



Mains Marathon
Compilation

April, 2023

Mains Marathon Compilation for the Month of April, 2023

1. **What is India's 6G vision? Highlight the rationale behind the early approach towards 6G.**
2. **What lessons can India take from its hydro-carbon policies, in transition to a self-reliant clean energy system?**
3. **A high enough carbon tax can pave the way for decarbonisation as a winning development formula. Explain.**
4. **Do you think, India's low ranking given by World Happiness Report, is based on a key misjudgment? Give reasons for your arguments.**
5. **Highlight the significance of the success of ISRO's Reusable Launch Vehicle Mission.**
6. **In the light of the recent controversy, highlight the shortcomings of the drug regulatory system of India.**
7. **Highlight the implications of strengthening Russia-China relations for India.**
8. **The Forest (Conservation) Amendment Bill, 2023 weakens the very purpose of the legislation, which is to protect and conserve India's forests. Discuss.**
9. **Do you think that India should join the investment facilitation agreement negotiations? Give reasons for your arguments.**
10. **What is the LIGO-India project? Also, highlight its significance for the technological developments in India.**
11. **Highlight the use of Artificial Intelligence (AI) for the law-making process.**
12. **What is India's Second Space Age? How is it possible to utilise the full potential of the Second Space Age?**
13. **In light of the increasing tiger population in India, conservation efforts should be balanced with the rights of forest dwellers. Examine.**
14. **What is a Small Modular Reactor (SMR)? Present the case of the use of small modular reactors (SMRs) in India, compared to big plants.**
15. **Preventive Detention law conferring arbitrary powers to the state must be critically examined and used in the rarest cases. In light of the statement, highlight the challenges associated with preventive detention law in India.**
16. **India needs a principles-based approach to regulate AI. Examine**
17. **Highlight the significance of Online Dispute Redressal (ODR). What steps can India take toward its implementation?**
18. **Should online gambling be regulated in India? Provide reasons for your arguments.**
19. **What is the recusal of Judges? Why is there an urgent need for reforms in the recusal system of India?**
20. **Critically analyze the MUDRA scheme as a scheme to promote financial inclusion.**
21. **Discuss the rationale and challenges associated with the changes to the NCERT syllabus.**
22. **Misinformation is a clear and present danger to the goal of a safe internet, and Government is well-placed to handle it. In the light of the statement, discuss the significance of amendments to the Information Technology Rules, 2021.**

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- 23. While the tiger population is increasing, the numbers do not reflect great success despite political support, funds, and a strong legal framework. Elaborate.**
- 24. Discuss the criterion and benefits of getting recognized as a national party.**
- 25. What steps can the government take to prepare people for heat conditions? How has Heat Action Plan (HAP) been useful in these conditions?**
- 26. The Media One judgment has underlined the institutional capacity of the court. Examine the statement.**
- 27. Discuss the significance and challenges of separate competition law for digital markets (SCLDM).**
- 28. What Is Government eMarket Place? How far has it been able to transform the process of public procurement of goods?**
- 29. India is set to become the most populous country in the world very soon. In the light of the statement, what steps can the government take to make India a human capital powerhouse?**
- 30. LIGO-India project will add to India's astronomical capabilities and will enable it to offer inputs and feedback not only for itself but for the rest of the world as well. Discuss.**
- 31. Explain the concept of the "basic structure" doctrine established in the Kesavananda Bharati case. Discuss its implications on the Indian Parliament's power to amend the Constitution and the protection of fundamental rights.**
- 32. Examine the role of the National Education Policy (NEP) 2020 in shaping the rationalisation of textbooks and the curriculum in Indian schools. How does the policy aim to improve the quality and flexibility of school education?**
- 33. Examine the question of justiciability of the Governor's assent to Bills in the Indian context. What insights can be drawn from relevant Supreme Court judgments?**
- 34. Assess the increasing interest in and development of central bank digital currencies (CBDCs) as an alternative to the US dollar in global trade. What challenges do CBDCs present for the US dollar's dominance?**
- 35. A clear understanding of technology is as important an issue as those of privacy, inclusivity, fairness, and ethics. To be a globally relevant player, India needs to embrace the concept of this new world of the brain economy. Discuss.**
- 36. India's engagement with the SCO was premised on Russian primacy in the region and Moscow's support of India's regional interests. That may be changing. Elaborate.**
- 37. Discuss the issue of regulating emerging technologies, citing the example of UK's Red Flag Act.**
- 38. Critically analyze the key provisions of the Civil Liability for Nuclear Damage Act, 2010 in addressing the concerns related to compensation and liability in the event of a nuclear accident in India.**
- 39. What are the reasons behind the accelerated sea-level rise? Highlight the multidimensional consequences of rising sea levels.**
- 40. Highlight the present challenges faced by Indian Railway considering the National Rail Plan 2030.**

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Q.1) What is India's 6G vision? Highlight the rationale behind the early approach towards 6G.

The Hindu

Introduction: Explain India's 6G vision.

Body: Explain the rationale behind the early approach towards 6G.

Conclusion: Write a way forward.

Vision Document promotes **to roll out high-speed 6G Communication Services by 2030** and also launched Bharat 6G Project to identify and fund research and deployment of the next-generation technology in India. **Bharat 6G Vision Document** enables India to become a leading global supplier of intellectual property, products and solutions of affordable 6G telecom solutions and identify priority areas for 6G research based on India's competitive advantages.

The project will be implemented in **two phases**, the first one from 2023 to 2025 and the second one from 2025 to 2030. In the first phase, it will provide support to explore new ideas and pathways. With the government's support, these ideas will then be used to develop use cases, intellectual properties (IPs) and testbeds. In the second phase, these IPs, prototypes and testbeds will be commercialized.

Rationale behind the early approach towards 6G:

- **Assuming Leadership:** The government wants to increase India's dominance in wireless data usage and it will be done through encouraging local manufacturing of telecom, supporting Indian companies and engineers in international discussions around standardization.
- **Avoiding Delays:** The government doesn't want to delay or stay behind the other countries in rolling out 6G as it did in 5G. **For instance**, 5G came in India years after countries like South Korea and the United States started using it.
- **Addressing the Demand:** with the advent of 5G and 6G technologies, lower frequencies in 4G networks may not be able to match the demand for traffic.
- **Developing R&D:** The government wants to support research in the field of 6G technologies. It will be done through **leveraging talent in academia and companies**.
- **Achieve connectivity goals:** 6G technology will help the government in achieving connectivity goals. **For instance**, ensuring that every person has access to a minimum of 100 Mbps of broadband, giving every **gram panchayat access to half a terabit** per second of connectivity, and installing over 50 million internet devices across the nation—13 per square kilometer.

6G will make websites load faster, videos to look better, and files to download faster than the 5G technology. However, businesses and governments are still figuring out how to best use 5G technology.

Q.2) What lessons can India take from its hydro-carbon policies, in transition to a self-reliant clean energy system?

Indian Express

Introduction: Contextual introduction.

Body: Explain what lessons India can take from its hydro-carbon policies, in transition to a self-reliant clean energy system.

Conclusion: Write a way forward.

According to the "**World Energy Transitions Outlook 2022**" report of **International Renewable Energy Agency (IRENA)**, current crisis of high fossil fuel prices, energy security concerns and the urgency of climate change underscores the pressing need to move faster to a clean energy system.

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India can take following lessons from its hydro-carbon policies, in transition to a self-reliant clean energy system:

- Clean energy minerals and components are internationally available. Instead of creating high-cost, domestic, clean energy hub dependent upon subsidies, government should **strengthen the trading relationship with exporting countries**.
- The hydrocarbon resources are located in harsh terrain and complex geology. They were difficult to produce on a commercial basis. The reason is the **high cost of drilling and development**.
- **Process cost**, due to land acquisition, erratic supplies of water and power and legal redress, needs to be **minimised**.
- The country should desist from building a high-cost, domestic, clean energy hub that is forever dependent on subsidies. Like oil, clean energy minerals and components are internationally traded. They can be purchased on the international market.
- Clean energy sector should not take the availability of tech as manufacturing competitiveness. China's dominance in PV solar cell manufacturing is because, China has been successful to **convert raw material into an end product, efficiently**.
- India should continue with its **two-track policy with China**. China is the lowest-cost supplier of clean energy components. One track will put us eye-ball-to-eye-ball on the border, the other should strengthen our trading relationship.
- In case of the **PLI scheme for clean energy sector**, the incentives offered are small compared to the benefits provided by the US and Europe. Therefore, endeavour should instead be to **lower entry barriers, ease business conditions** and remove the perception that India offers a high-cost operating environment.

Non combustion based RE power generation technologies have the potential to significantly reduce local and regional air pollution and lower associated health impacts compared to fossil-based power generation.

Q.3) A high enough carbon tax can pave the way for decarbonisation as a winning development formula. Explain.

Introduction: Introduction with recent context

Body: Write both the sides of the argument for and against the carbon tax

Conclusion: Why India cannot have high tax rate

Carbon Tax refers to the tax levied on the carbon emissions in the process of production, import and transportation. It is a source of revenue for the government as well as an incentive to switch away from carbon-intensive fuels, like coal.

The global average price of carbon tax currently is \$6/ton, which is a fraction of the harm caused from pollution. IMF proposes that price floors for a ton of carbon for the United States, China, and India be \$75, \$50 and \$25 respectively. Such a high carbon tax may pave way for decarbonization in a short span of time. The benefits of decarbonization are:

- 1) Extreme weather events are increasing for India. India ranks fifth in the global climate risk index 2020, and the climate change has led to direct economic losses worth trillions. Decarbonisation will reduce these losses for India.
- 2) Fiscal gains from high carbon tax will be huge, and can generate 2% of GDP as revenue. This can be used to promote the use of renewable and environment-friendly solutions. So that the carbon footprint can be lowered further. For example California state uses the revenue generated by Carbon permits to subsidize electric vehicles.
- 3) Carbon tax will also help India augment its effort toward carbon-neutral status by 2070. As a leader of the global south on climate action, high carbon tax will pace up decarbonization. India will be able to lead through example, bolstering its claim as a world leader.

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These reasons make the strategy of decarbonisation through high carbon tax a winning developmental formula, so that economic prosperity follows smaller carbon footprint.

However, there are certain challenges that India might face, if it opts for a high carbon tax rate:

- 1) The cumulative emissions determine the extent of temperature change. Historically, India has only contributed 4% to cumulative emissions. High carbon tax rate and consequent inflation will be a punishment, for a mistake that India never committed.
- 2) High carbon tax rate will make the exports uncompetitive for global market, especially while competing with countries that have lower or nil carbon tax.
- 3) High tax rate might lead to de-growth and de-industrialisation for India. However, due to the youth bulge, India needs employment and industrialisation.

Therefore, the concept of a high carbon tax for India, which has marginal contribution to cumulative emission, is not feasible. It is not a winning developmental formula, since it will dovetail inflation, uncompetitive exports and de-growth. If we opt for high tax and undifferentiated responsibility rhetoric, we shall be making the international inequality a reality for the fate of future generations to come.

Q.4) Do you think, India's low ranking given by World Happiness Report, is based on a key misjudgment? Give reasons for your arguments.

Introduction: Details about the report

Body: Reasons for misjudgement

Conclusion: Possible additions to index

World Happiness Report presents the people's assessment of their lives through qualitative indicators. It is published by Sustainable Development Solutions Network (SDSN), and uses a framework to evaluate people's own opinion about their lives, progress and well being, through quantitative indicators.

India ranked very low in these reports (126th out of 137 countries in 2023 report) and these reports have been widely criticised by experts for misjudgement. The reasons for misjudgement are:

- 1) Only a tiny fraction of citizens of a country participates in the report survey. Thus, the feedback of these people (about a thousand) determines the outcomes for all the citizens (about 130 crore), which may not be a realistic perception.
- 2) Happiness is a subjective feeling, which can not be caught into any fixed parameter. In a collectivist society, the parameters of happiness will be significantly different from the parameters in an individualistic society.
- 3) Happiness Index gains wide publicity, hence there may be politically motivated reason for dominant countries to tarnish the image of India through the index, when India defies its diktat, especially in the Ukraine-Russia war.
- 4) There has been obvious discrepancy in the rankings. The neighbouring countries of India, facing political, social and economic crisis (Pakistan, Sri Lanka Afghanistan and Myanmar), are ranked better than India, which has been enjoying a stable political and economic regime. The report indicates that citizens of such countries are happier than India, which seems distant from reality.
- 5) The methodology fails to incorporate diversity, spirituality, festivities, divorce rates and closeness of parents with their children. These factors would incorporate the key factors of happiness in a collectivistic society.

