



Mains Marathon
Compilation

June, 2023

Mains Marathon Compilation for the Month of June, 2023

1. Critically analyze the current state of railroad safety in India. What steps can be taken to improve this situation?
2. Translocation of big cats is being experimented with as a measure to decongest national parks. Explain this concept and discuss the arguments for and against this practice presented by foresters and conservationists.
3. Critically examine the significance of lateral entry in the Indian civil services.
4. The collapse of infrastructural projects across India, including bridges and roads, indicates a significant quality control issue. Discuss the reasons for such incidents and suggest measures to ensure structural safety in infrastructure projects.
5. The rapid scale and pace of development of technology have radically and disruptively transformed our societies and daily lives. Discuss the challenges that technology poses to the traditional notion of a nation-state.
6. Highlight the role of states and the need for a state-level framework in India's energy transition.
7. Critically evaluate the effectiveness of the Production-Linked Incentive (PLI) scheme in boosting India's domestic manufacturing and exports.
8. Discuss the history of insurgency and violence in Manipur. How have these historical factors influenced the current situation in the state?
9. Compare and contrast the electricity regulation model in the United Kingdom during the early 1990s with the model proposed in India following the Electricity Act 2003. Why was full deregulation deemed unsuitable for India?
10. Discuss the policy challenges posed by the balance between technological advancements and the harmful effects of AI. How does generative AI contribute to these challenges?
11. "The discretion of the Governor does not contemplate an indefinite withholding of assent to a Bill. Such an action would cause a breakdown of the constitutional machinery." Discuss the potential consequences of a Governor indefinitely withholding assent to a Bill.
12. Discuss the importance of prioritising the health and nutrition of adolescent girls in India. How can improving access to nutrition during adolescence contribute to India's demographic dividend?
13. Discuss the steps taken by the Indian government to achieve self-reliance in the fertiliser sector. How have these initiatives impacted India's food security?
14. Analyze the role of the expanding Internet economy in creating job opportunities in India. How can the government leverage this growth to address unemployment issues?
15. Discuss the influence of ethnic communities on a country's foreign policy, with specific reference to Canada. How does this influence affect bilateral ties between India and Canada?
16. Discuss the role of the manufacturing sector in expanding India's middle class. How can large-scale manufacturing drive formal employment and contribute to the growth of a prosperous middle class?

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17. Evaluate the impact of government spending on freebies on long-term fiscal sustainability. How can the Finance Commission lay down guidelines to restrain such spending without infringing on the sovereignty of elected governments?
18. Analyze the current status of transgenic crops in India. Why is there a lack of broad acceptance for genetically modified crops in the country?
19. Analyze the impact of the current ranking process on the competition among universities and colleges in India. Does it foster a culture that puts metrics ahead of excellence in education and research?
20. Critically analyze the concept of a “middle-income trap”. How can India build stronger institutions and a more inclusive growth strategy to avoid falling into this trap?
21. Explain the concept of Special and Differential Treatment (SDT) in WTO agreements. How can SDT provisions be strengthened to ensure more equitable trade relations between developed and developing countries?
22. Discuss the recommendations of the Punchhi Commission on Inter-state Relations. How can these recommendations be used to address the current impasse in Manipur?
23. Evaluate the potential benefits and challenges of the Direct Seeding of Rice (DSR) method in the context of water consumption and climate change.
24. Analyze the role of the India Meteorological Department (IMD) in mitigating the impact of cyclonic storm Biparjoy. How did early warnings contribute to disaster management?
25. 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.
26. Analyze the impact of the current appointment process and the reliance on the Academic Performance Index (API) in some higher educational institutions.
27. Analyze the role of yoga in the healthcare systems of various countries. How global impact of the International Day of Yoga (IDY) has contributed to the understanding and practice of yoga worldwide?
28. Discuss the impact of heat waves on human health. What measures can be taken to prevent heat-related deaths?
29. Discuss the implications of the European Union’s Carbon Border Adjustment Mechanism (CBAM) on developing countries like India. How does it affect India’s stand on climate justice?
30. Discuss the role of public libraries in promoting literacy and fostering a reading culture in India. Evaluate the need for a national library policy in India.
31. Discuss the potential implications of introducing a three-year diploma course for medical practitioners to serve in primary health centres (PHCs). Analyze both the potential benefits and drawbacks of such a proposal.
32. In light of present conditions, critically analyze the recommendations of the 21st Law Commission on the Uniform Civil Code (UCC).

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33. Discuss the geopolitical and economic implications for India of a potential crisis in the Taiwan Strait. How can India mitigate the risks associated with such a crisis?
34. Critically analyze the regulatory process for new drugs and vaccines in India. How can this process be streamlined to ensure safety while also allowing for flexibility in times of crisis?
35. Discuss the historical ties between India and Egypt and how they have shaped the current relationship between the two countries.
36. Discuss the need for the proposed Digital India Bill, and How does the Digital India Bill aim to tackle emerging challenges in the digital space.
37. Discuss the regional disparities in higher education quality as reflected in the NIRF rankings. Based on the NIRF rankings and the case study of Tamil Nadu, suggest strategies for improving the quality and inclusivity of higher education in other states.
38. Discuss the current status of India-U.S. digital trade. What are the key challenges and opportunities in this sector? How can the two countries further enhance their digital trade partnership?
39. Examine the role of Supreme Court judgments in shaping the discourse around the Uniform Civil Code. Also, evaluate the potential impact of the Uniform Civil Code on different communities in India, particularly in areas of property and inheritance.
40. How can the National Research Foundation (NRF) address the most pressing issues in Indian science and significantly improve India's research output?
41. In light of a recent controversy in Tamil Nadu, discuss the constitutional provisions under Article 164 regarding the appointment and dismissal of Ministers. How does this incident reflect the role of the Governor in the context of these provisions?
42. India recently became a signatory to the Artemis Accords. Discuss the implications of this decision for India's lunar exploration program. How can international cooperation, particularly with the US, benefit India's space ambitions?

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1. Critically analyze the current state of railroad safety in India. What steps can be taken to improve this situation?

Introduction: What is the recent incident regarding rail safety

Body: Explain reason for rail accidents and what steps could be taken to improve it.

Conclusion: Conclude with a positive statement.

The current state of railroad safety was once again in the news following the recent incident of rail derailment in Balasore, Odisha which resulted in the tragic loss of lives of many people. The number of railroad accidents and people dying from these incidents has steadily increased over the years and such incidents account for 8% of total accidental deaths in India. A government railway safety report for 2019-20 found derailments were responsible for 70% of railway accidents, up from 68% the previous year.

What are the reasons for rail accidents?

- **Effect of temperature:** Rail tracks undergo expansion in summer and contraction in winter which requires regular maintenance, and onsite inspection.
- **Tracks maintenance:** This is a major reason for the derailment of trains. Various reports have found that there is a continuous need to assess the geometrical and structural conditions of the tracks.
- **Human Error:** There have been reports of bad driving and overspeeding in cases of derailments.
- **Mechanical reason:** It has been found that more than a third of derailments have been due to poor structures of coaches and wagons.
- **Signal System error:** The recent incident in Balasore highlights the error in electronic signaling which was responsible for sending wrong signals to change tracks.

What steps can be taken to improve the situation?

- **Kavach System:** This is an automated accident prevention system that works by applying brakes automatically even if a driver fails to do so and it can help prevent collision on tracks.
- **Budgetary allocation:** More and more allocation of budget is being allotted to railway infrastructure every year to improve passenger safety.
- **Modernization of Railways:** The government has been committed to the modernization of railways by attending to the suggestions of the Kakodkar committee, and Bibek Debroy committee and launch of programs like Vande Bharat, Tejas Express, and PM Gati Shakti.
- **Railway Vision 2020:** The railway vision of India railways remains the guiding document to make Indian railways accident-free and make use of technologies to achieve the vision.
- **Global Systems for Mobile Railways (GSM-R):** This advanced railway traffic management system provides voice and data communication between trackside and onboard systems, which are being deployed.
- **Terrestrial Trunked Radio (TETRA):** This indigenous digital wireless technology developed by C-DAC is used to transmit voice and data more efficiently.
- **RailTel:** It was formed as PSU to provide free high-speed Wi-Fi at Railway stations for digital inclusion.

Conclusion:

The safety of railways should be the prime focus of the Government after recent incidents of derailment. There should be a focus on keeping the railways affordable, safe and enhancing connectivity.

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2. Translocation of big cats is being experimented with as a measure to decongest national parks. Explain this concept and discuss the arguments for and against this practice presented by foresters and conservationists.

Introduction: What is translocation of big cats?

Body: Support arguments for and against.

Conclusion: Give suggestion to resolve this.

Translocation of big cats is being carried out to move big cats from high-density areas to new forest areas or areas with large swathes of land and a relatively adequate prey base to feed the big cats. The tiger relocation project was initiated in 2018 wherein big cats from Kanha Tiger Reserve and from Bandhavgarh in Madhya Pradesh were relocated to Satkosia Tiger Reserve in Odisha, to shore up the tiger population in the state.

What are arguments given in support of translocation?

- Decongest National Parks: The reason given for translocation is that it will help decongest national parks and help maintain the genetic diversity of the big cats.
- Knowledge sharing: Translocation helps in giving conservationists, and researchers new insights into the behaviour of big cats. It also spreads awareness regarding tiger conservation.
- Conservation of big cats: Translocation would help in maintaining the population of big cats in different parts of the country and maintain ecological balance.
- International Cooperation: India being part of tiger range countries has the highest no of tigers in the world and is responsible to protect the charismatic species and cooperate with International Organisations on Project Tiger.
- Territorial dispute: Since big cats are very particular about their territory and would fight with other cats for gaining territory it is considered wise to translocate them to reduce territorial disputes.
- Man-animal conflict: Recent incidents of man-animal conflict in high-density areas have also led the government to go for translocation. What are the arguments given in against this practice?
- Low prey base: Since there is a low prey base in low tiger density areas it makes the survival of tigers very difficult.
- Change in natural habitat: Some of the widely used unscientific practices like clearing extrawide view lines, exotic weed removal schemes, creation of meadows, creating excessive water holes & replenishment in the dry season. This leads to a decline in prey species & further leads to reduce tiger density also.
- Conservation efforts ignored: Translocation is being viewed as a substitute for conservation activities.

Conclusion:

The answer to this problem lies in keeping a check on human activities and keeping buffer zone free of infrastructure development. The wildlife corridors should be free from encroachment and unfragmented to let the easy movement of tigers and reduction in man-animal conflict.

3. Critically examine the significance of lateral entry in the Indian civil services.

Introduction: Outlay the scheme of lateral entry.

Body: Highlight its challenges and significance

Conclusion: Suggestion to improve the scheme.

The scheme of lateral entry in civil services was started in 2019 when the Central Government began the process of recruitment to middle and senior-level positions in the government of India outside the regular process of civil service exams. Lateral entry denotes recruitment from the private sector of specialists working in various fields to be appointed as higher government officials.

What have been the challenges for the lateral entry program?

- **Institutional opposition:** The biggest challenge comes from the strong lobby of the Indian Administrative Service (IAS) and the Central Secretariat Service (CSS) who had traditionally been holders of higher positions in the Government of India.
- **Lacks Specialist officers:** The posts of specialist officers in departments like audit, the Railways, or tax (direct and indirect) have not yet been thrown open to lateral recruitments. Appointing specialist officers in these technical departments was the main aim of the lateral entry program.
- **Lack of interest from state governments:** State governments across India have been unresponsive to lateral entry with concerns regarding federalism, opposition from the state civil service cadre, and no initiative from the state public service commission.
- **Spoils System:** Former bureaucrats have raised concerns regarding lateral entry being turned into a spoils system where politicians favor certain kinds of people who are close to the political party or received patronage from the leader.

What is the significance of the lateral entry scheme?

- **Governance:** Lateral entry will help strengthen governance with people from the private sector bringing new insights and ideas which can help address administrative challenges and complement the efforts of traditional bureaucrats.
- **Reduce Vacancies:** Lateral vacancies will help reduce vacancies to significant numbers as the current recruitment process is long, costly, and prone to corruption.
- **Notable examples:** Lateral entrants like Montek Singh Ahluwalia, Bimal Jalan and Vijay Kelkar, and Parameswaran Iyer have brought new insights and set up new examples of achievements in their fields. This could motivate the new generation to enter bureaucracy without going for competitive exams.
- **Infuse competitiveness:** Lateral entrants will push traditional bureaucrats out of their comfort zone and challenge them for producing good results. Mid-career lateral entrants with proven capabilities will bridge the administrative and judgemental deficiency of the administrators who are recruited at a very young age.

Conclusion:

In ensuring the success of the scheme due attention should be focussed on the recruitment of lateral entrants. The recruitment should be done by UPSC and the focus should be to test analytical skills, maturity of judgment, and personality traits. The government has also set up the Capacity Building Commission and Mission Karmayogi to train government employees about their roles and bring efficiency to the administration.

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4. **The collapse of infrastructural projects across India, including bridges and roads, indicates a significant quality control issue. Discuss the reasons for such incidents and suggest measures to ensure structural safety in infrastructure projects.**

Introduction: Give introduction on mishaps in infrastructure

Body: Explain reasons for incidents and measures needed for safety of infrastructure

Conclusion: Conclude with giving directions for future.

Recently series of infrastructural projects across India especially in Odisha and Bihar, including bridges, and railroads were in the news due to accidents and mishaps which resulted in the tragic loss of lives and property. The incidents show that safety and quality of infrastructure are never a high priority for people as well as the government.

What are the reasons for such incidents?

- **Design:** Faulty designs of infrastructure projects is responsible for accidents. Designs of coaches, highways, wagons, and bridges should be based on scientific guidelines.
- **Poor maintenance:** Infrastructure in India suffers from constant neglect from policymakers, officials, and people responsible for their work. Regular wear and tear leads to depreciating the life of the project and compromises safety. Eg, Morbi Bridge in Gujrat
- **Improper safety and regulations:** The regulations in place are not properly implemented and safety protocols are not deliberated upon leading to such accidents.
- **Human error:** Another major factor for the rise of such accidents is human error which could be due to negligence, fatigue, or even boredom.
- **Lack of enforcement:** Wilful flouting of norms and safety regulations by citizens and officials alike leads to mishaps that lead to loss of lives and destruction of property. There is no strict attitude to corruption and no strict penalty for those found guilty.

