules-based system of the global carbon market according to the Paris Agreement would offset the advantage held by developed nations over developing nations due to their technical and financial capabilities.

How can a level playing field be achieved?

- **Cooperation in the International Market:** Indian companies and organizations can participate in the global marketplace to trade carbon credits. This could lead to the expansion of the market and new opportunities for buyers and sellers.
- **Access to international funding:** More interlinkages can lead to more funding from international organizations and investment. Proceeds from such investment can be used to mitigate climate change and sustainable development. A long-term commitment of developed nations to developing countries of \$100 billion annually can be fulfilled.
- **Carbon credit market:** Ministry of New and renewable energy has announced to establish carbon credit market in India. Carbon credits so generated would be used to achieve Nationally Determined Contributions (NDC) commitments with excess generated to be sold in the global market. The revenue generated would be used for the development of renewable energy infrastructure, afforestation, and reforestation projects.
- **Oversight by a neutral body:** Global carbon market would have an oversight mechanism headed by the UN entity which will be a centralized and regulatory body responsible for the efficient trading of carbon credits.

Conclusion:

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India as chair of G20 in 2023 needs to take a leadership role in climate change and climate finance. India could position itself as a key leader in the global carbon market by focusing on the 5E's- enhancing carbon reduction efforts, establishing robust mechanisms, exploring technology and innovation, and empowering local stakeholders in pursuing goals of sustainable development.

29. What is the Carbon Border Adjustment Mechanism (CBAM) and why has it raised concerns in India regarding its impact on exports?

Introduction: What is CBAM

Body: Why is it raised concern and how is India dealing with it

Conclusion: Conclude by giving balance view.

Carbon Border Adjustment Mechanism (CBAM) is a key policy of the EU related to climate change. The policy ensures that imports of carbon-intensive products like cement, iron and steel, electricity, fertilizers, aluminium, and hydrogen are subject to the same economic costs as products by EU producers. It requires importers to report the number of goods imported and their embedded GHG emissions on an annual basis. CBAM is part of the **“Fit for 55 in 2030 package”**, the EU’s plan to reduce greenhouse gas emissions by at least **55% by 2030 compared to 1990 levels**, in line with the European Climate Law.

Why has it raised concerns in India?

- **Effect on exports:** It will hurt India’s exports to the EU namely cement, iron and steel, electricity, fertilizers, aluminium, and hydrogen. While these exports are only 1.8% of total exports to the EU it nevertheless raises concern about the free trade principle.
- **Violate WTO principles:** CBAM policy violates WTO principles of non-discrimination. It violates important principles of equal treatment to goods originating from another country to be treated at par with the same goods produced domestically.
- **Increased price for Indian goods:** Indian goods will be subjected to increased pricing owing to the carbon tax on iron, steel and aluminium which will lead to a decrease in the demand for these goods in the EU and affect Indian export potential.

What steps can India take to resolve this issue?

- **Negotiation with EU:** CBAM is an ongoing issue in the India-EU FTA discussions where India is trying to secure gains for its exporters while abiding by the principles of WTO.
- **Reaching out to WTO:** India could challenge CBAM in the WTO dispute settlement body on grounds of trade protectionism and violation of Most-favoured Nation treatment.
- **Lowering GHG emissions:** Investing more in renewable and green energy like wind, and solar and in developing carbon capture technology can lower emissions generated from manufacturing processes.
- **Carbon price market mechanism:** India needs to have a carbon pricing market mechanism to maintain competitiveness in the global world related to price volatility, while at the same time reducing the effects of CBAM.
- **Transfer of clean technologies:** Government of India should pursue consistent efforts to negotiate with developed countries to transfer clean technologies and finance mechanisms as promised in various agreements to help make India’s manufacturing sector more carbon efficient.

Conclusion:

CBAM once again raises debate about linkages between trade and the environment. Balancing both is extremely crucial and mutual negotiations should provide the answer rather than trade protectionism.

30. What is the purpose of India's strategic petroleum reserves (SPR) program? Discuss the difference between salt cavern-based reserves and rock cavern-based reserves for storing crude oil.

Introduction: Describe the programme of building SPR.

Body: Explain difference between salt caverns and rock caverns

Conclusion: Conclude with why SPR is necessary.

Strategic Petroleum Reserves (SPR) programs are massive stores of crude oil which act as strategic crude oil reserves to mitigate major supply disruptions in the global supply chain. Strategic petroleum reserves (SPR) could assist assure energy security and availability amid global supply shocks and other emergencies since India, the third-largest consumer of crude, depends on imports for more than 85% of its needs. The country has three strategic oil storage facilities at Mangaluru and Padur in Karnataka and Visakhapatnam in Andhra Pradesh. India's strategic oil reserves come under the Petroleum Ministry's special purpose vehicle Indian Strategic Petroleum Reserve (ISPRL).

What is the difference between salt cavern reserves and rock caverns?

- **Cost:** Salt-based caverns are considered cheaper and less labour intensive than cost intensive.
- **Development Process:** Salt caverns are created through the process of solution mining, which entails pumping water into geological formations containing significant salt deposits to dissolve the salt. This method differs from the excavation method used to create underground rock caverns. Compared to creating excavated rock caverns, the procedure is easier, quicker, and less expensive in the development of salt caverns.
- **Storage:** According to scientific reports, oil storage facilities built in salt caverns are also naturally well-sealed and designed for quick injection and extraction of oil. Because of this, they represent a more appealing alternative to rock caverns. The salt inside the caverns develops an impermeable barrier against liquid and gaseous hydrocarbons making them a better option than rock caverns.
- **Types of fuel:** Salt-based caverns are more widely used to store liquid fuels and natural gas. They are widely considered as the storage medium for storing compressed air and hydrogen.
- **Technical know-how:** The requisite knowledge to build salt-based caverns is inadequate in India as compared to rock-based caverns. However, this gap can be bridged by cooperating with developed nations like the USA, and Germany.
- **Location:** Rajasthan in India is seen as a potential site to develop salt cavern-based storage facilities.

Conclusion:

SPR is necessary to build buffer stock and ensure energy security during supply shocks. India needs to increase its SPR capacity and develop more strategic reserves through Public Private Partnerships to reduce government spending and exploit the commercial potential of the reserves.