Therefore, the attempt to arrest a wide emotion such as happiness within the folds of quantitative ranking has been mediocre at best. This report needs a revamp, so that all the aspects of happiness have their due weightage, instead of vilifying certain countries for not becoming as individualistic as western countries.

Q.5) Highlight the significance of the success of ISRO's Reusable Launch Vehicle Mission.

Introduction: Provide a brief introduction on the 'success of ISRO's Reusable Launch Vehicle Mission'.

Body: Write 4-5 points on the significance of the success of ISRO's Reusable Launch Vehicle Mission. Write 2-3 points on the ways India can move forward after this mission.

Conclusion: Provide a conclusion on the success of the Reusable Launch Vehicle Mission.

Introduction:

ISRO's Reusable Launch Vehicle (RLV) Mission has achieved significant success in its recent test, marking a significant milestone in India's space exploration efforts. The Reusable Launch Vehicle Autonomous Landing Mission (RLV LEX) test, the second of five planned tests, demonstrated a precise landing of a reusable launch vehicle at the Aeronautical Test Range in Karnataka, India.

What is the significance of the success of ISRO's Reusable Launch Vehicle Mission?

- **Cost Reduction:** The success of the RLV Mission holds great significance as it aims to develop a fully reusable launch vehicle, enabling low-cost access to space. Reusable launch vehicles have the potential to significantly reduce the cost of space exploration, with estimates suggesting up to an 80% reduction in launch costs.
- **Access to Space:** Reusable launch vehicles open up new possibilities for frequent and affordable access to space, allowing for more frequent satellite launches, scientific experiments, and exploration missions.
- **Technological Advancement:** The RLV Mission involves the development of essential technologies, including hypersonic flight, autonomous landing, return flight, powered cruise flight, and scramjet propulsion. These advancements contribute to India's capabilities in space technology and strengthen its position in the global space industry.
- **Indigenous Development:** The success of the RLV Mission showcases India's indigenous efforts in developing advanced space technologies. By reducing dependence on foreign launch vehicles, India can enhance its self-reliance in space exploration and commercial satellite launches.
- **Environmental Impact:** Reusable launch vehicles have the potential to reduce space debris, as the same vehicle can be used multiple times instead of being discarded after a single launch. This contributes to the sustainability of space activities and helps protect Earth's orbital environment.

Way Forward:

- **Further Experiments:** The RLV Mission will continue with three more experiments: return flight, powered cruise flight, and Scramjet Propulsion Experiment (SPEX). These experiments will further refine and validate the technologies required for a fully reusable launch vehicle.
- **Scalability:** The RLV-TD, currently being tested, will be scaled up to become the first stage of India's reusable two-stage orbital launch vehicle. This scaling-up process will involve additional advancements and testing to ensure the successful deployment of a fully operational reusable launch system.

Conclusion:

The success of ISRO's Reusable Launch Vehicle Mission holds immense significance for India's space exploration endeavors. By developing a fully reusable launch vehicle, ISRO aims

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to reduce the cost of access to space, enhance technological capabilities, and promote indigenous development.

Q.6) In the light of the recent controversy, highlight the shortcomings of the drug regulatory system of India.

Introduction: Provide a brief introduction on the recent controversy and the shortcomings of the drug regulatory system of India.

Body: Write 4-5 points highlighting the shortcomings of the drug regulatory system of India. Write 3-4 points on the ways India can improve this shortcoming.

Conclusion: Provide a conclusion on the shortcomings of the drug regulatory system of India.

Introduction:

Recent controversy regarding the manufacturing process of eye drops exported by Chennai-based Global Pharma has raised concerns about the drug regulatory system in India. The US FDA conducted a plant inspection and listed multiple negative observations, leading to a halt in imports of the eye drops. Independent inspections by Indian regulators, however, found that quality standards were met. The focus should be on the domestic evaluation process and the overall shortcomings of India's drug regulatory system.

Shortcomings of the drug regulatory system of India:

- **Fragmented regulatory framework:** India's regulatory system for licensing drug manufacture and quality control is split between the central government (GoI) and states, leading to a fragmented system.
- **Varying quality supervision:** The fragmented system provides arbitrage opportunities as the quality of supervision varies across states, affecting the overall consistency of regulatory norms.
- **Inconsistent quality evaluation:** The market for medicines in India is nationwide, but the quality evaluation process is not standardized. Different states employ different sampling methodologies, raising questions about the reliability of quality assessment.
- **Lack of transparency:** A study in 2016 revealed that apart from Kerala and Tamil Nadu, other states and the central government lacked satisfactory answers to Right to Information (RTI) questions on sampling, indicating a lack of transparency in the process.
- **Shortage of drug inspectors:** A 2020 report by Brookings India highlighted a nationwide shortage of drug inspectors, with their numbers failing to keep pace with the growth of the domestic pharmaceutical industry. This shortage hampers effective monitoring and regulation.

Way forward:

- **Establish a unified regulatory system:** The Indian government should work towards establishing a unified drug regulatory system that streamlines processes, eliminates arbitrage opportunities, and ensures consistent quality evaluation across all states.
- **Strengthen transparency and accountability:** Enhance transparency in the drug regulatory system by ensuring timely and accurate responses to RTI queries. This will promote accountability and build trust among consumers and stakeholders.
- **Increase the number of drug inspectors:** Address the shortage of drug inspectors by increasing their numbers to match the growth of the pharmaceutical industry. This will enable more effective monitoring and regulation of drug manufacturing processes.

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- **Enhance collaboration and coordination:** Foster greater collaboration and coordination between the central government and state regulatory bodies to ensure a unified approach to drug regulation.

Conclusion:

In light of the recent controversy and the shortcomings of India's drug regulatory system, comprehensive reforms are needed. A unified regulatory system, standardized sampling, transparency, more drug inspectors, and better collaboration are crucial for ensuring high-quality standards and protecting consumer health.

Q.7) Highlight the implications of strengthening Russia-China relations for India.

Introduction: Provide a brief introduction on “strengthening Russia-China relations for India”.

Body: Write 3-4 points on the Implications of Strengthening Russia-China Relations for India. Write 2-3 points on the ways India can counterbalance the influence of the Russia-China alliance.

Conclusion: Provide a conclusion on the Russia-China relations and its Implications for India.

Introduction:

Strengthening Russia-China relations have significant implications for India's foreign policy and security considerations. Xi Jinping's recent state visit to Russia reaffirmed the deepening partnership between the two countries, despite the Ukraine crisis. The partnership is driven by a shared belief in countering Western containment and the perceived decline of the United States and the West.

What are the Implications of Strengthening Russia-China Relations for India?

- **Increased Strategic Pressure:** Russia and China view the US-led West as determined to contain their respective ambitions, leading to a closer partnership. India may face increased strategic pressure as it aligns with the US and other Western powers, potentially limiting its autonomy and room for maneuver in regional affairs.
- **Geopolitical Shifts in Central Asia:** China's growing influence in Central Asia, through initiatives like the Central Asian summit, poses a challenge to Russia's traditional dominance in the region. India's limited presence in Central Asia may be further marginalized as China solidifies its position as a security guarantor for these countries.
- **Economic and Energy Partnership:** China has structured an advantageous economic and energy partnership with Russia, enhancing its energy security through land-based supply routes. This partnership gives China greater leverage over Russia's engagement with India, potentially limiting defense cooperation and independent relations between Russia and India.
- **Limitations on Mediation Role:** China's alignment with Russia in the Ukraine crisis prevents it from playing a mediatory role between Ukraine and Russia, contrary to some expectations. The absence of a phone call between Xi and Ukrainian President Zelenskyy signifies China's clear support for Russia, further solidifying their alliance.

Way Forward:

- **Assessing Strategic Interests:** India needs to carefully assess the evolving Russia-China partnership and its implications for its own strategic interests.

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- **Strengthening Regional Alliances:** Strengthening ties with like-minded partners in the Indo-Pacific region and beyond can help counterbalance the influence of the Russia-China alliance.
- **Diversifying Energy Sources:** Diversifying energy sources and strengthening economic partnerships with other countries can reduce India's vulnerability to potential limitations imposed by the Russia-China partnership.

Conclusion:

The deepening partnership between Russia and China carries significant implications for India's foreign policy and security considerations. China's alignment with Russia amid the Ukraine crisis and its growing influence in Central Asia may limit India's regional presence and autonomy. India should carefully assess the evolving dynamics and seek strategic partnerships to counterbalance the influence of the Russia-China alliance. Diversification of energy sources and economic partnerships can enhance India's resilience in the face of potential limitations imposed by this strategic partnership.

Q.8) The Forest (Conservation) Amendment Bill, 2023 weakens the very purpose of the legislation, which is to protect and conserve India's forests. Discuss.

Introduction: Provide a brief introduction on the "Forest (Conservation) Amendment Bill, 2023 weakens the very purpose of the legislation, which is to protect and conserve India's forests"

Body: Write 3-4 points on "How The Forest (Conservation) Amendment Bill, 2023 weakens the purpose of the legislation". Write 2-3 points on the ways the bill can be modified so that no one is at loss.

Conclusion: Provide a conclusion on the Forest (Conservation) Amendment Bill, 2023 and the balance upheld to protect forests and biodiversity.

Introduction:

The Forest (Conservation) Amendment Bill, 2023 was introduced in Lok Sabha to make changes to The Forest (Conservation) Act, 1980. The proposed amendments focus on building carbon stocks in plantations and providing land for compensatory afforestation in lieu of diverted forest land. However, these changes weaken the original purpose of the legislation, which is to protect and conserve India's forests.

How The Forest (Conservation) Amendment Bill, 2023 weakens the purpose of the legislation?

- **Restricting applicability of the FC Act:** The Bill limits the applicability of the Forest (Conservation) Act only to land recorded as 'forest.' This excludes millions of hectares of land that have forest characteristics but are not officially notified as such, removing their protection under the Act.
- **Ignoring unrecorded forests:** Vast areas of unrecorded forests were left out during the process of designating reserved and protected forests. Instead of completing the demarcation process, the Bill ignores these unrecorded forests, further jeopardizing their protection.
- **Promoting plantations over natural forests:** The Bill incentivizes the establishment of plantations on land where the FC Act is not applicable. These plantations can then be used to compensate for the diversion of recorded forest land for development projects. This trade-off between natural forests and plantations weakens the conservation goals of the legislation.

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- **Expanding exemptions:** The proposed amendments seek to expand exemptions for certain projects and activities from obtaining forest clearance. This includes strategic linear projects near international borders and areas affected by Left Wing Extremism. Such exemptions further undermine the conservation efforts of the legislation.

Way forward:

- **Complete ground surveys:** Instead of limiting the applicability of the FC Act, there should be a focus on completing the demarcation process for unrecorded forests. This would ensure their inclusion and protection under the legislation.
- **Balance development and conservation:** There should be a careful balance between development projects and forest conservation. Compensatory afforestation should be carried out on non-forest land or degraded forest land, rather than promoting plantations over natural forests.
- **Indigenous and forest community rights:** The rights of indigenous and forest communities should be respected and their consent sought when it comes to the diversion of forest land. Their livelihoods and dependence on forests should be considered in decision-making processes.

Conclusion:

The Forest (Conservation) Amendment Bill, 2023 undermines forest conservation by prioritizing plantations, limiting the Act's applicability, and expanding exemptions. Balance and indigenous rights must be upheld to protect forests and biodiversity.

Q.9 Do you think that India should join the investment facilitation agreement negotiations? Give reasons for your arguments.

Introduction: Provide a brief introduction on "India and the investment facilitation agreement negotiations"

Body: Write 2- points on India's Advantages of Joining IFA Negotiations. Write 3-4 points on Way Forward for India.

Conclusion: Provide a conclusion on Whether India should join the investment facilitation agreement negotiations or not

Introduction:

The investment facilitation agreement (IFA) is gaining momentum as a rule-making initiative in the World Trade Organization's (WTO) current challenges. While India has not joined the negotiations, it is important to consider whether India should participate in the IFA discussions.

What are the Advantages of Joining IFA Negotiations?

