

Mains Marathon Compilation

February, 2020

General Studies 1

- Q.1) Discuss how art and literature influenced India's freedom struggle?
- Q.2) What are the contributions of Raja Ravi Varma to Indian art? Elaborate.
- Q.3) How far the developments in science and technology in the post-Independence period put India on the path of modernity?
- Q.4) What do you understand by the term 'anthropometric failures'? Discuss why despite various efforts, India continues to suffer from some form of anthropometric failures.
- Q.5) Critically examine the nature and scope of environmental movements in independent India.
- Q.6) What is secularism? Discuss various features of Indian concept of secularism.
- Q.7) Examine the role of Bismarck in state building in Germany.
- Q.8) Discuss various opportunities and challenges of demographic dividend in India.

General Studies 2

- Q.1) Freedom of expression enshrined under Article 19 (1) of the Constitution is not an absolute right; it comes with safeguards outlined under Article 19 (2). What are these safeguards? Discuss their need and significance.
- Q.2) Brexit provides an opportunity for both Britain and India to work for common interests and resolving various issues. Comment.
- Q.3) What are the major legal initiatives by India since Independence addressing discrimination against Scheduled Tribes (STs)?
- Q.4) Did the Government of India Act, 1935 lay down a federal constitution? Discuss.
- Q.5) Indian Ocean Region (IOR) is important for Indian security. In light of this, discuss India's policy of 'Security and Growth for All in the Region' (SAGAR) for IOR islands.
- Q.6) What is cooperative federalism? Discuss various roadblocks to cooperative federalism in India. How can it be strengthened in India?
- Q.7) Discuss various reasons for shortage of doctors per capita in India especially in rural areas. Discuss its impact on healthcare delivery in India.
- Q.8) "Traditional bureaucratic structure and culture have hampered the process of socio-economic development in India." Comment.
- Q.9) Indigenising defence capabilities can help India both economically and strategically. Examine.
- Q.10) Discuss the role and mandate of the International Maritime Organization. Discuss its strategic importance for Indian maritime interests.
- Q.11) In light of various controversies, critically examine the role of speaker in Parliamentary Democracy.
- Q.12) What is Darknet? Discuss its potential dangers and urgent need for a data protection law.
- Q.13) What is Red Tapism? Discuss its consequences and suggest some measures to reduce it.
- Q.14) How deeper cooperation between the United States and India in trade can help India achieve \$5 trillion economic status?
- Q.15) Critically examine salient features of Medical Termination of Pregnancy (Amendment) Bill, 2020.
- Q.16) Discuss India's policy on refugees. How do you think India should react to the Rohingya crisis?
- Q.17) What is a quasi-judicial body? Explain with the help of concrete examples.
- Q.18) Discuss various challenges in the implementation of Uniform Civil Code in India.

- Q.19) The traditional Indian systems of medicine like Ayurveda, Homeopathy and Unani can provide for a sustainable and more affordable healthcare system. Elaborate.
- Q.20) Hunger and Poverty are the biggest challenges for good governance in India still today. Evaluate how far Indian governments have progressed in dealing with these humongous problems. Suggest measures for improvement.
- Q.21) Discuss various reasons for the high incidence of domestic violence in India. Suggest some measures to prevent it.
- Q.22) Despite the law in place to prevent manual scavenging, it still persists in India. Discuss various reasons for it.
- Q.23) Discuss the need and significance of Pesticides Management Bill, 2020.
- Q.24) Involving women in the economy is not a social cause, rather it is a source of efficiency gains and economic growth. Comment.
- Q.25) It is said that India has been a 'hot zone' for the emergence of new zoonotic (animal-derived) pathogens for over a decade. In light of this, discuss the need of strengthening healthcare infrastructure to handle any risk of epidemics in India.
- Q.26) Critically examine the role of media as a watchdog in a democracy.
- Q.27) Despite constitutional mandate the inter-state council has not come of age. Discuss.
- Q.28) Discuss various threats and challenges to cyber-security in India. What initiatives are being taken by the government to enhance cyber-security in India?
- Q.29) Critically examine the impact of tagging of India as a developed nation by United States Trade Representative (USTR).
- Q.30) Discuss the shift of India's foreign policy towards Pakistan in the light of recent attacks.
- Q.31) What are issues related to urban local bodies in India? Suggest measures to strengthen urban local bodies in India.
- Q.32) What are the salient features of the Assisted Reproductive Technology Regulation Bill, 2020? Discuss its significance.
- Q.33) Discuss various reasons for prevalence of corruption in implementation of welfare programmes. Suggest some measures to reduce it.
- Q.34) Discuss various features of India's Neighbourhood First' policy.
- Q.35) Corporate social responsibility makes companies more profitable and sustainable. Analyse.
- Q.36) Analyse the role and effectiveness of FATF (Financial Action Task Force) in combating the financing of terrorism.
- Q.37) Discuss the role of National Commission for Scheduled Castes to curb violence against Dalits.
- Q.38) An independent and integrated judiciary is the basic pillar of parliamentary democracy. Comment.
- Q.39) Comment on the relevance of Directive Principles of State Policy in an era of liberalisation and globalisation.
- Q.40) None of the above (NOTA) system although enables voters 'right not to vote' but is toothless in spirit. Comment.
- Q.41) What is the difference between the fundamental duties and legal duties? Why are fundamental duties as important as legal duties?
- Q.42) The power sharing under the sixth Schedule of the Indian Constitution which was expected to be the panacea of the ethno-nationalist identity issues in Northeastern States, have failed to do so. Examine.
- Q.43) There are glaring deficiencies in drug regulation that need urgent addressing. Comment.

Q.44) Critically analyse whether the Aadhaar-based biometric authentication has been able to reduce PDS leakages or not.

General Studies 3

Q.1) Mindless unsustainable sand mining has become a major environmental problem. In light of this discussion, salient features of 'Enforcement and Monitoring Guidelines for Sand Mining 2020' released by the Ministry of Environment, Forests and Climate Change.

Q.2) Despite several measures to reduce vulnerability of climate-induced disasters, the farm sector and farmers continue to suffer losses. Discuss various reasons for this and suggest some measures.

Q.3) What is ISRO's Young Scientist Programme 2020? Discuss its need and significance.

Q.4) What are various bottlenecks to infrastructure creation in India? Discuss the significance of the National Infrastructure Pipeline (NIP) for infrastructure creation.

Q.5) What is public-private partnership (PPP)? Discuss various advantages and issues related to public-private partnership (PPP) in India.

Q.6) Describe the salient features of Indian Government's Mission on Nanoscience and Technology and the scope of its application in the development process of the country.

Q.7) Efficient and sustainable treatment of wastewater can provide enormous economic returns and other environmental benefits. Comment.

Q.8) Increased investment in agriculture research is an absolute need of the hour. Examine.

Q.9) What is organic farming? Explain why the use of organic farming should be encouraged in India.

Q.10) Promoting and strengthening the Micro, Small and Medium Enterprises (MSME) sector can help in achieving inclusive growth. Comment.

Q.11) What do you understand by 'formalisation of economy'? Discuss various merits and demerits of formalisation.

Q.12) 'E-commerce has tremendous potential to benefit farmers, small-scale industries and indigenous communities'. Comment.

Q.13) What is India's genome mapping project? Discuss its significance and potential benefits.

Q.14) What is Agricultural Protection Zoning? Discuss its need and importance.

Q.15) Would you advocate that the income of rich farmers should be taxed in India? Give reasons.

Q.16) What is 'National Mission on Transformative Mobility and Battery Storage'? Discuss its importance.

Q.17) What are various reasons for the gender gap in STEM (science, technology, engineering and mathematics)-related fields? Suggest some measures to improve women participation in these fields.

Q.18) With growing energy needs should India keep on extending its nuclear energy programme? Discuss the facts and fears associated with nuclear energy.

Q.19) What is the 'Nordic Economic Model'? Do you think Nordic Economic Model can be a way forward for a sustainable future?

Q.20) Discuss five key global risks as mentioned in recent, The 'Future of Earth, 2020' report.

Q.21) Explain, what reverse osmosis (RO) systems are and how do they work? Why does the Environment Ministry want to regulate RO-based water filtration systems?

- Q.22) What are the major Initiatives taken by the government for enhancing productivity of agriculture and efficiency of agricultural markets? Suggest some measures to improve agricultural productivity and efficiency of agricultural markets.
- Q.23) Examine the progress made so far by India, in achieving Sustainable Development Goal of reducing infant mortality.
- Q.24) The realisation of the objective of doubling farmers' income necessitates addressal of some of the basic challenges of agriculture and allied sector. Discuss these challenges and suggest measures to overcome them.
- Q.25) Given the fact that the livestock sector has grown significantly over the last five years, it assumes an important role in income, employment and nutritional security. Comment.
- Q.26) There is potential for private care providers and start-ups to be partners in improving India's healthcare system. Comment.
- Q.27) Describe briefly what stem cell therapy is and what advantages it has over other treatments?
- Q.28) What is Integrated Nutrient Management (INM)? Discuss various advantages and constraints in the Adoption of the INM System.
- Q.29) Government intervention, sometimes though well intended, often ends up undermining the ability of the markets and leads to outcomes opposite to those intended. Illustrate.
- Q.30) Why are land reforms still not complete in India? What are obstacles in its way? Elaborate.
- Q.31) What are various roadblocks to India-EU Free Trade Agreement? How can these roadblocks be removed?
- Q.32) Discuss India's concept of Indo-Pacific. Why Indo-Pacific region has a strategic significance for India?
- Q.33) Investment in sanitation is actually a facilitator for broader economic, health and social gains. Comment.
- Q.34) India needs to build its own technology capability and ensure that the technology available is inclusive in nature. Comment.
- Q.35) What do you mean by Minimum Support Price (MSP)? Examine the benefit and issues associated with Minimum Support Price.
- Q.36) Discuss the potential application of artificial intelligence in the healthcare system. Also mention, steps taken by the government to promote artificial intelligence in India.
- Q.37) Economic survey 2020, highlights that India's aspiration to become a \$5 trillion economy depends critically on promoting 'pro-business' policy than a 'pro-crony' policy. Do you agree? Elaborate.
- Q.38) Critically analyse the accomplishments achieved through nationalisation of banks in India.
- Q.39) Discuss the role of renewable energy resources in order to maintain environmental sustainability with special reference to India.
- Q.40) Indian textile industry can play an important role in India's inclusive growth. In light of this, discuss the significance of 'Technical Textiles Mission'.
- Q.41) What is bioenergy? Discuss how bio-energy can help in meeting India's energy demands.
- Q.42) Examine the impact of the coronavirus epidemic on Indian economy.
- Q.43) Discuss the importance of Eastern Ghats for Indian biodiversity. Suggest some measures to protect it.

General Studies 4

Q.1) What do you understand by Stereotyping? Critically examine why stereotyping is so common in society today.

Q.2) What is the difference between attitude and aptitude? Which of the two is more important for leading a successful life?

Q.3) What is Information Ethics? Discuss its significance in present times.

Q.4) Discuss the ethical issues involved in marketing of a product or service. How can these issues be resolved?

ForumIAS

General Studies 1

Q.1) Discuss how art and literature influenced India's freedom struggle?

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how freedom fighters used art and literature in India's freedom struggle.

Conclusion. Way forward.

Art and literature, played an important role in India's freedom struggle. Both art and literature acted as a tool in India's freedom struggle against colonialism. As part of the freedom movement, many indigenous industries and enterprises were set up. Indian art and literature flourished, and soon became a source of national pride. For example, Abanindranath Tagore through his paintings helped raise the consciousness of many. Through various journals, newspapers like Harijan freedom fighters like Gandhiji, Rabindranath Tagore raised important issues on the national platform.

Role of art and literature in India's freedom struggle:

- 1. Evoking emotions:** Art helped nationalist in their struggle by evoking emotions related to oppression or kind of injustice to people that they had been facing for a long time. It helped to increase the sensitivity among elite and bourgeoisie class towards the suffering of the common man by depicting their poor living condition and atrocities.
- 2. Raising nationalist sentiments:** The nationalistic sentiment replaced what was earlier widely dominated by the portraits and songs or bhajans based on gods and goddesses only. It influenced people through painting battle scenes between Indian and British soldiers and portraying brutalities, to people singing and writing nationalistic poetries, plays, and stories. Fiction and poetry was used for a patriotic purpose and to create a nationalist discourse.
- 3. Overcoming linguistic barriers:** Indian art helped in overcoming linguistic differences across the country in the form of visual and performing art. Further, nationalist literature was in the local language that helped many common people to take part in India's freedom struggle.
- 4. Spreading awareness:** Writers and poets such as Rabindranath Tagore, Josh Malihabadi, Muhammad Iqbal, Bankim Chandra Chattopadhyay, Mohammad Ali Jouhar, and Kazi Nazrul Islam used literature, poetry and speech as a tool to spread awareness against the atrocities by British on Indians and to provoke the thought of freedom to encourage people to fight for the country.
- 5. Women participation:** Women leaders like Begum Rokeya and Sarojini Naidu promoted the emancipation of Indian women and to encourage their participation in national politics. Bankim Chandra Chattopadhyay's *Devi Chaudharani*, became an inspiration to women to take up the cause of independence. In this novel, he made a woman the protagonist and leader of the struggle. Anandamath also featured a strong woman character, and in both books, while women do take up arms, they fight while embodying the values of love.
- 6. Revival of cultural identities:** When the Swadeshi movement started gaining momentum, Indian artists attempted to revive their cultural identities which were suppressed by the British. This led to the creation of the Bengal School of Art, led by the reworked Indian styles with a focus on nationalism of Abanindranath Tagore. An example of this is the painting of 'The Passing of Shah Jahan' by Abanindranath Tagore which evoked the recent past of Indian history which was being seen to be

glorious. Many other artists like Jamini Roy and later SH Raza took inspiration from folk traditions.

- 7. A tool of propaganda:** Literature played an important role and was used as a tool of propaganda. Newspapers like *Bande Mataram*, *Jungantar Patrika*, and *Harijan* sought to make Indian citizens not only socially and politically aware but also unite them for one common cause. Pamphlets written and distributed across India provided critical information and served as propaganda against the British.
- 8. Spread patriotic feelings:** Art and literature was used to spread the message of patriotism and expose atrocities of British. In *Anandamath*, set during the famine in Bengal, Chattopadhyay highlighted various patriotic acts of and sacrifices made by his characters, ordinary people who left their homes and families to fight against subjection, and in service of the Mother. National song, *Bande Mataram*, was first published as a poem in this novel as the rallying cry of the characters who used it to give themselves courage and to urge people to fight against the British.

Thus, art and literature played an immense role in India's freedom struggle. It gave birth to many nationalist artists who tried to influence public psyche through their work. It not only led to a silent criticism of colonial atrocities but also acted as a force to unite mass against colonial forces.

Q.2) What are the contributions of Raja Ravi Varma to Indian art? Elaborate.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various contributions of Raja Ravi Varma to Indian art.

Conclusion. Way forward.

Raja Ravi Varma, also known as 'The Father of Modern Indian Art' was an Indian painter of the 18th century who attained recognition as a painter. He is considered among the greatest painters in the history of Indian art. Recognizing his feat, Viceroy Lord Curzon had honoured him with the 'Kaisar-i-Hind Gold Medal' for his service in the furtherance of public interest.

Contributions of Raja Ravi Varma to Indian art:

- 1. European fusion:** His works are held to be among the best examples of the fusion of European techniques with a purely Indian sensibility. While continuing the tradition and aesthetics of Indian art, his paintings employed the latest European academic art techniques of the day.
- 2. Secular paintings:** Raja Ravi Varma, gave birth to secular-sacred images that can even today can be found in puja rooms, calendar advertisements, tiles in public spaces, flex banners and all kinds of packaging for products ranging from soap to incense.
- 3. Challenging caste and class hierarchies:** Raja Varma paintings challenged caste and class hierarchies as the circulation of these images broke down the idea that they were meant to rest solely within temples or in private collections. He was the first artist to avail his works to the mass market, irrespective of their status in the society. This greatly enhanced his reach and influence as a painter and public figure.
- 4. Depiction of women:** He often modelled Hindu Goddesses on South Indian women. Ravi Varma is particularly noted for his paintings depicting episodes from the story of Dushyanta and Shakuntala, and Nala and Damayanti, from the Mahabharata. His most famous work was painting 'A Lady Playing Swarbat'.