What are measures needed to ensure safety in these projects?

- **Politicians-contractor nexus:** Strict enforcement measures should be in place to curb the corrupt nexus between private contractors and politicians. Such a type of nexus is the root cause of corruption and flouting of norms around safety.
- **Accountability:** CAG reports have pointed to lapses in inspection and short utilization of funds in infrastructure projects. There is a need to enforce strict accountability to address this issue and penalize corrupt officials and contractors.
- **Strict implementation of rules/protocols:** From testing car crash test norms to implementation of seat belts in automobiles and basic rules like labeling of specifications according to the FSSAI act there needs to be strict policy implementation.
- **Training:** To avoid human error there is a need to provide the best training to those who are working on these projects and make them aware of the latest safety and system functions.

Conclusion:

The policymakers and industry should take note of these faultlines in our infrastructure projects and urgently work to resolve the issues. Citizens should also make it their priority to hold authorities accountable and not tend to blame their fate for poor safety and quality enforcement.

5. The rapid scale and pace of development of technology have radically and disruptively transformed our societies and daily lives. Discuss the challenges that technology poses to the traditional notion of a nation-state.

Introduction: What is a nation-state?

Body: Describe the challenges associated with the nation-state

Conclusion: India's global role in dealing with such challenges.

Ever since the rapid expansion of the internet and its use in the finance sector, there have been instances of rapid and disruptive technologies transforming our society and daily lives. The rise of such technology has posed complex challenges to the polity and governance which has affected the idea of the nation-state. A nation-state is a sovereign state in which government has control over a defined territory and population which shares language, culture, and history.

What are the challenges to the nation-state?

- **Cyber attacks:** the expansion of the internet in various fields has increased the possibility of terror attacks. The concept of Web3 which is a combination of blockchain, token-based currency, and decentralized internet has led to both actors and non-state actors influencing various dimensions of human life like trade, commerce, health, and education
- **Conventional geography boundaries:** The virtual world of the internet is not confined to the boundaries of nation-states. The era of high technology has made enforcement of rules difficult when data and information spread at a very fast rate.
- **Effect on institutions:** Since it is difficult to frame country-specific legislation due to the universal nature of technology state institutions like legislature, judiciary, and executive have been unable to curb the adverse effects of this technological boom.
- **New Technologies:** The emergence of new technologies has led multinational corporations, non-governmental organizations, and supranational organizations, both legitimate and illegitimate, state and non-state actors to execute their work. They do not have to depend on traditional bureaucratic structures to share data and statistics. For eg, Topographical maps, or Weather related data which used to be produced by public and military institutions, are now available entirely by private non-state actors, such as Apple or Google Maps.
- **Big 5:** The immense power of the five largest American tech companies Google, Amazon, Facebook, Apple, and Microsoft is reflected in their extensive use of data and its storage.

Way forward:

- **Rules-based global order:** There has to be agreement on a principle-based global order for technology to deal with its adoption and enforceability challenges.
- **Data privacy law:** India urgently needs its data privacy law and data transfer law to regulate the free flow of data and create data sharing ecosystem based on principles of privacy and transparency.

Conclusion:

India as acting chair of G20 this year can guide the nations towards a framing global architecture to regulate deep web, crypto given the risks they pose to the financial ecosystem of the world.

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6. Highlight the role of states and the need for a state-level framework in India's energy transition.

Introduction: Give introduction about India energy transition pledge

Body: What role does states play and why is there need for state level framework.

Conclusion: Give suggestions for improving cooperation between states and centre.

India as chair of G20 this year is planning to develop multiple pathways to reach its targets of net zero emissions by 2070 and 50% non-fossil electricity generation capacity by 2030. The diversity of states in India necessitates a clear framework in ensuring a smooth energy transition.

What role do states play in this energy transition?

- **Implementation of policies:** States are critical to the implementation of policies. The Centre may set up goals but the actual realization of the targets depends upon state performance and its capabilities.
- **State subjects:** Electricity is listed as a state subject and it is the sole responsibility of states to deal with issues like high losses, unreliable supply, and service quality.
- **Innovative ideas:** States have been at the forefront of innovation in implementing renewable energy projects. For example, early initiatives by Gujarat and Rajasthan on solar, and Maharashtra and Tamil Nadu on wind energy technologies, have contributed significantly to renewable energy uptake at the national level.
- **Different priorities:** States could have different priorities which can be misaligned with the national goals in which case states can obstruct the policy. Eg, Government wants to increase nuclear power share but protests by locals against nuclear power plants obstruct the policy making.

What is the need for such a framework?

- **Broadens understanding:** Such a framework helps to understand plans, goals, and outcomes of the energy transition. This includes accountability, affordability, and transparency of decision-makers.
- **Public cooperation:** Framework would lead to transparent decisions and engage public participation in the decision-making process.
- **Federalism:** The framework would respect the principle of federalism and will lead to a pragmatic and accelerated energy transition.

Way forward:

- There is a need to engage with states based on the diversity, capability, and priorities of the state. In considering these due importance should be given to available techno-economic options, fiscal space, and social and political imperatives.
- States should update their State action plan on climate change, set up state-level steering committees for energy transition, and have a regular dialogue between the energy minister of state and the centre.
- NITI Aayog State Energy and Climate Index (SECI) encourage healthy competition among states on different dimensions of the energy and climate sector.

Conclusion:

States are critical to achieving net zero goals and transitioning to renewable energy in a federal polity. The principle of cooperative federalism would help in bridging ambitions and implementation gaps between the Centre and the States.

7. Critically evaluate the effectiveness of the Production-Linked Incentive (PLI) scheme in boosting India's domestic manufacturing and exports.

Introduction: Give a brief introduction to the PLI scheme.

Body: Critically evaluate its effectiveness.

Conclusion: Give ways to improve the scheme.

Recently PLI scheme was in the news regarding its performance in boosting India's domestic manufacturing and exports. The PLI scheme was introduced by the Central Government in 2020 with the basic aim to boost domestic manufacturing and cut down import bills. The fundamental feature of the scheme is it offers incentives to companies for sales of products manufactured in domestic units. It encourages domestic companies to set up or expand their existing manufacturing units to generate jobs and increase exports.

Evaluation of PLI scheme in boosting manufacturing and exports?

- **Focus Is on large companies:** Critics have often argued that the PLI scheme offers protection to large-scale companies while the need is to revive the micro sector, which is where the bulk of the employment lies. The scheme focuses on mobile manufacturing as well as pharmaceutical ingredients and medical devices while ignoring labour-intensive industries.
- **Incentivise target companies:** Focus targeting should be the primary aim of the PLI scheme. India should focus on its priorities and develop strategies that should fulfill our commitments accordingly. The focus should be on labour-intensive companies, large export markets, and being safe from the pitfalls of the integrated global world.
- **Structural problem:** Critics of PLI policy have often suggested that policy addresses the supply side situation by giving freebies to the corporate which is already a resource-rich ignoring the demand side problem of the consumer who is short of cash.
- **Crony capitalism:** The subsidy being offered to sectors that are in the PLI scheme also depicts favourable government decisions to such sectors which is a sign of crony capitalism. Factors like living issues and employability are neglected in these decisions.
- **Large import bill:** Despite investments made in the PLI scheme various reports have estimated that by 2025 also India might be importing \$400 billion of electronics every year. So in a globally open and integrated economy, investments will come if we focus our efforts on the promotion, facilitation, and incentivization of investment.
- **Investment in R&D:** There is an urgent need to address issues in infrastructure, the quality of education needs to be enhanced and the maximum focus should be on skills upgradation.

Conclusion:

The government can consider widening the scope of the scheme and include renewable energy, electric vehicles, biotechnology, and advanced technology industries. Special focus should be given to MSMEs. Government should work to promote region-specific incentives to promote industrial development in underdeveloped or backward regions. Finally, there should be active collaboration between industry, government, research institutions, and academia to foster innovation to improve the competitiveness of domestic manufacturers.

8. Discuss the history of insurgency and violence in Manipur. How have these historical factors influenced the current situation in the state?

Introduction: Give an account of historical violence in Manipur

Body: State historical factors are responsible for the current situation

Conclusion: What should be the future course of action

Recently Manipur was in the news following violence between Meiteis and the Kukis, after High Court asked State Government to recommend Scheduled Tribe (ST) status to Meiteis. Manipur has a history of ethnic violence between tribals and those living in valleys. Manipur has a long history of insurgency movements. Post-independence, Naga national movement fight for an independent Nagalim touched parts of Manipur. Simultaneously, Meitis in Manipur were opposing the merger agreement between Maharaja Bodhachandra, and the Indian government.

Numerous insurgent groups like the United National Liberation Front (UNLF), the People's Revolutionary Party of Kangleipak (PREPAK), and the People's Liberation Army (PLA), were formed which received arms and training from China & demanding secession from India. The Indian Government responded by enacting Armed Forces Special Powers Act in 1958 to deal with law and order issues. As the law-and-order situation gradually improved, AFSPA has been repealed in several areas.

Which historical factors are responsible for the current situation?

- **Meitei dominance:** Meiteis form 52% of the population of Manipur and predominantly reside in valley areas which are 10% of the total land of the state. The state was ruled by Meitei rulers and so there is a dominance of Meiteis in the cultural sphere.
- **Socio-Economic issues:** Meiteis feel that since they are Vaishnav Hindus and it is illegal for them to relocate to hill areas which are reserved for ST they are deprived of political and economic benefits and right to occupy 90% of the territory of the State.
- **Border states:** Insurgency in border states like Nagaland and Mizoram has spillover effects. The demand for Greater Nagalim has also led to ethnic violence in Manipur.
- **Land boundary disputes:** There have been instances of land disputes between Meiteis and Kukis. There have also been instances of communal disputes between Meiteis who belong to the Vaishnav Hindu sect and Manipur Muslims called Pangals.
- **International Neighbour:** Manipur shares a border with Myanmar which is often used by insurgent groups to be a base for their soldiers and get arms from China.

Conclusion:

The government of India has taken various steps like protracted military operations, peace talks, and political negotiations, improved means of communication in the region, development, and the granting of Statehood to deal with the insurgency problem in the state. The administrative and judicial interventions in the Land Act should not be done in haste and take into account the sensitivities of the tribals and bridge the trust deficit between the communities.

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9. Compare and contrast the electricity regulation model in the United Kingdom during the early 1990s with the model proposed in India following the Electricity Act 2003. Why was full deregulation deemed unsuitable for India?

Introduction: Provide a brief introduction to the “ Electricity regulation model in the United Kingdom during the early 1990s with the model proposed in India following the Electricity Act 2003”

Body: Write 4-5 points comparing the electricity regulation model in the United Kingdom during the early 1990s with the model proposed in India following the Electricity Act 2003. Write 3-4 points on full deregulation deemed unsuitable for India. Write 2-3 points on the ways for India.

Conclusion: Provide a conclusion on the balanced approach for India.

Introduction:

The Electricity Act 2003 in India aimed to separate generation, transmission, and distribution into separate companies and promote competition in the power sector. The United Kingdom implemented full deregulation and competition in the early 1990s, introducing a power pool and retail competition.

How does the electricity regulation model in the United Kingdom during the early 1990s compare and contrast with the model proposed in India following the Electricity Act 2003?

UK Model:

- Mandatory power pool where generators submitted bids indicating the quantity and price they could supply.
- Pool price is determined by the intersection of supply and demand curves.
- The full retail competition allowed consumers to choose from multiple suppliers.

Indian Model:

- Power is supplied through long-term contracts at prices determined for each plant.
- Competitive procurement through power purchase agreements (PPAs).
- Distribution Licensee (Discom) responsible for supplying electricity to meet full demand, entering long-term contracts to ensure reliable supply.
- Open access is provided for consumers with 1 MW and above load, allowing them to buy electricity from suppliers of their choice.

Why was full deregulation deemed unsuitable for India?

- **Impact on electricity prices:** Full deregulation would have resulted in selling electricity at the price of the most expensive plant, leading to a steep price shock. India's older plants, with depreciated capital costs, would have been required to sell electricity at significantly higher prices, causing affordability issues.
- **Political economy and governance issues:** State governments struggled to determine cost-reflective tariffs and provide timely subsidies. Misgovernance and rent-seeking in some states necessitate privatization as a solution.

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- **Importance of Discoms:** Discoms project demand and enter long-term contracts, ensuring investment in generating capacity. Without Discoms, power supply reliability and investment would be at risk.
- **Lessons from the UK:** the UK did not experience significant demand growth, which limited the need for new generating capacity. To drive energy transition, the UK had to invite bids for renewable energy through contracts for differences.

Way forward:

- **Progressive reduction of cross-subsidies:** Implement progressive reduction of cross-subsidies as mandated in the Electricity Act.
- **Address political economy and governance issues:** Address political economy and governance issues through better regulation and privatization in certain states.
- **Maintain competition and private investment:** Continue promoting competition and private investment while ensuring the role of Discoms in reliable power supply.

Conclusion:

India needs to find a balanced approach that addresses governance issues, reduces cross-subsidies, and encourages private investment while maintaining the stability and accessibility of the power sector.

10. Discuss the policy challenges posed by the balance between technological advancements and the harmful effects of AI. How does generative AI contribute to these challenges?

Introduction: Provide a brief introduction on “Policy challenges posed by the balance between technological advancements and the harmful effects of AI”

Body: Write 3-4 points on the policy challenges posed by the balance between technological advancements and the harmful effects of AI. Write 2-3 points on generative AI that contribute to these challenges. Write 2-3 points on the ways forward on the balance between technological advancements and the harmful effects of AI.

Conclusion: Provide a conclusion on the balance between technological gains and the harmful effects of AI.

Introduction:

The rapid development and deployment of artificial intelligence (AI) technology pose significant policy challenges. Sam Altman, CEO of OpenAI, highlights three areas of concern: AI going wrong, job displacement, and the spread of targeted misinformation. The need for regulation is influenced by the profitability and efficiency of AI, as demonstrated by the success of companies like Nvidia.

What are the policy challenges posed by the balance between technological advancements and the harmful effects of AI?