- **Enhancing Investment Flows:** The IFA aims to create legally binding provisions that facilitate investment flows, which can benefit India by attracting foreign direct investment (FDI). Regulatory transparency and predictability of investment measures can attract more investors, stimulating economic growth and job creation.
- **Addressing Apprehensions of Investor-State Dispute Settlement (ISDS):** India's concerns regarding potential ISDS claims under existing bilateral investment treaties (BITs) should be addressed. The IFA can be structured to ensure that its provisions do not allow foreign investors to bring claims against the host state for alleged treaty breaches. Including language in the IFA text that explicitly insulates it from BITs and clarifies its limited scope can safeguard India's interests.

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- **Reforming BITs:** Joining the IFA negotiations provides an opportunity for India to reform its existing BITs and align them with the IFA's principles. Countries supporting the IFA can collaborate to amend their respective BITs and exclude the IFA from its scope, ensuring consistency and avoiding conflicts.

Way Forward:

- **Participate Actively in IFA Negotiations:** India should actively engage in the IFA negotiations, contributing to the development of provisions that align with its interests. By participating, India can shape the agreement to address apprehensions and incorporate safeguards that protect its sovereignty and regulatory autonomy.
- **Collaborate with Like-minded Countries:** India should collaborate with other countries supporting the IFA to amend their BITs accordingly. By forming a coalition of countries sharing common objectives, India can strengthen its position and influence the direction of the IFA negotiations.
- **Monitor and Evaluate ISDS Interpretations:** India should closely monitor ISDS tribunal decisions and interpretations to ensure they align with the intended scope of the IFA. If necessary, India can advocate for reforms to prevent any overly broad interpretations that could undermine the agreement's objectives.

Conclusion:

India should consider joining the investment facilitation agreement negotiations at the WTO, taking advantage of the opportunity to shape provisions that align with its interests. By actively participating and collaborating with like-minded countries, India can address its apprehensions regarding ISDS claims and reform its existing BITs. Joining the IFA negotiations can promote investment flows, enhance regulatory transparency, and contribute to India's economic growth while safeguarding its regulatory autonomy.

Q.10 What is the LIGO-India project? Also, highlight its significance for the technological developments in India.

Introduction: Provide a brief introduction to the "LIGO-India project"

Body: Write 3-4 points on the Significance of Technological Developments in India. Write 3-4 points on Way Forward for India in the LIGO-India project.

Conclusion: Provide a conclusion on the LIGO-India project and its significance for the technological developments in India

Introduction:

The Union Cabinet has approved the establishment of LIGO-India, a gravitational-wave detection facility in Maharashtra, India. LIGO-India will consist of a detector called the Laser Interferometer Gravitational-wave Observatory (LIGO), similar to the existing instruments in the United States. Its purpose is to enhance the collective ability of LIGO detectors to locate gravitational wave sources, contributing to the field of astrophysics and opening up new avenues for scientific exploration.

What is the Significance of Technological Developments in India?

- **Advancing Scientific Research:** LIGO-India presents an opportunity for India to become a global hub for gravitational physics research, enabling the training and development of expertise in precision technologies and control systems.
- **Technological Expertise:** The project will drive advancements in precision instrumentation, data analysis, and high-performance computing, bolstering India's technological capabilities.

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- **Research Collaboration:** LIGO-India will foster collaborations with international scientific communities, attracting top talent and promoting knowledge exchange in cutting-edge scientific techniques.
- **Innovation and Economic Growth:** The development of LIGO-India will stimulate research and innovation, contributing to India's technological advancements and economic growth.
- **Participation in International Scientific Community:** LIGO-India signifies India's commitment to scientific progress and active participation in the global scientific community.

Way Forward:

- **Addressing Societal Concerns:** LIGO-India should engage in meaningful dialogue with local communities, addressing concerns related to land-use change, environmental sustainability, and access to resources.
- **Community Engagement:** The project should contribute to the communities it relies on, through knowledge sharing, employment opportunities, and public outreach initiatives.
- **Responsible Land Management:** LIGO-India should ensure responsible land management practices, respecting cultural and environmental sensitivities.
- **Timely Execution:** Timely release of funds and efficient allocation of resources are crucial for the successful construction and operation of LIGO-India.
- **Collaboration with LIGO Scientific Collaboration:** Active collaboration with the international LIGO Scientific Collaboration will enhance the scientific value and global recognition of LIGO-India.

Conclusion:

LIGO-India's approval marks a significant milestone in India's scientific and technological advancements. The project holds immense potential for India to excel in gravitational physics research and develop expertise in precision technologies. LIGO-India's establishment signifies India's commitment to scientific progress and its active involvement in the global scientific community. By addressing societal concerns, engaging with communities, and fostering collaboration, LIGO-India can achieve its goals and contribute to India's technological development and scientific reputation.

Q.11) Highlight the use of Artificial Intelligence (AI) for the law-making process.

Introduction: Provide a brief introduction to “Artificial Intelligence (AI) for the law-making process”

Body: Write 3-4 points on the use of Artificial Intelligence (AI) for the Law-Making Process. Write 3-4 points on some examples of AI Implementation in Parliaments and some potential Benefits of AI in Law-Making. Write 3-4 points on Way Forward in AI for law making.

Conclusion: Provide a conclusion on Artificial Intelligence (AI) for the law-making process

Introduction:

Artificial Intelligence (AI) is gaining attention worldwide and has the potential to enhance law-making, policy-making, and parliamentary activities. Mature democracies are utilizing AI tools to improve legislation, parliamentary procedures, and decision-making processes.

What is the use of Artificial Intelligence (AI) for the Law-Making Process?

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- **Assisting Legislators:** AI tools can aid parliamentarians in various tasks such as drafting responses, conducting research, obtaining information on bills, understanding house rules, and legislative drafting.
- **Informed Decision-Making:** AI can provide insights into citizen grievances, media opinions, and the voices of citizen-centric associations, empowering legislators to make well-informed decisions.
- **Identifying Issues and Priorities:** AI can analyze citizens' grievances and social media responses, highlighting issues that require immediate attention and helping set priorities.
- **Public Consultation:** AI can facilitate citizen input for public consultations on laws and assist in the preparation of manifestos.

What are some examples of AI Implementation in Parliaments?

- **United States House of Representatives:** Introduced an AI tool to automate the analysis of differences between bills, amendments, and current laws, streamlining the legislative process.
- **Netherlands House of Representatives:** Implemented the "Speech2Write" system, converting voice to text and providing automated editing capabilities for written reports.
- **Japan:** Utilizes an AI tool to prepare responses for its legislature and automatically selects relevant highlights from parliamentary debates.
- **Brazil:** Developed an AI system called Ulysses, which supports transparency and citizen participation.

What are some potential Benefits of AI in Law-Making?

- **Simulating Policy Effects:** AI can model various datasets and predict potential outcomes of policies, aiding lawmakers in making informed decisions.
- **Identifying Outdated Laws:** AI can flag laws that are no longer relevant or effective in present circumstances, suggesting amendments to keep legislation up to date.

Way Forward:

- **Codifying Laws:** Establishing a central law engine that provides a comprehensive view of acts, subordinate legislation, gazettes, compliances, and regulations, making laws machine-consumable.
- **Digital Transformation:** Embracing digital initiatives like the 'One Nation, One Application' and the National e-Vidhan (NeVA) portal to digitize parliamentary activities.
- **Transparency and Citizen-Friendly Approach:** Encouraging the use of AI openly and transparently, ensuring citizen participation and engagement throughout the law-making process.

Conclusion:

AI has the potential to revolutionize the law-making process by assisting legislators, enhancing decision-making, and identifying priority issues. Several countries have already adopted AI tools in their parliaments, demonstrating its effectiveness in streamlining legislative procedures. India should leverage the momentum gained from the COVID-19 pandemic's digital transformation to implement AI in law-making, policy-making, and parliamentary activities.

Q.12) What is India's Second Space Age? How is it possible to utilise the full potential of the Second Space Age?

Introduction: Provide a brief introduction on "India's Second Space Age"
Body: Write 3-4 points on the possibility to utilise the full potential of the Second Space Age. Write 3-4 points on Way Forward in India's Second Space Age
Conclusion: Provide a conclusion on India's Second Space Age and the possibility to utilise the full potential of the Second Space Age

Introduction:

The First Space Age began in the 1950s with the launch of Sputnik 1 and culminated in Neil Armstrong's moon landing in 1969. The Second Space Age is characterized by a shift from government dominance to private sector involvement, with companies like SpaceX leading the way. India made a modest entry into the First Space Age in the 1960s and has since made significant progress in space exploration and satellite technology.

How is it possible to utilise the full potential of the Second Space Age?

- **Recognize the potential:** The global space economy is estimated to reach \$600 billion by 2025, and India's space economy is expected to be \$13 billion by the same year. The country has an opportunity to exceed \$60 billion by 2030.
- **Foster an enabling environment:** Develop an inclusive policy and regulatory framework to support the growth of the private sector in space exploration and satellite technology.
- **Encourage private sector participation:** Support and collaborate with space start-ups to leverage their innovative ideas and technological advancements.
- **Enhance satellite services:** Invest in satellite infrastructure and services to meet the growing demand for data-intensive applications, such as broadband, OTT, and 5G.
- **Focus on downstream activities:** Emphasize satellite services and associated ground segment development, as they account for over 70% of India's space economy.
- **Strengthen research and development:** Leverage the expertise and resources of organizations like ISRO to support research and development efforts in space technology.

Way forward:

- **Introduce legislation:** Enact comprehensive space activities act to provide legal grounding, establish a regulatory authority, and create a favorable environment for venture capital funding in the Indian space start-up industry.
- **Establish a regulatory authority:** Clearly define the role of the Indian National Space Promotion and Authorization Centre (IN-SPACe) as either a licensing authority or a regulator to streamline operations and decision-making processes.
- **Encourage industry collaboration:** Foster collaboration between ISRO and the private sector, enabling the exchange of knowledge, resources, and expertise for mutual growth and development.
- **Promote international partnerships:** Seek partnerships and collaborations with other space-faring nations and organizations to leverage their expertise and expand India's capabilities in space exploration.

Conclusion:

India's entry into the Second Space Age presents immense opportunities for the country to tap into the growing global space economy. By fostering an enabling environment, encouraging private sector participation, and focusing on downstream activities, India can harness the full potential of the Second Space Age.

Q.13) In light of the increasing tiger population in India, conservation efforts should be balanced with the rights of forest dwellers. Examine.

Introduction: Provide a brief introduction on “Increasing tiger population in India, and conservation efforts”

Body: Write 3-4 points on conservation efforts and how it should be balanced with the rights of forest dwellers. Write 3-4 points on Way Forward in conservation efforts and balanced with the rights of forest dwellers.

Conclusion: Provide a conclusion on increasing tiger population in India and how conservation efforts should be balanced with the rights of forest dwellers.

Introduction:

India's tiger population has shown an increase in recent years, reaching at least 3,167 tigers in 2022. The country has made significant efforts to conserve tigers and involve forest-dwelling communities in conservation activities. However, challenges such as deforestation and loss of tiger habitat still persist in various tiger zones, including the biodiverse Western Ghats.

How conservation efforts should be balanced with the rights of forest dwellers?

- **Sustainable coexistence:** It is essential to strike a balance between conservation efforts and the rights of forest-dwelling communities who rely on forest resources for their livelihoods.
- **Engage local communities:** Involve forest-dwelling communities in conservation initiatives by providing them with training, education, and opportunities for sustainable livelihoods that are compatible with conservation goals.
- **Recognize traditional knowledge:** Respect and incorporate the traditional knowledge and practices of forest-dwelling communities, who have coexisted with wildlife for generations and possess valuable insights into conservation.
- **Ensure land rights:** Secure the land and resource rights of forest-dwelling communities to prevent displacement and allow them to continue their traditional ways of life in harmony with wildlife.
- **Mitigate human-wildlife conflicts:** Implement measures to minimize conflicts between humans and wildlife, such as developing effective livestock management practices and providing compensation for any losses incurred by communities due to wildlife interactions.