- 5. Depiction of social realities:** Raja Varma played an important role in depicting social and economic realities of the society. For instance his painting depicting 'A Family of Beggars' represented the sorry state of Indian economics.
- 6. Insights to Indian mythology:** Through his paintings, he gave an insight of the famous mythological stories to those who were not fortunate enough to hear or read them. Varma's work helped in recounting the ancient Indian ideal of healthy beauty and enjoyment of life.
- 7. Oil painting:** He was one of the first Indian artists to use oil paints and to master the art of lithographic reproduction of his work. In addition to incidents in Hindu mythology, Varma painted many portraits of both Indians and British in India.

Raja Ravi Varma was one of the first artists who created such a modern and Indian style. He mastered the western art of oil painting and realistic life study but painted themes from Indian mythology. Ravi Varma's representation of mythological characters has become a part of the Indian imagination of the epics.

Q.3) How far the developments in science and technology in the post-Independence period put India on the path of modernity?

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss developments in science and technology in the post-Independence period making India modern. Various challenges to it.

Conclusion. Way forward.

India has succeeded in creating a sizable science and technology infrastructure within five decades of independence. Modern India has had a strong focus on science and technology, realising that it is a key element of economic growth. India is among the topmost countries in the world in the field of scientific research, positioned as one of the top five nations in the field of space exploration.

Developments in science and technology in the post-Independence period making India modern:

- 1. Agricultural modernity:** Since the independence government has achieved self-sufficiency in agriculture. The Green revolution has enabled India to increase productivity through high yield varieties. Further, Indian agriculture benefited from the developments made in the field of biotechnology, for which a separate department was created in 1986 under the Ministry of Science and Technology.
- 2. Industrialisation:** Technological advances such as industrialization, railroads, gas lighting, factory systems, indoor plumbing, appliances, and scientific advances were rapidly made and these changes dramatically affected the way people lived and thought about themselves. One consequence was that people in industrialized areas thought of themselves as progressive and modern.
- 3. Space exploration:** The Indian space program has made a lot of progress. Indian Space Research Organisation achieved a lot launching remote sensing satellites since developing India's first satellite—Aryabhata. India has achieved a lot in the field of communication by launching communication satellites. Mars mission, Chandrayaan mission has proved India a leader in space activities.
- 4. Secular nation:** Modernity is characterized by increasing secularism and diminished religious authority. India adopted scientific temper and secularism as a foundation of

new India, and of dams as the temples of modern India. This Idea of India has rejected the opposite idea of what led to Islamic Pakistan. Tolerance and spirituality characterize the country's rich culture.

Challenges to India's progress as modern nation:

- 1. Corruption:** Corruption is a big roadblock to India's progress. For example, agricultural reforms like PDS are marred by leakages and corrupt practices. Public resources are used inefficiently and subsidies do not reach the poorest.
- 2. Social divide:** India's social divide is often linked to its centuries-old caste system. The caste system still exist and lower castes still face discrimination from upper caste. This has hindered India's emergence as a modern nation.
- 3. Inequality:** India has turned into a \$3 trillion economy. But this growth is less inclusive with a high level of growing economic inequality. Inequality led to many remaining under poverty and did not grow with the nation. A modern nation is one where poverty is minimal, and poor having access to minimum basic like food, health, education which is absent in India.
- 4. Health and Education:** As India marches forward, it faces new challenges in health and education. Poor education and healthcare in India remains a hurdle to India's progress. Cities grappling with alarming rates of congestion and pollution, together with an unhealthy population, significantly dampen the benefits of India's demographic dividend and urban growth.

Way forward:

- 1. Infrastructure development:** A high priority should be infrastructure development, both physical and digital, to enable rural dwellers to access the products and services matching their incomes, needs and aspirations. The government already has flagship programmes such as Digital India, which envisions transforming the country into a digitally empowered society and knowledge economy.
- 2. Collaborative effort:** Working together, business, government and civil society will have to connect Indians with their sustainable development. Policy efforts will be needed at the highest levels to harmonize India's growing need for housing, roads, transport services and packaged goods with the resulting impact on the environment.
- 3. Education and health spending:** Improving service delivery of health and education services for better efficiency and access by the poor requires increasing public expenditures, reallocating expenditures away from tertiary levels and toward primary ones, making institutional changes, and sharpening targeting and incentives.
- 4. Focus on access:** As India aspires to be a global leader in science and technology, it is important for Indian policy to give attention to science and technology policy. Science and technology policy should focus on access, inclusion and equity, to link societal development with science and technology policy. It also reflects the current thinking on sustainable and inclusive growth.

India is aggressively working towards establishing itself as a leader in industrialisation and technological development. Significant developments in the nuclear energy sector are likely as India looks to expand its nuclear capacity. Moreover, nanotechnology is expected to transform the Indian pharmaceutical industry. The agriculture sector is also likely to undergo a major revamp, with the government investing heavily for the technology-driven Green Revolution. The Government of India, through the Science, Technology and Innovation (STI) Policy-2013, among other things, aspires to position India among the world's top five scientific powers.

Q.4) What do you understand by the term 'anthropometric failures'? Discuss why despite various efforts, India continues to suffer from some form of anthropometric failures.

Ans.

Demand of the question

Introduction. What are anthropometric failures?

Body. Discuss various reasons for anthropometric failures in India.

Conclusion. Way forward.

Anthropometric failures means failure in front of anthropometric indicators like weight, height etc. indicating malnutrition and undernutrition and is reflected as underweight, stunting and wasting. The recent National Family Health Survey (NFHS 2015–16) confirms that every second child in India continues to suffer from some form of anthropometric failure (either stunting, or underweight, or wasting). Despite considerable efforts, India is yet to witness meaningful reductions in the burden of child undernutrition.

Various reasons for anthropometric failures in India:

- 1. Lack of Data:** Lack of credible data on a year-year basis is a big hurdle to tackle malnutrition and policy formulation. For example, there has been a 10-year gap between NFHS 3 and NFHS 4. Further, there is confusion and inability to understand measurement procedures among ill-trained Anganwadi workers.
- 2. Corruption:** Due to ineffective functioning (corruption and leakages) of the public distribution system (PDS), access to food is a major problem. Loss of food grains in warehouses (due to rotting and theft) further aggravates the problem.
- 3. Issues with policy implementation:** Major issues with schemes like Mid-day meal are the supply of quality food and its uniform distribution. Further, policy implementation on ground level is poor due to lack of funds, gross mismanagement and corruption.
- 4. Cereal-based Diet:** A major reason for micronutrient deficiency in India is because of a cereal-based diet. Even the National Food Security Act does not address the issue of nutritional deficiency adequately. Further, efforts regarding food fortification have also been inadequate.
- 5. Social-economic and Cultural challenges:** Major challenges in implementing nutritional programmes are socio-cultural factors such as caste. Illiteracy among women and gender biases is also a challenge.
- 6. Financial Constraints:** Budgetary allocations of many schemes have decreased over time. Further, the money allocated has remained unspent in many states.
- 7. Lack of nutritional and health awareness:** Lack of awareness, ignorance of healthy diets, unhealthy feeding habits, poor breastfeeding practice are major challenges in reducing malnutrition.

Various government efforts:

- 1. Integrated Child Development Services (ICDS) Scheme:** The scheme provides specific interventions targeted towards the vulnerable groups including children below 6 years and women.
- 2. National Health Mission (NHM):** National Health Mission (NHM) was launched by the government of India in 2013. It subsumed the National Rural Health Mission and the National Urban Health Mission to enhance nutrition status in India.
- 3. Mid Day Meal Scheme:** It provides that every child within the age group of six to fourteen years studying in classes I to VIII who enrolls and attends the school shall be provided with a hot cooked meal, free of charge every day except on school holidays.

- 4. Indira Gandhi Matritva Sahyog Yojna (IGMSY):** The scheme aims to contribute to a better enabling environment by providing cash incentives for improved health and nutrition to pregnant and lactating mothers.
- 5. National Nutrition Mission (POSHAN Abhiyaan):** It seeks to ensure a malnutrition free India by 2022. It is India's flagship program, which envisages improving nutritional outcomes for children, adolescents, pregnant women and lactating mothers.

Way forward:

- 1. Early life interventions:** To address the problem of child under-nutrition, and disease there should be early life interventions targeting the first 1,000 days of a child's life.
- 2. Public-Private partnership:** Public-Private partnership should be encouraged in schemes like mid-day meal. This would ensure less leakages, and other constraints like delay in supply of food etc.
- 3. Food fortification:** It is important to extend the food fortification of staples. Public-private partnerships can help leverage the appropriate technology for scaling up food fortification interventions. Further, the focus should be on incorporating nutritious food and diversifying the diet.
- 4. Policy efforts:** Agricultural policy should be aligned with nutrition policy with incentives provided for encouraging the production of nutrient-rich and local crops for self-consumption.
- 5. Effective data:** It is important to have sufficient information and reliable, updated data for effective interventions. It is thus necessary to collect and maintain real-time data on various nutrition indicators.

The POSHAN Abhiyan aims to reduce child stunting, underweight, low birthweight and anaemia. To translate such intent into action calls for insightful deliberations on a range of policy issues. The aspirational districts programme is an attempt in the right direction to accelerate progress in poor performing districts.

Q.5) Critically examine the nature and scope of environmental movements in independent India.

Ans.

Demand of the question

Introduction. Contextual introduction.

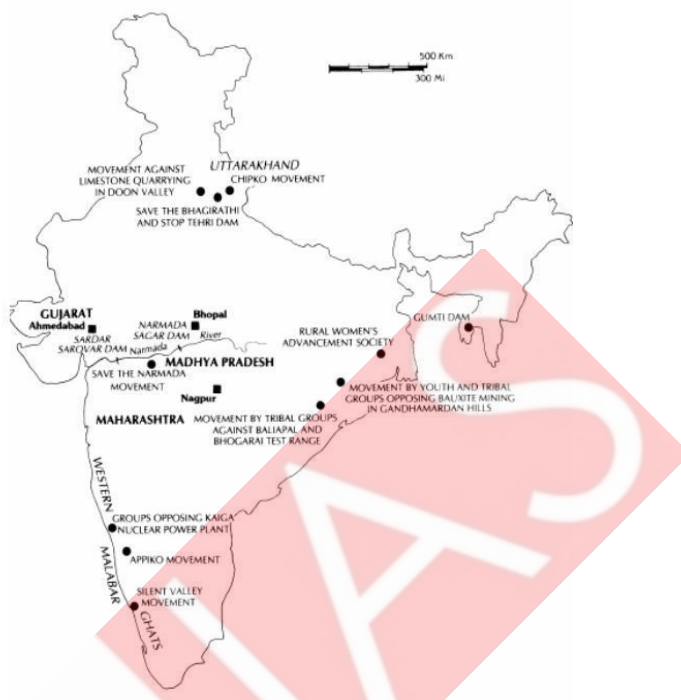
Body. Discuss the nature and scope of environmental movements in independent India. Discuss their significance and limited success.

Conclusion. Way forward.

The environmental movements are social movements that involve local people and organizations for the conservation of the environment and for the improvement of the state policy especially inclined towards the environment. In India, the history of environmental movements is quite old. Movements like Chipko Andolan, Narmada Bachao Andola have played an important role since independence.

Nature and scope of environmental movements in independent India:

- 1. Mass movement:** In India the environmental movements go beyond the social and cultural differences. It unite people belonging to different caste, ethnicity, political ideologies, gender and age groups working for the common goal of environment protection.
- 2. Women as the leader:** In these movements, women especially of weaker sections took the lead, both as leader and the participants. For instance, Gaura Devi and Bachni Devi of the Chipko movement, Amrita Devi of the Bishnoi movement, Medha Patkar of the Narmada Bachao Movement were some important leaders.
- 3. Gandhian influence:** It was commonly observed that in all the movements the people adopted the Gandhian concept of non-violence and Satyagraha.
- 4. Involvement of NGOs:** The most significant feature of environmental movements in India is involvement of Non-Governmental Organizations (NGOs) in these movements. Many examples can be cited. In case of the famous Chipko movement, the work of Dasholi Gram Swarajya Mandal (DGSM) was significant.
- 5. Not environmental movements exclusively:** These movements deal not exclusively with the various environmental issues alone, but also with contemporary socio-economic issues associated with the environment.



Significance of environmental movements in independent India:

- 1. Creating awareness:** These movements played a pivotal role in creating public awareness about the importance of bringing about a balance between environment and development.
- 2. Participatory development:** These movements helped in organizing model projects that show the way forward towards non-bureaucratic and participative, community-based natural resource management systems.
- 3. Fight for local rights:** These movements are important for tribal rights, especially the right of access to forest resources.
- 4. Livelihood:** Forest resources are a source of livelihood for local communities. Environmental movements are important to safeguard their livelihoods and prevent non-commercial use of natural resources.
- 5. Ecological health:** These movements are important for prevention of land degradation and cultural displacement, Eco-restoration that constitute the core themes.

Limited success: Of the people's movements listed above, few have succeeded in achieving success. Many environmental movements in India failed for the following reasons:

- 1. Weak local government:** Local self-governments having weak decision-making power over their environments. Thus, they failed to support local environment movements.
- 2. Lack of information:** Environmental movements often fail because they lack sufficient technical information and data about the impacts of environmental stressors and therefore do not know what kind of demands to make.

- 3. Lack of coordination:** There is little dialogue and no cooperation between the various types of environmental movements, let alone between environmental movements and other pro-people movements. Consequently, environmental battles have little support from the general public.
- 4. Weak law support:** One of the biggest weaknesses to the environmental movement is lack of support through environmental law which provides for no public participation in environmental management.

Numerous grass root environmental movements were started against the developmental activities that have endangered the ecological balance. These local campaigns have always garnered local mobilizations for the common issues of environment, economic justice etc. and helped in preventing major environmental disasters.

Q.6) What is secularism? Discuss various features of Indian concept of secularism.

Ans.

Demand of the question

Introduction. What is secularism?

Body. Discuss various features of Indian concept of secularism.

Conclusion. Way forward.

Secularism is the principle that makes a state neutral in the matter of religion and hence does not uphold any particular religion as the state religion, for example, USA and India. Principled distance from religion is the essence of Indian secularism. The 42nd amendment of the Constitution of India, amended the Preamble of the Constitution declaring India as a secular nation. In India secularism means state view all religions as equal.

Various features of Indian concept of secularism:

- 1. Positive concept of secularism:** Indian Constitution embodies the positive concept of secularism, i.e. giving equal respect to all religions or protecting all religions equally. The Western concept of secularism connotes a complete separation between the religion and the state.
- 2. Basic feature of Indian constitution:** Secularism is one of the basic features of the Constitution. In a landmark judgement in the Bommai case (1994), the Supreme Court upheld that secularism is a 'basic feature' of the Constitution. Hence, a state government pursuing anti-secular politics is liable to action under Article 356.
- 3. Concurrent power:** The 7th schedule of Indian constitution places religious institutions, charities and trusts into concurrent List, which means that both the central government of India and various state governments in India can make their own laws about religious institutions, charities and trusts.
- 4. Equality:** The Constitution of India does not uphold any particular religion as the official religion of the Indian State. It prevents the State from discriminating against any citizen on the grounds of religion (Article 15).
- 5. Focus on Harmony:** Indian secularism focuses on harmony among all religions rather than tight separation between state and religion. It allows the state to prevent conflicts on basis of religion through timely interventions which would have been disastrous for the state if not controlled.
- 6. Room for religious reforms:** Indian secularism is broader in a sense that it allows state intervention to help reform various evils and superstitions. E.g. Many rules in Karnataka allowed the government to curb superstitions that were against human rights.

- 7. Protect rights over religion:** By accepting community-based rights for religious minorities, the state can protect the rights of Indian citizens. All persons are equally entitled to freedom of conscience and the right to freely profess, practice and propagate any religion (Article 25).
- 8. Tolerance:** By acceptance of all religions rather than tight separation it reflects tolerant attitude of state and its people.
- 9. Liberal:** Many religiously sanctioned social practices are oppressive by virtue of their illiberal and non-egalitarian character and deny a life of dignity and self-respect. Therefore, Indian secularism helps liberal and egalitarian principles by reforming such practices through state intervention. E.g. recent Triple Talaq Act.