- **AI going wrong:** AI can go wrong and provide inaccurate or misleading information, leading to potential risks in decision-making and user reliance.

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- **Job displacement:** Job displacement is a growing concern as AI automation replaces certain roles, requiring strategies to mitigate the negative impact on employment and livelihoods.
- **Spread of targeted misinformation:** AI can be exploited to spread targeted misinformation, influencing public opinion and potentially undermining democratic processes.
- **Ethical considerations and responsible use:** AI technology raises ethical questions regarding its use in various domains, such as warfare and healthcare.
- **Definitional challenges and regulatory thresholds:** Defining AI and its capabilities presents a policy dilemma.

How does generative AI contribute to these challenges?

- **Risks of generative AI:** Generative AI, such as OpenAI's ChatGPT, presents specific risks due to its ability to produce diverse content, including text, imagery, audio, and synthetic data.
- **Amplification of biases:** Generative AI systems learn from vast amounts of data, including biased or discriminatory information present in the training datasets.
- **Manipulation and persuasion:** Generative AI can be used to create persuasive and manipulative content, which raises concerns about its potential misuse for propaganda, targeted advertising, or influencing public opinion.
- **Content ownership and intellectual property:** Generative AI challenges traditional notions of content ownership and intellectual property rights.

Way forward:

- **Establishing regulatory frameworks and licensing requirements:** Establishing regulatory frameworks and licensing requirements for AI companies can ensure accountability and responsible development of AI technologies.
- **Differentiating regulatory thresholds based on AI capabilities:** Differentiating regulatory thresholds based on the capabilities of AI models, as suggested by Altman, can help determine appropriate levels of regulation and ensure public safety.
- **Prioritizing education and awareness:** Policymakers should prioritize education and awareness to understand the technology and its implications fully.
- **International cooperation:** International cooperation is necessary to address global risks associated with AI, similar to other societal-scale risks like pandemics and nuclear war.

Conclusion:

The balance between technological gains and the harmful effects of AI is a pressing policy debate worldwide. Generative AI, with its potential for misleading content, poses additional challenges in terms of spreading misinformation. Effective regulation, education, and international cooperation are key to ensuring the responsible and beneficial use of AI while safeguarding individual rights and mitigating potential risks.

11. **“The discretion of the Governor does not contemplate an indefinite withholding of assent to a Bill. Such an action would cause a breakdown of the constitutional machinery.” Discuss the potential consequences of a Governor indefinitely withholding assent to a Bill.**

Introduction: What is the issue?

Body: What are the consequences of the Governor's decision? Suggest ways to resolve the issue.

Conclusion: State the view of the Constitution.

Recently there were issues between the Governor and Chief Minister regarding the passing of bills. The friction between the two is not healthy for parliamentary democracy. The Governor along with State Assembly is part of the State Legislature but he can act only on the “advice” of his Council of Ministers, with the Chief Minister as the head of the Council. The discretionary power of the Governor under **Article 163(2)** is significant for his decision can't be challenged in any court. **Article 200** provides for the consent of the governor concerning bills passed by the state legislature. The discretionary power of withholding the bill for an indefinite period is not in harmony with parliamentary democracy.

What are the potential consequences of a Governor indefinitely withholding assent to a Bill?

- **Multiple power centers:** Governor is only the ceremonial head while CM is the de facto head. The withholding of assent to bills by the Governor undermines the CM authority which is answerable to the people.
- **Effects on Cabinet responsibility:** A politically active Governor would lead to usurpation of the power of elected representatives which will have disastrous consequences for our constitutional machinery.
- **Violates Constitution:** In the Nabam Rebia case, the Supreme Court held that the Governor exercise discretion only in those matters in which the Constitution expressly permits it to do so, His discretion concerning bills is related only to reserving the bill for consideration of the President or not.
- **Governance in State:** The Governor's inaction on the bills creates a situation where the state is unable to function according to the constitution which affects the governance of the state.
- **Dispute between Centre and State:** The withholding of bills by the Governor may lead to a tussle between the state Government and central government which is not healthy for the principle of cooperative federalism.

Way Forward:

- **Appointment of Governor:** Governor should not be from a political background. Election of the Governor through a panel comprising the PM, Home Minister, Lok Sabha Speaker, and the CM.
- **Fixed Tenure:** The tenure of the Governor should be fixed for 5 years as suggested by the Sarkaria Commission.
- **Impeachment:** Recommendations have also been made for a provision to impeach the Governor by the Assembly.

Conclusion:

The principles of Constitutional morality should take precedence rather than power politics in the governance of the state. Framers of the constitution intended that actual governance should be done by the PM, CM & President, and Governor should act only on the advice of the Council of Ministers.

12. Discuss the importance of prioritising the health and nutrition of adolescent girls in India. How can improving access to nutrition during adolescence contribute to India's demographic dividend?

Introduction: Give an introduction to health and nutrition.

Body: State the importance of health and nutrition and how they can help in demographic dividend.

Conclusion: Conclude by giving positive directions.

Health and nutrition are pivotal for the development of a girl child. Health and nutrition during adolescence offer a second opportunity for the growth of a girl child if she is neglected during her early stages after birth. Various health reports suggest that adolescent health is also an important long-term predictor of women's participation in the labour market in India because improved nutrition increases every young girl's chances of engaging in productive activities. By funding nutrition treatments for adolescent females, the government has a tremendous chance to increase its demographic dividend.

Why is it important to prioritise health and nutrition?

- **Undernutrition & Anaemia:** Due to mensuration girls are often vulnerable to these problems. National Family Health Survey-5 (2019-21) shows 59.1% of adolescent girls are anaemic. NFHS-4 numbers also reported over 41.9% of school-going girls as underweight highlighting the cause for concern.
- **Cognitive Impairments:** Insufficient nutrition and an unbalanced diet might cause cognitive problems that have an impact on a person's academic performance. Because of this, there may be fewer prospects for work and financial independence later in life, which may limit their ability to achieve higher levels of schooling.
- **Health Risk:** Undernourished Adolescent girls are also more likely to develop chronic illnesses and experience pregnancy problems, which can place a greater financial burden on families and communities and increase poverty. They are less likely to actively participate in society through work, politics, or community involvement if they are less healthy and educated.

How to improve access to nutrition which can contribute to demographic dividend?

- **Focus on the Life cycle approach:** Redefining our investment and focus on nutrition, health, and breaking the cycle of poverty can lead to potential returns in the form of well-nourished girls, healthy babies, and better care for their families.
- **Use of technology and data:** Holistic use of data and technology on linkages between nutrition and overall mental and physical well-being can raise individual productivity and overall economic growth of the country.
- **Convergence of welfare schemes:** Convergence of government initiatives such as the Scheme for Adolescent Girls (SAG) with (POSHAN) 2.0 can bring desired results that stem from collective endeavor and cooperation of many departments.
- **Health workers:** Focus on the training of Auxillary Nurse midwives and ASHA workers can lead to effective implementation of the scheme. They should receive adequate salaries and be given the benefits of formal employees.
- **Targeting of schemes:** Targeted adolescent-focused projects like the Rashtriya Kishor Swasthya Karyakram (RKSK) could incorporate stronger awareness and nutrition education activities. Increased demand and the adoption of best practices will undoubtedly result from targeted and regionally contextualized Social and Behaviour Change Communication (SBCC) efforts on teenage girls' nutrition.

Conclusion:

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It is important to recognize that solving the complicated problem of nutrition among adolescent girls is an investment in the future of the country as well as a health issue. The strength of a nation is measured by its capacity to raise its future generations, and providing opportunity to every girl to reach her full potential.

13. Discuss the steps taken by the Indian government to achieve self-reliance in the fertiliser sector. How have these initiatives impacted India's food security?

Introduction: Brief introduction about the fertiliser industry.

Body: Steps taken by the government to achieve self-reliance in the fertiliser sector and its effect on food security.

Conclusion: Conclude with Vocal for Local initiative.

India is the world's second-largest consumer of fertilisers. The fertilisers department of India has made tremendous progress towards reaching sector self-reliance. During the Russia-Ukraine war, the government showed prudence by ensuring fertiliser supply in the market.

What steps are taken by the Indian government to achieve self-reliance in the fertiliser sector?

- **Strategic Partnership:** Indian Government has forged partnerships with countries such as Jordan, Saudi Arabia, Oman, Canada, Russia, Morocco, Israel, Senegal, Tunisia and South Africa, to secure a supply of various fertilisers like rock phosphate and potash, phosphoric acid.
- **Support domestic industry and PSU:** The government has also urged domestic businesses and government-run enterprises to negotiate long-term contracts for the import of intermediates and raw materials including ammonia, phosphoric acid, and sulphur.
- **One Nation One Fertiliser scheme:** The scheme is also known as Pradhanmantri Bhartiya Janurvarak Pariyojna (PMBJP) & is an important step towards the security of fertilisers. Only one-third of the fertiliser bags may bear a fertiliser company's name, trademark while the remaining two-thirds will have the PMBJP's emblem and the brand name "Bharat".
- **PM-Kisan Samruddhi Kendras (PM-KSK):** They aim to bolster fertiliser security by serving as centres that provide a range of agricultural inputs including seeds, fertilisers, and farming tools, alongside soil, seed, and fertiliser testing.
- **PM Promotion of Alternative Nutrients for Agriculture Management (PM PRANAM):** The scheme seeks to provide incentives to states for promoting the adoption of organic manure, organic and bio-fertilisers, nano-urea and di-ammonium phosphate (DAP).

How have these initiatives impacted India's food security?

- **Crop yield:** Due to efforts of self-reliance in the fertilizer sector, India has a cushion from the pitfalls of an increase in input cost which lower crop yield.
- **Balanced Nutrition:** Above mentioned initiatives have enabled India to diversify its fertilizer pool and produce more NPK complexes. This eventually helps farmers by providing a wide range of fertilizer options while at the same time ensuring balanced nutrition.
- **Atmanirbhar Bharat:** By ensuring a regular supply of fertilizer, India ensures that its targeted programmes like PM-POSHAN and Mid-day meal programmes are executed without any obstructions. India has cooperated with Asian Development Bank (ADB)

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to improve long-term food security by strengthening food systems against the impacts of climate change and biodiversity loss.

Conclusion:

The remarkable improvement of stocks of different fertilisers has positioned India as a vital player in the global supply chain for fertiliser & achieving PM vision of Vocal for Local to be a self-sustaining and self-generating economy.

14. Analyze the role of the expanding Internet economy in creating job opportunities in India. How can the government leverage this growth to address unemployment issues?

Introduction: Give reference to the report and its data.

Body: Role of the Internet economy and government efforts to leverage the Internet for employment.

Conclusion: Conclude by highlighting the role of the private sector also.

The Internet economy or digital economy consists of a network of economic activities, professional interactions and commercial transactions that are based on interactions that are enabled by information and communications technologies (ICT). A report titled **“e-Conomy”** projected India’s internet economy, worth \$155-175 billion in 2022 will grow to \$1 trillion by 2030.

What role will the Internet economy play in job creation in India?

- **High Economic Growth:** Reports have suggested that the online economy would contribute 12-13% of GDP by 2030. The predicted \$1 trillion economy would raise per capita income from \$2,500 (2022) to \$5,500 (2030) leading to a rise in consumption.
- **Digital platforms:** digital platforms like Aadhaar, the Unified Payments Interface (UPI), and Digilocker have acted as enablers for the Open Network for Digital Commerce (ONDC), Unified Health Interface and Open Credit Enablement Network (OCEN) and have successfully engaged people in Tier-II cities and rural households raising their per capita income and generating jobs.
- **B2C e-commerce:** Reports have suggested that B2C commerce will contribute about a third of the online economy’s value by 2030. Various sectors like fintech, health tech, online travel, and food delivery platforms will witness strong growth.
- **Overseas Presence:** Various companies will leverage the skills of employees and will try to expand their business overseas leading to new job generation and acquiring new skills.
- **Boost to start-up industry:** The Internet economy will benefit start-ups by helping them establish their presence in foreign markets. Presence in overseas markets will help generate jobs in content creation and influencers in marketing their products.

How can the government leverage this growth to address unemployment issues?

- **Skill India Mission:** Government and industry need to focus on providing skills of 21 century namely related to machine learning, AI, and digital marketing. Schools and colleges could be venues to provide webinars and awareness sessions at an early age.
- **Financial Inclusion:** Programmes like the JAM model, and UPI, enable citizens to be part of the digital economy and participate in employment opportunities. It also helps in targeting citizens with intended benefits reducing administrative burden and corruption.

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- **E-Commerce:** Government can help small businesses and MSMEs to connect with online shopping portals so that they can sell their products online. Eg is Government e-marketplace (GEM Registration) is an online platform for public procurement introduced by GoI.
- **Entrepreneurship:** The government through its various programmes like MUDRA yojana, and Start-Up India can support aspiring entrepreneurs by providing them access to funding, cooperation with industry and the creation of a supportive ecosystem for startups.
- **Online Government Services:** The use of the internet can help government deliver government services online, reducing corruption and increasing efficiency. It also helps in Ease of doing business, reduces red tape and enables faster response to process permits, registrations and certifications.

Conclusion:

The government should take the lead in leveraging the Internet economy but efforts of the private sector should be combined with the government sector to bridge the digital divide and ensure digital infrastructure in rural India to provide employment opportunities across the country.

15. Discuss the influence of ethnic communities on a country's foreign policy, with specific reference to Canada. How does this influence affect bilateral ties between India and Canada?

Introduction: What is the issue of the ethnic community in Canada

Body: Discuss their influence and how it affects India's relationship with Canada

Conclusion: What should GoI focus on to improve relations

Recently, a pro-Khalistan parade in Canada raised concern in India which led to the Foreign Minister criticizing the parade and cautioning Canada about not meddling in the internal affairs of India and highlighting India's priority to safeguard its territorial integrity. As per the 2021 Canadian census, Sikhs account for *2.1 per cent of Canada's population* and are the country's fastest-growing religious group. After India, Canada is home to the largest population of Sikhs in the world.