Way forward:

- **Strengthen conservation efforts:** Allocate sufficient resources and support for the protection and restoration of tiger habitats, ensuring a conducive environment for their population growth.
- **Empower local governance:** Promote community-based conservation initiatives and empower local governance structures to play a more significant role in decision-making processes related to conservation.
- **Raise awareness:** Conduct awareness campaigns to educate both forest-dwelling communities and the general public about the importance of tiger conservation and the need to balance it with the rights of local communities.
- **Collaborate with stakeholders:** Foster partnerships between government agencies, non-governmental organizations, researchers, and local communities to develop comprehensive conservation strategies that consider the needs and perspectives of all stakeholders.

Conclusion:

While India's increasing tiger population is a positive development for conservation efforts, it is crucial to strike a balance between conservation and the rights of forest-dwelling communities. Sustainable coexistence can be achieved by engaging local communities, recognizing their traditional knowledge, ensuring land rights, and mitigating human-wildlife conflicts. Strengthening conservation efforts, empowering local governance, raising awareness, and fostering collaboration among stakeholders will contribute to a harmonious relationship between tiger conservation and the well-being of forest dwellers.

Q.14) What is a Small Modular Reactor (SMR)? Present the case of the use of small modular reactors (SMRs) in India, compared to big plants.

Introduction: Provide a brief introduction on "Small Modular Reactor (SMR) in India"

Body: Write 3-4 points on presenting the case of the use of small modular reactors (SMRs) in India, compared to big plants. Write 3-4 points on Way Forward for small modular reactors (SMRs) in India.

Conclusion: Provide a conclusion on the use of small modular reactors (SMRs) in India, compared to big plants.

Introduction:

India is taking steps towards the development of Small Modular Reactors (SMRs) with up to 300 MW capacity as part of its commitment to clean energy transition. The participation of the private sector and startups is encouraged to explore the development of this critical technology within India. SMRs offer cost savings, shorter construction time, and flexibility in design, making them a promising technology for industrial decarbonization.

Present the case of the use of small modular reactors (SMRs) in India, compared to big plants:

- **SMR advantages:** SMRs are smaller in size and require a smaller footprint compared to conventional nuclear reactors. They can be factory-built, resulting in cost and time savings during construction.
- **Flexibility and scalability:** The modular design of SMRs allows for flexible deployment and scalability, making them suitable for a variety of applications and locations, including remote areas and industrial settings.
- **Reliable and continuous power supply:** SMRs provide a reliable and continuous supply of power, making them valuable for industrial processes that require consistent energy availability.
- **Safety and simplicity:** SMRs are considered simpler and safer than large nuclear plants due to their design and inherent safety features. Their smaller size allows for better control and containment of any potential accidents or incidents.
- **Clean energy transition:** SMRs play a significant role in India's clean energy transition strategy. As a base load power source, nuclear energy, including SMRs, can help in the decarbonization of the energy sector and reduce reliance on fossil fuels.
- **Complementary to renewables:** While India has made significant progress in renewable energy adoption, SMRs can complement renewable sources by providing a stable and constant power supply, particularly when intermittent renewable sources are not available.

Way forward:

- **Private sector participation:** Encourage the private sector and startups to actively participate in the development and deployment of SMR technology in India.

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Collaboration between government, industry, and research institutions is crucial for progress.

- **Technology sharing and funding:** Foster technology sharing and collaboration with international partners to leverage expertise and resources for the development of SMRs. Ensure sufficient funding mechanisms are in place to support research, development, and commercial availability of SMR technology.
- **Regulatory framework:** Establish a clear and comprehensive regulatory framework that addresses safety, security, waste management, and public concerns related to SMR deployment.

Conclusion:

Small Modular Reactors (SMRs) offer an innovative and flexible approach to nuclear power generation. In India's pursuit of a clean energy transition, SMRs can play a significant role due to their smaller size, cost savings, and reliability.

Q.15) Preventive Detention law conferring arbitrary powers to the state must be critically examined and used in the rarest cases. In light of the statement, highlight the challenges associated with preventive detention law in India.

Introduction: Provide a brief introduction on “ Preventive Detention law conferring arbitrary powers to the state must be critically examined and used in the rarest cases”

Body: Write 4-5 points on Challenges Associated with Preventive Detention Law in India. Write 3-4 points on the ways forward for Preventive Detention laws in India.

Conclusion: Provide a conclusion on the preventive detention law in India.

Introduction:

Preventive detention laws in India have long been criticized for granting arbitrary powers to the state and posing a threat to personal liberty. The recent observation by the Supreme Court reaffirms this concern and emphasizes the need to adhere to procedural safeguards. While courts primarily focus on examining procedural adherence, there is a pressing need to critically examine and restrict the application of preventive detention.

What are the Challenges Associated with Preventive Detention Law in India?

- **Failure to Adhere to Procedural Safeguards:** The executive's consistent failure to follow procedural safeguards while dealing with detainees is a significant challenge. Detention orders are often set aside on technical grounds, but the relief for detainees is limited as it comes months after their detention, rendering it ineffective.
- **Delay in Disposal of Representations:** Unexplained delays in the disposal of representations submitted by detainees against their detention to the authorities are a common reason for detention orders being set aside. This delay denies detainees their right to a timely review of their case.
- **Insufficient Grounds for Detention:** Failure to provide proper and justifiable grounds for detention or delays in furnishing them, undermine the legitimacy of preventive detention. The absence of clear and compelling reasons for detention erodes the credibility of the law.
- **Misuse for Trivial Reasons:** There have been instances where preventive detention laws have been misused for trivial reasons, such as detaining individuals involved in non-serious offenses. This misuse not only undermines the intent of preventive detention but also leads to an unjust and disproportionate application of the law.

Way Forward:

- **Strict Adherence to Procedural Safeguards:** The government must ensure that every procedural rigidity is followed in preventive detention cases. Any lapse in the procedure should work in favor of the detainee.

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- **Narrowing the Scope of Preventive Detention:** The law should be critically examined and revised to limit the application of preventive detention to the rarest of cases involving serious threats to public order.
- **Timely Disposal of Representations:** Authorities should prioritize the prompt disposal of representations submitted by detainees, allowing for a timely review of their case.
- **Enhanced Judicial Scrutiny:** Courts need to play a more proactive role in scrutinizing preventive detention cases beyond procedural adherence.

Conclusion:

By critically examining the law, narrowing its scope, and enhancing judicial scrutiny, India can strike a balance between maintaining public order and safeguarding individual rights. It is crucial to ensure that preventive detention is used sparingly and only in exceptional circumstances where its necessity is unquestionable.

Q.16) India needs a principles-based approach to regulate AI. Examine

Introduction: Provide a brief introduction on “India needs a principles-based approach to regulate AI”

Body: Write 4-5 points on how India needs a principles-based approach to regulate AI. Write 2-3 points on the ways for India.

Conclusion: Provide a conclusion examining a principles-based approach to regulating AI by India.

Introduction:

The recent open letter expressing concerns about the impact of AI on jobs has sparked a debate on the need for regulation. While some view AI as a transformative technology with immense potential, others fear its adverse effects on employment and society.

How does India need a principles-based approach to regulate AI?

- **Embracing transformative technology:** AI has the potential to revolutionize various sectors and create new opportunities for growth and innovation in India.
- **Job displacement concerns:** The fear of AI leading to job losses is valid, but history has shown that technological advancements create new jobs and require humans to develop new skills.
- **Adapting regulatory frameworks:** Traditional regulatory frameworks may become obsolete in the face of rapid AI advancements. A principles-based approach allows for flexibility and adaptation to changing circumstances.
- **Addressing discrimination and privacy concerns:** AI systems trained on biased data can perpetuate discrimination, while privacy concerns arise from the misuse of personal information. Principles-based regulation can tackle these issues by promoting fairness, transparency, and accountability in AI systems.
- **Mitigating liability risks:** Holding developers solely responsible for unpredictable behaviour and emergent outcomes of AI systems can stifle innovation. A principles-based approach encourages responsible development while considering the complex nature of AI.

Way forward:

- **Agile and iterative approach:** India can follow the UK's Pro-Innovation Approach to Regulating AI, which focuses on learning from experience and adapting regulations accordingly. This approach prevents rigid legislation that may hinder technological progress.

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- **Cross-cutting principles:** Implementing high-level principles that define expectations from AI systems can guide sector regulators to identify potential harms and take corrective action promptly.
- **Leveraging existing expertise:** India can leverage the domain-specific expertise of existing regulators to tailor regulations for different sectors and applications of AI.
- **Non-statutory implementation:** Rather than enacting new legislation, India can issue the principles on a non-statutory basis. This approach maintains flexibility while allowing regulators to enforce the principles effectively.

Conclusion:

India stands at a critical juncture where it must strike a balance between reaping the benefits of AI and addressing potential challenges. A principles-based approach to AI regulation offers a promising way forward. By focusing on fairness, transparency, and accountability, India can ensure the responsible development and deployment of AI technologies. This approach will enable the country to adapt to the evolving AI landscape while safeguarding against discrimination, privacy breaches, and liability risks. As India moves forward, it should seize the potential of AI while fostering an environment that encourages innovation and protects the interests of its citizens.

Q.17) Highlight the significance of Online Dispute Redressal (ODR). What steps can India take toward its implementation?

Introduction: Provide a brief introduction on “Online Dispute Redressal (ODR)”

Body: Write 3-4 points on the Significance of Online Dispute Redressal (ODR). Write 3-4 points on Steps India can take toward ODR implementation. Write 3-4 points on the ways forward for Online Dispute Redressal (ODR).

Conclusion: Provide a conclusion on the Online Dispute Redressal (ODR) in India.

Introduction:

Online Dispute Redressal (ODR) is a virtual mechanism for resolving disputes using technology. India has the potential to leverage ODR to ensure justice for all and address the challenges in the administration of justice.

What is the Significance of Online Dispute Redressal (ODR)?

- **Reducing Burden on Traditional Courts:** ODR can reduce the burden on traditional courts, save time, and lower costs associated with dispute resolution.
- **Time and Cost Savings:** It offers effective resolutions by integrating various tools such as multi-channel communication, case management systems, and advanced technologies like blockchain, AI, and machine learning.
- **Traction in India:** ODR has already gained traction in India, with private platforms resolving a significant number of disputes.
- **Increased Access to Justice:** It can enhance access to justice, especially for small-value disputes and online transactions.

What are the Steps India can take toward ODR implementation?

- **Legislative measures:** Incentivize the use of ODR by establishing it as the default dispute resolution tool for certain categories of disputes arising from online transactions. Fast-track enforcement of ODR outcomes to ensure timely resolution. Exempt or reduce stamp duty and court fees for ODR cases to encourage participation.
- **Infrastructure development:** infrastructural challenges and bridge the digital divide to facilitate the growth of ODR. Optimize existing setups like Aadhaar Kendras to function as ODR kiosks, providing accessible dispute resolution services. Establish

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ODR cells in courts, accompanied by technical and administrative support, to promote ODR at the grassroots level.

- **A dedicated fund for ODR:** Create a dedicated fund to support the development and implementation of ODR initiatives. Similar to the e-Courts project, allocate resources to digitize the justice system and ensure adequate funding for ODR.
- **Government adoption of ODR:** Encourage government departments to adopt ODR as a grievance redress mechanism. Proactive use of ODR by government entities will build trust in the process and provide citizens with a convenient and cost-effective means of resolving disputes with the government.

Way forward:

- **Collaboration among Stakeholders:** Collaboration among the legislature, executive, and judiciary is essential for the successful implementation of ODR in India.
- **Dissemination of Best Practices:** Institutions like the Reserve Bank of India and the National Payments Corporation of India have already incorporated ODR mechanisms, and their experiences should be disseminated at a mass scale.
- **Leveraging Technological Strengths:** Leveraging India's strengths in technology, ODR has the potential to position India as a frontrunner in dispute resolution, addressing the challenges of pendency and ensuring justice for all.

Conclusion:

With a collaborative effort, India can emerge as a leader in ODR and overcome its past challenges in becoming an international arbitration hub. ODR is the path forward to deliver justice at everyone's fingertips.

Q.18) Should online gambling be regulated in India? Provide reasons for your arguments.

Introduction: Provide a brief introduction to "Online gambling in India"

Body: Write 4-5 points on "Online gambling regulation in India. Write 3-4 points on the ways forward to govern online gambling activities across the country.

Conclusion: Provide a conclusion on Online gambling in India.

Introduction:

The Tamil Nadu Prohibition of Online Gambling and Regulation of Online Games Act has recently been passed in Tamil Nadu, bringing closure to the issue of online gambling and regulation of online games in the state. The passage of the bill has seen ups and downs, with the Governor initially returning the bill and later giving his assent.