The essence of secularism lies in accommodation of varied social groups and overcome tendencies that destructs the social fabric of any society. In India where differences exist in terms of different religions and cultures secularism plays a crucial role. It is evident that Indian secularism since ancient India embraced many religions, sects, communities showing tolerance and true sense of accommodation, leading to a tolerant nation with social cohesion.

Q.7) Examine the role of Bismarck in state building in Germany.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the role of Bismarck in state building in Germany.

Conclusion. Way forward.

The formation of Germany as a nation state was one of the most important events in the history of the world. Napoleon Bonaparte first sowed the seeds of nationalism in Germany. But it was the rise of Otto Von Bismarck and his diplomacy that led to the unification of Germany as a nation state.

Role of Bismarck in state building in Germany:

- 1. Military reforms:** Bismarck initiated many military reforms that allowed successful wars in later time. In the 1850s, Bismarck wanted to build up Prussia's army to be ready if war broke out with the other German states or Austria. To do this Bismarck collected money for military reforms through direct taxation. These reforms included:
 - An increase in army conscription from two to three years.
 - The introduction of new battle tactics.
 - The introduction of weapons such as the needle gun.
- 2. Speeches:** Bismarck made numerous speeches in public to rattle the feeling of nationalism inside the German people. This was done in order to arouse a sense of nation among people.
- 3. Isolation of countries:** He successfully isolated other countries by making them look like aggressors. He made following efforts for this:
 - a) 1st War of Unification (Schleswig-Holstein):** The first diplomatic step of Bismarck was the intervention of the Schleswig-Holstein. These two duchies were under the Denmark in 1850 by the London Protocol. At this time the combined army of Austria and Prussia under the leadership of Bismarck attacked Denmark in 1864. This was the first diplomatic step of Bismarck against Austria.

- b) **Elections:** To counter Prussia's growing influence, Austria tried to strengthen its position in the German Federation. Bismarck thwarted Austria's plans by insisting on popular elections to the Diet (the Federation's Parliament). Bismarck had successfully ruined Austria's plans.
 - c) **2nd War of Unification, 1866 (Austro-Prussian War):** Bismarck knew Austria was a major obstacle to unification. To succeed in his aims, Bismarck declared war against Austria in 1866. This War led to the defeat of the neighbouring States of Austria like Bavaria, Saxon etc. and then Austria. To isolate Austria, Bismarck built up alliances with other major powers- Russia, France and Italy.
 - d) **The Treaty of Prague and formation of Germany:** After the Austro-Prussian War, the 'Treaty of Prague' was concluded between Austria and Prussia in 1866. According to this treaty Austria was expelled from Germany. After the treaty of Prague the formation of Germany was started.
 - e) With Austria weakened, Bismarck now turned his attention to the other great stumbling block to unification- France. France had watched Prussia's growing power with alarm. France was heavily defeated in the Franco-Prussian War. The circumstances leading to the war caused the southern German states to support Prussia. This alliance led to the unification of Germany.
4. **Annexation:** The states of Schleswig, Holstein, Hanover, Nassaa and Frankfort were annexed to Prussia. The States north to May River were annexed to Prussia and the North German Confederation was formed.
 5. **Unification:** In the build up to war, the southern confederate German states voluntarily joined the Prussian-controlled Northern German Confederation. Germany was now unified.

Unification of Germany was not one single event but a process which occurred in phases. Bismarck had played a major role in unification and nation building of Germany through his policies, military reforms, speeches and isolation strategies.

Q.8) Discuss various opportunities and challenges of demographic dividend in India.

Ans.

Demand of the question

Introduction. What is demographic dividend?

Body. Discuss various opportunities and challenges of demographic dividend in India.

Conclusion. Way forward.

According to United Nations Population Fund (UNFPA), demographic dividend means, the economic growth potential that can result from shifts in a population's age structure. India has one of the youngest populations (62.5% of its population in the age group 15-59) in an aging world. The demographic dividend leads to an increased labour supply that will increase the production of goods and boost savings and investment on the other.

Various opportunities related to demographic dividend in India:

1. **Labour supply:** The first benefit of the young population is the increased labour supply, as more people reach working age. However, the magnitude of this benefit depends on the ability of the economy to absorb and productively employ the extra workers.
2. **Capital formation:** As the number of dependents decreases individuals save more. This increase in national savings rates increases the stock of capital in developing countries and provides an opportunity to create the country's capital through investment.

3. **Female Human capital:** Decrease in fertility rates result in healthier women and fewer economic pressures at home. This provides an opportunity to engage more women in the workforce and enhance human capital.
4. **Economic growth:** Another opportunity is produced by increased domestic demand brought about by the increasing GDP per capita and the decreasing dependency ratio. This leads to demand-driven economic growth. Growth, education, better economic security and a desire for more durable goods are the cause and consequence of young demographics.
5. **Infrastructure:** Increased fiscal space created by the demographic dividend enables the government to divert resources from spending on children to investing in physical and human infrastructure.
6. **Skilled workforce:** Most sectors of Indian economy would require a more skilled workforce than the present. It would be both a challenge and an opportunity for India to provide its workforce with required skill sets and knowledge to enable them to contribute substantially to its economic growth.
7. **Migration:** It presents some opportunities that can arise from having demographic changes, particularly the demographic dividend and interstate migration to overcome labour shortage in some parts.

Challenges of demographic dividend in India:

1. **Enhancing human capital:** Poor human capital formation is reflected in low employability among India's graduates and postgraduates. According to ASSOCHAM, only 20-30 % of engineers find a job suited to their skills. Thus, low human capital base and lack of skills is a big challenge.
2. **Low human development:** India ranks 130 out of 189 countries in UNDP's Human Development Index, which is alarming. Life expectancy at birth in India (68 years) is much lower than other developing countries. The mean years of schooling and expected years of schooling and need to be improved.
3. **Informal economy:** Informal nature of economy in India is another challenge in reaping the benefits of demographic transition in India. Nearly 216 million people are engaged in the agriculture sector, are in the informal economy where not only they earn lower wages, but with little social security and few days of employment in a year.
4. **Jobless growth:** There is a mounting concern that future growth could turn out to be jobless due to deindustrialization, de-globalization, the fourth industrial revolution and technological progress. As per the NSSO Periodic Labour Force Survey 2017-18, India's labour force participation rate for the age-group 15-59 years is around 53%, that is around half of the working age population is jobless.
5. **Asymmetric demography:** The growth in the working-age ratio is likely to be concentrated in some of India's poorest states and the demographic dividend will be fully realised only if India is able to create gainful employment opportunities for this working-age population.
6. **Issue of tilted sex ratio:** Declining female labour force participation: According to data from the International Labour Organization and World Bank, India's female labour force participation rates have fallen from 34.8 % in 1990 to 27 % in 2013. Without women participation India can't dream of reaping demographic dividend.

Way forward: Indian policymakers will need to recognize that realization of the demographic dividend depends on an economy's capacity to absorb workers into productive employment. This capacity is strengthened by:

1. **Building human capital:** India has to invest more in human capital formation at all levels, from primary education to higher education, cutting-edge research and

development as well as on vocational training to increase the skill sets of its growing working-age population.

2. **Skill development:** Skill development is needed to increase employability of young population. Government has established 'Skill India' as a mission to skill India's youth and the National Skill Development Corporation (NSDC) with the overall target of skilling/up skilling 500 million people in India by 2022.
3. **Education:** Enhancing educational levels by properly investing in primary, secondary and higher education is important. As recommended by the National Health Policy 2017 and the National Policy on Education 1986, India needs to increase its spending on health and education to at least 2.5 % in 6 % of GDP respectively from its current levels.
4. **Health:** Improvement in healthcare infrastructure would ensure higher number of productive days for young labour force, thus increasing the productivity of the economy.
5. **Job Creation:** The nation needs to create ten million jobs per year to absorb the addition of young people into the workforce. The number of formal jobs have to be created, especially in labour intensive, export-oriented sectors such as textiles, leather and footwear, gems and jewellery etc.
6. **Good governance:** Effective avenues for citizen input, well-functioning institutions, respect for the rule of law, low level of corruption, respect for property rights, sanctity of contracts etc. are important aspects of good governance that enable equal opportunity to all.

If India has to reap the benefits of 'demographic dividend' in the years ahead, it is imperative that investments in social infrastructure by way of education, skill development, training and provision of health care facilities are made to enhance productivity of workforce and welfare of the population. Though India has initiated all pertinent programmes and policies, to make the dream of demographic dividend a reality the key lies in their effective and efficient implementation.

General Studies 2

Q.1) Freedom of expression enshrined under Article 19 (1) of the Constitution is not an absolute right; it comes with safeguards outlined under Article 19 (2). What are these safeguards? Discuss their need and significance.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss in brief about Article 19 (1) and safeguards outlined under Article 19 (2). Mention significance of these safeguards.

Conclusion. Way forward.

Freedom of Speech and expression means the right to express one's own opinions freely through speech, writing, printing, pictures or any other mode. In India, under Article 19(1), the Constitution of India guarantees to all its citizens the right to freedom of speech and expression. However, this freedom is not absolute and under Article 19(2) reasonable restrictions can be imposed on the exercise of this right for certain purposes.

Significance of freedom of expression enshrined under Article 19 (1) of the Constitution:

- 1. Societal good:** Liberty to express opinions and ideas without hindrance, and especially without fear of punishment plays a significant role in the development of a particular society and ultimately for that state. It is one of the most important fundamental liberties guaranteed against state suppression or regulation.
- 2. Self-development:** Free speech is an integral aspect of each individual's right to self-development and fulfilment. Restrictions inhibit our personality and its growth. The reflective mind, conscious of options and the possibilities for growth. Freedom of speech is also closely linked to other fundamental freedoms. Thus, for full-fledged development of personality, freedom of speech and expression is highly essential.
- 3. Democratic value:** Freedom of speech is the bulwark of democratic Government. This freedom is essential for the proper functioning of the democratic process as it allows people to criticise the government freely. In a democracy, freedom of speech and expression open up channels of free discussion of issues. Freedom of speech plays a crucial role in the formation of public opinion on social, political and economic matters.
- 4. Ensure pluralism:** Freedom of Speech reflects and reinforces pluralism, ensuring that diversity is validated and promote the self-esteem of those who follow a particular life-style.

Safeguards outlined under Article 19 (2): Article 19(2) allows the state to make laws that restrict freedom of speech so long as they impose reasonable restrictions in the:

- 1. Interests of the sovereignty and integrity of India:** Sovereignty and integrity of India as a ground under Article 19 (2) was added by 16th constitutional amendment act. This was as a reaction of the tense situation prevailing in different parts of the country. Its objective is giving appropriate powers to impose restrictions against those individuals or organisations who want to make secession from India or disintegration of India as political purposes for fighting elections.
- 2. The security of the state:** The term security of state refers only to serious and aggravated forms of public order e.g. rebellion, waging war against the State, insurrection and not ordinary breaches of public order and public safety. Thus speeches or expression on the part of an individual, which incite to or encourage the commission

of violent crimes, such as, murder are matters, which would undermine the security of State.

3. **Friendly relations with foreign states:** This ground was added by the First Amendment Act, 1951. The object behind the provision is to prohibit unrestrained malicious propaganda against a foreign friendly state, which may jeopardise the maintenance of good relations between India, and that state. It is to be noted that members of the commonwealth including Pakistan is not a foreign state for the purposes of this Constitution. The result is that freedom of speech and expression cannot be restricted on the grounds that the matter is adverse to Pakistan.
4. **Decency or morality:** Sections 292 to 294 of the Indian Penal Code provide instances of restrictions on the freedom of speech and expression in the interest of decency or morality. These sections prohibit the sale or distribution or exhibition of obscene words, etc. in public places. The standard of morality varies from time to time and from place to place.
5. **Contempt of court:** Restriction on the freedom of speech and expression can be imposed if it exceeds the reasonable and fair limit and amounts to contempt of court. According to the Section 2 of Contempt of court it may be either civil contempt or criminal contempt.
6. **Defamation or incitement to an offence:** A statement, which injures a man's reputation, amounts to defamation. Defamation consists in exposing a man to hatred, ridicule, or contempt. The civil law in relating to defamation is still uncodified in India and subject to certain exceptions.

Need and significance of these safeguards:

1. **Social Balance:** In a modern State, absolute and unrestricted individual rights cannot exist. Freedom is more purposeful if it is coupled with responsibility. Like any other freedom, the freedom of speech and expression has to be balanced with other social values. The liberty of the individual is not absolute and subject to common good of all.
2. **Public interest:** Certain permitted prior restraints and restrictions on the freedom of speech and expression, are made in the collective interest of society. Freedom of speech and expression has to be reconciled with the collective interest of the society, which is known as public interest.
3. **Other's rights:** Freedom of speech and expression is inherently restricted by the rights of other individuals of society. Any speech that can harm a large group of people and their rights need restriction by state. In *Maneka Gandhi v. Union of India*, Court held that reasonable restrictions should be such that others' rights should not be hindered or affected by the acts of one man.
4. **State security:** Restrictions are needed in order to safeguard state security and its sovereignty. A speech may lead to secessionist tendencies and can be used against state as a tool to spread hatred. Reasonable restrictions ensure, security of the state and its citizens.

Way forward: The Constitution does not define the expression reasonable restrictions. The following are some of the principles which the Supreme Court of India has affirmed in *Narottamdas v. State of M.P.* for ascertaining the reasonableness of restrictions:

1. **Non-arbitrary:** The phrase reasonable restriction connotes that the limitation imposed upon a person in the enjoyment of a right should not be arbitrary or of an excessive nature.
2. **Nature of restriction:** In determining the reasonableness of statute, the court should see both to the nature of the restriction and procedure prescribed by the statute for

enforcing the restrictions on the individual freedom. Not only substantive but also procedural provisions of a statute also enter into the verdict of its reasonableness.

3. **Objectivity:** The reasonableness of a restriction has to be determined in an objective manner and from the standpoint of the interests of the general public and not from the point of view of persons upon whom the restrictions are imposed or upon abstract considerations.
4. **Enforcing DPSP:** A restriction that is imposed for securing the objects laid down in the Directive Principles of State Policy may be regarded as reasonable restriction.

India is a democracy and citizens have a constitutionally guaranteed right to a freedom of speech and expression which they can enforce via the Indian court system. The people of India gave to themselves, the Constitution of India, and provided for freedom of speech and expression to ensure free and equal society. The judiciary has upheld the restrictions that can be imposed but have also held that the government's interference in this right has to also be kept in check. Freedom of Expression is among the foremost of human rights.

Q.2) Brexit provides an opportunity for both Britain and India to work for common interests and resolving various issues. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various post-Brexit opportunities and challenges for India.

Conclusion. Way forward.

Brexit is a term being used for Britain's exit from the European Union. Both Britain and India share an age-old history of common interests and values and with India growing fast, the relations between the two countries can reach new heights post Brexit. The UK is India's 5th largest trading partner and provides great opportunities for India to develop stronger relations with Britain, post-Brexit.

Post-Brexit opportunities:

1. **Stronger Trade ties:** Brexit provides a fresh opportunity to India to strengthen its economic relationship with the UK through an India-UK free trade agreement (FTA). A study carried out by the Commonwealth Secretariat after the Brexit vote has identified 13 new products which India can export to the UK. It has estimated market access of around \$2 billion for these products. A well negotiated bilateral trade arrangement between the UK and India has the potential to increase bilateral trade by 26%.
2. **Foreign Direct Investments (FDI):** Indian government has considerably liberalised the FDI regime in the country and there has been an increase in FDI inflows over the last two years. India is expected to get continued attention from the investors including investments from the UK. The UK is the third largest investor in India and accounts for about 8.0% of the total FDI inflows in the country. Several British companies have exhibited interests in India post launch of the Make in India campaign.
3. **Boost Immigration from India:** The UK is experiencing a great shortfall in skilled manpower. Brexit would provide a new opportunity for the Indian professionals to look for the work options in the UK.
4. **Cheaper Pound Sterling:** The British pound is among the most expensive currencies in the world. The cheaper UK currency would likely boost exports from India as an alternative to the overpriced Eurozone. Indian students could pay less for the rupee conversion and for the Indian tourists UK travel could become much more affordable.