Influence of ethnic community concerning Canada:

- **The prosperous community:** Due to their burgeoning population and presence as lawmakers and serving in government Sikh community is well represented in Canada. Eg, Jagmeet Singh became the leader of the left-leaning New Democratic Party (NDP).
- **Geopolitics:** Khalistan movement receives backing from China and Pakistan and makes trouble for India as Punjab is a bordering state and has a history of insurgency movements.
- **Cabinet members:** Many ethnic Indians are members of the cabinet because of which Canadian politicians indulge in "vote bank politics" as seen during the farmer's agitation movement which received wide support from Canadian politicians.
- **Support to Pro-Khalistan groups:** Ethnic Indians are also associated with terrorist groups like Babbar Khalsa International and the International Sikh Youth Federation who are associated with terrorism. These radical groups control the gurudwaras in Canada which control the narrative about India in Canada.
- **Vaunted Multiculturalism:** Canada's excessive multiculturalism which boasts about its unique way is also responsible for insulating Sikhs from traditional liberal

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Canadian values and allowing anti-Indian sentiments to pass down along the generations.

How does this influence affect relations with India?

- **Khalistan demand:** Pro Khalistan organization Sikhs for Justice (SFJ) held a so-called “referendum” on Khalistan in Canada which led to a strain in the relations between both nations.
- **Free Trade Agreement:** Strain in relations due to support for Khalistan in Canada has adversely affected vital issues like Free Trade Agreement between both countries.
- **Positive effects:** Despite all this a strong vibrant, financially prosperous Indian community in Canada has led to meaningful cooperation in a wide range of areas including economy, energy, science and technology, space, information technology, and education.
- **Diaspora politics:** Leaders of countries like Canada, Australia, USA now are engaging in diaspora politics where they use PM Modi's popularity to impress domestic public opinion.

Conclusion:

India should diplomatically coordinate with Canada and find ways to urge Canadian authorities to take action against those anti-Indian elements who are indulging in violent activities and influencing domestic opinions which is a concern for the security of India.

16. Discuss the role of the manufacturing sector in expanding India's middle class. How can large-scale manufacturing drive formal employment and contribute to the growth of a prosperous middle class?

Introduction: Briefly give an account of manufacturing in India

Body: What is the role of manufacturing in India's middle class and how can it be expanded

Conclusion: Conclude with government programs for manufacturing.

India is moving towards being a significant global manufacturing centre and can export items worth \$1 trillion by 2030. The manufacturing industry contributes significantly to India's economy, accounting for 17% of GDP and employing more than 27.3 million people. The Indian government wants manufacturing to *contribute 25% of economic production by 2025* through the execution of several programmes and policies.

What is the role of the manufacturing sector in expanding India's middle class?

- **Entrepreneurship:** The manufacturing sector provides opportunities for entrepreneurship and establishing Small scale industries which are export-oriented, generate jobs and contribute to a rise in income in cities and towns. It helps people living in small towns to raise their incomes and thereby expands India's middle class.
- **Standard of living:** Reports have suggested that manufacturing helps in raising the lifestyle of people as it helps in raising their disposable incomes and generates demand for consumer items.
- **Skill Generation:** The manufacturing sector aids in developing skills and drives innovation. This generation of skill sets leads to better prospects of jobs for citizens in foreign markets and leads to higher wages.
- **High Economic Growth:** Historical insights from countries of the Western world and China show that high economic growth is fueled by an increasing share of manufacturing in the country's GDP.

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- **Employment generation:** Manufacturing is a very important source of job generation in developing countries, particularly for the middle class. It eventually leads to upward mobility and income generation.

How can large-scale manufacturing drive formal employment and contribute to the growth of a prosperous middle class?

- **Formalization of the workforce:** Informal sector is commonly estimated to account for 90% of employment, but generates only a third of the value added in the economy. Conditions in the informal sector affect the entrepreneurial spirit, have low productivity and reduce the chances of expansion of the middle class. Therefore, more formalisation of the workforce is needed combining with the benefits of labour laws, income by working with better tools, easy learning of new skills, getting the effort-multiplier benefit of teamwork, and accessing the full suite of reasonably priced and regulated financial services.
- **Focus on training and productivity:** Due to the nature of temporary or contract workers in the informal economy, employers are discouraged from investing in productivity-enhancing tools and providing training for workers to use them because the payoff time is longer than the workers' tenure. Government and industry leaders should cooperate to provide training and incentivise productivity to contribute to the growth of the manufacturing sector.
- **Finance:** The need is to increase the domestic credit to GDP ratio for informal workers and MSME which is far lower than China and USA.
- **Role of digital platforms:** Higher-skilled occupations like carpenters, tailors, and auto mechanics when part of digital platforms should receive all benefits of formal employees and such platforms should contribute to raising productivity and income generation.

Conclusion

Historically it is seen that manufacturing is the well-defined path to economic development. Government programmes like Make in India, Skill India, and Start-Up India, are crucial through which formal jobs and genuine middle-class expansion can take place.

17. Evaluate the impact of government spending on freebies on long-term fiscal sustainability. How can the Finance Commission lay down guidelines to restrain such spending without infringing on the sovereignty of elected governments?

Introduction: What is Finance Commission

Body: Give the impact of government spending on freebies and how to restrain them.

Conclusion: What can FC do further?

Finance Commission is a statutory, independent, non-political body set up by the President of India every five years (or earlier) under Article 280 of the Constitution. It was established to define the financial relations between the Centre and the state. Post 1991 reforms, fresh investment in PSU has come down and due to the abolishment of the Planning Commission, Finance Commission remains virtually the sole architect of India's fiscal federalism.

Impact of Government Spending on Freebies for long term fiscal sustainability

- **Subsidy burden:** Due to excessive spending on subsidies the state finances are stretched out. States are already in huge debt owing to Covid 19, the poor performance of DISCOMs.

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- **Fiscal health:** RBI titled report, State Finances: A risk analysis has highlighted that the fiscal health of states like West Bengal, Kerala, Rajasthan, Punjab, and Andhra Pradesh needs careful assessment on account of their large spending on social welfare.
- **No clear definition of subsidy:** Subsidies like free electricity, free water, loan waivers, and free transportation need to be differentiated from spending on education, health, PDS system, and employment generation programs as the former leads to the undermining of credit culture, distort prices through cross-subsidization and eroding incentives for private investment.
- **The burden on the exchequer:** Freebies put a heavy burden on taxpayer citizen and finally leads to an increase in taxes and debt.

What guidelines can be laid down by FC to restrain such spending?

- **Evaluate the state's fiscal health:** The Finance Commission is an independent body. The Commission, while making allocations to the States, can take into account the debts of each state and examine whether offers of freebies would be viable for them or not.
- **Cooperation with Election Commission:** Both constitutional bodies can cooperate to restrain political parties to indulge in promises of "irrational freebies" during elections. This is against the free and fair election principle.
- **Fiscal Responsibility and Budget Management (FRBM) Act:** Strict implementation of the FRBM Act aims to ensure fiscal discipline for the centre by setting targets including reduction of fiscal deficits and elimination of revenue deficit. It is a legal step to ensure fiscal discipline and fiscal consolidation in India.
- **Grants be made conditional:** FC could be one of the institutional mechanisms to regulate spending on freebies, which destroys the foundation of macroeconomic stability. A crucial step to restrain freebie culture can be to link revenue deficit grants to states to curbing freebies and off-budget liabilities.

Conclusion:

The next FC faces a tough task in determining the tax proceeds to be allocated to the states and to bridge the divide which is deepening in terms of infrastructure, private investment, social indicators, and the rule of law between southern and northern states.

18. Analyze the current status of transgenic crops in India. Why is there a lack of broad acceptance for genetically modified crops in the country?

Introduction: Define Transgenic Crops.

Body: What is the current status of such crops and why is lack of acceptance regarding GM crops.

Conclusion: Conclude with way forward.

Transgenic crops are those crops that have used genetic engineering to modify their genomes by the addition or removal of genes. The modification helps the crop develop certain traits like immunity from pest attack, high yield, or herbicide tolerance. Transgenic crops were in the news recently when 3 states Gujarat, Maharashtra, and Telangana deferred the Centre's proposal for testing of transgenic cotton seed with the gene Cry2Ai, which makes cotton resistant to pink bollworm.

What is the current status of transgenic crops in India:

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- **Different types of crops:** A wide range of crops like brinjal, tomato, maize, and chickpea are in different phases of trials in India. Only 1 crop Bt Cotton has received approval for commercial cultivation in India.
- **Area:** India has the world's fifth largest cultivated area under genetically modified (GM) crops, at 11.4 million hectares (mh) in 2017. The entire GM crop area is under cotton, incorporating genes from the *Bacillus thuringiensis* for resistance against *Heliothis bollworm* insect pests.
- **GM Mustard:** The government has cleared the release of the GM variety of mustard, DMH-11, developed by the Centre for Genetic Manipulation of Crop Plants (CGMCP) at Delhi University but the decision was opposed by environmentalists, and the release was put on hold.
- **Bt Brinjal:** Bt Brinjal was developed by Mahyco (Maharashtra Hybrid Seeds Company) in collaboration with the Dharwad University of Agricultural Sciences and the Tamil Nadu Agricultural University. Its release was also put on hold regarding biosafety concerns.

Why is there a lack of acceptance regarding GM crops?

- **Precautionary Principle:** The principle argues that the absence of any scientific data and information on any innovation can cause adverse effects on health and the environment.
- **Health:** Independent research has shown carcinogenicity, neurotoxicity, reproductive health problems, organ damage, etc. as harmful effects on the health of GM crops.
- **Farmer's concern:** A particular concern of farmers is that GM crops will lead to the risk of monopoly of big corporates like Monsanto in the seed business.
- **Not universally practiced:** Only 29 out of 172 countries worldwide still cultivate GM crops. Additionally, only five nations—the United States, Brazil, Argentina, Canada, and India—continue to contain 91% of the world's GM cropland. China has also seen a decline in the usage of Bt cotton, and rapeseed and mustard are being hybridized using non-GM technologies.
- **Environment:** Activists argue that GM crops destroy soil, and impact microbes, medicinal herbs, and pollinators like bees which adversely impacts our crop diversity.

Conclusion:

The issue of GM crops is delicate as it relates to agriculture, food security, and nutrition. Central Government should consult all stakeholders involving NGOs, State Government, Farmer Groups, and Dept of Biotechnology before implementing any important decision.

19. Analyze the impact of the current ranking process on the competition among universities and colleges in India. Does it foster a culture that puts metrics ahead of excellence in education and research?

Introduction: Define NIRF.

Body: What is its impact and does it foster a culture that puts metrics ahead of excellence?

Conclusion: Conclude with the way forward.

The National Institutional Ranking Framework (NIRF) was established in 2016 by the Ministry of Education to determine the indicators on which higher education institutions (HEI) performance could be measured. NIRF rankings are based on 5 important factors namely; Teaching, Learning & Resources, Research and Professional Practice, Graduation Outcomes, Outreach, and Inclusivity and Perception.

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What is the impact of rankings on competition among universities?

- **Financial health:** It is observed that institutions with high ranks get more priority in central grants. In the Union Budget 2021, the government allocation was Rs 7,686 crore to the IITs in comparison to Rs 7,643.26 crore for all Central Universities.
- **One size fits all approach:** NIRF seems to miss the diversity aspect of the Indian educational system. The diversity ranges from old institutes vs new institutes, private vs public, and arts institutes vs technology institutes which is a very important factor to acknowledge.
- **The mismatch between ranking and accreditation:** Colleges and universities compete to get NAAC, and NBA certificates but final results show a poor disconnect as colleges with NAAC A grades are also left out in the ranking system.
- **Bibliometrics:** To get good score in NIRF colleges and universities are relying too much on the bibliometrics factor where there is too much reliance on publishing research papers which does not fully capture the scientific performance.
- **Privileges:** the impact of rankings can be gauged from the fact that high rankings bring privileges like getting autonomy, the power to offer open and distance mode programs, and permission to enter into collaboration with foreign universities.

Does it foster a culture of metrics ahead of excellence?

- **Indicators:** Among other factors used in NIRF rankings Research and Professional Practice factor has the highest share (30%) in combined score. This factor is paid special attention because of bibliometrics or the publishing of research papers.
- **Funds and faculty:** There should be sufficient funds and teacher-pupil ratio to assess the parity among different institutes. Eg. IISc, with 464 faculty members for 4,000 students, has a faculty ratio of 1:8.6 and receives about Rs 350 crore in central grants, BHU with 2,000 teachers for 32,000 students has a ratio of 1:16 and receives a grant of about Rs 200 crore.
- **Transparency issues:** Reputed foreign journals have cited discrepancies in research quality and quantity of journals published in Indian universities.

Conclusion:

NIRF ranking plays a vital role in helping students, faculty, and prospective employer, to help them choose institutions for admission, enhance chances for securing research funding, and target campuses for hiring. Two important factors which need to be factored in NIRF are international faculty and students and the relationship of research to connect with the industry.

20. Critically analyze the concept of a “middle-income trap”. How can India build stronger institutions and a more inclusive growth strategy to avoid falling into this trap?

Introduction: Define Middle Income trap.

Body: Why the concept is criticized and what should India do to avoid it?

Conclusion: Show the way forward.

The World Bank defines it as the ‘middle-income range’ countries with the gross national product per capita that has remained **between US\$ 1,000 to US\$ 12,000 at constant** (2011) prices. With a per capita income of over \$2000, India is still a middle-income country. The concept suggests that after attaining a lower middle-income level a country struggles to achieve high-income status and is trapped in a period of low economic growth.

Why is the concept of a “middle-income trap criticized?

- **Excess focus on domestic factors:** Middle-income trap concept tends to ignore the external factors influencing a country's growth. Eg, the COVID pandemic's effect on the Indian economy.
- **The concept has limited value:** Critics argue that after becoming a middle-income market economy, the focus should shift to innovation, and strengthen institutional capabilities to avoid further such traps in the future.
- **Different views of economists:** Those who are pessimist about India's future predict that India is forever trapped in middle-income status and its growth is driven by top-tier people and benefits not percolating downwards. Optimists on the other hand predict that sustainable infrastructure and energy transitions will bring new investment and drive India's growth.
- **Limited empirical evidence:** The concept of the middle-income trap has been short of case studies except only for South East Asian countries and Latin American countries. Apart from economic factors, social conditions, and political conditions also played a role in generating conditions of middle-income trap for these nations.