Should online gambling be regulated in India?

- **Protection against addiction and financial distress:** Online gambling can lead to addiction, causing financial distress for individuals and families. Regulation can help protect vulnerable individuals from the potential harm associated with excessive gambling and provide avenues for intervention and support.
- **Preventing illegal activities:** Regulation allows authorities to monitor and control online gambling activities, ensuring that they are conducted legally and fairly. It helps prevent illegal activities such as fraud, money laundering, and unauthorized gambling operations.
- **Safeguarding consumer rights:** Regulation provides a framework for the protection of consumer rights in online gambling. It ensures transparency, fair play, and accountability of gambling operators, protecting consumers from unethical practices and fraud.

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- **Generating revenue and employment:** Regulated online gambling can contribute to the economy by generating tax revenue for the government. It also has the potential to create job opportunities in the gambling industry, boosting employment prospects.

Way forward:

- **Establishing a comprehensive regulatory framework:** India should consider establishing a comprehensive regulatory framework to govern online gambling activities across the country. The framework should include licensing requirements, consumer protection measures, responsible gambling initiatives, and mechanisms for dispute resolution.
- **Collaborative approach:** Regulating online gambling requires collaboration between the central government, state governments, and relevant regulatory authorities. A unified approach will ensure consistency, avoid confusion, and effectively address challenges associated with online gambling.
- **Promoting responsible gambling:** Regulation should emphasize responsible gambling practices, including age verification, self-exclusion options, and educational campaigns about the risks and consequences of excessive gambling.
- **Effective enforcement and monitoring:** It is crucial to have robust mechanisms in place for the enforcement and monitoring of online gambling activities. This can be achieved through partnerships with internet service providers, payment gateways, and technology companies to ensure compliance with regulatory requirements.

Conclusion:

Regulating online gambling in India is necessary to protect individuals from the potential risks of addiction, financial distress, and illegal activities associated with unregulated gambling. A comprehensive regulatory framework, collaborative efforts, and a focus on responsible gambling practices will help strike a balance between consumer protection and the potential benefits of regulated online gambling, such as revenue generation and employment opportunities.

Q.19) What is the recusal of Judges? Why is there an urgent need for reforms in the recusal system of India?

Introduction: Contextual introduction

Body: Write the issues associated with the recusal of judges.

Conclusion: Write the reforms needed

Recusal is an act of abstaining from taking decision in matters such as legal hearings, due to conflict of interest. Judges have frequently recused themselves voluntarily in cases related to their home-state, in cases they have earlier served as lawyer, or if there is any other conflict of interest that can lead to bias in judgement.

However, the recusal of judges leads to dissolution of the bench, and re-listing of the matter before another bench. This causes delay, and leaves everyone in a lurch.

Problems in the current recusal system:

- 1) There are no specific legislations in India to instruct on a judge's recusal. Hence, any act of recusal, without due transparency, raises doubts over judicial fairness.
- 2) Lack of guidelines over recusal makes different judges interpret the situations differently, so that any related conflict of interest is evoked as a means to recuse from the case.
- 3) Requests of recusal from the bar is made in order to intimidate the judges, to get a 'convenient' judge or to delay the proceedings.

Therefore, recusal is an instrument, which has been overly misused, and needs to be regulated. Recently, in the Maharashtra-Karnataka border case, there have been four recusals already.

The reforms needed are:

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- 1) A neutral arbiter is needed to decide the issue whether a judge should recuse himself from the case or not. This is a widely accepted practice in USA.
- 2) The person who appointed the judge to the case, the Chief Justice himself, can only dismiss a judge from the case. Hence, Chief Justice should decide whether to allow recusal or not.
- 3) Legislature should bring a detailed legislation in this regard, so that the matter of recusal becomes transparent.

Q.20) Critically analyze the MUDRA scheme as a scheme to promote financial inclusion.

Introduction: Contextual introduction

Body: Write the pros and cons of the MUDRA scheme

Conclusion: Write a way forward

Recently, PM Modi made a remark highlighting the importance of MUDRA scheme as a means to promote the financial inclusion. PM Mudra Yojna is a government scheme to provide collateral free institutional loans up to Rs 10 lakhs for small business enterprise. It has been a transformative scheme, enabling micro-finance in a major way.

The benefits of MUDRA Scheme are:

- 1) It provides funding to the non-corporate small business sector through last mile financial agencies such as Banks, Non-Banking Financial Institutions and Micro Finance Institutions.
- 2) Disadvantaged sections of society such as women entrepreneurs, SC/ST/OBC borrowers have received loans. About 8 crore new entrepreneurs have been created, of which more than 70% beneficiaries are women.
- 3) It has brought many informal businesses into the folds of formal economy. This will widen the tax base for the government, as well as ensure that the intended labour benefits and social security are reaching the last mile.

However, there are some concerns related to MUDRA scheme as well:

- 1) Most of the MUDRA loans are small-sized, with 83% of loans being less than Rs. 50,000. Small-sized loans are not going to impact the lives of entrepreneurs significantly or uplift their businesses.
- 2) The interest subvention provided in this scheme, promotes dwarfism in the economy, with no incentive for small-sized industries to expand.
- 3) The percentage of bad loans, or NPA (Non-performing assets) may rise, leading to poor performance of economy. Since, the loans are being given to units that require to scale up, without assessing the demand of the product in the market, some of the loans are bound to end up as bad loans.

Way Forward:

- 1) Banks need to focus on the repayment capacity of the lender, so that the loans are paid back.
- 2) Government needs to handhold the small businesses into use of technology, such as GPS, Website, E-commerce etc, so that the efficiency of the businesses increases. Integration of technology will make the business more agile, updated and visible to the people, while increasing the capacity to serve the customers, as well as improve turnaround time.
- 3) The Micro-Finance institutions should step out of their client base and increase the sectors and areas served, so that a greater percentage of people are covered under MUDRA scheme.

Q.21) Discuss the rationale and challenges associated with the changes to the NCERT syllabus.

Introduction: Introduction with recent context

Body: Write both the sides of the argument

Conclusion: Mention about wider discussion

Recently, the government has announced third rearrangement of NCERT syllabus in last six years, and reduced the references to the Mughal history, amid other changes. This has led to a wide debate over the intent and impact of the syllabus rearrangement by the current government.

The intent of the government behind the changes in the NCERT syllabus are:

- 1) Syllabus revision is a necessary step towards reducing the burden of the students impacted by the pandemic learning losses. All the overlapping contents that gets repeated in various classes have been removed to reduce the burden on students.
- 2) It is an effort to provide adequate focus on all aspects of Indian history of 2,500 years, instead of over-emphasizing on one period of Indian History. Other periods and dynasties such as Cholas and Gupta have been under-represented in the present textbooks, which is essential to provide a holistic understanding about the Indian history.
- 3) School teaching should be about building the interest and skills in students so that they research further and analyse the facts, instead of memorising the facts. Hence, the textbook should be just indicative, rather than exhaustive in its content.
- 4) Syllabus revision is an essential part of a robust education system which is updated and contemporary. Previous governments have also carried out the revisions periodically to improve the content of the textbooks.

However, there are certain challenges associated with the reorganisation of the syllabus:

- 1) A shallow understanding of the Mughal Empire will limit the understanding of the present society, since most of the North-Indian culture, terms and clothing have their origin in Mughal times.
- 2) There have been communal overtones to the selective deletions in the textbook. References to the dislike of Hindutva extremists for Gandhi, a ban on Rashtriya Swamsewak Sangh (RSS) after the assassination of Gandhiji and the Gujarat communal riots 2002 have been deleted.
- 3) Experts involved in the creation of the syllabus, were not consulted regarding the revisions, making the revision opaque. Such arbitrary actions, tend to reduce the faith of people in the government.

A wider discussion is needed before carrying out a large-scale revision, because NCERT reflects the collective memory of our country, and will have a deep-seated impact on the psyche of the upcoming generations.

Q.22) Misinformation is a clear and present danger to the goal of a safe internet, and Government is well-placed to handle it. In the light of the statement, discuss the significance of amendments to the Information Technology Rules, 2021.

Introduction: Definition of misinformation

Body: Write the amendments and its significance

Conclusion: Write the reforms needed

Internet has allowed unfettered user-generated information and communication, which has allowed the evil of misinformation to spread all around. Misinformation refers to the deliberate effort to spread incorrect or misleading information that are deceptive. Government has notified amendments to Information Technology Rules, 2021, to deal with the nuisance of misinformation on the internet.

Amendments to Information Technology Rules, 2021:

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- 1) Ministry of Electronics and IT can appoint a fact-check body, which will label information on online platforms related to the central government as fake or misleading.
- 2) Any online intermediary including social media platforms like Facebook, Youtube and Twitter should make efforts to not host content related to the Central Government that have been identified as fake or misleading by the 'fact check unit', failing which they will risk losing their safe harbour against third-party content.

Significance of the amendments:

- 1) The amendment strengthens the architecture to counter the flood of misinformation present on the internet related to the government activities and initiatives. However, any executive body should not be given the power to have the final say in a matter involving government.
- 2) The amendment will deter the individuals and shore up the efforts of the social media platforms to discourage misinformation. It will push the platforms to use various technology tools such as Artificial Intelligence and Data analysis to proactively flag false information and prevent it from spreading. For example – Twitter has Birdwatch feature to report misinformation.

Way Forward:

- 1) Details on the composition of the fact-check unit should be made public, so that the doubts over credibility of the unit will be addressed. There are serious doubts if the unit will be subservient to political interests of the government, since it is not an autonomous body.
- 2) There should also be some provision for remedial action over the unit in case of malafide action. The lack of such provision dilutes accountability, and the vision of open, safe & trusted and accountable internet will not be realised.

Q.23) While the tiger population is increasing, the numbers do not reflect great success despite political support, funds, and a strong legal framework. Elaborate.

Project Tiger is a tiger conservation effort, started by Government of India in 1973. It was launched to improve the dwindling population of Tiger and to restore the grassland ecosystem of India.

The project has been regarded to be one of the most successful conservation projects of the world. The project has been successful in protection, maintaining, and increasing the count of tigers in nature. The tiger census in 1972 revealed the existence of 1827 tigers. However, in 2023, India is the home of 3167 tigers, which is the highest among the 13 Tiger Range Countries in the world.

However, the critics have pointed out that the increase in the population of the tiger since the inception of the project has not been very reassuring. The amount of political effort, funds and legal framework that has gone into this has not given appropriate outcomes.

The limitations of the Tiger Project have been the following:

- The tiger population in certain geographical regions of India still depreciated, despite the major effort to conserve.
- The plan to reintroduce tigers from central Indian Forests to such areas where the population is dwindling, has led to homogeneity in the tiger genetic structure across the country.
- As Cheetal are the major prey for tiger, efforts to provide for prey base in varying ecosystems has majorly resulted in 'Cheetalification' of the tiger reserves.
- All the conservation efforts in Project Tiger are done by the government only. Wildlife Protection Act is very restrictive in nature. This has led to exclusion of the local communities and other sections from the conservation efforts.

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However, the efforts by the government to conserve the population of the tiger has borne fruit. Trafficking of Tiger has been effectively controlled, public has become more aware and poaching has been prevented. These efforts have led to increase in the number of the tigers in the country, making Project Tiger a very successful project.

Q.24) Discuss the criterion and benefits of getting recognized as a national party.

Recently, Aam Aadmi Party (AAP) has been recognised as a national party, while Trinamool Congress (TMC) and Nationalist Congress Party (NCP) have lost their status as national party. These statuses are given by Election Commission of India, based on technical criteria given in Election Symbols (Reservation and Allotment) Order, 1968.

Criteria of being recognised as a National Party:

- If a party has been recognised in four or more states.
- The party must have polled at least 6 per cent vote share in four or more states in the last Lok Sabha or Assembly elections and having at least 4 MPs.
- The party must have polled at least 2 per cent of the seats in the Lok Sabha, with its candidates having been elected from at least three states.