- 5. Education Sector:** Britain's exit from the EU is expected to open up significant business and economic opportunities for the Indian Education Sector. Education in the UK will likely become more affordable. For Indian students studying in the UK, Brexit might result in a more level playing field compared with other EU students who hitherto had an informal edge over the rest of the world in the job market. India being one of the largest skilled labour markets, with a population well versed in the English Language could have a distinct advantage.
- 6. Agricultural opportunities:** Key opportunities for Indian companies, post-Brexit could arise in the food and agro products sector, since the UK is a net importer of food and food products from the EU. Indian exporters would need to comply with the regulatory framework and accompanying phytosanitary requirements, depending naturally on what framework the UK adopts.

Some challenges:

- 1. Depreciation of Pound:** India businesses have presence in a wide array of sectors in the UK which include automobiles, auto components, pharmaceuticals, gems and jewellery, education and IT enabled services. Most of these sectors will be vulnerable to changes in demand and currency values. The depreciating Pound will impact the revenue stream of companies over the near term.
- 2. Potential loss of market access in EU:** Many of the largest Indian employers operate in the services sector, which will be seriously impacted. Businesses in the UK might be treated as third country service providers by the EU, with potential loss of market access and increase in non-tariff barriers.
- 3. Impact on garment industry:** Readymade garments are one of the key export items to the UK from India. It accounts for about 20% of India's total exports to the UK. The sector is expected to feel the pinch on account of moderation in demand.
- 4. Loss of jobs:** India is one of the largest exporters of IT-enabled services and the sector has significant exposure to the European market especially the UK. The UK accounts for about 17% of India's total IT exports. IT companies thus are expected to face the heat in light of Brexit. Given the risk of further moderation in growth in the UK and EU, there is an increased probability that the companies lower their IT budgets and many may lose their jobs.

Brexit does provide an opportunity to expand India's trade and economic relations with the UK. Much will depend on the fine print of Brexit and the ensuing negotiations. The challenges that Brexit throws up have to be addressed before an India-UK FTA becomes a reality. Even though the Indian economy may be in better shape than a post-Brexit UK, we will need to leverage our strengths so that the complementarities in our economies are harnessed. We need to work towards a win-win situation so that we are able to translate adversity into an opportunity for mutual prosperity.

Q.3) What are the major legal initiatives by India since Independence addressing discrimination against Scheduled Tribes (STs)?

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various Constitutional and legal safeguards since Independence addressing discrimination against Scheduled Tribes.

Conclusion. Way forward.

The scheduled castes and scheduled tribes have faced historical discrimination based on caste and tribe lines. They are educationally backward and neglected due to lack of awareness among the groups. The Constitution of India has several provisions to prevent discrimination against people belonging to Scheduled Tribes and to protect their rights. Indian government has been working in the direction of their upliftment since independence.

Constitutional safeguards:

- 1. Provisions to prohibit discrimination:** Article 15 prohibit discrimination on grounds of religion, race, caste, sex or place of birth. Similarly under Article 17 of the Indian constitution untouchability is abolished.
- 2. Equal opportunities:** Article 16 pertains to equality of opportunity in matters of public employment. Article 46 promotes educational and economic interests of scheduled castes, scheduled tribes and other weaker sections.
- 3. Safeguard of Tribal Interests:** Under Article 19 (5), while the rights of free movement and residence throughout the territory of India and of acquisition and disposition of property are guaranteed to every citizen, special restrictions may be imposed by the state for the protection of the interests of any Scheduled Tribe. For example state may impose restrictions on owning property by non tribals in tribal areas.
- 4. Minister in-charge of tribal welfare:** Article 164 It provides for a Minister-in-charge of tribal welfare in the states of MP, Chhattisgarh, Orissa and Jharkhand. These states have substantial tribal populations and special provision of a Minister looking after tribal welfare is an evidence of the concern of the framers of the constitution for safeguarding the interests of Scheduled Tribes.
- 5. National Commission for Scheduled Tribes:** As per Article 338-A of the Constitution of India, the National Commission for Scheduled Tribes has been set-up to, inter-alia, investigate and monitor all matters relating to the safeguards provided for the Scheduled Tribes under the Constitution or under any other law. It also inquire into specific complaints with respect to the deprivation of rights and safeguards of the Scheduled Tribes.

Major legal initiatives for addressing discrimination against Scheduled Tribes:

- 1. Protection of Civil Rights Act, 1955:** In order to stop practice of untouchability the Protection of Civil Rights Act, 1955 has been enacted. This Act provides assistance to the States and Union Territories for the implementation of the constitutional provisions for the Scheduled Tribes. It also provides funding for the states to assist victims of atrocities and for the provision of incentives for the creation of special courts, inter-caste marriages and awareness generation.
- 2. Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989:** This act was enacted in order to prevent the commission of offences of atrocities against the members of the Scheduled Castes and the Scheduled Tribes. The act provides for Special Courts for the trial of such offences and for the relief and rehabilitation of the victims of such offences and for matters connected.
- 3. Panchayats (Extension to the Scheduled Areas) Act, 1996:** It was enacted in order to provide for the extension of the provisions of Part IX of the Constitution relating to the Panchayats to the Scheduled Areas.
- 4. Recognition of Forest Rights Act, 2006:** The act was enacted to recognize and vest the forest rights and occupation in forest land in forest dwelling scheduled tribes and other traditional forest dwellers who have been residing in such forests for generations.

Government has adopted a multi-pronged strategy for overall development and mainstreaming of tribal people in the country, which includes support for education, health, sanitation, water supply, skill development, livelihood, infrastructure, etc. Major part of infrastructure development and provision of basic amenities in tribal areas in the country is carried out through various schemes of Central Ministries and the State Governments concerned.

Q.4) Did the Government of India Act, 1935 lay down a federal constitution? Discuss.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how Government of India Act, 1935 lay down a federal constitution and its shortcomings.

Conclusion. Way forward.

The Government of India Act 1935 was an important act in the history of India. As a result of several previous Governments of India Act and Round Table Conferences, the Government of India Act 1935 was introduced. It changed the Federation of India in the aspects of the structure of government, legislation and so on. It granted Indian provinces autonomy and provided for the establishment of Indian Federation. The Government of India Act, 1935, which acted as a framework did laid some federal features.

Federal features under Government of India Act 1935:

- 1. All India Federation:** It provided for the establishment of an All India Federation consisting of the British India Provinces and other Indian states. The States were absolutely free to join or not to join the proposed Federation. The rulers of Indian states never gave their consent and thus, the Federation envisaged by the Act never came into being.
- 2. Provincial Autonomy:** One redeeming feature of the new Act was that it marked the beginning of the provincial autonomy. The Act divided legislative powers between the provincial and central legislatures and within their defined sphere the provinces they were autonomous units of administration. The Ministers were not absolutely free in matter of running their departments. The Governors continued to possess a set of overriding powers.
- 3. Setting up of a federal legislature:** Bicameralism was introduced. The Federal Legislature was to consist of two houses. It envisaged setting up a council of states and federal assembly, with reservations in the Council of states for minorities, women and depressed classes.
- 4. Distribution of Legislative Power:** The act made a three-fold division of powers between the Centre and the Provinces- federal list, provincial list and concurrent list. The subjects which were of all-India interest and demanded uniform treatment were put in the federal list.
- 5. Setting up of a federal court:** A Federal court was also envisaged to be set up under this act so the provisions of the act could be interpreted in case of any disputes. The Federal Court established by this Act has three kinds of jurisdictions i.e. Original, Appellate and Advisory. The court had exclusive original jurisdiction in any dispute between the Federation and its units.

Not a true federal system:

1. **Discretionary powers:** The new act armed the governors and governor-general with tremendous discretionary powers and thus reduced provincial autonomy on paper. In a way the Act made the Governors so powerful that they could play the dictator if they liked. The Governors and the Governor-General continued to have the last word in the preparation of budget and allocation of funds to various departments.
2. **Legislation regarding provincial list:** The Federal Legislature had the power to legislate with respect to the subjects enumerated in the Provincial List if a proclamation of emergency was made by the governor-general.
3. **Defective federation:** The proposed formation of the Federation was also fundamentally defective. Entry into the federation was compulsory for the Provinces but voluntary for the Princely States. There was a lot of difference in regard to population, area, political importance and status between the provinces and the States. Whereas the British Provinces were partly autonomous units, the States were still under the autocratic rule of the Princes.
4. **Residuary powers:** The allocation of residuary powers was unique. It was not vested in either of the legislatures, central or provincial. But the Governor-General was empowered to authorise, either the Federal or the Provincial Legislature to enact a law with respect to any residuary matter.

The 1935 Act was aimed to perpetuate British rule and design to appease Nationalists. The act also had regressive provisions such as separate electorate and had divide and rule as it's guiding philosophy. An analysis of the features concludes that despite the provision to draft a federal Constitution, the Government of India Act fell short of an actual federal Constitution.

Q.5) Indian Ocean Region (IOR) is important for Indian security. In light of this, discuss India's policy of 'Security and Growth for All in the Region' (SAGAR) for IOR islands.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how Indian Ocean Region (IOR) is important for Indian security? Discuss India's policy of 'Security and Growth for All in the Region' (SAGAR) for IOR islands.

Conclusion. Way forward.

The strategic importance of Indian Ocean Region (IOR) is ever increasing to the world order in general and Indian sub-continent in particular. A secure IOR is key to ensuring security of India's national interests. The importance attached to sea lines of communication (SLOCs) security was first seen in India's stated aspiration to become a net security provider in the region. In 2015, India started SAGAR (Security and Growth for All in the Region) strategy, making it the cornerstone of his engagement with the Indian Ocean rim and islands.

Importance of Indian Ocean Region (IOR) for Indian security:

1. **Energy security:** Nearly 80% of India's crude oil requirement is imported, which are mostly routed through the sea. Taking into account the total oil imports by sea, offshore oil production and petroleum exports, the country's cumulative sea dependence for oil is estimated to be about 93%. Thus, IOR is very important to keep India's oil route safe.

2. **Trade security:** Today, almost 95% of India's trade by volume and 68 per cent of trade by value are routed via the Indian Ocean. Any impediment to flow of commercial traffic would have disastrous ramifications on her economic objectives.
3. **Resources:** India depends heavily on Indian Ocean resources for resources. Fishing and aquaculture industries are a major source of export as well as providing employment to more than 14 million people. Thus, securing presence in IOR is important for India.
4. **Security threats:** Militarily, the presence of a long coastline makes India vulnerable to potential threats emerging from the sea. One of the worst terrorist attacks in Mumbai was perpetrated by terrorists arriving by sea. India's nuclear installations, coastal cities are at continuous threat from state and non-state actors. Thus, keeping an eye on the sea is important.
5. **Piracy:** The presence of non-traditional threats like piracy, smuggling, illegal fishing and human trafficking also present major challenges and hence, a secure Indian Ocean is key to securing India's national interests. Multiple cases are reported in the past of drug smuggling near Gujarat coast, Mumbai coast etc.

India's policy of 'Security and Growth for All in the Region' (SAGAR) for IOR islands:

1. **Safeguard land and maritime territories and interests:** Enhancing capacities to safeguard land and maritime territories and interests is major focus under SAGAR initiative. India has held multilateral naval exercises called Milan in the Andaman and Nicobar Islands with 16 other countries and in the Rim of the Pacific Exercise (RIMPAC). The success of maritime cooperative action against piracy in the Gulf of Aden is an example of the benefits of a cooperative approach which resulted in a dramatic decline in piracy incidents in the region.
2. **Deepening economic and security cooperation:** The emergence of the Blue Economy promises a new pillar of prosperity in the region with immense economic and employment potential. It is important to engage with IOR in Blue Economy initiatives, particularly in the areas of marine bio-technology, exploration and sustainable exploitation of ocean mineral resources, sustainable fishing practices, and harnessing of ocean energy. India is committed to extending port connectivity among the littoral states of the Indian Ocean and beyond.
3. **Disaster management:** Promoting collective action to deal with natural disasters and maritime threats like piracy, terrorism and emergent non-state actors is a goal under SAGAR. India is proactive in providing assistance to littoral islands during disaster. This was seen recently, in India's support to Madagascar which was ravaged by the Cyclone Ava. The Indian Navy and Air Force provided 1,000 tonnes of fresh water to Male to help Maldives which is suffering from an acute drinking water crisis. The Annual Joint HADR exercises, conducted by Indian Navy, help in India to connect with other nations.
4. **Working towards sustainable regional development through enhanced collaboration:** India is targeting for re-energising economic activity in our islands and our coastal areas. There is a renewed focus on strengthening marine research, developing eco-friendly marine industrial technologies, promoting sustainable fisheries and ensuring the protection of the maritime environment. 14 Coastal Economic Zones being developed under Sagarmala.
5. **Engaging with countries:** Engaging with countries beyond our shores with the aim of building greater trust and promoting respect for maritime rules, norms and peaceful resolution of disputes is one of the goals under SAGAR. India is working on a range of projects to improve maritime logistics in Sri Lanka, Maldives, Mauritius and Seychelles. Other initiatives include the Kaladan transport project leading to Sittwe port in Myanmar, the Trilateral Highway to Thailand, and the Chabahar port project in Iran.

It is clear that, if India wants to become a serious Indo-Pacific player, it has to prioritise implementation of the SAGAR initiative. It is important for India to look beyond the Quad to partner with smaller littoral states and provide alternatives to China's investment strategies.

Q.6) What is cooperative federalism? Discuss various roadblocks to cooperative federalism in India. How can it be strengthened in India?

Ans.

Demand of the question

Introduction. What is cooperative federalism?

Body. Discuss various roadblocks to cooperative federalism in India. Suggest measures to strengthen cooperative federalism.

Conclusion. Way forward.

Federalism is a system of government in which states or provinces share power with a national government. Cooperative federalism refers to a concept where various states cooperate with each other and with the centre to achieve the goals of growth, development of the states and the nation. They cooperate in working out details concerning which level of government takes responsibility for particular areas and creating policy in that area. The concept of cooperative federalism put forward the view that the national and state governments are partners in the exercise of governmental authority.

Various hurdles to cooperative federalism in India:

- 1. Over-centralisation:** As widely recognised, India is quasi-federal, with powers and resources being highly tilted in favour of the Union. The Union list has more items than the state list that enables more taxation power to centre. This acts as a major roadblock to cooperative federalism in India. Excessive central character, reduce active participation of states.
- 2. Ineffective inter-state council:** The Constitution provided for institutions like inter-state councils to serve as a platform for consultation between the centre and the states. The inter-state council has just turned out as a platform of talks with less progress on real issues. Inter-state council has met twice in 50 years, and has not been taken seriously as a vehicle of cooperative federalism:
- 3. Presidential rule:** The constitution has provided the President with power to take over state machinery in situations of state failure and emergency. Unfortunately, it has been misused by political parties to subvert state governments. Between 1947 and 1977, there were 44 instances when the power to impose President's rule was exercised. In *S.R. Bommai v. Union of India* (1994), the limitation laid down by the Supreme Court has placed gentle breaks on exercise of this power, but it had limited effect.
- 4. Taxation:** Taxation powers are another contentious issue between state and the Central government. For example, in the Goods and Services Tax (GST) scenario, States have power to levy tax on sale of petrol, diesel, etc. and these would be revenues of the respective States. However, the GST Council is yet to recommend inclusion of these items under GST.
- 5. Under-represented in finance commission:** States are under-represented. Recommendations of the Finance Commission are placed before Parliament and States have no role in the debate. There is no provision for an aggrieved State to challenge the FC report or seek its enforcement.

6. **Trust deficit:** Trust deficit between Centre and States is widening. Several issues such as shrinkage of divisible pools plague Centre-State relations. Together, they make total cooperation difficult. Most state governments believe the thrust on federalism is limited to lofty ideas and big talks. Many States have shown their displeasure with the way the Centre has been dealing with the States. Recently, Kerala has used Article 131 to move against centre due to displeasure over Citizenship amendment act.
7. **One size fits all approach:** A 'One Size Fits All' approach had been used for years, not taking into account the heterogeneity of different states and their local requirements. Due to this many states continue to suffer. Earlier planning commission and now Niti Aayog both have followed the same policy. This leads to difficulty in Policy implementation and working together.

Measures to strengthen cooperative federalism:

1. **Empowering states:** NITI Aayog was formed to further empower and strengthen the states. NITI Aayog needs to act to provide the strategic policy vision for the government as well as deal with contingent issues. For example, the state should be empowered more for working to enable smart cities.
2. **Empowering states:** There are several ways through which a country can achieve higher growth and promote economic activities. One of the ways is to empower states towards optimum utilization of its resources such as infrastructure, buildings, transportation and the most importantly its human resource.
3. **Fostering cooperation:** All states should compete with each other regarding policies and its effective implementation. The Union government can include States in how decisions are made and enforced. The Union must develop newer conventions to foster cooperation. Aspirational district initiative has potential to foster cooperation at local level, enabling the states to work with the centre.
4. **Taxation:** States must be given more power to tax and more grants should be given to them. One size fits all policy needs to be changed with focus to specific needs of each state.