How can India avoid the middle-income trap?

- **Strong Institutions:** India requires strong and credible institutions which can deal with present challenges transparently. These institutions should cater to the needs of citizens and create congenial conditions for investment in infrastructure and push for structural changes in the economy.
- **Export-oriented growth:** India needs to push its MSME sector for more export share in the global market. Export-led growth has been the main factor in countries escaping the middle-income trap.
- **Innovation:** The use of technologies, developing skills in citizens, and reaping the benefits of digitalization can certainly help India to avoid the trap situation.
- **Human capital:** India needs to add to its human capital in terms of highly skilled workers and professionals who are indispensable to high, valued-added, modern services and manufacturing. India needs to overcome its problem of youth unemployment (23.2%) and arrest the decline in female labour force participation.

Conclusion:

Some of the suggestions suggested by the PM-Economic Advisory Council to raise income are higher minimum income, urban jobs guarantee scheme, and universal basic income. India needs to urgently address the problem of inequality which has led to the concentration of wealth in the top 1% and prevented wealth to trickle downwards.

21. Explain the concept of Special and Differential Treatment (SDT) in WTO agreements. How can SDT provisions be strengthened to ensure more equitable trade relations between developed and developing countries?

Introduction: Explain the SDT mechanism.

Body: What are its benefits and how can WTO be strengthened?

Conclusion: Future of India in WTO.

The concept of Special and Differential Treatment (SDT) is one of the core principles of WTO. The WTO Agreements include unique clauses that grant developing nations particular rights and give wealthy countries the option to treat developing countries more kindly than other WTO Members. Such clauses form the concept of SDT. Recently, there has been a call from the developed world to make changes to the SDT definition & only LDC or Least Developed

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countries are to be accorded special treatment as India, China, and South Africa don't qualify for SDT as they are sufficiently developed.

What are the benefits of SDT?

- SDT ensures higher domestic support for agriculture in developing nations.
- For countries that have less than \$1000 per capita income, there is no prohibition on export subsidy
- SDT offers longer implementation periods for developing countries to fulfil their commitments under the WTO framework. E.g., may be given of TRIPS.

How can the provision of WTO be strengthened to ensure equitable trade?

- **Strengthen SDT framework:** The onus to reform WTO rests on middle powers" such as India, Indonesia, Brazil, and South Africa. SDT provisions are shrouded in ambiguous language which allows developed nations certain leeway to fulfil their obligations. SDT framework should be spelled out and negotiations should be done to enforce the mechanism strictly.
- **Dispute Settlement Mechanism:** It is the most important body of WTO. It hears disputes among nations for violation of WTO rules. The body has been dysfunctional since 2019 following the USA stopping the appointment of Appellate Body members. India as chair of G20 this year needs to persuade the USA to change its position or India should cooperate with like-minded nations to find an alternative.
- **Plurilateral Framework:** Since 2017, there has been a shift from a consensus-building approach towards a plurilateral approach for rulemaking. The plurilateral approach makes it easier for developed nations to pursue their subject of interest while ignoring subjects like agriculture subsidies, market access, and services. The need is to develop a framework where plurilateral frameworks are adopted after consensus among members and such a framework should be based on non-discrimination, transparency, and inclusivity.
- **Transparency:** All WTO members should notify all their laws, and regulations, to the WTO to ensure transparency else it leads to a high cost of trade for developing nations.

Conclusion

Trade multilateralism should be the core agenda of developing countries like India which is head of G20 this year and assumes responsibility for the developing world. India should work with members to be a part of WTO reform and make trade multilateralism inclusive and sustainable.

22. Discuss the recommendations of the Punchhi Commission on Inter-state Relations. How can these recommendations be used to address the current impasse in Manipur?

Introduction: Briefly describe the objective of Punchhi Commission.

Body: What were its recommendations and how can they be helpful in Manipur.

Conclusion: Way forward for Union Government.

Punchhi Commission was formed under the chairmanship of retired judge Madan Mohan Punchhi, on April 27, 2007, by UPA Government to examine Centre-state relations. The Commission submitted its report on March 31, 2010. The commission's task was to review other aspects of center-state relations, such as taxes and river linking, as well as what might be the role, responsibility, and jurisdiction of the Centre during significant and protracted outbreaks of communal violence, caste violence, or any other social conflicts. It also

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considered whether a centralized law enforcement agency should be established to conduct on-the-spot investigations into crimes that have major effects on national security, the role of a governor, or other factors.

Recommendations of the commission:

- **Impeachment of Governor:** It provided for the impeachment of the Governor on the same lines as that of the President under Art 61. It also argued that Governor should not be burdened with additional duties other than those written in the constitution. For eg, Posts of Chancellors of Universities.
- **Localised Emergency provisions:** These provisions can be adopted under Art 355 to bring a district or even part of a district under the Central rule in case of a law-and-order situation. In the rest of the areas, the same elected state government would continue undisturbed.
- **Communal Violence Bill:** The commission suggested amending the Communal Violence Bill 2014 to deal with communal riots situation by removing the clause of mandatory consent of state government in the deployment of central forces.
- **The time limit for giving assent to bills:** Commission suggested that Governor should decide whether to grant assent or to reserve the bill for consideration by the President within a maximum period of six months after submission to him. The commission added that when the State Legislature reconsiders and passes the Bill (with or without amendments) after it is returned by the Governor according to the direction of the President, the President should be bound to grant his assent.

How could these recommendations be used to deal Manipur situation?

- **Kuki-Meitei conflict:** If these recommendations were included in our constitution, it would help the Central government to deal with the Manipur conflict. Using the provisions of Localised Emergency Provisions, Centre would have taken over administration in only Kuki-dominated areas without toppling the State government. This would have gone as beneficial for both Centre and State and unnecessary mayhem would have been avoided.
- **Civil Centres:** Such types of centres could have been established in areas of insurgency to deal with insurgents and protect the villagers and establish the rule of law. Such centres could break the crucial link between Insurgent groups and the civilian population which could finally develop confidence among the villagers.

Conclusion:

Union Government should urgently hold a meeting of the Inter-State Council and discuss the recommendations which are crucial for establishing peace and harmony following the collapse of law and order. The Centre must consider the concerns of state government regarding federal principles and follow the principle of cooperative federalism.

23. Evaluate the potential benefits and challenges of the Direct Seeding of Rice (DSR) method in the context of water consumption and climate change.

Introduction: Explain the DSR method.

Body: What are its benefits and challenges?

Conclusion: Way forward.

Direct Seeding of Rice (DSR) is an alternate method of rice cultivation technique which is different from the conventional method of transplanting paddy. In DSR paddy is grown directly in the field without any nursery preparation, puddling or flooding. The main difference between the two is in the conventional method water acts as a natural herbicide in denying oxygen to the weed seeds in the soil, thus preventing their germination. On the other hand in DSR, chemical herbicides replace water.

What are the benefits of DSR?

- **Water:** DSR techniques save water as compared to the transplanting method. Experts say that around 15% to 20% of groundwater can be saved by adopting DSR.
- **Labour:** DSR technique has reduced the cost of labour as it takes 4-5 labourers to transplant an acre of paddy, for which they charge Rs 4,000. A DSR machine on the other hand can cover the same area in 1.25-1.5 hours, burning up to 3 litres of diesel at Rs 90/litre. It has considerably reduced the cost of cultivation.
- **Other benefits:** DSR method saves less power in comparison to the traditional method. Reduced weed problems and reduced incidence of nutrient deficiency especially iron, owing to lesser leaching of nutrients and deeper root development, have made the DSR method more popular among the farmers of Haryana and Punjab.
- **Climate:** It has been analysed from various experiments from the field that DSR is a feasible alternative to mitigate methane emission in comparison to the conventional method of planting paddy which is a major source of methane, a major greenhouse gas.

What are the challenges associated with DSR?

- **Subsidized electricity:** A key reason for farmers of Punjab not adopting DSR is subsidized or free electricity in the state which offers little incentive for them to adopt DSR or less water technique.
- **Weed:** In the conventional method sapling is taller than the weed from the start of the process while in DSR both plants and weeds grow simultaneously which causes major problems during harvest.
- **Lack of awareness:** There is a lack of awareness and guidance highlighting the importance of DSR. Farmers are confused about the yield using the DSR method. There is also evidence that good result using the DSR method is based on soil types and are different for every farmer.
- **Cost:** The biggest disadvantage is in terms of the rising cost of DSR machines which is beyond the reach of small and marginal farmers. DSR technique would also harm the migrant population from Eastern UP, Bihar who act as skilled migrant labourers for transplanting paddy.

Conclusion:

Union Government should support the efforts of state governments in making efforts to popularize this method using training sessions and awareness. State Governments is providing subsidy on DSR Seeder machines and financial incentives per acreage cultivated through the DSR method. Finally, the main push for DSR will come from Government policy on water, power and labour.

24. Analyze the role of the India Meteorological Department (IMD) in mitigating the impact of cyclonic storm Biparjoy. How did early warnings contribute to disaster management?

Introduction: Explain the origin of IMD and its role.

Body: What role does it play in mitigating the impact of a cyclone?

Conclusion: Conclude with the way forward.

India Meteorological Department was established in 1875. It is an agency of the **Ministry of Earth Sciences** & is responsible for meteorological observations, weather forecasting and seismology. Its headquarters is located in New Delhi. IMD is also one of the **six Regional Specialized Meteorological Centres** of the World Meteorological Organization.

What role does IMD play in mitigating the impact of cyclones?

- **Advanced warnings:** Early prediction of cyclones helped authorities to evacuate people from coastal areas. Railways and fishermen also received prior alerts of the cyclones which helped the authorities to mitigate the impact of the cyclone.
- **Colour-based alerts and their definition:** IMD categorises cyclones as severe, very severe, and extremely severe and colour alerts based on orange, red etc which help authorities like NDRF, SDRF, and medical teams to make preparations for evacuation efforts and provide relief to people.
- **Fewer casualties:** Early warning and proactive efforts are the main reason for very few human casualties from the impact of Biparjoy. State administration was proactive and received cooperation from Union Government to mitigate the impact of the cyclone.
- **Cyclone warning system:** IMD has launched impact- based cyclone warning system which aims to minimise infrastructure losses like property damage.
- **Role of Centre:** Union Government has also been proactive with efforts like modernising fire services across the coastal states, efforts to reduce the risk of urban flooding in metro cities & giving more allocation to projects like National Landslide Risk Mitigation Project for Landslide Mitigation, National Cyclone Risk Mitigation Project.

How did early warnings contribute to disaster management?

- **Less human tragedy:** Early warnings gave ample time for NDRF, and SDRF to complete the evacuation process and minimise the loss of human life.
- **Active citizen participation:** Early warning signs led to cooperation between citizens and administration which can be seen in steps like fishermen not going towards seas, following the guidelines of government diligently and the active role played by media in not spreading fears of any kind but rather helping in spreading of awareness on measures to minimise loss of life and damage to property.
- **Boost to scientific research:** Early and correct predictions lead to a big morale boost for the scientific community which helps in developing futuristic models and following the “zero casualty approach”. It also helps to learn new insights about climate change.

Conclusion:

The early warning system of IMD will be of help in future because of more tropical cyclones occurring in the Arabian Sea due to global warming. The focus of government should be to ensure that coastal regulations norms are used in developing infrastructure and minimising loss of human life. The housing of rural and coastal areas must be strengthened. The role of mangroves which act as natural barriers to storm surges should be highlighted to increase their conservation.

25. 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: Describe what is Master Plan of Delhi

Body: What are the challenges faced and what are the solutions for inclusive urban development?

Conclusion: Conclude with a positive statement.

The Master Plan of Delhi prepared by the Delhi Development Authority is a visionary document giving the direction of future urban development of national capital. It is based on factors like population, economy, housing, transportation, community facilities, and land use. The focus of MPD-2041 is inclusive development, environmental sustainability, green economy, and infrastructure development.

What Role does MPD play in addressing the complex urbanization challenges faced by the city?

- **Illegal Construction:** The recent demolition drive near Tughlaqabad Fort shows that illegal construction and encroachment are still portrayed as law and order issues rather than the failure of urban planning.
- **Urban planning:** Urban planning in India is still formulated using strategies developed in post-war Europe and the US completely under different circumstances and completely neglecting India's own complex socio-economic and cultural problems.
- **Governance:** The recent example of Delhi shows that instead of relying on the expertise of urban planners or technocrats the onus is put on courts and police to resolve the issues which highlights a lack of creativity to resolve the management of the city.
- **Environment:** With almost 20% of its land area under green cover Delhi is among the greenest cities in the country but the distribution of greenery across the city is uneven and hence inequitable. MPD has to take into account pollution challenges across its borders from UP, Haryana from vehicular pollution and stubble burning.
- **Water:** Delhi being a water scare city faces challenges of encroachment, pollution, and natural drying up of water bodies affecting Delhi's water resources. MPD ensures that no untreated wastewater and industrial effluents are discharged into water bodies. The plan includes timely monitoring of drains by the Delhi Pollution Control Committee (DPCC).
- **Institutional challenges:** MPD faces challenges from political wings, lack of resources and funds, corruption in different departments, lack of political and bureaucratic will, and multiplicity of agencies.

What are possible solutions for inclusive and sustainable urban development strategy?

- **Energy resources:** The need is to prepare a Renewable Energy Plan to identify potential renewable energy generation areas within Delhi. MPD also focuses on the mandatory use of star-rated electrical appliances and electrical fixtures in buildings for higher energy efficiency.
- **Mobility:** MPD ensures last-mile connectivity and infrastructure for walking and cycling in the city. The need is to develop an electric fleet of buses and vehicles to combat pollution.
- **Housing:** To address the housing needs of citizens MPD provides for new housing inventory and improvement of old housing. The focus is on making housing affordable, safe and enhances the quality of life.
- **Disaster Management:** MPD plans to reduce damage from disasters by dedicated structural audits, and mandatory clearances from the fire departments.

Conclusion:

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There is a need to redefine the concept of urbanization and strengthen civic bodies and make people's participation in urban governance a necessary condition to make our cities "world-class" cities.