The benefits of being recognised as a National Party:

- Once the party gets the national party status, the election symbol of the party will remain unchanged across India. Hence, the uniformity of the symbol, provides a greater vision and recognition across the states.
- The party also gets free broadcast/telecast times on Akashvani and Doordarshan during the general election. They can reach the general masses through these channels, free of cost.
- National Party can have a maximum of 40 star campaigners, whose travel expenses will not be counted in the account of the candidates. Star campaigners are the celebrity campaigners who endorse the party and have more vote-fetching ability, but should not share the stage with any candidate.
- These parties need only one proposer to file nomination. For an independent candidate, 10 proposers are required to sign the nomination paper.
- These parties get two sets of electoral roll free of cost at the time of the revision of rolls. Their candidates get one copy free of cost during the general elections.
- They get the privilege of consultation with Election Commission in setting of election dates.
- Top slots on the voting machine usually stay reserved for the national parties.

However, if the parties fall short of the votes for two consecutive elections, then they may lose their status. In past, RJD lost its status as national party by failing to get 6% vote share, by a very small margin.

Q.25) What steps can the government take to prepare people for heat conditions? How has Heat Action Plan (HAP) been useful in these conditions?

Recently, in a government organised event held in Navi Mumbai, 12 people died of heatstroke due to inadequate provision for appropriate drinking water which led to dehydration. In the coming years, heat stroke is going to rise, especially for India, as per Global Climate Risk Index.

Steps that can be taken by the government to prepare people for heat conditions:

- 1) Effective preparation of Heat Action Plan (HAP), which is a policy document outlining preparatory, adaptive and responsive measures for government department to tackle the heat and its impacts. Delhi is yet to come out with a HAP, while HAP has proven to be effective in several regions across India.
- 2) Spreading awareness about climate literacy, so that climate-appropriate decisions are taken by individuals. Most importantly, the vulnerable section such as residents of

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urban slums, people with chronic health problems, and workers working in small, enclosed space.

- 3) Installation of local meteorology offices, so that timely heat alerts based on the local conditions are issued well in advance.
- 4) Specialised training for health care professionals to deal with heat stroke related issues. Strengthening of medical infrastructure for heat related conditions.
- 5) Installation of roofs made of cooling materials, such as coconut husks and paper waste, so that the buildings remain cold despite heat conditions.

National Disaster Management Authority (NDMA) gave guidelines to enable states to prepare HAP. HAP have been useful in dealing with the heat related conditions.

- 1) The early warning system established under HAP has been helpful for forecast and inter-agency coordination against heat wave. Telangana has an app to disseminate village level weather condition in real time.
- 2) Identification of hotspots in the cities has helped in developing coping mechanisms and emergency response to heat related conditions. Odisha has taken special initiative to outline such hotspots in Bhubaneswar.
- 3) Dissemination of public awareness through print media and electronic media has helped reduce exposure to heat and promote adaptive measures.
- 4) Collaboration with non-government and civil society organisations has helped improve sheds and shelter at public places such as market, bus stations. Water delivery has improved in public areas.
- 5) In long term, improving of forest coverage, green areas and shelter belts have helped reduce the ill impacts of heat waves.

However, there are still certain limitations in HAP, such as the definition of heat hazard does not consider humidity, exposure durations etc. Most of HAP are poor at identifying the vulnerable sections and the heat hotspots. Another issue relates to the funding of the HAP, which is facing serious funding constraint.

Heat is still not identified as a disaster, which is eligible for mitigation and relief under National and State disaster risk management funds. An expert committee should be constituted to review the decision, review the HAPs and share the best practices based on experiences of different states.

Q.26) The Media One judgment has underlined the institutional capacity of the court. Examine the statement.

Supreme Court (SC) has recently set aside the ban by Ministry of Information and Broadcasting on MediaOne channel, a Malayalam news channel critical of government policies. Supreme Court has delivered a landmark judgement preserving the right to freedom of speech for media.

The MediaOne case has highlighted the capacity of the Supreme Court to go against political forces reaffirming its institutional capacity. The judgment has also touched upon a few issues which are important for a democracy.

- 1) **Sealed Cover Jurisprudence:** a practise to accept affidavits by the government in form of sealed envelope, so that only the concerned judge reads the content. This practice goes against natural justice, where a party has a right to know the evidence presented against them. Supreme Court has taken a note of the habit to accept sealed cover by High court and has asked to reduce the practice.
- 2) **Government is not equal to nation:** SC has underlined that government is not equal to nation, hence criticism of the government policies is not criticism of the nation. Therefore, this cannot be a ground for citing national security.
- 3) **Admonishing the state against misuse of national security rhetoric:** SC has commented that allowing the state to raise the national security ground to curb rights without any checks can lead to dangerous consequences.

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The judgment has highlighted the resolve of the SC to protect the right of expression for the citizen and media. National Security forms part of the reasonable restrictions contained in Article 19(2). Yet, SC sought a deeper inspection of the issue and concluded that the government cannot raise national security without any substantial evidence.

However, the judgement falls short as it has not evolved a set of guidelines, to help determine which practices can be covered under national security, and hence be used to restrict the freedom of speech.

SC observed that claiming national security cannot be used to deprive court of judicial review powers. Therefore, a bold verdict has been given by SC to strengthen the fundamental rights in country, while reclaiming the eroding power and prestige of the judiciary.

Q.27) Discuss the significance and challenges of separate competition law for digital markets (SCLDM).

Standing Committee on Finance recommended a Digital Competition bill in late 2022 to ensure a fair, transparent and contestable digital ecosystem in India. Thereafter a committee was formed by the government in 2023 to examine the need for a separate competition law for digital market.

What is Separate Competition Law for Digital Markets (SCLDM)?

- 1) The existing Competition Act and Competition Commission of India (CCI) come into picture after the event has taken place, and monopolized the market. Proposed SCLDM aims to provide regulation before markets end up monopolized (ex-ante).
- 2) Significant entities like Alphabet (google), Amazon and Facebook (Whatsapp) have monopolised various sectors like app stores, e-commerce and instant messaging. SCLDM aims to allow new players to enter by reducing entry barriers.

Significance of the Proposed SCLDM :

- 1) It will regulate the unintended data collected by these companies either as a part of their operation or by-product of it. This data otherwise may be compromised, sold or misused due to absence of data protection act in the country. The proposed act will ensure consumer protection in India.
- 2) The high scale of return for significant companies (Google, Amazon etc) due to large user base provides an unfair advantage. This advantage restricts the entry of new players through abusive practices and hindering innovation. For example- Google Play Store ruling by CCI. The proposed act will address innovation and entry barriers as well.
- 3) The emerging digital challenges such as deep discounting and pricing, platform neutrality, search and ranking preferencing, advertising policies, market crowding and digital dominance, which leads to abuse of market, were hitherto unregulated. The proposed act will regulate these upcoming challenges in digital sector.
- 4) The proposed regulation will only cover big companies that have significant presence in the market. Thus, only the Systemically Important Digital Intermediaries will come under ex-ante law, while new players will not be covered under the law. This marks an exit from the sector agnostic approach of CCI and Competition Law.

However, there are certain challenges that may come with enactment of SCLDM:

- 1) With different regulations within same sector, distortions in choices made by consumer may arise, leading to market failure in future. Big players may take innovative route to bypass the regulations, leading to poorer protection for the consumers.
- 2) Digital markets are not much different from physical markets, and both have one foot in the other type of market. It will be very difficult to demarcate which market will SCLDM apply to.
- 3) With rapidly growing innovation, law making can never match the pace of technological advancements. Emerging areas like metaverse markets and Non

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Fungible Tokens (NFT) markets will need a different regulation, since they are fundamentally different from the current digital market.

- 4) Special regulation for only one part (online sector), while both online and physical market face the same challenges such as increasing returns to scale, will hamper the uniformity in regulatory environment.
- 5) Abuse of the dominance is the problem, which is only ex-post, and not ex-ante. Hence, creating an ex-ante law will suppress dominance, which may not be bad, and might be the result of efficiency and technology improvement, such as JIO telecom.

Therefore, before finalising a digital market law, effort to digitalise all the reporting, compliance and audit is important. Reporting will itself reduce the need for an ex-ante law, and the field will become more welcoming for new players that bring innovation into the sector.

Q.28) What Is Government eMarket Place? How far has it been able to transform the process of public procurement of goods?

Government eMarket Place (GeM) is a national procurement portal dedicated to efficiency, transparency and speed in procurement. The portal has facilitated procurement of Rs. 2 lakh crore in a single financial year 2022-23.

The GeM portal has been able to change the old procurement process and add value along with efficiency to the process of public procurement. The benefits have been the following:

- 1) The portal allows registration of new sellers without any human interface. The induced competition has allowed better price discovery and larger savings for the government. Saved money has been spent in welfare programs without compromising on the fiscal health.
- 2) The transparency in government procurements has made an opaque, time consuming, cumbersome procurement process into efficient, honest and accessible process.
- 3) Payment to the vendor, which got delayed earlier, has become paperless and automated now. Hence, the vendor payments are timely, helping the vendors grow.
- 4) 56% of the order value processed through the portal has been delivered through Micro, Small and Medium sized Enterprises (MSME). The portal has allowed MSME and small business access to the highly sought after government orders.
- 5) The portal is a shining example of use of technology to ease governance. The portal uses technology and live tracking to book orders, deliver orders timely and release payments to the vendors.
- 6) The participation of government agency is diversified, and Central/State governments, central/state PSUs have been procuring from GeM.
- 7) The portal allows the online marketplace to aggregate demands from multiple entities for similar products, and build in the preference provided by State Governments to small enterprises. This allows discovery, variety and neutrality in placing orders for government procurement.

However, there has been certain drawbacks in the implementation of GeM:

- 1) Only 10% of the government procurement value (about Rs. 20 Lakh Crore) is processed by GeM portal. A lot of progress is remaining.
- 2) States from south have not participated well, since they have their own portal and these states (Tamil Nadu and Karnataka) feel that opening door to GeM would be detrimental to the sellers in the state.
- 3) Language has been a big barrier in inter-state trade and large distance procurement.

More than 2.36 crore flags worth over Rs 60 Crore was procured by different government departments on GeM portal from over 4100 sellers in Har Ghar Tiranga campaign. Within a short span of time, GeM has reached fourth rank globally in terms of value of transaction. Many other milestones are yet to come in the future.

Q.29) India is set to become the most populous country in the world very soon. In the light of the statement, what steps can the government take to make India a human capital powerhouse?

As per UNFPA estimates, India has surpassed China to become the most populous country of the world. With the youth bulge and low dependency ratio, India will have the largest size of working population soon. Government needs to make sure that this opportunity is well utilised to reap the demographic dividend.

Human Capital is the productive capacity generated by an individual due to better education and health. Human Capital Index 2020 by World Bank ranked India at 116 out of 180 countries, with an expectation that an average worker in India can only reach about half her full potential during her lifetime. India's Human Capital formation has worsened since then, due to the COVID-19 pandemic.

Investment in human capital is needed for technological growth, improving productivity, creating social innovations, etc so that the country can develop at fast pace. Steps needed to make India a human capital powerhouse are:

- 1) **Health:** 47% of Indians are below the age of 25 years. India needs to work on improving the quality of primary healthcare, so that the young adolescents have access to healthcare, and do not develop life-threatening diseases, which reduces their human capital. Ayushman Bharat Yojna is a step in that direction.
- 2) **Nutrition:** High proportion of malnutrition persists in India (close to 30% as per NFHS-5). Various government initiatives like Mission Poshan 2.0, Mid-Day Meal Scheme and Anaemia Mukta Bharat Abhiyan are steps in this direction.
- 3) **Education:** Quality of education directly influences the human capital formation. Only about 74% Indians are literate. New Education Policy, Samagra Siksha Abhiyan, National Digital Literacy Mission and Eklavya Model Residential schools for Tribals are important steps in this direction.
- 4) **Skill Development:** India Skills Report 2022 suggests that only 48.7% of India's educated youth are employable. Participation of private sector in skilling sector, will ensure that skill development is demand driven and addresses the needs of the market. Maharashtra Govt Skill University, aligned with NEP will be a major step in developing job ready human capital.
- 5) **Entrepreneurship:** India is booming into the startup sector, ranking third in the world now. Focus on startups will lead to job creation in the economy. These startups contribute to youth development significantly.
- 6) **Financial Inclusion:** Combined with improved purchasing power, financial inclusion will make India a formal market. Such formal inclusion will ease access to credit and provide a social safety net, leading to better human capital.
- 7) **Gender Inclusion:** Gender gaps in the early years are closing, but inequalities persist in adulthood. Female participation in politics, workforce and higher management should be nurtured.