The new challenges and issues need centre and various states to come together. Terrorism, militancy, organised crimes, problem of internally displaced persons, refugees issue, all these require that the country as a whole comes together. Cooperative federalism alone strengthens the nation from within by enabling it to withstand adversities and challenges because of its inherent resilience and malleability. Thus efforts must be made towards cooperative federalism.

Q.7) Discuss various reasons for shortage of doctors per capita in India especially in rural areas. Discuss its impact on healthcare delivery in India.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various reasons for shortage of doctors in India. Discuss its impact on healthcare delivery.

Conclusion. Way forward.

India has only 10 lakh registered doctors to cater to 1.3 billion citizens. While urban areas have 58% qualified doctors, in rural areas the number is as low as 18.8%. There is one government doctor for every 10,189 people according to WHO against the recommended

ratio of 1:1,000. This has hampered healthcare delivery in India especially in rural areas leading to bad healthcare situation in India.

Reasons for shortage of doctors per capita in India:

1. **Less intake:** There are fewer medical education institutes across the nation. Further, these institutes are mostly private which have a high amount of fees. Also intake in these institutions are less.
2. **Lack of incentives:** While India has one of the largest medical education systems and reputed institutions such as AIIMS, doctors are not willing to serve in rural areas, many of which are still difficult to access and lack electricity. There is poor availability of doctors to the majority of the population living in rural areas.
3. **Emigration:** Many of the doctors trained in India do not stay here due to better standard of lives and better income in other nations. Most of the doctors move to the UK, USA, and Australia to settle there.
4. **Low healthcare spending:** India's government spends only 1% of GDP on health. Thus the healthcare system suffers from lack of staff, poor infrastructure etc. This has also led to a lesser number of hospitals and institutions for medical education.

Its impact on healthcare delivery in India:

1. **Overburdened Doctors:** Due to a disproportionate Doctor-patient ratio, a limited number of doctors, nurses and medical staff have to cater to a large number of patients. This leads to hospitals which are overcrowded and staff are overworked.
2. **Quacks:** The shortage of trained doctors has led to a proliferation of unqualified quacks. Just 19% of people in rural India who call themselves doctors actually have a medical degree. These quacks are usually trained in alternative remedies, such as homeopathy, but advertise themselves as qualified medical professionals to patients desperately seeking help.
3. **Risk of epidemic:** India suffers from lack of doctors and clinics, especially in rural areas and in case of epidemics and diseases like tuberculosis. Thus patients are either never diagnosed or diagnosed too late.
4. **Unaffordable healthcare:** The large number of people still living below the poverty line in India. Lack of doctors leads to costly services by private practitioners who exploit the market for their profits.
5. **Antibiotic resistance:** A shortage of healthcare professionals in India is hampering access to lifesaving antibiotics and contributing to a rise in antibiotic resistance. Due to lack of medicine it has hampered the antibiotic course of the patients.

Way forward:

1. **Motivation:** Medical institutions should motivate the upcoming doctors to provide their education and services in rural parts of the country as well as remind them that the profession revolves around saving lives.
2. **Spending:** Rural areas should have access to easy travel and help patients get to hospitals for betterment and cure. If a city is too far, then there should be smaller hospital branches/health centres well equipped to handle emergencies. For this, more spending on healthcare is needed.
3. **More medical institutes:** Government should target to open more medical institutes across the nation. Effort must be made to have at least one institution in every district.
4. **Bridge courses:** Government proposal of bridge course needs to be implemented. It can help in plugging doctor shortage effectively with a proper worked out course.

Shortage of doctors need government efforts especially regarding spending on healthcare. Without sufficient manpower, healthcare continues to suffer. Initiatives like Ayushman Bharat can't be successful with insufficient number of doctors.

Q.8) "Traditional bureaucratic structure and culture have hampered the process of socio-economic development in India." Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how traditional bureaucracy has hampered the process of socio-economic development in India. Suggest some measures.

Conclusion. Way forward.

The bureaucracy is a crucial pillar of the Indian state, and has been given the responsibility for administering the country. It was supposed to participate in the socio-economic development of the nation. Unfortunately, traditional bureaucratic structure and culture in India led to inefficiency, corruption, and red Tapism and is considered to hamper the socioeconomic development agenda.

1. **Corruption:** Bureaucratic structure has been criticized for the strong protection it provided under the constitution Article 311. It has acted as shield for bureaucracy which led to lack of accountability and transparency. This has also been the cause of rising business-political-bureaucratic nexus and consequently wide spread corruption and, hence, hampered the process of socio economic development.
2. **Political interference:** Sometimes there is "unholy" nexus between unscrupulous politicians and officers leading to poor governance. Transfer and location posting being in control of political leaders bent the working based on performance to appease the politician of the day.
3. **Red Tapism:** Red Tapism and unnecessary complex procedures add to the hardship of citizens. It has made doing business in India a difficult task. Development has been hindered by delays in processing, approval of the project.
4. **Grievance redressal:** There is a perceptible lack of commitment in public servants towards redressal of citizens' grievances. Lack of empathy, indifferent attitude towards the public are still present in the bureaucratic structure. This has hampered the process of inclusive development as bureaucracy hasn't been to redress the public grievances completely.
5. **Lack of coordination:** Bureaucracy has been mired by lack of coordination among various services. Interservice rivalry between IAS, IPS and IRS exists with special preference in compensation and powers to IAS. This is a constant source of social tensions while working together.
6. **Rigid hierarchy:** Hierarchy in bureaucracy slows down implantation of policies & decision making. Government servants are rarely held to account and complaints to higher authorities usually go unheeded. Frequent transfer of officers reduces their effectiveness and also dilutes their accountability.

Way forward:

1. **Citizen centric administration:** The 2nd ARC report has pointed out the need to make citizen centric administration as a Priority. The priority need to be shifted to citizens and making administration pro-poor.
2. **Attitude change:** Attitude change through linking service conditions with outcomes and reforming policies to appreciate/reward proactive civil servants is needed.

3. **Focus on Outcomes:** There is a need for a result oriented bureaucracy which focuses on outcomes, is people-centric, participatory responsive and focused on effectiveness and equity rather than merely efficiency.
4. **Bottom-up approach:** Socio-economic development requires bottoms-up approach and therefore sensitization of bureaucrats towards problems faced by people is very important.

The bureaucrats have struggled to change their mind set to the new scenario after independence. The needs of the current administration has grown in complexity and requires specialisation for effective governance. The age-old habit of posting generalists to top positions of administration has not yet changed.

Q.9) Indigenising defence capabilities can help India both economically and strategically. Examine.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the need and significance of indigenising defence capabilities.

Conclusion. Way forward.

India's defence budget is large and is growing very fast. Currently, the country allocates about 1.8% of its GDP to defence spending and imports about 70% of defence equipment. However, the country remains heavily reliant on defence imports, while its own exports are extremely meagre. An indigenous defence industry is vital for India given its security environment and strategic objectives.

Need and significance of indigenising defence capabilities:

1. **Increasing demand:** Due to the rising security threats, India's defence requirements are likely to increase in the future. Thus, making indigenous development of modern defence hardware and technology a top priority for the government is important. With China and Pakistan as adversaries, there is a need to keep our armed forces modernised.
2. **Strategic significance:** Dependence on other countries for defence products, jeopardise India's abilities to negotiate. A successful defence industry provides strategic leverage with other countries, including as a potential supplier to neighbours who may otherwise turn to competitors.
3. **Largest importer:** India is the largest arms importer in the world and spends annually on an average about \$3.6 billion, which is more than the combined imports of both Pakistan and China. Thus it is important to indigenise the defence production, due to reduce high expenditure on defence equipment from outside. The Abdul Kalam Committee had recommended redressing India's import-export ratio.
4. **Economic growth:** Defence sector has the potential to become an engine of economy and drive double digit growth in leading India to \$5 trillion economy. Furthermore, with increase in defence exports, it would reduce the costs of defence acquisitions and can help subsidise a country's defence budget. In Israel's case, exports finance the country's defence research and development (R&D) to a considerable degree.
5. **Employment:** As per government estimates, a reduction in 20-25% in defence related imports could directly create an additional 100,000 to 120,000 highly skilled jobs in India. Defence industry is one of the 25 identified sectors under the Make in India

programme, and is also part of the 10 'Champion Sectors' that will generate significant employment opportunities.

Way forward:

1. **Predictable Requirements:** The armed services must take primary responsibility for articulating their short, medium, and long-term requirements for equipment, taking into consideration technological quality, costs, India's industrial capabilities, and export potential. The Sisodia Committee had recommended involving industry in the acquisition process, including in setting qualitative requirements.
2. **Neutrality:** In a bid to make India's defence public sector more competitive, the Defence Ministry must ensure that the acquisitions process is neutral for the public and private sector. A level playing field between the Indian public and private sectors will accelerate the process of indigenisation by increasing competition.
3. **Partnering for success:** Co-development and co-manufacturing is the way forward to achieve the vision of turning India into a global high value manufacturing destination. Indian industry must be encouraged to adopt best practices for global quality standards in their manufacturing processes to lead to the creation of a gold standard supply chain and defence manufacturing ecosystem in India.
4. **A skilled talent pool:** To be ready for the opportunities of the future, the industry needs to build and train talent to address the growing needs of the market. In addition, the academia and industry needs to forge partnerships to encourage research and technological advancements and create a talent pool that is industry ready.
5. **Robust supply chain:** A strong supply chain is critical for a defence manufacturer looking to optimize costs. With the government's offset policies, procurement policies and regulatory incentives spurring the growth of a domestic defence industry, the SMEs need to play a more active role in developing a robust supply chain.
6. **Infrastructure development:** Lack of adequate infrastructure drives India's logistics costs upwards thus reducing the country's cost competitiveness and efficiency. While the government is investing in this area the pace of development needs to pick up considerably and public-private participation can go a long way in hastening this process.

Thus the indigenisation of defence industry is a necessary and worthwhile national security objective, particularly for a large country like India with an expanding economy, a wide variety of security challenges, and growing international obligations. Efforts should be made to ensure predictable long-term requirements and create a more level playing field between the public and private sectors.

Q.10) Discuss the role and mandate of the International Maritime Organization. Discuss its strategic importance for Indian maritime interests.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the role and mandate of the International Maritime Organization. Discuss the strategic importance of IMO for Indian maritime interests.

Conclusion. Way forward.

International Maritime Organization (IMO) is a specialized agency of the United Nations that is responsible for measures to improve the safety and security of international shipping. It

plays an important role in formulating a regulatory framework for the shipping industry across the world.

Role and mandate of the International Maritime Organization:

1. **Regulatory framework for the shipping industry:** Its main role is to create a regulatory framework for the shipping industry that is fair and effective, universally adopted and universally implemented. It encourage the removal of discriminatory action and unnecessary restrictions by governments engaged in international trade, so as to promote the availability of shipping services to world commerce without discrimination.
2. **Safety and security of international shipping:** The IMO sets standards for the safety and security of international shipping. IMO measures cover all aspects of international shipping including ship design, construction, equipment, manning, operation and disposal to ensure that this vital sector remains safe, environmentally sound, energy efficient and secure.
3. **Goal-Based New Ship Construction Standards:** This means that the IMO also set standards for the ship making. The standards are intended to ensure that full standards conform to the safety goals and the functional requirements established by the IMO.
4. **Investigation of the Maritime Casualties and Incidents:** IMO check and investigate the casualties and the accidents happening in the midwaters or the international waters and also ensure that the conduct of the investigations, analysis and reporting the accidents is in accordance with the globally recognised best practices.
5. **Creating a level playing-field:** An important aim of IMO is to facilitate cooperation among governments on technical matters of all kinds affecting shipping engaged in international trade. It plays an important role to create a level playing-field and prevent compromise on safety, security and environmental performance.
6. **Marine pollution:** One of its key duties is to devise strategies and measures to keep the waterways clean by preventing marine pollution from ships. IMO has announced an ambitious project to decarbonise shipping in order to reduce carbon emissions. It has also mandated that merchant ships should not burn fuel with sulphur content greater than 0.5%.
7. **Piracy and armed robbery against ships:** IMO also work to combat piracy and armed robbery at sea by adopting measures, including those relating to assistance with capacity-building through training of seafarers, port staff and enforcement personnel. It brings the alleged perpetrators to justice, in accordance with international laws.

Importance for Indian maritime interests:

1. **Rule based trade:** There is a need to strengthen the maritime rules-based order to provide a strong foundation for the Indian economy. Today, almost 95% of India's trade by volume and 68% of trade by value are routed via the Indian Ocean. Thus a regulatory framework for the shipping industry facilitated by IMO is must to establish a rule based order.
2. **Tackling Piracy:** Asia's seas offer rich pickings for pirates who steal oil and supplies worth billions of dollars every year. The Malacca, Singapore straits and Indian Ocean serve as global shipping superhighways and are major regions for piracy. Safeguarding these is important for securing India's interests.
3. **Energy security:** The Indian Ocean region serves as one of the busiest commercial as well as primary energy supply lines in the world. However, the energy traffic in the region is vulnerable to various strategic choke points. Nearly 80% of India's crude oil requirement is imported, which are mostly routed through the sea. Thus, it is very important to work with IMO to keep oil routes safe.

4. **India's shipping industry:** Shipping, which accounts for over 90% by volume and about 80% by value of global trade, is a highly regulated industry with a range of legislation promulgated by the IMO. The IMO's policies or conventions have a serious impact on every aspect of shipping including the cost of maritime trade. Thus more presence in organisation through lobbying is must to secure India's maritime interests.
5. **Preventing conflicts:** IMO rules and policies have a significant impact on all the nations. For instance, the IMO's demarcation of "High Risk Areas" when piracy was at its peak has resulted in virtually the entire south-west coast of India being seen as piracy-infested. This has impacted India's maritime interests. The "Enrica Lexie" shooting incident of 2012, off the coast of Kerala was a direct fallout of the demarcation. Thus it is must to ensure that India's maritime interests are protected by more presence in IMO.

IMO is significant for a rule based trade order in the world. So far, India's presence and participation in the IMO has been at the individual level. India should make its presence felt so that its national interests are served. It is time India regained its status as a major maritime power.

Q.11) In light of various controversies, critically examine the role of speaker in Parliamentary Democracy.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the role of Speaker of the Lok Sabha in a Parliamentary democracy and various issues related to it.

Conclusion. Way forward.

India is a parliamentary democracy where the Parliamentary proceedings are headed by the Speaker in the Lok Sabha. A parliamentary democracy is a system of government in which citizens elect representatives to a legislative parliament to make the necessary laws and decisions for the country. In a parliamentary democracy, the Speaker represents the dignity and the freedom of the House and the country's freedom and liberty. But the role of speaker has been criticised for favouring political parties and remaining biased to the party in majority.

Role of Speaker of the Lok Sabha in a Parliamentary democracy:

1. **Ensure smooth proceedings of the house:** The Speaker presides over the meetings of the Lok Sabha and conducts its proceedings. He also presides over the joint sittings of the two Houses of the Parliament. Therefore it enables parliament to successfully carry over the debates and passage of important laws.
2. **Maintain discipline in the Lok Sabha:** The Speaker maintains discipline in the House. If any member disrupts or tries to disrupt the proceedings of the House, the Speaker can warn him or can ask him to leave the House. He can suspend a member from the House whom he finds guilty of violating the discipline and decorum. This ensures the smooth functioning of Lok Sabha.
3. **Fix the Agenda of the House:** The Speaker, in consultation with other members of the business committee of the House and the Prime Minister, fixes the agenda of the meetings of the House. This ensures timely debates and discussion on important issues of the country.