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

Introduction: What are Academic Performance Indicators (API)?

Body: What is the impact of API on the appointment process? What can be the way forward?

Conclusion: Conclude with steps that UGC can take.

UGC has made Academic Performance Indicators (API) mandatory for the promotion and appointment of professors and lecturers. This was introduced by the UGC in 2010. API score is calculated using metrics such as years of teaching experience, books she/he has published, no publications the faculty have, how many conferences has the faculty attended, etc.

What is the impact of API on the appointment process?

- **Slow appointments:** Appointments based on API score rely on a single metric which can't fully capture the total capability of a faculty leading to delays in appointments.
- **Burdensome procedure:** Since many candidates are having low API scores, colleges are interviewing thousands of candidates for recruitment with limited time for interaction between the board and candidates.
- **Ad hoc teachers:** Ad-hocism still is on the rise as temporary teachers who are teaching for quite a long time are still not able to clear the metrics required by API. This affects their mental health and sometimes leads to tragic loss of life.
- **Outside influence:** Evidence suggests that despite being a merit-driven process there are reports of candidates being appointed based on recommendations by various social and cultural organizations.

Way Forward:

- **Common Portal:** UGC has launched the 'CU-Chayan' portal to streamline the recruitment process and all future recruitments will be through the new portal.
- **Transparency:** New portal will lead to transparency in the recruitment process by offering a completely online system from application to screening.
- **Digital features:** System alerts would be sent to the candidate ensuring they are informed of vacancies released. Another important feature is a single login attempt to be applicable to apply for more than one college and the new dashboard offers real-time tracking of applications.

Conclusion:

The focus of UGC should be to fill vacancies in central universities at the earliest and make possible efforts to make ad hoc teachers permanent based on their merit and qualifications. Finally, UGC should devise norms regarding providing mental support to faculty who are troubled and need counseling. Teacher Unions should focus on performance appraisal based on qualitative analysis and those who are recruited on an ad hoc basis should be considered based on their work experience.

27. Analyze the role of yoga in the healthcare systems of various countries. How global impact of the International Day of Yoga (IDY) has contributed to the understanding and practice of yoga worldwide?

Introduction: Give a brief introduction about IDY.

Body: What has been the role of yoga in healthcare and what has been its global impact?

Conclusion: Conclude with the role of India regarding yoga.

UN proclaimed June 21 as International Day of Yoga by passing a resolution on December 11, 2014, during the 69th session of the General Assembly. According to the UN website, “Yoga is an ancient physical, mental and spiritual practice that originated in India. The word ‘yoga’ derives from Sanskrit and means to join or to unite, symbolizing the union of body and consciousness.” As part of this year’s International Yoga Day 2023, the theme is “Yoga for Vasudhaiva Kutumbakam,” which beautifully articulates our shared goal of “One Earth, One Family, One Future.”

What has been the role of yoga in the healthcare system of other nations?

- **Alternate Medicine:** Evidence from the UK, and USA suggests that the inclusion of yoga in the healthcare system in these countries has helped citizens deal with stress and sickness. Absenteeism due to intense work pressure and mental health & sickness contributed heavily to the annual cost of healthcare in the UK.
- **Research and Innovation:** In 2014, the Department of AYUSH was transformed into a full-fledged Ministry of AYUSH with a focus on improving educational standards and developing quality research in the Traditional medicine system of India.
- **Health Insurance:** Countries like Australia and USA have established norms and procedures to allow private insurance companies to cover yoga and other alternative medicine systems. Yoga discounts are being offered to attract more and more youth to practice yoga to attain a happy and healthy lifestyle.
- **Education:** The popularity of yoga can be analyzed from the fact that Vivekananda Yoga University, California — started a master’s program in 2019. Yunnan Minzu University, Kunming (China), SOAS, University of London, and International College of Queensland (Australia) have also started such academic initiatives.

How has IDY contributed to the understanding and practice of yoga worldwide?

- **Wide acceptance:** IDY has risen yoga to be a global phenomenon with the help of digital media especially during COVID. Yoga has transcended geographical boundaries and IDY is now celebrated in 192 countries, including 44 Islamic countries.
- **Soft power:** Indian Council for Cultural Relations (ICCR) and the Ministry of External Affairs with the support of the AYUSH ministry have been promoting yoga and aims to create a holistic understanding of yoga at the global level which could act as soft power for India. This has led to identifying other traditional medicine systems from Africa as well as South East Asia.
- **Sports:** IDY has popularised yoga as a competitive sport and asanas have been included in Khelo India and National games. National Yogasana Sports Federation and World Yogasana Federation, are going to standardize and introduce yogasana-based competitions at national and international levels.
- **International Cooperation:** WHO in collaboration with the Ministry of AYUSH and major yoga institutions, has developed a new mobile app (mYoga) to educate people about the therapeutic benefits of yoga.

Conclusion:

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IDY has created a global community of yoga practitioners who are offering solutions to new lifestyle diseases which have become the leading cause of concern. India should take the lead in maintaining the purity of yoga and making it helpful for the whole of mankind.

28. Discuss the impact of heat waves on human health. What measures can be taken to prevent heat-related deaths?

Introduction: Define heat wave.

Body: What is its impact on human health? What measures can be taken to prevent such deaths?

Conclusion: Conclude with what should be the way forward.

According to the health ministry, a heatwave condition involves a maximum temperature of at least 40°C or more for plains, 37°C or more for coastal stations, and at least 30°C or more for hilly regions.

What is the impact of heat waves on human health?

- **Heat Stress and Thermoregulation:** Prolonged exposure to heat causes heat stress and disallows excess heat to dissipate due to less sweating causing the skin to dry up and affecting our organs.
- **Electrolyte imbalance:** Dehydration can disturb the balance of electrolytes such as sodium, potassium, and magnesium, which are necessary for the proper functioning of muscles, neurons, and internal systems.
- **Heat Stroke:** When the body's core temperature reaches 40 degrees Celsius as a result of prolonged exposure to excessive heat, a heat stroke occurs. The brain, heart, liver, and kidneys can all be damaged or destroyed by heatstroke.
- **Heat Exhaustion:** Heat exhaustion may result from the body's inability to regulate its temperature in the face of extreme heat. Excessive perspiration, exhaustion, nausea, headaches, dizziness, and a rapid heartbeat are some of the symptoms that heat exhaustion.

What measures can be taken to prevent heat-related deaths?

- **Avoid going out at noon:** One should avoid going out in direct sunlight between 12 noon and 3 pm.
- **Keep yourself Hydrated:** Drink plenty of fluids like ORS, water, juice, lassi, lemon water, & buttermilk. One should avoid alcohol, tea, coffee, and carbonated soft drinks as they can cause further dehydration.
- **Take Government advisory seriously:** Advisories of IMD, NDMA, and Health Ministry of keeping homes cool by using shades, taking cold baths, and using a damp cloth to keep body temperature low should be taken seriously.
- **Heat action plans:** There should be an implementation of heat action plans across all three tiers of governance with special attention to panchayats and municipalities in spreading awareness regarding the effects of heat waves. Evidence from Ahmedabad shows that such cooperation results in a 30% to 40% reduction in mortality in the city.

Conclusion:

Special focus should be given to old age, children, and persons with co-morbidities conditions to prevent heat stroke-related deaths. Indian Council of Medical Research can help to develop short-term and long-term plans in coordination with other agencies to prevent such deaths.

29. Discuss the implications of the European Union's Carbon Border Adjustment Mechanism (CBAM) on developing countries like India. How does it affect India's stand on climate justice?

Introduction: Describe the CBAM program of the EU.

Body: What are its implications on India and how does it affect India's climate policy?

Conclusion: Conclude with a positive statement.

Carbon Border Adjustment Mechanism (CBAM) is an initiative of the EU that involves imposing tariffs on imports from countries that are seen to be using carbon-intensive methods of production. The tariff imposed on the import of goods by the EU will lead to competitive parity with the domestically manufactured goods in the EU which are subjected to high prices because of carbon emission. The CBAM is expected to achieve three objectives. First, to reduce EU emissions; second, for the EU not to lose competitiveness in carbon-intensive goods; and third, to make the targeted countries reduce the carbon intensity of their exports.

What is its implication for countries like India?

- **Exports:** India's exports of cement, iron and steel, energy, fertilizers, aluminium, and hydrogen to the EU will suffer. Even while these exports only account for 1.8% of all exports to the EU, they still cast doubt on the free trade tenet.
- **Incompatible with WTO:** The CBAM policy transgresses WTO non-discrimination standards. It goes against fundamental tenets of fairness to regard domestically produced commodities equally with goods imported from other nations.
- **The increased price of goods:** The carbon tax on iron, steel, and aluminium will cause prices for Indian commodities to rise, which will reduce demand for these products in the EU and limit India's ability to export.

How does it affect India's stand on climate justice?

- **Climate Finance:** CBAM will affect the financial transfer from developed countries to developing nations to reduce carbon emissions and mitigate climate change.
- **Relaxed Carbon Laws:** In a move to meet the demands of developed nations, there will be more relaxation or bypassing of carbon regulations in India which itself will adversely affect climate change.
- **Push to Renewables:** CBAM will push developing nations to move towards renewable energy. Increased pressure to reduce emissions will drive India to foster research and innovation in clean energy technologies.
- **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.

Conclusion:

CBAM raises issues regarding linkages between trade and the environment which require international cooperation, and negotiations within the framework of WTO to prevent principles of free trade slip into trade protectionism.

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30. Discuss the role of public libraries in promoting literacy and fostering a reading culture in India. Evaluate the need for a national library policy in India.

Introduction: What is a public library?

Body: Describe their role in promoting literacy and reading culture. Why do we need a national policy for libraries?

Conclusion: Conclude as to why the public library is important.

A public library is a library that is accessible to the general public irrespective of any differences and is usually funded by public sources like taxes or contributions from the community.

Role of public libraries in promoting literacy and fostering a reading culture in India

- **Access to books:** Public libraries provide free access to a wide range of books, journals, and research papers to individuals belonging to different educational backgrounds, and age groups.
- **Collaboration with institutions:** Public libraries cooperate with schools, and universities to organize debates, storytelling competitions, and educational activities for youth, children, and adults.
- **E-Books:** During COVID, public libraries supported their members by offering E-books to access online information. This has helped books reach remote places and fostered a reading culture in small towns.
- **Community Outreach:** Public libraries are places that bring communities together and organize events related to educational programs. Such community outreach programs are helpful for people from marginalized communities in inculcating values of reading and promoting literacy.
- **Leisure activity:** Public libraries have played a crucial role in developing reading as a leisure activity. Books in multiple languages have led to new readerships in libraries who like to read books in native languages with varied socio-political dimensions.

Need for national library policy in India

- **3A's-** National library policy will ensure the availability, accessibility, and affordability of books across India.
- **Modernization:** Since libraries are a state subject, the need of the hour is to focus on modernizing public libraries of the state. State libraries suffer from a lack of financial funds, and the non-availability of books in English and other native languages.
- **Inaccurate data:** There is ambiguity regarding the number of functional libraries operational at the state and national levels. By national library policy, there will be accurate data regarding operational and non-functional libraries in the public domain.
- **Support to NGOs:** National Library policy will help strengthen the efforts of NGOs that are functioning in remote regions of the country.

Conclusion:

The need of the hour to frame national library policy is necessary to adopt new and modern practices from the best libraries across the world and frame standardized practices on preserving this cultural heritage of India.

31. Discuss the potential implications of introducing a three-year diploma course for medical practitioners to serve in primary health centres (PHCs). Analyze both the potential benefits and drawbacks of such a proposal.

Introduction: What is the proposal for a 3-year diploma course?

Body: What are its benefits and drawbacks?

Conclusion: What should be the way forward?

Recently, West Bengal Government proposed to start a 3-month diploma course for medical practitioners who would then serve in PHC. The main reason given for such an initiative is to address the shortage issue of medical professionals in rural areas.

What are the benefits of this proposal?

- **Rural area centric:** The proposal plans to address the problem of rural aversion in the medical field. The focus will be on Primary Health Centre which is a crucial infrastructure for rural areas.
- **Continuity:** The proposal ensures that continuity in healthcare is maintained as these practitioners will coordinate with ASHA workers to spread health awareness.
- **Experience from other countries:** Various short-term courses in developed and developing countries have shown that these courses can provide good care of good quality at the primary level.
- **Rural Retention:** The focus on rural retention of practitioners is a vital step to decentralizing health infrastructure which is largely concentrated in top cities and towns.

What are the drawbacks of this proposal?

- **Inadequate training:** A diploma course may prove to be inadequate as rural areas offer multiple challenges which go beyond training and require efforts to deal with critical care situations, tackling transport and infrastructure challenges that a basic diploma course may not be able to cater to.
- **Focus on physician assistants:** Need is to train them so that they can provide emergency support and later bring the patient in contact with a professional doctor.
- **Discrimination of rural areas:** By providing mid-level practitioner who is diploma holder rather than full-fledged doctor there is discrimination between rural and urban areas and these diploma holders may not be adequately qualified to deal with health situations.
- **Future of practitioners:** The major drawback of the proposal is what will be the future of these practitioners once they have completed a certain period of service. Whether they will be considered a full-fledged doctor or they have to again appear for exams is a big question mark. Also is the question of their acceptance into the medical fraternity.
- **Disincentives for doctors to practice in rural areas:** The proposal may lead to doctors neglecting the rural areas as they will feel that alternates in the form of practitioners will be available in rural areas. More and more doctors will opt for urban areas.
- **Medical colleges:** There is a need to address the disparity in the density of medical colleges in the country.

Conclusion:

This proposal should not stop the need for private investments in healthcare which is needed to address the issue of lack of medical colleges in Eastern and Northern India. There should be a focus to redistribute colleges in rural areas and hire doctors from rural areas as the only solution to retain healthcare providers in rural areas.

32. In light of present conditions, critically analyze the recommendations of the 21st Law Commission on the Uniform Civil Code (UCC).

Introduction: Describe UCC.

Body: What were the recommendations of the 21 Law Commission?

Conclusion: What is the way forward?