However, there are challenges that needs to be addressed:

- 1) Baby boom in states like UP and Bihar, coupled with ageing population in the South Indian States, will be a challenge for policy makers. Ability to handle demography effectively is challenging at central level.
- 2) With the increasing older population (about 10% of the population soon), the significant challenges will include social security, access to geriatric healthcare, and post-retirement employment. UN study shows that ageing population has a higher proportion of poverty, with them being dependent on others for sustenance. Present government schemes lack meaningful impact, being of tokenistic financial support.
- 3) By 2050 more people will live in urban areas than in villages. The cities lack adequate basic amenities such as housing, water, transportation and sanitation. Urban planning to support the high population becomes challenging when the cities are already overpopulated.

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- 4) India spends just 4% of its GDP as public expenditure on human capital. This small budget can be better utilised if there is decentralisation, so that principle of subsidiarity is followed.

Therefore, policies with gender equality and rights, parental leave programs, child tax credits and workforce gender equality policies should be introduced so that the population does not become gendered and continues to support a balanced demographic dividend for years to come.

Q.30) LIGO-India project will add to India's astronomical capabilities and will enable it to offer inputs and feedback not only for itself but for the rest of the world as well. Discuss.

The LIGO-India project will be in Maharashtra and will help Indian Scientists measure gravitational waves in space which are created by various space events such as mergers of black holes. It will be the fifth node on the international network of gravitational wave observatories.

- 1) Laser Interferometer Gravitational-Wave Observatory (LIGO) is cutting-edge research to identify gravitational waves generated by cosmic events which pass through the earth.
- 2) These waves when passing through earth tend to affect the shape of earth, and a precise measurement of these changes allows perceiving a gravitational wave. LIGO has exceptionally high accuracy to measure these very tiny changes.
- 3) These gravitational waves prove the special theory of relativity by Einstein. Which explains gravity and space-time, and answers about the origin of the gravity forces.

How LIGO adds to Indian astronomical capabilities?

- 1) Collaboration in the LIGO project demonstrates India's eagerness to contribute to the global knowledge body in Astronomy.
 - Previous projects like Chandrayaan 2, Aditya L1 Solar Telescope, AstroSat, Square Kilometre Array Radio Telescope, Indian Astronomical Observatory at Hanle and Thirty Metre Telescope (TMT) adds to the reputation of India.
- 2) The standard of innovative science at LIGO on Indian soil will help improve the standards of astronomy in India through exposure for researchers from IITs and IISERs.
- 3) Such projects also inculcate invaluable elements of work ethics in the Indian Astronomy and Astrophysics community. Large-scale participation and proactive planning have enabled Indian researchers to get entrenched in an emerging frontier before it matures.
- 4) The expertise gained with LIGO lasers will help in the Quantum Technology for India, which will have various applications in future.
- 5) Indian manufacturing reputation will improve if India is able to manufacture and commission this complex equipment domestically. This reputation will become a source of commercial contracts and partnerships in future.

The experience with LIGO will be invaluable for India, as well as other countries. It will demonstrate the possibilities when the education system and geography meet to unravel the frontiers of basic science with skilled experts. As a result, the whole world can use the knowledge for advancement of the humanity.

Healthy expenditure on Science and Technology will be able to empower, enrich the nation, and help achieve the status of world leader, in various dimensions. Indian Neutrino Observatory (INO), another ambitious scientific project, has been delayed due to environmental concerns. We need to ensure that LIGO does not meet the same fate.

Q.31) Explain the concept of the “basic structure” doctrine established in the Kesavananda Bharati case. Discuss its implications on the Indian Parliament’s power to amend the Constitution and the protection of fundamental rights.

The Chief Justice of India, D. Y. Chandrachud compared the ‘basic structure’ of the Constitution to the North Star, which guides the path for everyone. The basic structure doctrine emerged in Kesavananda Bharati Case 1973 and was adopted by countries such as Pakistan, Bangladesh, and Malaysia to guide them too.

Basic Structure Doctrine refers to the legal doctrine which means that:

- 1) A sovereign state and constitution have a peculiar nature, and that cannot be amended by the legislature.
- 2) This doctrine limits the power of the legislature to make drastic amendments, which may affect the core values enshrined in the constitution.

This doctrine has proven to be essential in protecting constitutional values and the fundamental rights of citizens.

- 1) In the Minerva Mills case, the 42nd amendment which declared the unlimited power of legislature to amend and barred courts from questioning such amendments, was struck down, claiming that Judicial review is a basic structure and cannot be taken away.
- 2) Basic Structure Doctrine has proven to be that bedrock of democracy, which has prevented the legislature from becoming totalitarian.
- 3) By restraining the degradation of Fundamental Rights, it has ensured that essential fundamental rights are available to citizens at all times. E.g.- Freedom Of Speech for media in MediaOne case.
- 4) In the NJAC case, the supreme court ruled that the opinion of the Chief Justice of India in judicial appointments was prime and formed a part of the Basic Structure. Thus, judicial independence has been upheld because of the doctrine.
- 5) Various aspects of Basic Structure such as republican and democratic form of government, secular and federal character of constitution, welfare state and unity and integrity of the nation have helped consolidate the character of Indian democracy in the world.

However, some experts have criticized it, terming it as “tyranny of the unelected” since it gives the judiciary power to impose over a democratically elected government. The comments of the Vice President against the doctrine have opened the box of worms leading to debate over the importance of the doctrine, 50 years after it was pronounced.

Q.32) Examine the role of the National Education Policy (NEP) 2020 in shaping the rationalisation of textbooks and the curriculum in Indian schools. How does the policy aim to improve the quality and flexibility of school education?

National Education Policy (NEP) 2020 has provided curricular guidelines in the form of National Curriculum Framework (NCF), which guides the updation and rationalisation of the textbooks and curriculum in the Indian schools.

Until now, the NCF of 2005 was being followed. Under the NEP 2020, new NCF is being developed. The Guidelines provided under NCF to rationalise the textbooks and curriculum includes:

- 1) Remove the overlapping of content amongst different subjects in the same class.
- 2) Reduce similar content in the lower or higher class in the same subject.
- 3) Ease the difficulty levels.
- 4) Content that is easily accessible to children and does not require much intervention from the teachers — it can be learned through self-learning or peer learning be done away with.

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5) Rationalise the content that is not relevant in the present context.

The NCF aims to improve the quality and flexibility of school education by the following ways:

- 1) Most of the redesigning of the curriculum is to keep 'Indian Roots' as focus in the minds of the students.
- 2) Once the new books and curriculum are released, the syllabus will also be aligned to PARAKH, the new assessment platform that the government is in the process of launching to ensure better study outcomes.
- 3) Ten volumes of instructions on various areas such as Arts, Language, Maths, Sciences, Sports, Vocational Education and School Culture will be released, so that the quality of education can be holistically improved across India.
- 4) The present practice of 11th and 12th in one of three streams (namely science, arts and commerce) will be changed to a secondary stage 9th to 12th, which will enable students to choose discipline (e.g., History, Physics, Language), from at least three curricular areas. Thus, the flexibility at terminal stage of school will allow different students to pursue different combination of subjects.
- 5) Vocational Education, which will be aligned to National Skills Qualifications Framework (NSQF) will add to the flexibility in school education.
- 6) It will also aim to introduce Sports/Yoga/ games etc. to ensure holistic development of the students in school.
- 7) Gender Equality and compassion are essential things that have been added to the curriculum.

However, the wide range of choices available to students on paper, might not translate to reality, as the low-cost-private-institutions that are schools might not be able to offer all the choices to the students. As a result, the planning and flexibility of NEP and NCF might remain a dead letter, unless efforts are taken to shore up the capacity of the schools on the ground.

Q.33) Examine the question of justiciability of the Governor's assent to Bills in the Indian context. What insights can be drawn from relevant Supreme Court judgments?

Recently the Tamil Nadu Government passed a resolution urging the President of India to fix a timeline for assent to be given to Bills passed by the assembly. In past, several bills have been pending due to the inactivity by the governor's office, for example the NEET bill.

Governor's assent to bills is governed by Article 200, which gives governor the power to either grant assent to a bill, reject it or reserve it for the president's consideration in certain cases. However, the present trend to delay action on controversial bills indefinitely by governor, has led to a crisis.

The questions that arise related to Governor's office are:

- 1) The governor is an appointee of centre. Can she delay the bill indefinitely passed by representatives of the people of state, without providing any explanation?
- 2) Can the Supreme Court be asked to pronounce judgement on the action of the Governor?

The past Supreme Court Judgements can help in deciding the course of action:

- 1) The Supreme Court in the **Nabam Rebia judgment (2016)** ruled that the exercise of the **Governor's discretion under Article 163 is limited**, and his choice of action should not be arbitrary or fanciful.
- 2) In another judgement, **Shamsher Singh vs State of Punjab (1974)**, the Supreme Court said that President and Governor shall "exercise their formal constitutional powers only upon and in accordance with the advice of their Ministers, except in a few well-known exceptional situations".
- 3) In a recent case, Telangana Government was seeking directions to Governor Tamilisai Soundararajan to clear ten bills passed by the legislative assembly. SC mandated that Governors should not delay over Bills sent to them for assent after they had been

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passed by Legislative Assemblies. Bills should be returned "as soon as possible" and governors should not sit over them. The expression "as soon as possible" in this article has significant constitutional intent and that constitutional authorities should keep this in mind.

Constitutional experts such as PDT Achary, former Lok Sabha secretary general, highlight that governors do not have the right to keep bills pending. If the governors exercise a pocket veto, it certainly goes against the federal structure.

Q.34) Assess the increasing interest in and development of central bank digital currencies (CBDCs) as an alternative to the US dollar in global trade. What challenges do CBDCs present for the US dollar's dominance?

Central Bank Digital Currency (CBDC) are digital form of paper currency that are legal tenders issued and backed by the central banks. They are unlike the cryptocurrency; however, they are based on the blockchain technology.

The increasing interest of the central banks with CBDC is reflected in the efforts put by about 110 countries to explore CBDC at one level or another. China (e-CNY) and Bahamas (Sand Dollar) have already started transacting with CBDC.

The primacy of the U.S. dollar grants the U.S. government and economy special privileges, including

- Ability to print money with relative freedom
- Issue debt at low interest rates reducing the cost of capital both for the government and U.S. firms
- Maintain long-term and persistent trade surpluses with other economies
- Monitor global transactions—and therefore apply economic sanctions to countries and individuals without much effort or harm to self

However, unless the U.S. policymakers take decisive steps to adapt to an increasingly digital financial system, the United States risks losing the economic and geopolitical advantages afforded to it by the dollar's dominance of the global financial system. Moreover, the weaponisation of Dollar has reduced the interest that countries have in using dollar as the means of trade.

Challenges presented to US Dollar dominance by CBDC are:

- 1) CBDC can be used as an effective medium for international payments in bilateral trade, replacing the advantage that dollar enjoys.
- 2) CBDC can remove the need for transaction fee which is required to be paid with every transaction done in dollar and forms a hefty sum over time.
- 3) CBDC can promote financial inclusion and make more people involved in international trade, because of ease of currency exchange.
- 4) The effectiveness of economic sanctions through weaponization of Dollar, which USA used to influence the political and economic governance of other countries, will reduce.

However, the challenges have not uprooted the dollar system yet. There are challenges to the mass adoption of digital currencies. To play an effective role as stores of value and medium of exchanges, currencies need to have the trust of their holders and users. Volatility, cyber theft, and the usage of private digital currencies for illegal activities currently limit trust and adoption. However, simplicity of use, especially like the interoperable BharatQR will speed up the adoption of the digital currency.

Q.35) A clear understanding of technology is as important an issue as those of privacy, inclusivity, fairness, and ethics. To be a globally relevant player, India needs to embrace the concept of this new world of the brain economy. Discuss.

Brain Economy refers to the economy that is primarily dependent on skill instead of body and manual labour to operate. With the oncoming onslaught of technology, brain economy will become the future. To stay globally relevant, become a world leader, grow the size of economy and attract more investment, India needs to take brain economy more seriously.

Technology is our friend, and with the unprecedented pace of changes in technology (Generative Artificial intelligence and resulting changes in job market) is threatening the job market. However, to fight the job shift due to technology, one needs to understand the technology.