4. **Permission to ask questions:** Each member of the House can put questions to the ministers; the permission of the Speaker is required purpose. This helps the speaker to prevent unnecessary and politically motivated questions while ensuring discussion on the important questions.
5. **Conduct the business of the House:** The Speaker conducts the business of the House. He allows the members to introduce the bills or to move motions. He recognises the members on the floor of the House and gives them time for speaking in the House. He fixes time limit for the debates in the House, puts matters to vote, and announces the results. He can warn the members against the use of unparliamentary language and can order the same to be expunged from the records.
6. **Interpretation of Rules of Procedure:** The business of the House is conducted according to definite and settled rules of procedure. In case of any dispute regarding the rules of the House, the Speaker interprets and applies these rules. The interpretation of rules made by the Speaker is final and cannot be challenged.
7. **Power to adjourn the House:** The Speaker can adjourn the meetings of the House if the quorum of the House is not complete or if the conducting the business of the House is not possible due to a disorderly behaviour of its members. This ensures the presence of members in the parliament; performing his/her duties as mandated by citizens by electing him/her.

Criticism faced by office of the Speaker:

1. **Impartiality:** In a parliamentary democracy office of speaker should be fair and impartial but they are usually elected to the House on a political party's ticket. In Britain, the Speaker is strictly a non-party man. There is a convention that the Speaker has to resign from his party and remain politically neutral. This healthy convention is not fully established in India where the Speaker does not resign from the membership of his party on his election to the speaker office. This makes it more of a political liability on the speaker to favour his party.
2. **Anti-defection law:** In recent times, there are a number of instances where the role of speaker has been criticised for disqualification of MLAs under the anti-defection law and their ruling has been challenged in courts. In two recent cases, prior to dismissal of governments in Uttarakhand and Arunachal Pradesh, the Speakers in both assemblies had helped ruling parties by using their powers to disqualify MLAs under the 10th Schedule.
3. **Discretionary power:** There are various instances where the Rules vest the Speakers with unbridled powers such as in case of declaration of bill as money bill (Lok Sabha Speaker). This discretionary power comes under criticism when the Aadhar bill was introduced in Lok Sabha as Money Bill.
4. **Review of the Speaker's Decisions:** Under the Rules, the Speaker is not answerable to any person in performing the roles assigned to him. Decisions of presiding officers are final and are not open to appeal or subject to review. This is in stark contrast with the American system, where the presiding officer's decisions may be appealed against to a committee. In India, a member of the House may strongly disagree with the determination of the Speaker, but as per the Rules, he does not have any recourse apart from pursuing his interests through parliamentary procedures. In the Kihoto Hollohan case, the SC declared that the speaker is subject to judicial review.
5. **Increased disruptions:** Frequent disruptions reduced the time required for important discussions and compel speakers to allocate less time for discussion. This often questions the impartiality of the speaker as he allegedly provides more time to the ruling party. Also, it is alleged that the speaker took harsh punishment against the disrupting member of opposition compared to the government.

The Speaker plays the crucial role of ensuring that the Parliament carries forward its role of legislation peacefully, maintaining harmony in the Houses of Parliament and taking crucial procedural decisions of the House. The Speaker is considered as the true guardian of the Indian Parliamentary democracy, holding the complete authority of the Lok Sabha. Thus, impartiality of the office is very important to make parliamentary democracy work in true sense.

Q.12) What is Darknet? Discuss its potential dangers and urgent need for a data protection law.

Ans.

Demand of the question

Introduction. What is Darknet?

Body. Discuss potential dangers of Darknet. Mention the need for a data protection law.

Conclusion. Way forward.

Darknet is a computer network with restricted access that is being used chiefly for illegal activities on the web like selling drugs, personal information etc. One of the most famous examples of a dark network was the Silk Road marketplace which was a website used for the buying and selling of a variety of illegal items, including drugs and weapons. A comprehensive Data Protection Act is the need of the hour due to potential dangers. The Centre constituted the BN Srikrishna Committee to identify 'key data protection issues' which suggested a draft data protection Bill.

Potential dangers of Darknet:

- 1. Identity misuse:** There are reports of log-in details of streaming sites like Netflix being sold on the dark web marketplaces for cheap rates. This data is misused for creating fake identities, financial frauds etc. Leaked information has the potential to be mined for deeper data analysis and for creating profiles that could be used for social engineering, phishing and online identity theft, among other practices that thrive on the availability of such data on the Darknet.
- 2. Malware and Ransomware:** Another danger of the dark net is malware and ransomware. Most malware is transmitted over the dark net and then used on public access websites, so being on the darknet can put in danger of coming into contact with malware or ransomware that can cripple a business or steal one's identity.
- 3. Drug smuggling:** The relative impermeability of dark net has made it a major haven for drug dealers who can sell or buy any kind of narcotic substances on the darknet without getting caught. In February 2016, in a study titled 'Cryptopolitik and the Darknet', researchers analysed content over the TOR network. Of the 2,723 websites they could classify by content, 57 % hosted illicit material ranging from drugs and hacking among others.
- 4. Terrorism:** Terrorists use dark net to provide information to fellow terrorists, to recruit and radicalize, to spread propaganda, raise funds, and to coordinate actions and attacks. Terrorists also use the darknet for illegal purchase of explosives and weapons, using virtual currencies like Bitcoin and other crypto-currencies.
- 5. Child pornography:** The Darknet has been used for trafficking and child pornography and other crimes. An international investigation to uncover users of a dark web child pornography website has led to 337 arrests in US.

Need of a data protection law:

- 1. Data theft protection:** Unlike the data protection regulations in place in the European Union and in the U.S., India still lacks a comprehensive legal framework to protect data privacy. Considering the manner in which public data are being stored and used by both the state and private entities, data of individuals is at high risk for being misused in Darknet. For efficient management of data in the age of digitisation, a data protection law is needed.
- 2. Right to privacy:** The Supreme Court (SC) in Justice K.S Puttaswamy vs Union of India case, declared that the right to privacy is an inherent part of the fundamental right under Article 21 of the constitution. Thus, it is the duty of the state to safeguard individual's privacy through legislation.
- 3. Rising cyber-crime:** Public data leaks have been quite common in India from government websites enabling the download of Aadhaar numbers to electoral data rolls being downloaded in bulk, among others. Due to increased digitisation and increased digital complexities, data protection is needed for the hour. Recent rise of crimes like WhatsApp, Pegasus scam demands a data protection law in place.
- 4. Regulating companies:** Large amounts of personal data have been collected by state agencies and private companies and their flow across national boundaries has been a cause for concern. There are many instances that the state and private agencies who are using the personal data are not transparent on the purpose for which the data is being utilised. To curtail the perils of unregulated and arbitrary use of personal data a legislation must be in place.
- 5. Digital India:** With a billion population, India has the second highest internet user base in the world. India has 450 million internet users and expected to increase up to 730 million by 2020. With emphasis on digital India, the government must ensure the safety of citizen's data.

Data protection is a must in the age of digital era. The law should encompass all the aspects- data collection, processing and sharing practices in an integrated manner. The Kerala Police has set up a 'state-of-the-art lab' to intervene and crack down on the rising criminal activities over the Darknet, also known as the underworld of the Internet. The state must prevent and investigate digital crimes, prevent misuse of data and encourage data security through legislation.

Q.13) What is Red Tapism? Discuss its consequences and suggest some measures to reduce it.

Ans.

Demand of the question

Introduction. What is Red Tapism?

Body. Discuss the consequences of Red Tapism and suggest some measures to reduce it.

Conclusion. Way forward.

Red Tapism refers to excessive regulation or rigid conformity to formal rules that is considered redundant and bureaucratic and hinders action or decision-making. In other words, these are burdensome rules, providing no added value. It includes unnecessary paperwork, obtaining licenses, having multiple people or committees approve a decision and various low-level rules that make conducting one's affairs slower, more difficult.

Consequences of Red Tapism:

- 1. Citizen satisfaction:** Red tape indeed negatively affects citizen satisfaction. Citizens remain dissatisfied due to delayed government processing and cost associated with it.

Most of the time citizen's problems remain unresolved due to red Tapism, leading to a sense of loss of trust in the government's process.

2. **Scheme implementation:** Every new governmental scheme gets roadblocks in terms of red Tapism that eventually kills the larger objective by which it was launched. Delayed release of funds, lack of proper monitoring etc. are common associated issues attached to Red Tapism that make policies ineffective.
3. **Corruption:** A World Bank study found that the higher the level of red Tapism, the higher the level of corruption. Bureaucracy invariably breeds corruption and lowers growth by complicating the normal flow of businesses. Paying a bribe to speed up the handling of the procedure is a typical example of Red Tapism associated corruption.
4. **Increased cost of doing business:** Red tape is costly, not just in time and money spent filling out forms but also in terms of reduced productivity and innovation in business. This is particularly burdensome to smaller businesses and may even discourage people from starting up a new business.
5. **Governance:** Due to Red Tapism variable enforcement of contracts and delayed administration lead to delayed justice, especially to the poor. The burden of red tape requirements prevent many to enjoy their rights due to delayed governance and delayed distribution of welfare measures. For example, delayed wage payments under MGNREGA impact timely benefits to poor.

Measures to reduce Red Tapism:

1. **Reforming laws:** Reducing administrative burdens should be a part of making good laws. This objective also contributes to making administrative cultures more responsible and service-oriented. For example, Insolvency and Bankruptcy Code has helped in reducing Red Tapism regarding insolvency of a business unit, enhancing overall business sentiments. Further many redundant laws have been scrapped, making India achieving a 63rd spot in World bank's Ease of doing business.
2. **Involving states:** Governments also need to consider ways in which sub-national levels of government can be incorporated into the administrative simplification and regulatory quality process. Administrative simplification programmes have focused primarily on regulations emanating from the central government. However lower levels of government can be responsible for imposing significant administrative burdens and requirements on businesses and citizens.
3. **Reduce the paperwork:** Computers have already made many of the government services faster. It is a way forward to decrease the red tape. Capacity building in IT and communications is required at all the levels of the government, top to bottom. For example, the government has launched National Investment Promotion and Facilitation Agency known as Invest India that helps investors looking for investment, to reduce red Tapism. Another such initiative is paperless green clearance that will reduce paperwork and is environmentally friendly.
4. **Skill development:** There are officials who are not skilled enough to make government processing faster. It is important to train them properly on the subjects and appoint skilled people.
5. **Incentives:** A lot of government employees at the lower level (Group-C and Group D) are underpaid. They find no incentive to work efficiently. Efforts must be made to honour workers for their good work and punishing for not achieving timely efficiency.

Red Tapism hinders good governance and the country's economic progress. It leads to a culture of corruption and inefficiency. Efforts must be made to make rules and regulations simple with emphasis on reducing delays in government work culture.

Q.14) How deeper cooperation between the United States and India in trade can help India achieve \$5 trillion economic status?

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how deeper cooperation in Indo-US trade can help India achieve \$5 trillion economic status? Various issues in India-US trade.

Conclusion. Way forward.

How deeper cooperation in Indo-US trade can help India achieve \$5 trillion economic status?

1. **Investment:** The potential economic benefits of India's partnerships with the US are significant. India requires \$1 trillion over the next decade to upgrade its infrastructure, for which it needs foreign direct investment. For this US can play an important role. On other hand good ties with India can help US in economic growth which is hampered due to recent US-China tussle.
2. **Trade ties with US allies:** Due to the rapid growth of China, collaborating with the US can help India progress from being a South Asian power to an Asian and eventually global power. The improved relationship with the United States would help India's trade relation with other US allies like Japan.
3. **Countering China:** A partnership with the US will create more balance in a region increasingly dominated by China. The deeper ties with India is an important part of the US's pivot to Asia Policy. With the rise of India, China's hegemony is challenged which is good for both India and US. India can replace China as USA's top importing country.
4. **Multipolarity:** With change in global order, it is important for both US and India to deepen their ties as there is no enemy or friends in these times. Whereas the US can help India to rise as an important power in a multipolar world, it can help the US strategically in Indian Ocean by keeping India as a good friend.
5. **Defence:** The US is critical for India's indigenous defence production and to reduce the country's defence import bill. With transfer of significant defence technology and equipment US can help India to be self-sufficient to tackle future dangers. This will help India strategically and economically by increasing defence exports.

Various issues between India-US relations:

1. **Tariffs:** Bilateral tensions have increased over each side's tariff policies. The US has accused India of relatively high average tariff rates, especially in agriculture. The United States and India are challenging each other's tariff measures in the WTO.
2. **Intellectual Property (IP):** The two sides differ on how to balance IP protection to incentivize innovation and support other policy goals, such as access to medicines. India's IP regime remains a top U.S. concern, and India remains on the "Special 301" Priority Watch List for 2018, based on such concerns as its treatment of patents, infringement rates, and protection of trade secrets.
3. **Relations with Russia:** The US is the all-time rival of Russia. While India is a friend of Russia. Russia has always supported India on an international platform. It helped India to develop its defence capabilities. In 2018, India inked the historic agreement worth with Russia to procure four S-400 surface-to-air missile defence system, the most powerful missile defence system in the world ignoring America's CATSA act. The U.S. threatened India with sanctions over India's decision to buy the S-400 missile defence system from Russia.

4. **Forced Localization:** The United States continues to press India to address its forced localization practices, such as in-country data storage, domestic content, and domestic testing requirements, viewed by the United States as presenting barriers to trade with India. At the same time, India has moved to ease some local sourcing rules for single-brand retailers, which would affect companies such as Apple.
5. **Services:** The United States and India are competitive in certain services industries. A key issue for India is the U.S. temporary visa policies, which affect Indian nationals working in the United States. India is challenging U.S. fees for worker visas in the WTO, and monitoring potential U.S. action to revise the H-1B (specialized worker) visa program.

India and the U.S. should strengthen their relationship on global and regional levels and look for issues of common interest which can provide enormous opportunities for both countries to work closely in reshaping the global political order. Both nations have the potential to grow together benefitting mutual interests and understanding each other better.

Q.15) Critically examine salient features of Medical Termination of Pregnancy (Amendment) Bill, 2020.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss salient features of Medical Termination of Pregnancy (Amendment) Bill, 2020. Discuss its importance and various issues.

Conclusion. Way forward.

The Medical Termination of Pregnancy (Amendment) Bill, 2020 seeks to amend the Medical Termination of Pregnancy Act, 1971. The bill aims to reduce not only unsafe abortions but also ensure that vulnerable women get every right to decide about her pregnancy.

Salient features of Medical Termination of Pregnancy (Amendment) Bill, 2020:

1. **Increased gestation limit:** The bill has enhanced the upper gestation limit from 20 to 24 weeks for special categories of women. It would include vulnerable women including survivors of rape, victims of incest and other vulnerable women (like differently-abled women, minors) etc.
2. **Opinion of professional:** Bill has proposed a requirement of the opinion of one doctor for termination of pregnancy, up to 20 weeks of gestation and introducing the requirement of opinion of two doctors for termination of pregnancy for 20-24 weeks of gestation.
3. **Medical board:** Upper gestation limit will not apply in cases of substantial foetal abnormalities diagnosed by the Medical Board. The composition, functions and other details of the Medical Board to be prescribed subsequently in Rules under the Act.
4. **Identity protection:** Name and other particulars of a woman whose pregnancy has been terminated shall not be revealed except to a person authorised in any law for the time being in force.

Importance of Medical Termination of Pregnancy (Amendment) Bill, 2020:

1. **Reproductive rights:** The Supreme Court has recognised women's right to make reproductive choices and their decision to abort as a dimension of their personal liberty (in *Mrs. X v. Union of India*, 2017) and as falling within the realm of the fundamental

right to privacy (in *K.S. Puttaswamy v. Union of India*, 2017). The bill will strengthen reproductive rights of women.

2. **Sexual abuse:** In case of rape, the woman is weak or underage. Such girls don't even know they are pregnant and fall prey of unsafe abortion practices. It is important to allow abortion of pregnancies due to sexual violence faced by women as they have every right to choose what they want. Medical Termination of Pregnancy (Amendment) Bill, 2020 aims to expand access of women to safe and legal abortion services on therapeutic, humanitarian or social grounds.
3. **Access to safe abortion:** According to a study published in the Lancet Global Health, 15.6 million abortions occurred in India in 2015 of which 78% of these were outside health facilities. Mortality of pregnant women is about 8% due to unsafe abortions. The bill will help women getting access to safe abortion.
4. **Need of change:** The existing MTP Act, 1971, has not kept pace with the changing times, needs and advancements in medical science. More women are now approaching the Courts to seek approval for abortion over 20 weeks, a provision that has been made available in a number of countries around the world.
5. **Judicial burden:** The proposed amendments will definitely reduce the burden on the judiciary, especially given the plethora of cases seeking permission for abortion beyond the prescribed duration of 20 weeks.