A uniform civil code would provide a single body of law that would apply to all religious communities nationwide in aspects of individuals' private lives, such as adoption, inheritance, and marriage. According to **Article 44** of the Indian Constitution, the government is required to work towards establishing a uniform civil code for all of its residents. The 21st Law Commission, headed by former Supreme Court judge Balbir Singh Chauhan, held that the “formulation of a Uniform Civil Code is neither necessary nor desirable at this stage”.

What were its main recommendations?

- **Diversity:** The commission recognized that the principle of difference does not imply discrimination and most nations have recognized diversity as their moving principle rather than establishing legal uniformity.
- **Reform in family laws:** The commission was vocal in suggesting that personal laws of all religions be reformed to make them gender-neutral and just. The focus should be to establish uniformity in rights guaranteed to all without any bias toward gender, group, etc
- **Economic Rights of Women:** The commission focussed on the economic rights of women rather than delving into controversial issues like triple talaq, Muslim bigamy, or the constitutional validity of adultery under Section 497 of the IPC since these issues were before either the Supreme Court or Parliament.
- **Change in the Hindu coparcenary system:** Commission suggested changes in Hindu Undivided Family (HUF) property which are being used only for tax evasion.
- **Codification of Muslim Law:** Commission suggested that Muslim Laws be codified in matters of inheritance and laws should be gender neutral in matters of inheritance. Inheritance right should even be given to Muslim women. It also suggested uniformity in these provisions between Shias and Sunnis.
- **Property rights:** The Commission noted the division of all matrimonial property acquired after marriage must be divided between the two parties after the dissolution of a marriage in case of divorce.
- **Bigamy and Conversion:** Commission had suggested that UCC be enacted to deal with these issues as there is frequent misuse of these provisions.
- **Custody and guardianship:** Commission noted that the interest of the child is paramount in matters of custody and guardianship. The report also noted views regarding the right of Parsi women and Christian women in matters of custody and guardianship.

Conclusion:

The recommendations of the 21 Law Commission are to be viewed by the newly appointed 22nd Law Commission headed by former Karnataka High Court Chief Justice Ritu Raj Awasthi. UCC should be framed by soliciting the views of the public, religious groups, and all stakeholders within the framework of the Constitution.

33. Discuss the geopolitical and economic implications for India of a potential crisis in the Taiwan Strait. How can India mitigate the risks associated with such a crisis?

Introduction: Briefly describe the situation in Taiwan Strait.

Body: What are the geopolitical and economic implications of conflict and what measures India can take to mitigate the risks?

Conclusion: Conclude with the way forward.

After the communists' triumph in 1949, Chinese republicans of the Kuomintang government fled to Taiwan, a small island off the east coast of China, which has since retained the name Republic of China (RoC). Taiwan was formerly known as Formosa. Since its founding in 1949, the People's Republic of China has believed that Taiwan must be reunified with the mainland, while the RoC has held out as an "independent" country. India does not have formal diplomatic ties with Taiwan, as it follows the One-China policy. Taiwan Strait, just 130 kilometers (80 miles) wide at its narrowest point, is a major international shipping channel and all that lies between self-ruled Taiwan and China.

What are the geopolitical and economic implications for India in Taiwan Strait?

- **Trade:** India's 50% of exports is to the east of the Indian Ocean which will be adversely affected because of the crisis. Disruption in sea lines of communication along Malacca Strait will be adversely affected.
- **Supply chain impact:** Disruption in shipping will negatively impact the supply of raw materials needed for key industries like pharmaceuticals, and electronics which will finally impact our exports in the Western World.
- **The safe supply chain for semiconductors:** Taiwan is crucial for semiconductor supplies which are widely used in computers 5G smartphones, electric cars, and medical equipment. Disruption will lead to unemployment in these industries and impact services ranging from logistics supply chain to e-commerce.
- **Submarine cables:** Disruptions of submarine cables could impact the data flow between India and data servers located in the USA.

Steps India can take to mitigate risks:

- **Non-alignment:** India's policy of NAM allows India to engage with multiple partners like ASEAN, EU, Japan, and South Korea, which have vital stakes in the Pacific.
- **Global South:** India should take the lead in engaging Global South or like-minded developing nations to engage with US-China-Taiwan and maintain peace in Taiwan Strait.
- **De-risking approach:** India should take a cue from the EU and focus on this approach to reduce over-dependency on China for its imports and find new trade partners. India could cooperate with the EU, African Union, Latin America, and small Pacific Island states to find alternative investment destinations.

Conclusion:

The growing rivalry between China and the United States in the Taiwan Strait could have a devastating impact on Indian economic and national security interests. There is an urgent need to assess the impact should the conflict arise and pursue diplomatic efforts to maintain peace and stability in the region.

34. Critically analyze the regulatory process for new drugs and vaccines in India. How can this process be streamlined to ensure safety while also allowing for flexibility in times of crisis?

Introduction: Briefly describe the regulatory process for vaccines in India.

Body: Critically analyze and suggest measures to streamline the process.

Conclusion: Conclude with the way forward.

Recently, the WHO gave the Indian vaccine regulatory structure the highest rating on various parameters. The rating point to the fact that India is a stringent regulator of vaccines alongside developed countries such as the US, Japan, and EU member states. The regulatory process in India aims to ensure the efficiency, quality, affordability, and safety of pharmaceutical products.

What are certain factors on which the regulatory process can be analyzed?

- **Central Drugs Standard Control Organization (CDSCO):** CDSCO is in charge of licensing new medications and vaccines in India. It gives marketing permits, manages post-marketing safety, and supervises the clinical trial approval procedure.
- **Clinical Trials:** These are done to ensure the efficacy and safety of the drug. Mistrust, arbitrary decree, and lax regulations have historically plagued clinical trials in India.
- **Delay in approval:** In India, the procedure for receiving regulatory approval can be time-consuming. In urgent situations like epidemics or emergencies, approval delays might prevent timely access to life-saving medicines and vaccinations.
- **Lack of evidence-based assessment:** India's regulatory framework has been primarily focused on analyzing formulations that have received foreign regulatory approval and determining if they are appropriate for India. This can also be seen in the adoption of 'emergency use authorizations (EUA) during COVID-19.
- **Inadequate regulation:** Poor regulation often floods the market with poor-quality and fake medications. They may not meet efficiency, safety, and potency standards and may endanger life of patients. The detection and reduction of possible dangers associated with pharmaceutical products are further hampered by inadequate monitoring of adverse drug reactions and post-market surveillance.

What steps can be taken to ensure safety and maintain flexibility during the crisis?

- **Strengthen regulatory agencies:** Augment the resources and capacity building of regulatory agencies like CDSCO and the Drug Controller General of India.
- **New Drugs and Clinical Trials Rules:** The rules should be updated and framed in light of the recent COVID pandemic. There should be clear guidelines on the process to be followed during exigencies and the process be evidence-based.
- **Transparency and Standardized testing:** India's regulatory system requires transparency between consumers and regulatory agencies. Standardized testing is essential to ensuring the safety and effectiveness of medicines.
- **Single regulatory agency:** The establishment of a single regulatory body will enhance oversight and quicken the approval process for medications. A centralized organization can offer uniform regulatory enforcement, homogeneous standards, and efficient industry oversight.
- **Pharmacovigilance:** The current gaps in the regulatory landscape can be filled by creating effective pharmacovigilance programs and encouraging transparency and accountability. The need is to establish strong quality checks, efficient inspection processes, and strong regulatory frameworks.

Conclusion:

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The estimated value of total vaccines manufactured in India is around \$ 900 million out of which 65%-70% is exported. The above-listed measures will make Indian pharma companies competitive, increase their export share and bring the quality of medicines at par with the global industry earning India the title of "*pharmacy of the world*."

35. Discuss the historical ties between India and Egypt and how they have shaped the current relationship between the two countries.

Introduction: Give a brief introduction about the recent visit of PM to Egypt.

Body: Which historical factors are involved and how have they shaped relations in the present context?

Conclusion: Highlight the main factors necessary for good relations.

Recently PM Modi visited Egypt and the two sides have decided to elevate their bilateral relationship to a "strategic partnership". PM Modi was also conferred PM Modi with the Order of the Nile, Egypt's highest honour.

Historical factors which have shaped the relationship:

- **Trade:** The two ancient civilizations Indus Valley Civilization (2600–1900 BCE) and the ancient Egyptian civilization (3100–332 BCE) had trade and cultural regions.
- **Maritime Trade Route:** Both nations had large maritime boundaries which played a crucial role in the exchange of spices, stones, metals, and jewellery.
- **Cultural Exchanges:** Both nations have contributed to enriching the culture of others whether in terms of architecture, the spread of Buddhism, or maintaining diplomatic connections during the Mauryan Empire.
- **Anti-Imperialism:** Both nations had suffered from the evils of imperialism and were committed to anti-imperialism philosophy as seen during the golden years of the relationship in the 1950s when Prime Minister Nehru and President Nasser connected frequently.
- **Non-Aligned Movement:** Egypt alongside India was one of the founding members of NAM. President Gamal Abdel Nasser, together with Josip Broz Tito of Yugoslavia, Jawaharlal Nehru of India, Kwame Nkrumah of Ghana and Sukarno of Indonesia played the leading role in the early days of the movement. Both India and Egypt were against aligning with any superpower and disapprove of bloc politics.

Relationship in the present context:

- **Defence Cooperation:** Egypt hosts the headquarters of the League of Arab States and has the largest standing army in the region. All these factors have enabled Egypt to cooperate with India in defence which is marked by activity with the air force and special ops exercises and a series of high-level visits coupled with increased defence exports from India to Egypt.
- **Suez Canal Economic Zone (SCZONE):** This core economic zone around both sides of the canal can offer India access to markets in Europe, Africa and the Gulf. By gaining substantial access to SCZONE. India could successfully boost its exports through the "Made by India for the World" programme.
- **Countering Fundamentalism:** Egypt and its educational institutions occupy a reputed place in the Muslim world and have played a key role in countering doctrines spouted by terrorist groups like Al Qaeda and ISIS. Educational and cultural linkages can help Indian Muslims in fields like Commerce, engineering, and medicine.

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- **New areas of cooperation:** The two sides are also pursuing closer cooperation in green energy, pharmaceuticals and defence, with MoUs in agriculture, archaeology and antiquities, and competition law. Egypt joined the “New Development Bank” set up by BRICS and is keen to join this grouping in the upcoming summit.

Conclusion:

The four pillars of politics, defence, and security; economic engagement; academic and scientific exchanges; and cultural and people-to-people connections form the foundation of the India-Egypt strategic alliance.

36. Discuss the need for the proposed Digital India Bill, and How does the Digital India Bill aim to tackle emerging challenges in the digital space.

Introduction: What is Digital India Bill?

Body: What is the need for a new bill and how does it aim to resolve new challenges?

Conclusion: Conclude with the way forward.

Digital India Bill will be the successor to the decades-old Information Technology Act, of 2000, the country's core Internet law. It will address emerging issues like user harm, competition and misinformation in the digital space.

What is the need for Digital India Bill?

- **Classification of Intermediaries:** The government is considering a review of the definition of intermediaries and classifying them based on their nature and not just based on their size. A classification framework with few defined categories, which requires intermediaries to undertake risk assessments is need of the hour.
- **Safe harbour:** It is the most important regulatory freedom afforded to tech giants like Twitter, Instagram, YouTube and WhatsApp under Section 79 of the IT Act, 2000. The diversity and complexity of the tech platforms have raised the relevance of safe harbour.
- **User harm:** With the evolution of the internet the online space is rife with specific online crimes and unique natures which are not defined in IPC. For eg, Online misinformation is currently not a legal offence in India. The present Digital Data Bill aims to address challenges which are likely to emerge from AI platforms like ChatGPT and Google's Bard.

How does the Digital India Bill aim to tackle emerging challenges in the digital space?

- **The difference in nature of intermediaries:** The draft bill aims to distinguish communication services (where end-users interact with each other) from other forms of intermediaries (such as search engines and online marketplaces). The former are subject to high forms of regulation vis-à-vis the latter & are subject to “content down request” within a short period.
- **Regulate communication platforms:** Platforms like Twitter might be required to follow rules, such as appointing officers based in India and establishing internal grievance appeals processes with impartial outside stakeholders.
- **Accountability and Online safety:** The proposed steps must include a risk assessment framework, and periodic review of regulations to keep digital infrastructure updated with the needs of the time will lead to accountability and online digital safety.

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- **Experience of other nations:** Draft Bill could take suggestions from the EU's Digital Services Act which increases the legal obligations of intermediaries and the Australian classification system of differentiating between communication and search engine intermediaries.

Conclusion:

The new Digital India Bill should aim to ensure an open and secure Internet in the nation, protect users' rights and lower their online dangers, as well as hasten the development of technological innovation in the country.

37. Discuss the regional disparities in higher education quality as reflected in the NIRF rankings. Based on the NIRF rankings and the case study of Tamil Nadu, suggest strategies for improving the quality and inclusivity of higher education in other states.

Introduction: Describe the NIRF rankings framework.

Body: Factors highlighting disparities in education and suggestion to improve them

Conclusion: Conclude with SDG.

The National Institutional Ranking Framework (NIRF) was established in 2016 by the Ministry of Education to determine the indicators on which higher education institutions (HEI) performance could be measured. NIRF rankings are based on 5 important factors namely; Teaching, Learning & Resources, Research and Professional Practice, Graduation Outcomes, Outreach, and Inclusivity and Perception. Out of the top 100 medical colleges in the country Tamil Nadu has the largest share (35). Delhi (32), followed by Kerala (14) and West Bengal (8). The performance of large states like Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Odisha Karnataka, Telangana, and Andhra Pradesh is abysmally poor.

Factors highlighting regional disparities in Higher Education

- **Colonial Influence:** South India and Bengal witnessed early contact with colonial powers and this led to the establishment of modern educational institutions, and infrastructure.
- **Political Will:** South India had visionary leaders who were focused on making education an important tool to attain social justice in comparison to leaders of other states who mobilized people on caste, and communal lines.
- **Language:** Due to Dravidian politics, Tamil Nadu had focussed on developing Tamil language not just medium of communication but rather enriching the language and making opportunities available for Tamil speakers.
- **Infrastructure:** Due to the high urban population in Southern states relative to North India which is predominantly rural they have wide access to transportation, connectivity, and accommodation facilities.
- **Quality of Education:** The top-ranked states attract the best talent, and provide the best academic research & opportunities to students which makes them attractive to students pursuing higher education.