- 1) Technology will not replace humans but will change the profile of the jobs needed. The invention of airplanes created additional jobs of pilots and air hostesses.
- 2) To survive the changes in technology led job market, we need to be more understanding of important issues like privacy, inclusivity, fairness and ethics. These are the components that are not currently on offer by Artificial intelligence.
- 3) As a human, controlling the AI that will perform menial and repetitive tasks, humans need to understand and commit to qualities such as agency, commitment, empathy and perseverance. These will become the valuable traits in brain economy.

Steps needed by India to embrace the brain economy:

- 1) As a hub for software products, which might be replaced by code generating ChatGPT-3 etc., India needs to upskill the youth to data analysis and data scientists.
- 2) Training an AI model is cost expensive and requires expertise. This can be the next expertise that can be mastered by the software sector of India, by leveraging the present capabilities.
- 3) The use of AI is likely to generate even more amount of data. Big data engineering along with data storage with privacy, inclusiveness, fairness and ethics is needed in future.

Therefore, India needs to embrace the brain economy and embrace the changes with open arms, skill the youth appropriately, and bring policy level changes to ease the adoption of technology. Combined with the demographic dividend, these steps will catapult India to the status of global leader in economy.

Q.36) India's engagement with the SCO was premised on Russian primacy in the region and Moscow's support of India's regional interests. That may be changing. Elaborate.

Shanghai Cooperation Organisation (SCO) is a group consisting of 8 Asian countries, formed in 2001 to work on regional security, terrorism and reduction of border troops. It has helped the Central Asian countries resolve some of its boundary disputes. Iran and Belarus are on the path of becoming full members of SCO soon.

India's full membership into SCO was premised on the prime position of Russia, a key ally of India, in SCO. India trusted Russia to be able to help advance India's 'Connect Central Asia Policy'. In past, India has used the platform sidelines to discuss differences with other member nations. For example:

- 1) Indian PM Modi held a bilateral meeting with former Pakistani Prime Minister in 2015 on SCO meeting sidelines.
- 2) Foreign Minister S. Jaishanker negotiated a 5-point agreement with his Chinese counterpart on the side-lines of the 2020 Moscow conference.

However, the geopolitics of SCO has undergone changes, due to rise of China in regional geopolitics and in SCO. This has diminished the position of Russia within SCO. Consequently, SCO is also losing its shine. For example:

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- 1) The tensions between countries in SCO are deepening. There are serious conflicts between India and China, Kyrgyzstan and Tajikistan.
- 2) SCO talks about regional security, but it took a direct deal between USA and Taliban to reshape the Afghan crisis. This reflects the inability to directly influence the regional security.

However, with the rising global size and stature of China, and deepening ties of Russia with China, the advantage that SCO held for India is diminishing. Russia needs China's backing in the Ukraine war. Moreover, the boundary problems between Russia and China have been resolved. The closeness between Beijing and Moscow has made India unsure.

Therefore, India needs to be able to protect its own interests amidst the rapidly changing regional power. India should be able to manage its foreign policy by balancing SCO with QUAD membership, to hedge the risks and diversify the foreign policy.

The opportunity of chairing SCO in 2023, gives India the power to shape the regional dynamics. If India uses this opportunity to improve ties with Pakistan, it will dent the Russia-China-Pakistan axis, thus improving its position in SCO and Central Asia again.

Q.37) Discuss the issue of regulating emerging technologies, citing the example of UK's Red Flag Act.

Red Flag Act of UK was a historic act, passed in 1865 by the British Parliament that required all the self-propelled vehicles on public roads to be preceded by a man on foot waving a flag to warn pedestrians and horse-drawn vehicles of their approach. It was a law that hindered the widespread adoption of the new technology.

The Red Flag Act is seen as a symbol of resistance to progress by many supporters of the new technology. The Act limited the speed of the automobile, making the invention impractical and expensive. Automobiles were designed to be faster than horse drawn carriage, and carry more weight. However, the act defeated the purpose of the invention.

Similarly, India has also enacted some acts that regulate the emerging technology:

- 1) Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 which was introduced by the government to regulate the Social Media can have the effect of stifling new innovations in privacy and communication.
- 2) Indian Patent Laws also are very restrictive, and create barriers to innovation in certain sectors. There are very few patents, long waiting times and very difficult renewal for patents. This can discourage companies from investing in research and development in India.

However, regulating emerging technologies that can disrupt any sector is very challenging. Few challenges associated with regulating emerging technologies are:

- 1) **Unpredictability:** The unpredictable nature of business models that rely on emerging technologies, which makes it difficult to regulate them. For example, ChatGPT relies on data, while Twitter relies on subscription fee.
- 2) **Pace of Development:** The rapid pace of technological change can make it difficult for regulators to keep up with the latest developments. The companies that operate in such emerging technologies may influence the market negatively by exploiting the loopholes.
- 3) **Policy Support:** Regulators need to create an enabling environment for the effective roll-out of emerging technologies, which involves developing governance institutions, policies, and laws that can keep pace with technological change. India launched Emerging Technologies Initiative for this.
- 4) **Ethical Concerns:** Some emerging technologies raise ethical concerns about how they are developed and used. For example, artificial intelligence raises questions about bias and discrimination, while gene editing raises concerns about genetic engineering and

eugenics. Regulating such ethical questions requires a wide consensus building and agile governance to prevent side effects.

Regulations related to emerging technology should strive to maintain a balance between public safety and predictability, while allowing innovation. Job losses and change of the established norms (for example due to internet banking) should not stop the government from accepting the innovations.

Integrating such emerging technologies into governance helps speedup adoption. For example- Big Data in CoWin Platform for vaccination, Blockchain in Land Records Modernisation, etc. Thus, India should also accept the emerging technologies such as – autonomous vehicles, precision medicine and gene editing.

Q.38) Critically analyze the key provisions of the Civil Liability for Nuclear Damage Act, 2010 in addressing the concerns related to compensation and liability in the event of a nuclear accident in India.

Civil Liability for Nuclear Damage Act, 2010 was enacted to fix the accountability to ensure that India has a comprehensive legal framework to deal with the consequences of nuclear incidents, and to provide compensation to victims in a fair and efficient manner.

The Key Provisions of the Civil Liability for Nuclear Damage Act, 2010 are:

- 1) **Liability of the operator:** The Act specifies that the operator of a nuclear installation will be liable for any nuclear damage that may occur due to a nuclear incident, and the liability will be channelled exclusively to the operator.
- 2) **Compensation for nuclear damage:** The Act provides for compensation to be paid to victims of a nuclear incident, which includes damage to property, loss of life or personal injury.
- 3) **Limitation of liability:** The Act specifies a maximum amount of liability that can be claimed by victims of a nuclear incident. The liability of the operator is limited to Rs. 1,500 crores for each nuclear incident.
- 4) **Right to recourse:** The Act also provides the operator of a nuclear installation the right to recourse against a supplier of nuclear material, equipment or services in case of a nuclear incident caused by a defect in the supplier's material, equipment or services.

The Advantage of this Act is that:

- 1) **Compensation for the Victims:** Unlike the Bhopal Gas Tragedy, where the victims had to wait very long for compensation, this act establishes mechanism to compensate quickly and adequately.
- 2) **Nuclear Safety:** The act has strong emphasis on the standard of nuclear safety. This ensures that the installations are operated safely and risk of a nuclear incident is minimised.
- 3) **International Cooperation:** The act has provisions for international cooperation, so that the global best practices, safety standards and expertise can be shared with India.

However, the provisions of the act have been criticised for these controversial clauses:

- 1) India's civil nuclear liability law is unique in that it includes a clause on supplier liability, which foreign and domestic suppliers are wary of due to potentially unlimited liability under the Act. The Act has spooked nuclear suppliers due to these two clauses, 46 and 17(b).
- 2) The liability cap on the operator may be inadequate to compensate victims in the event of a major nuclear disaster.
- 3) The Act has shoddy clauses, of which some are related to the definition of nuclear damage, the liability of the operator, and the right of recourse.

Germany has been phasing out the nuclear reactors, to make their country safer and avoid high-risk radioactive waste. India can also ensure its energy independence by focussing on

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renewables instead of Nuclear power, the risks of which are unmanageable in case of an accident.

Q.39) What are the reasons behind the accelerated sea-level rise? Highlight the multidimensional consequences of rising sea levels.

Recently, the report released by World Meteorological Organisation (WMO) has found that the rate of sea level rise has doubled in 2013-22 compared to 1993-2002 at presently 4.62mm/year. This accelerated sea level rise presents potentially disastrous consequences for the weather, agriculture, the extant groundwater crisis, and social disparities.

The reasons behind the accelerated sea-level rise are following:

- 1) Ocean Warming: increase in temperature of the Earth's oceans due to the absorption of heat from greenhouse gases in the atmosphere, primarily from fossil fuel consumption.
- 2) Loss of glaciers and ice sheets: The melting of these bodies due to global warming. Iceberg A-81 broke off from the Brunt Ice Shelf recently.
- 3) Changes in land water storage: Human Activities such as pumping of ancient groundwater from deep aquifers, drive more water into the ocean and cause additional sea-level rise.

The long term consequences of rising sea levels could be:

- 1) Social: Rising sea levels can force people who live in low-lying coastal areas to relocate, which can result in social, economic, cultural disruptions and widened social gaps.
- 2) Environmental: It will cause changes in the land cover in area beside the sea due to coastal flooding. Rising sea will swallow more land due to erosion, which will lead to land scarcity for the communities living in the coastal area.
- 3) Climate Change: Rising sea levels can lead to more frequent and intense storms, hurricanes, and other extreme weather events, which can cause additional damage and exacerbate the impacts of sea level rise. West Bengal and Odisha are already highly vulnerable to such cyclones.
- 4) National Security: Sea level rise can also pose national security risks, such as increased vulnerability of military bases and coastal infrastructure to flooding and erosion.
- 5) Ecological: The coastal ecosystem and habitat such as mangroves, salt marshes and coral reefs will be impacted. These natural ecosystem provide important ecosystem services, such as coastal protection, habitat for marine life, and carbon storage.
- 6) Agricultural: As sea levels rise, saltwater can intrude into freshwater sources, such as rivers and aquifers, and contaminate drinking water supplies and agricultural lands. This will aggravate the present water crisis in urban coastal cities like Chennai.

In short-term, adaptation measures like building sea walls, elevating homes and relocating critical infrastructure away will help reduce the impact. However, in long term the western countries must come together to reduce emissions which will help slow down the pace of sea level rise. The international community has an important role to play in this effort, and cooperation and collaboration will be crucial in achieving meaningful progress.

Q.40) Highlight the present challenges faced by Indian Railway considering the National Rail Plan 2030.

The National Rail Plan 2030 is a long-term plan created by Indian Railways to create a "future ready" railway system in India by 2030. The plan aims to increase the modal share of railways in freight to 45% by formulating strategies based on operational capacities and commercial policy initiatives.

The key objectives of the National Rail Plan 2030 are:

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- 1) Reduce transit time of freight substantially by increasing the average speed of freight trains to 50 kmph.
- 2) Create capacity ahead of demand, which in turn would cater to growth in demand right up to 2050.
- 3) Reduce the overall cost of rail transportation by nearly 30% and pass on the benefits to the customers.
- 4) Improve last-mile connectivity by introducing feeder services, providing better connectivity to airports, and developing multi-modal transportation hubs.
- 5) Provide better passenger amenities like modern coaches, improved catering services, Wi-Fi facilities, and better station infrastructure.
- 6) Promote sustainable transportation by reducing the carbon footprint of Indian Railways, promoting the use of renewable energy, and adopting green technologies.

However, these goals are not east to achieve. Challenges faced by the Indian Railways are:

- 1) Funding is one of the biggest challenges in implementation of the Plan.
- 2) Punctuality has been the single most important operational index and the headache for the passenger trains.
- 3) Land Acquisition for the expansion of the railway tracks are most often accompanied by protests from the affected communities.
- 4) Operational challenges such as congestion on the network, aging infrastructure, and outdated technology reduces the efficiency of the operations.
- 5) Safety challenges such as accidents due to human error, unmanned level crossings, and inadequate safety infrastructure.

Railway is an important public good, which is being modernised to reflect the 'New India'. However, the absence of a separate budget seems to have pushed the performance of railways to the background. A separate annual report that contains internal performance metrics should bring railway and its needs back to the foreground again so that the challenges faced by Railway can be resolved.