Issues in the Medical Termination of Pregnancy (Amendment) Bill, 2020:

1. **Lack of autonomy:** At all stages of the pregnancy, the healthcare providers, rather than the women seeking abortion, have the final say on whether the abortion can be carried out. This is unlike the abortion laws in 67 countries, including Iceland, France, Canada, where a woman can get an abortion 'on request' with or without a specific gestational limit. Thus there is a lack of autonomy in making the decision to terminate their pregnancy.
2. **Burden on women:** To get a pregnancy terminated solely based on her will, the woman may be compelled to lie or plead with the doctor. Pregnant women have to bear additional mental stress, as well as the financial burden of getting a doctor's approval.
3. **Limited option:** Due to advancements in science, foetal abnormalities can even be detected even after 24 weeks. This means that even if a substantial foetal abnormality is detected and the mother doesn't want to bear life-long responsibilities and the mental agony associated with it, the law gives her no recourse. Bill doesn't allow abortion on request at any point after the pregnancy.
4. **Access to doctor:** The 24-week modification will help a niche group of women who discover foetal abnormalities. Such women have access to doctors. But there are concerns about those who have no access to doctors. Millions of rural women have do not have access to a safe and transparent route to abortion and doctor recommendation. Thus they would suffer as the bill makes the doctor recommendation final without exception.
5. **Lack of information:** The major reason for unwanted pregnancies is inadequate information about the contraception available. Rural Indian women are far behind when it comes to awareness of methods like IUDs and injectable. Thus, after pregnancy, an unsafe abortion is often the way out for them. Availability of improved contraceptives and easy access to friendly and competent staff is a big gap which needs to be filled.

India is changing rapidly and people's needs and their lives are no longer similar to what was in the 70s when this Act was passed. It is must to ensure that all norms and standardised protocols in clinical practice facilitate safe abortions across the country. This

is imperative if we need to ensure that every one who needs it, can legally access safe abortions.

Q.16) Discuss India's policy on refugees. How do you think India should react to the Rohingya crisis?

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss India's policy on refugees. Mention how India should tackle the Rohingya crisis?

Conclusion. Way forward.

According to UNHCR, a refugee is someone who has been forced to flee his or her country because of persecution, war or violence. In India, the provisions of the Constitution mainly govern the law relating to citizenship or nationality. The Constitution of India provides for single citizenship for the entire country. While law and order is a State subject under the Indian Constitution, international relations and international borders are under the exclusive purview of the Union government. Thus, all policies governing refugees are laid down by the Union government.

India's policy on refugees:

- 1. Principle of non-refoulement:** While India is not a signatory to the UN Refugee Convention, 1951, India has followed the principle of non-refoulement whenever helpless asylum seekers have knocked on its doors.
- 2. Internal matter:** India has not signed the 1967 Protocol and has always maintained it is its internal matter. The Convention requires the signatory nation to accord a minimum standard of hospitality and housing towards those it accepts as refugees. The porous nature of borders in South Asia, continuous demographic changes, poverty, resource crunch, and internal political discontent made it impossible for India to accede to the Protocol.
- 3. Ad hoc refugee policy:** India's refugee policy can be termed as ad hoc refugee policy that allows New Delhi to differentiate between different groups in its treatment toward refugees and put other interests over humanitarian concerns.
- 4. Open borders policy:** India has a history of welcoming refugees as a means of projecting its relative strength and security as the economic powerhouse of South Asia. In the past, the country maintained relatively open borders. The two most notable groups in this category are Tibetans (leader- Dalai Lama) and Sri Lankans, collectively numbering over 150,000.
- 5. Legal tenets:** Under various laws and provisions, India provides citizenship to many under special circumstances. These are NRC Assam, Citizenship amendment act, 1955 and 2019. There are some laws that govern refugees, including the Registration of Foreigners Act, 1939; Foreigners Act, 1946, and the Passport Act, 1967. Recently, Rohingya crisis and CAA, 2019 has been criticised for not including Muslims of some countries to provide early citizenship benefits.

How should India tackle the Rohingya crisis?

- 1. Resettlement:** Resettlement efforts must be made with the Myanmar from which Rohingya are moving out. India has extended 7,000 tonne of relief assistance for Rohingya refugees in Bangladesh. This was followed by a \$25-million development

programme to help Myanmar build the necessary infrastructure to rehabilitate Rohingya in the troubled Rakhine State.

2. **Working with neighbours:** India must keep continuing work with other neighbouring countries like Bangladesh so that the refugee influx is better managed and does not cause a permanent strain on the resources. For instance, under Operation Insaniyat, India has provided aid to Bangladesh. This aid is given to improve the situation of Rohingya in Cox's Bazar region of Bangladesh.
3. **Balancing human rights:** The Supreme Court has urged the Indian administration to strike a balance between human rights and national security interests but not stayed the administration's deportation plans. Thus, India should ensure that human rights are not violated and must provide health, food and temporary shelter to Rohingya.
4. **Identity cards:** As Myanmar-India have strong cultural ties, India should take proactive steps in solving the situation. India may introduce identity cards for refugees so as to allow them temporary relief and enhancing India's security.

The absence of a framework on refugees in India makes it prone to inconsistent and ad-hoc reactions to refugee crises. In order to frame a robust refugee policy, it is essential to examine the cause that gives rise to this migration like unstable political environments, insurgencies by non-state actors etc.

Q.17) What is a quasi-judicial body? Explain with the help of concrete examples.

Ans.

Demand of the question

Introduction. What is a quasi-judicial body?

Body. Discuss various features of Quasi-judicial bodies with examples. Mention advantages and issues of Quasi-Judicial Bodies in India.

Conclusion. Way forward.

A quasi-judicial body is a body which has powers and procedures resembling those of a court of law or judge such as an arbitrator or tribunal board. It is obliged to objectively determine facts and draw conclusions from them so as to provide the basis of an official action. Their powers are usually limited to a very specific area of expertise and authority, such as land use and zoning, financial markets, public standards etc. National Human Rights Commission, National Commission for Women, National Commission for Minorities, etc. are examples of quasi-judicial bodies.

Features of Quasi-judicial bodies:

1. **Similar to law imposing bodies:** Quasi-Judicial bodies are institutes which have power similar to law imposing bodies but these are not courts. The courts have the power to supervise over all types of disputes but the quasi-judicial bodies are the ones with the powers of imposing law on administrative agencies.
2. **Specific purpose:** These are created for specific purpose. For example,
 - a) **National river water dispute tribunal:** National river water dispute tribunal has the power to grant the award to share the water among disputing states.
 - b) **Central administrative tribunal:** This is constituted to look into the matter related to service dispute of civil servants. For example determination of age of civil servant in case of dispute etc.
 - c) **National Human right commission:** National Human Rights Commission is a quasi-judicial body which looks into cases of specifically Human Rights violation. It

was established under the Human right act 1993. They can investigate human right abuse and can recommend the steps to be taken.

- d) **Election commission:** It is constitutional bodies that mainly function for the conduct, control, supervise the election. It also performs judicial function e.g. determination of disqualification of Member of legislator or examining the violation of model code of conduct.
 - e) **Other regulatory bodies:** SEBI, TRAI, IRDA etc. are some other quasi-judicial regulatory bodies. Their main function is to ensure transparency in the market economy. They also take judicial measures e.g. punishing in case of violation of rules through fines etc.
3. **Nature of bodies:** They can be statutory, regulatory or constitutional in nature. For example, the National Human Rights Commission is a statutory body, while Finance Commission is a constitutional body created under Article 280. Whereas SEBI is a regulatory body which performs judicial functions too.
 4. **Expertise:** These bodies need not only be headed by a judge rather experts too can be included having sectoral knowledge like Finance, Economics, and Law etc.
 5. **Judicial review:** Verdict of these bodies can be challenged in a court of law which is the final authority.

Advantages of Quasi-Judicial Bodies:

1. **Low Cost:** In the conventional judicial process, a large section of the population hesitate from approaching the Courts, thus defeating the purpose of justice. Tribunals on the other hand, have an overall low cost which encourages people to seek redressal for their grievances.
2. **Simplicity:** Tribunals and other such bodies do not follow any lengthy or complex procedure for submitting application or evidence etc.
3. **Expert Knowledge:** A tribunal comprises experts, who can easily understand the technicalities of a case, the necessary actions involved and their consequences.
4. **Reduction of Workload:** Tribunals while taking up specific matters, majorly help by sharing the massive workload of the Judiciary. In a country which has 2.81 crore pending cases, it is important to take steps to decrease the burden of the Judiciary.

Issues in Quasi-Judicial Bodies:

1. **Funding:** Public funding is not available for tribunals so one side may be at a disadvantage if the parties can afford a lawyer to represent them, making the process unfair.
2. **False cases:** While lower costs of Tribunals encourage people to fight for justice, they also invite a lot of ill-founded claims.
3. **Burden:** Though the concept and working of Tribunals and Quasi-Judicial Bodies is still new to our country, they mostly remain understaffed and burdened with the ever increasing number of cases, because of which they find it difficult to perform their functions smoothly. Many times the decision given by a Tribunal is challenged in a High Court by the losing party, which defies the purpose of Tribunals.

As a whole, a quasi-judicial body is a good concept as it reduces the burden on Judiciary but there are some loopholes there in this system also. Govt should choose individuals with both technical and legal knowledge and providing them with power to take decisions will be a booster to this organ of Government.

Q.18) Discuss various challenges in the implementation of Uniform Civil Code in India.

Ans.

Demand of the question

Introduction. What is the Uniform Civil Code?

Body. Discuss various challenges in the implementation of Uniform Civil Code in India.

Conclusion. Way forward.

Uniform civil code (UCC) is the proposal to replace the personal laws with a common law for property, marriage, divorce, inheritance and succession for all religions. Article 44 of Indian constitution mentions UCC and leaves it on the state for its implementation.

Challenges in the implementation of Uniform Civil Code:

1. **Diverse personal laws:** The customary practices among communities vary a lot. The vast diversity of the personal laws, along with the devotion to which they are adhered to, makes uniformity of any sort very difficult to achieve. It is very tough to find a common ground between different communities.
2. **False perceptions:** Many people still do not know what the uniform civil code really means. There are still false perceptions surrounding it, especially among the minorities, which make a rational debate on its implementation quite difficult.
3. **Fundamental rights violation:** There is an apprehension that the uniform civil code may be in conflict with the fundamental rights of freedom of conscience of free profession, practice and propagation of religions (Article 26) and the freedom to manage religious affairs (Article 25).
4. **Opposition from the religious groups:** This is one of the most trivial and obvious hurdles to bring up the UCC. The fundamentalism which is deep rooted in many of the religions in India doesn't seem to vanish even in the 21st century.
5. **Political willpower:** The government may lack the will to face the consequences of abolishing the personal laws of the major religions and to convince the people of justice and reform they want to bring to the society in order to grow better as a nation.
6. **Encroachment on religious freedom:** Many communities, particularly minority communities perceive Uniform Civil Code as an encroachment on their rights to religious freedom. They fear that a common code will neglect their traditions and impose rules which will be mainly dictated and influenced by the majority religious communities.
7. **Sensitive task:** Such a code, in its true spirit, must be brought about by borrowing freely from different personal laws, making gradual changes in each, issuing judicial pronouncements ensuring gender equality, and adopting expansive interpretations on marriage, maintenance, adoption, and succession by acknowledging the benefits that one community secures from the others. This task will be very demanding time and human resource wise.

Way forward:

1. **Awareness:** Major awareness efforts are needed to reform current personal law reforms which should first be initiated by the communities themselves.
2. **Gradual approach:** The social transformation from diverse civil code to uniformity shall be gradual and cannot happen in a day. Therefore, the government must adopt a piecemeal approach.

3. Law Commission's recommendations: The commission stresses on initiatives to reconcile the country's diversity with universal arguments on human rights. It recommended codification of all personal laws:

- So that the prejudices and stereotypes in all religions can be brought to light.
- They can eventually be tested against the anvil of the fundamental rights in the constitution.
- It could help arrive at certain universal principles.
- These may facilitate prioritising equality instead of the imposition of UCC.

The better course would be to bring about small reforms, correcting some inherent irrationality in some of the personal laws, and make them suitable for modern times. The focus should also be on removing disparities between different religions. This might lay the foundation of implementing a UCC at a later date.

Q.19) The traditional Indian systems of medicine like Ayurveda, Homeopathy and Unani can provide for a sustainable and more affordable healthcare system. Elaborate.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how traditional Indian systems of medicine like Ayurveda, Homeopathy and Unani can provide a sustainable and more affordable healthcare system.

Conclusion. Way forward.

Traditional medicine is considered as a major healthcare provider around the globe particularly in rural and remote areas. Indian traditional medicinal systems like Ayurveda, Siddha and Unani have a very rich history of their effectiveness. Mainstreaming of such medicine is important for the people. Evidence based incorporation of Indian traditional medicine in clinical practice will help to provide quality healthcare to all.

How will strengthening of traditional medicine will help in the achievement of sustainable and more affordable healthcare system?

- 1. Accessibility:** Despite tremendous advances the healthcare system lag behind in accessibility, availability and affordability in many parts of India. Integration of Ayurvedic and other Indian traditional medicine will be helpful in promoting the health of the people who are unable to access modern medicine.
- 2. Affordability:** Variety, flexibility, easy availability, religious/social acceptance, relative low side effect and cost are the key factors for the need for revival of traditional medicine. The revival also provides us the opportunity to integrate such medicine in primary healthcare to facilitate the people's health.
- 3. Doctor's availability:** At present, an acute shortage of allopathic doctors exists in India. In India, the ratio of the doctor-patient is 1:1700. The ratio will come to 1:800 if the AYUSH practitioners are added. Thus, AYUSH practitioners can help in plugging gaps due to shortage of doctors.
- 4. Prevent common diseases:** Strengthening traditional medicine will help in prevention of common diseases due to their less side effects and long term benefits. A study in rural areas of West Bengal shows that folk medicine plays a key role to prevent common diseases like small injuries, skin disease, fever, dehydration, diabetes, high BP, liver disease etc. in a better way.

- 5. Rural reach:** In rural areas, indigenous medicine plays a significant role in primary healthcare for prevention/management of common ailments. If quacks are trained they can be a vehicle of providing low cost healthcare especially in remote areas.

Indian traditional medicine like Ayurveda and others have a sound scientific background of effectiveness and also acknowledged by recent research. Although efforts are needed to overcome barriers like irrational use, quality control and standardisation issues etc. Overall, adequate knowledge about the system, high quality clinical trial, proper information about such drugs and their effectiveness among common people required towards the promotion of such medicine.

Q.20) Hunger and Poverty are the biggest challenges for good governance in India still today. Evaluate how far Indian governments have progressed in dealing with these humongous problems. Suggest measures for improvement.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how far Indian governments have progressed in dealing with Hunger and Poverty in India.

Conclusion. Way forward.

India is one of the fastest growing economies. Despite this, poverty and hunger in India are very high. About 20-35% of children suffer from severe undernutrition in the majority of Indian states. According to India's 2011 government data, 65 million people live in areas that lack basic facilities, which puts them under the risk of various diseases alongside hunger, which is often life-threatening.

Progress made:

1. Poverty:

- a) **Reduction in absolute poverty:** According to a UNDP report, India lifted 271 million people out of poverty between 2006 and 2016, recording the fastest reductions in the multidimensional poverty index values.
- b) **Reduced poverty rate:** According to the world bank, India has achieved annual growth exceeding 7% over the last 15 years that halved its poverty rate since the 1990s. The World Bank's estimate of the number of people living on less than \$1.90 per day on a purchasing power parity basis, found that poverty declined from 21.6% to an estimated 13.4% between 2011 and 2015.
- c) **Removed extreme poverty:** As of 2018, India is no longer home to the highest number of extremely poor people in the world. According to the Brookings Institution, extreme poverty continues to fall in India.

2. Hunger:

- a) **Reduced IMR:** According to India Spend, India has reduced its infant mortality rate (IMR) by 42% over 11 years, from 57 in 2006 to 33 per 1,000 live births in 2017. In 2017, India's rural areas had an IMR of 37 and urban areas 23.
- b) **Reduced MMR:** Further, India has registered a 26.9% reduction in Maternal Mortality Ratio (MMR) since 2013, according to the Sample Registration System Bulletin-2016.
- c) **Increased food security:** Government has launched various efforts like the National food security act, that has led to increased food security. According to the 2018

Global Nutrition Report (GNR 2018), there is increased food security and access has led to fewer malnourished and anaemic Indians in 2017 than in the preceding decade.