Strategies to improve the quality and inclusivity of higher education in other states

- **Dispersed Education Institutes:** Other states should focus on the dispersal of educational institutes across the state and not just concentrated within the capital area. It invariably puts pressure on the city's resources and increases the cost of living for migrants. Dispersed institutes will also cater to the needs of rural and under-

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served areas, and provide an opportunity for quality education for students from poor and disadvantaged social groups.

- **Bridge language barriers:** This is necessary to address the needs of students from diverse linguistic backgrounds. Training programs and multilingual education can create an inclusive learning environment.
- **Social and Economic welfare architecture:** Proper implementation of reservation policy in the recruitment of teachers and students and economic welfare programs in the form of scholarships, and grants for economically disadvantaged students can help in improving the quality and inclusion of educational institutions in India.

Conclusion:

The above policy measures could help in achieving the SDG 4 of “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”.

38. Discuss the current status of India-U.S. digital trade. What are the key challenges and opportunities in this sector? How can the two countries further enhance their digital trade partnership?

Introduction: Describe the current status of India-USA digital trade.

Body: What are the key challenges in digital trade? How opportunities can enhance their relationship?

Conclusion: Way forward.

Recently PM Modi's visit to the USA raised the prominent issue of technology cooperation and tried to address some of the concerns raised by US Inc. In 2023 the USA emerged as India's biggest overall trading partner with a 7.65% increase in bilateral trade to \$128.55 billion in 2022-23. Despite the strength of the US export market and the potential of the online services market in India the U.S. ran a \$27 billion deficit in trade in digital services with India in 2020.

What are the key challenges in this sector?

- **Protectionism posture:** US tech companies noted that market access, trade, and openness to Indian companies in UU is not reciprocated by the Indian side and India adopts a protectionist industrial policy to safeguard its domestic companies.
- **Freedom of expression:** US tech companies have noted *government censorship and control over political speech* as a major hurdle for companies to work in the USA.
- **Equalization Tax:** The imposition of the equalization levy aims to create a fair competition environment for Indian businesses that fulfill their tax obligations within India, as compared to foreign e-commerce companies operating in India but not paying any income tax in the country. US companies have held that it creates a system of double taxation and complicates the taxation process and is without any constitutional validity or international commitments
- **Information Technology Rules, 2021:** Tech companies have addressed concerns regarding impractical compliance deadlines and content take-down protocols.
- **Digital Personal Data Protection Bill, 2022:** The tech firms have ambiguities about cross-border data flows, compliance timelines, and data localization issues raised in the draft bill. Data localization requirements can lead to substantial cost escalations for companies and are often perceived as discriminatory by foreign firms operating in the country.

How can both nations use opportunities to enhance their partnerships?

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- **Initiative on Critical and Emerging Technology (iCET):** India is prepared to exchange its core technologies with the United States under this framework, expecting reciprocity from Washington also. The primary objective of this collaboration is to foster partnerships in vital and emerging technological domains such as artificial intelligence, quantum computing, semiconductors, and wireless telecommunications.
- **Strategic Trade Dialogue:** To facilitate trade and achieve "deeper cooperation" in important sectors, India and the U.S. jointly created a Strategic Trade Dialogue with an emphasis on removing regulatory obstacles and harmonizing export controls.
- **Strengthen Data Protection Law:** According to tech companies, Data Protection Law might be improved by "proactively supporting cross-border data flows through certifications, standard contractual clauses, and binding corporate rules."

Conclusion:

The recent visit of PM Modi to the USA has addressed concerns of the US tech industry and hopefully, both nations will come to common ground regarding the contentious issues to increase bilateral digital trade from the current level.

39. Examine the role of Supreme Court judgments in shaping the discourse around the Uniform Civil Code. Also, evaluate the potential impact of the Uniform Civil Code on different communities in India, particularly in areas of property and inheritance.

Introduction: Define UCC.

Body: What role did SC play in shaping discourse around UCC and highlight its impact on various issues.

Conclusion: Way forward.

Uniform Civil Code is a constitutional provision mentioned in Article 44 of the Indian Constitution that aims to replace personal laws based on religions, customs, and traditions with one common law for everyone irrespective of religion, caste, creed, sexual orientation, and gender.

Role of SC judgments in shaping discourse around UCC:

- **Shah Bano Case:** In its Mohd. Ahmed Khan vs. Shah Bano Begum decision of 1985, when a divorced Muslim woman demanded support from her former husband, the SC asked for the execution of the UCC while deciding whether to give precedence to the CrPc or the Muslim personal law. SC urged that Common Civil Code will help the cause of national integration.
- **Sarla Mudgal Case:** The Supreme Court in Sarla Mudgal v Union of India held that religious conversion for the sole purpose of committing bigamy is unconstitutional & the Court also urged the government to put the UCC into effect.
- **Paulo Coutinho v. Maria Luiza Valentina Pereira case (2019):** In this case, SC upheld Goa as a shining example of an Indian state where UCC is applicable and again revived the debate around UCC.

The potential impact of UCC on communities:

- **Gender Justice:** The primary objective of UCC is to promote gender justice and equality by eliminating discriminatory practices against women. Regardless of a person's religious background, the UCC seeks to develop a standard body of laws that guarantees equal rights and opportunities for all citizens. This might result in a more equitable division of land and inheritance rights among various populations.

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- **Marriage laws:** The minimum legal age for marriage, bigamy's abolition, and problems with interfaith weddings would be resolved to a certain extent if a UCC were to be put into effect.
- **Hindu Religion:** Existing legislation like the Hindu Marriage Act (1955) and the Hindu Succession Act (1956) would need to be revised if the UCC were to be implemented. For instance, Section 2(2) of the Hindu Marriage Act states that the Scheduled Tribes are exempt from its prohibitions. The law specifies in sections 5(5) and 7 that customary practices will take precedence over the rules. However, UCC won't permit all of these exceptions.
- **Property:** If UCC comes into effect the benefit of Hindu Undivided Family (HUF) in Income Tax will not be availed by Hindus. Once the law comes into effect, no Hindu will be entitled to claim any interest in ancestral property due to his birth in the family.
- **Inheritance & Succession Rules:** UCC could establish a uniform set of laws that provides equal inheritance rights to all individuals, regardless of their religious background or gender. A UCC would streamline these procedures, making them more consistent and accessible to all citizens. Simplified inheritance procedures could reduce legal complexities, speed up the settlement of inheritance matters, and minimize disputes.

Conclusion:

The need for UCC was spelled out by the framers of the Constitution and it should be implemented in the true spirit of the Constitution by holding dialogue with people of different communities, religious scholars, and legal experts.

40. How can the National Research Foundation (NRF) address the most pressing issues in Indian science and significantly improve India's research output?

Introduction: What is NRF and what is its objective?

Body: What are the challenges faced by Indian research and science and what are suggestions to improve it?

Conclusion: Way forward.

Central Government has proposed to set up an apex body to promote, fund, and mentor scientific research in higher education institutions across the country. NRF is aligned with the aims and objectives of NEP 2020 which aims to make all higher education institutions teaching- as well as research-intensive.

What are the main issues challenging Indian science and research output?

- **Broad-based research:** There is an urgent need to develop research capacities in our colleges and universities. Studies have pointed out that less than 1% of higher learning institutions were engaged in research.
- **Lack of research in social sciences:** Research in India is heavily inclined toward natural sciences and there is a lack of focus on humanities, social sciences, and art. Limited sources of funding are the main reason for the lack of research in these areas.
- **Target National Objectives:** NRF should address issues having national ramifications like clean energy, climate change, sustainable infrastructure, improved transportation, and accessible and affordable healthcare.
- **Funding:** India's spending on research and development has remained below 0.7 percent of its GDP, as compared to other nations like the USA, Korea, & even China where spending is 2-5% of their GDP.

How can we improve India's research output?

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- **Capacity building:** NRF needs to build research capacities in colleges and universities. NRF professorships for serving or retired faculty will be a good start. NRF plans to offer doctoral and post-doctoral fellowships to young researchers in colleges and universities.
- **Focus on 3C's:** NRF should focus on humanities and arts subjects as they help in inculcating creativity, critical thinking, and communication skills (3C's). Social sciences, Indian Languages and Knowledge Systems, Arts and Humanities are among the ten major 'centres' sought to be established under NRF, along with others like natural sciences, mathematics, earth sciences, and engineering.
- **Autonomy:** Since NRF is modeled on the National Science Foundation of the US, the top positions will be reserved by members of the government. The need will be to allow autonomy to NRF in decision-making and some oversight from the Parliament.
- **Private Sector cooperation:** Since lack of funding is major lacunae in research output there is a need for the private sector or Indian corporates to help the government in raising money so that NRF acts as a bridge between industry and government departments.
- **Prioritise areas:** NRF should be sensitive towards concerns of rural areas like cleaning rivers, weather-proofing agriculture, and setting up Centres of Excellence to focus on research output aligning it with national objectives.

Conclusion:

The success of NRF in the domestic sphere can be extended to international research areas like Laser Interferometer Gravitational-Wave Observatory (LIGO), and International Thermonuclear Experimental Reactor (ITER) but its success will finally depend on collaboration between the industry, academia, government departments, and research institutions.

41. In light of a recent controversy in Tamil Nadu, discuss the constitutional provisions under Article 164 regarding the appointment and dismissal of Ministers. How does this incident reflect the role of the Governor in the context of these provisions?

Introduction: What is the recent issue regarding the role of the Governor?

Body: What is the role of the Governor regarding the appointment and dismissal of Ministers?

Conclusion: Way forward

Recently, the Governor of Tamil Nadu dismissed the Council of Ministers without the recommendation of the Chief Minister setting a dangerous precedent to destabilize state government and putting federal principles in jeopardy. Article 164 (1) of the Constitution states that the Chief Minister shall be appointed by the Governor and "the other Ministers shall be appointed by the Governor on the advice of the Chief Minister, and the Ministers shall hold office during the pleasure of the Governor".

Role of the Governor in the context of these provisions:

- **Appointment of Chief Minister:** The Governor appoints the chief minister who is the leader of the majority party or coalition in state assembly.
- **Constitutional role:** In *Shamsher Singh v. State of Punjab*, SC ruled that save in a few well-known exceptional circumstances, a governor may only use formal constitutional powers "upon, and in accordance with, the aid and advice of their ministers." The decision to invite a party to form the government is one of these exceptions, as are decisions to remove a government that has lost its majority. In both

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cases, the Council of Ministers' assistance and advice is either unavailable or unreliable.

- **Discretionary role:** In *Nabam Rebia vs Deputy Speaker*, SC held that the discretionary powers of the Governor are limited to the postulates of Article 163(1) which mandates that the power of the Governor primarily flows from the “aid and advice” of the Council of Ministers.
- **Dismissal of minister:** Governor does not have the power to directly dismiss the minister because they are appointed based on the recommendation of the CM. The decision as to who should be or who should not be a minister is a political one and is the sole prerogative of the chief minister.
- **Dismissal of the Council of Ministers:** If the Chief Minister loses the majority support in the state assembly or fails to prove their majority in a trust vote, the Governor can dismiss the entire Council of Ministers. The Governor usually acts on the advice of the Chief Minister, but in certain circumstances, they may use their discretionary powers to dismiss the Council of Ministers.

Conclusion:

- The dismissal of ministers directly by the Governor is a serious issue that raises serious issues regarding the Governor's role in our constitutional system. There is an urgent need to address these concerns and the partisan role played by the governor by adhering to recommendations of **the National Commission to Review the Working of the Constitution, Sarkaria Commission, and Punchhi Committee report.**

42. India recently became a signatory to the Artemis Accords. Discuss the implications of this decision for India's lunar exploration program. How can international cooperation, particularly with the US, benefit India's space ambitions?

Introduction: What are Artemis Accords?

Body: What is its impact on India's space program?

Conclusion: Way forward.

Artemis Accords 2020 are a set of 13 principles that ensures that space exploration is conducted in a safe, sustainable, and transparent manner and full compliance with international law. The signatory countries agree to abide by these principles that are mostly a reiteration of established international law on space exploration, like a commitment not to use space for military purposes, a promise to cooperate on matters of safety of space assets and astronauts, and a willingness to share scientific data from space missions. The founding members of the Artemis Accords are Australia, Canada, Italy, Japan, Luxembourg, United Arab Emirates, the United Kingdom, and the US. By signing the Artemis Accords, India has expressed its commitment to adhere to the best practices in space exploration.

What implications does this have on India's lunar exploration program?

- **Close cooperation in space programs:** By signing the accords India has opened up possibilities of much closer cooperation between ISRO and NASA on the Artemis mission which aims at returning to the moon, setting up a permanent station there, and then using it for deep space exploration.
- **Gaganyaan Project:** India's human spaceflight program could receive a push from the signing of the accords and it could help in expediting the project to send astronauts into space.

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- **Knowledge sharing:** Artemis Accords enables the sharing of information and experience, and helps to progress technical innovation, scientific research, and the expansion of humanity's presence in space.
- **Diversification in the supply chain:** Artemis Accords will help to create a semiconductor ecosystem that encourages supply chain diversification with numerous US-based companies ready to collaborate with India. These projects demonstrate the expanding technological and innovative cooperation between India and the United States.

How can these accords benefit India's space ambitions?

- **Chandrayaan 3:** The accords will help India in collaborating with other nations to achieve success in its lunar mission. This can help to foster scientific curiosity and help India in raising skilled engineers and scientists.
- **Geopolitics:** The accords will give India a say in space-related matters which are mostly discussed among developed nations and Russia, and China.
- **Cooperation with ISRO:** Accords will help ISRO in utilizing India's private sector for deep space exploration. The private sector can help offer products and services to foreign nations like software, ground tracking technology, and developing scientific payloads.
- **Strong regulatory framework:** India will need domestic law to govern its space activities in line with international commitments and a strong regulatory framework to promote space activity and protect India's international interests.

Conclusion:

These accords will push India to review its policy on outer space and pursue deeper lunar cooperation among like-minded nations & contribute to the development of new global norms that will strengthen the essence of the Outer Space Treaty.