- d) **Reduced stunting:** India has shown improvement in reducing child stunting but with 46.6 million stunted children, according to the GNR 2018 report, the country is home to over 30.9% of all stunted children under five--the highest in the world.

Challenge of hunger and poverty in India still remains:

A. Hunger:

1. The latest Global Hunger Index (GHI) 2019 has ranked India a lowly 102 among the 117 countries slipped from 95th position in 2010. On the whole, the 2019 GHI report has found that the number of hungry people has risen from 785 million in 2015 to 822 million.
2. Malnutrition amongst children in India is projected to remain high, despite all the progress made in food security. Almost one in three Indian children under five years will still be malnourished by 2022 going by current trends.
3. Access to food has not increased. Food-grain yields have risen 33% over the last two decades, but are still only half of 2030 target yields. The consumer's access to rice, wheat and other cereals has not increased at the same rate, due to population growth, inequality, food wastage and losses, and exports.
4. Despite positive trends and patterns in improving food security, the prevalence of hunger in India remains high, with many people, especially women and children, suffering from micronutrient deficiency.

B. Poverty:

1. It is estimated 23.6% of Indian population, or about 276 million people, is living below \$1.25 per day on purchasing power parity.
2. An analysis of the consumption expenditure numbers reported by the National Statistical Office (NSO) suggests that rural poverty rose nearly 4% between 2011-12 and 2017-18 to 30%.
3. According to Oxfam, India's top 1% of the population now holds 73% of the wealth while 670 million citizens, comprising the country's poorest half, saw their wealth rise by just 1%.
4. Given the higher weight of the rural population, the estimated overall poverty rate went up nearly a percentage point to 23 percent in 2017-18. The rise implies that 30 million people fell below India's official poverty line and joined the ranks of the poor over the past six years.

Way forward:

1. **Zero hunger:** Achieving zero hunger requires agriculture and food systems to become more efficient, sustainable, climate-smart and nutrition-sensitive. It is important to look at the future of food production to achieve the zero hunger goal.
2. **Human capital:** Human resource capacity building is the key as is access to education and health services and empowering the poor through partnerships.
3. **Women empowerment:** In particular, programmes must focus on women and girls. Longstanding discrimination against women and girls, which affects their access to food, sanitation, care, and health services, is a key driver of poor nutrition outcomes in India.
4. **Local government involvement:** Outcomes can be improved through capacity enhancement and transparency at the local government level, and by targeting

MGNREGA works towards creating productivity and income-enhancing community assets or, in special cases, assets on participants' lands.

5. **Focusing most vulnerable:** Policies must pay special attention to groups who are the most vulnerable to the harmful consequences of poor food access: infants, children aged under five, school-aged children, adolescent girls, and women.

Government has made various efforts like the National Food Security Act, Mid-day meal scheme for tackling hunger and poverty alleviation programs like MGNREGA. Although significant improvements have been made, there is still much needed to be done in front of hunger and poverty. It is high time, the policy makers should consider providing for the right to be free from hunger as a fundamental right.

Q.21) Discuss various reasons for the high incidence of domestic violence in India. Suggest some measures to prevent it.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various reasons for the high incidence of domestic violence in India.

Conclusion. Way forward.

In the recent times, violence against women has increased in India. According to National Family Health Survey (NFHS-3), 37% of married women face domestic violence. Domestic violence is a violation of the fundamental right to live with dignity and of the right to equality and equal protection of the law guaranteed under the Indian Constitution and demand proper legal actions.

Various reasons for the high incidence of domestic violence in India:

1. **Patriarchal attitude:** The major factor behind the violent behaviour of men is the patriarchal attitude which perceives woman as an object and gives her a low status in the society. Violence arises from patriarchal notions of ownership over women's bodies, labour, reproductive rights and level of autonomy.
2. **Dowry system:** There are strong links between domestic violence and dowry. In a 2005 study published in World Development, a negative correlation between dowry amount and inter-domestic violence was found, indicating dangers of domestic violence, if falling short on dowry expectations. The dowry prohibition act has limited impact on violence related to dowry, and many cases of bride being burned for dowry is reported.
3. **Social culture:** The Indian culture glorifies the image of a woman who is tolerant and receptive, and is another reason which prevents women from walking out of the violent relationship. Further, religion perpetuates a culture where a woman is supposed to be submissive to her husband. For example, 'pativrata nari' is considered ideal in Indian society.
4. **Gender inequality:** The research carried out in different parts of the world indicates that any social structure which treats women as fundamentally of less value than men is conducive to violence against women. India ranks 112th rank in the World Economic Forum's Global Gender Gap Index 2019-2020 indicating wide gender gap. As men consider themselves superior, resorting to violence boosts and nurtures their egoistic superiority complex.
5. **Lack of support:** Absence of viable alternatives of survival and lack of proper support group also forces a woman to continue tolerating violent behaviour. For instance,

uneducated women find no support from her maternal family and therefore, continuously suffer due to economic dependence.

6. **Lack of awareness:** Lack of awareness of their own rights and a general social belief in women's subordination perpetuates a low self-image in women and her inferior status. Women are taught that marriage is the ultimate goal she has to achieve. All this conditioning gradually becomes the nature of an Indian woman.
7. **Other reasons:** Poverty, alcoholism, unemployment etc. also contribute to violent behaviour. These factors put women at greater risk of violence because of the stresses created by financial hardship and relationship crises.

Various government measures to prevent domestic violence:

1. **Criminal offence:** In 1983, domestic violence was recognised as a specific criminal offence by the introduction of section 498-A into the Indian Penal Code. This section deals with cruelty by a husband or his family towards a married woman.
2. **Dowry Prohibition Act, 1961:** This Act prohibits the giving or taking of dowry. This is to ensure a change in the culture of dowry in India and associated violence.
3. **Protection of Women from Domestic Violence Act, 2005:** Protection of Women from Domestic Violence Act, 2005 ensures the reporting of cases of domestic violence against women to a Protection Officer. The Act was to make justice available to women who may not always want criminal proceedings and would want to keep the option of reconciliation alive.

Measures to prevent domestic violence:

1. **Gender sensitization:** A gender sensitization of all stakeholders is an important component of effective responses to domestic violence. It should form part of the curriculum of training of the police, judiciary, bureaucracy, policymakers, social workers, counsellors, and other service providers.
2. **Disseminate Information:** Many women are unable to escape domestic violence because they are unaware of available legal services and agencies working in this area. Therefore, disseminating information on the range of services available is essential.
3. **Raise Public Awareness:** It is important to generate public awareness on domestic violence as a violation of human rights. Educational strategies aimed at changing attitudes, beliefs and biases of law enforcers, the judiciary and citizens need to be developed and implemented.
4. **Healthy relationship skills:** Social-emotional learning programs for youth and healthy relationship programs for couples should be promoted.
5. **Economic empowerment:** So many women stay in destructive relationships because they will be homeless, with their children, if they leave. Divorce financial distributions need to be much fairer. Policy changes that tend to help women financially like raising the minimum wage, universal basic income can make a difference.

Article 21 of our constitution ensures the right to live with dignity for women. Protection of Women from Domestic Violence Act, 2005 has not helped much in preventing domestic violence. A comprehensive effort is required and societal and government level.

Q.22) Despite the law in place to prevent manual scavenging, it still persists in India. Discuss various reasons for it.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various Reasons for manual scavenging in India.

Conclusion. Way forward.

Manual scavenging has been officially prohibited by the Anti-Manual Scavenging Act in 1993. Unfortunately, manual scavenging still persists in India. The 2011 Census of India found 7.9 lakh cases of manual scavenging across India. According to a 2016 report of Rajya Sabha, 22,327 lose their lives every year due to manual scavenging. It not only violates fundamental rights to live with dignity, but also poses a great threat to the life of the individual.

Reasons for manual scavenging in India:

1. **Presence of insanitary toilets:** Majority of toilets used in India especially in rural areas are insanitary types of toilets that require cleaning by hand. There are approximately 26 million insanitary toilets in India. Moreover, in rural areas, there are no strategies put forward to convert dry toilets.
2. **Social norms:** Many communities still regard the inclusion of a sanitary toilet as ritual and physical pollution of the house.
3. **Lack of incomplete rehabilitation:** Most states with scavenging problem lack means of fully rehabilitating the sanitation workers. Also, lack of schemes for livelihood of manual scavengers contribute to its existence.
4. **Lack of liberation strategies:** There are no proper strategies put forward to liberate manual scavengers psychologically. This pushes those in the practice to get even deeper and deeper into the practice of manual scavenging.
5. **Unemployment:** Unemployment rate is high in India. India's unemployment rate is 7.7% according to data released by Centre for Monitoring Indian Economy (CMIE). Availability of cheap labour promotes manual labour as a job in India.
6. **Law implementation:** First anti-manual scavenging Act was passed in 1993. In 2013, Manual Scavengers and Their Rehabilitation Act was passed. These provisions are not implemented effectively. Only when fatal cases come to light, laws are referred to and mostly settled with negotiated compensation with no action on the culprit.
7. **Caste based division of labour:** Manual scavengers are usually from caste groups customarily relegated to the bottom of the caste hierarchy and confined to livelihood tasks viewed as deplorable or deemed too menial by higher caste groups.

Way forward:

1. **Involving all stakeholders:** In order to tackle the problem, it would be necessary to involve all the major stakeholders involved. The inclusion of the community around the areas that are most affected into the program is important.
2. **Creating Awareness:** It is important to educate the community on the devastating effects caused by dry toilets. Government officials should inform on the legal implications that are related to engaging in scavenging and having dry toilets.
3. **Investing in human waste management:** The government should invest in human waste management infrastructure. Also, the government should provide the sanitation workers with quality protective gears.

- 4. Fund Management:** The funds that are released by the Total Sanitation Campaign should be put in good use. In the past, the funds were allocated on time but were not utilized. Such funds should be reallocated. The officials managing the fund should then strategize on how the funds will be given to the community.
- 5. Rehabilitation and Reintegration:** Creation of more employment is one of the most important rehabilitation processes. The jobs created would act as a means to assimilate manual scavengers into the community.
- 6. Enforcement of law:** The government should enforce the law strictly that prohibits scavenging. Governmental institutions are reluctant to act and go to great lengths in denying the existence of manual scavengers. People subjecting others into such inhuman activities should be arrested.
- 7. Education:** Children whose families are involved in scavenging experience a lot of social discrimination that affect their education. Implementation of schemes that would help these children finish their studies would be an effective strategy in ending manual scavenging.

In order to tackle the problem initiatives such as Namma toilets to end open defecation are important. Manual scavenging is regarded as inhuman and a violation of the law. This practice is prevalent and needs collaborative efforts of government, civil society and every individual to end it.

Q.23) Discuss the need and significance of Pesticides Management Bill, 2020.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the need and significance of Pesticides Management Bill, 2020.

Conclusion. Way forward.

India is the 4th largest producer of pesticides in the world. At present regulation of pesticides in India is done under the Insecticides Act 1968. The Pesticides Management Bill, 2020 aims to regulate the business of pesticides that is currently being regulated by the 1968 rules, which require amendment.

Need for a fresh law:

- 1. Need of change:** The current state of regulation of pesticides in India, is under Insecticides Act 1968. It needs to change to keep up with modern pest management science. Therefore, it is high time that new legislation is brought in.
- 2. Health risks:** Due to acute pesticide poisoning farmers face hospitalisations and deaths. It is not just human beings but wildlife and livestock that are poisoned routinely by toxic pesticides as numerous reports indicate. Thus, a check is needed on fake pesticides.
- 3. Fake and spurious agrochemicals:** Spurious agrochemicals harm crop, soil fertility and the environment. They are responsible for the losses of not just farmers but also producers of genuine agrochemicals and the government, which loses revenue from the sales of the counterfeit versions of the real farm inputs. Thus, there is a need for new regulation.

Significance of Pesticides Management Bill, 2020:

1. **Empower farmers:** The bill will empower farmers to get all the information regarding pesticides including their strengths and weaknesses and the risk and alternatives involved, in all languages. This would prevent over-usage by farmers.
2. **Compensation:** The bill includes the provision of compensating the farmers in case of losses due to the use of spurious or low quality of pesticides. Thus, it enables farmer's rights to get compensation in case of fake products.
3. **Transparency:** Bill makes provision to ensure transparency by keeping details of the seller. Any person who wants to import, manufacture, or export pesticides would have to register under the new bill and provide all details regarding expected performance, efficacy, safety, usage instructions, and infrastructure available to stock that pesticide.
4. **Reduced misuse:** Bill makes provision which would help farmers to know potential harms of pesticide. The information will also include details on the pesticide's potential effects on the environment.
5. **Prevent misleading marketing:** The bill also includes provisions to regulate pesticides-related advertisements to check misleading claims by industries and manufacturers.

The Pesticide management bill is needed for the hour, to promote safe and effective pesticides. The bill is needed to protect the interest of the farmers, so that they get safe and effective pesticides. It would safeguard farmers from being cheated by spurious pesticides.

Q.24) Involving women in the economy is not a social cause, rather it is a source of efficiency gains and economic growth. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how increased women participation in the economy can help economic growth.

Conclusion. Way forward.

Gender equality is a prerequisite for any country's progress. According to Global Gender Gap report, the participation of women in the labour force is among the lowest in the world. According to the International Labour Organisation's (ILO) Report, 2019, 1.3 billion women were in work in 2018 as compared to 2 billion men– a less than 2% improvement in the last 27 years. The report highlighted that women are paid 20% lower than men, as a global average. This situation necessitates a deeper understanding as lesser female labour force participation, hinders India's progress.

Benefits of increased women participation in the economy:

1. **Realizing women's rights:** Women's economic empowerment enhances women's ability to participate equally in existing markets. It increases their access and control over productive resources, their own lives and bodies and increases their voice through meaningful participation in economic decision-making at all levels.
2. **Better Workforce:** Increasing female labour force participation rates creates an opportunity for countries to increase the size of their workforce and achieve additional economic growth.
3. **Political stability:** The World Bank has suggested that improved gender parity increases political stability and reduces the likelihood of violent conflict. This helps in enhancing economic policies and measures.
4. **Business efficiency:** Companies greatly benefit from increasing employment and leadership opportunities for women, which is shown to increase organizational

effectiveness and growth. For example, many women leader like Indra Nooyi, Kiran Mazumdar Shaw etc. have shown their might in business.

5. **Ripple effects:** Investing in girls and women creates a ripple effect that yields multiple benefits. Increasing women's control over household income improves their children's access to school and healthcare, boosts women-run businesses and improves their status within families, communities, and entire countries.

Steps taken by Government to encourage women participation in workforce:

Legal efforts	Government schemes
Equal Remuneration Act, 1973: It provides for payment of equal remuneration to men and women workers for the same work of similar nature without any discrimination.	Support to Training and Employment Programme for Women (STEP): The scheme aims to provide skills that give employability to women and to provide competencies and skill that enable women to become self-employed/entrepreneurs.
Minimum Wages Act, 1948: The wages fixed by the appropriate Government are equally applicable to both male and female workers and the Act does not discriminate on the basis of gender.	Scheme for Working Women Hostel: The scheme aims to promote availability of safe and conveniently located accommodation for working women, with daycare facility for children, at places where employment opportunities for women exist.
Unorganised Workers' Social Security Act 2008: The act seeks to ensure social security to the workers including women in the unorganised sector.	Mahila E-Haat: It is a direct online marketing platform leveraging technology for supporting women entrepreneurs/SHGs/NGOs for showcasing their products/services.
Maternity Benefit (Amendment) Act, 2017: It provides for enhancement in paid maternity leave from 12 weeks to 26 weeks and provisions for mandatory crèche facility in the establishments having 50 or more employees.	Rajiv Gandhi National Crèche Scheme for Children of Working Mothers: It seeks to provide day care facilities for children (0-6 years) of working mothers.
The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013: It seeks to protect women against sexual harassment at all workplaces both in public and private sector, whether organised or unorganised.	Indira Gandhi Matritva Sahyog Yojana (IGMSY) Scheme: It provides cash incentives to pregnant and nursing mothers to partly compensate wage loss both prior to and after delivery.
Advisory on Factories Act: The government has issued an advisory to the States under the Factories Act, 1948 for permitting women workers in the night shifts with adequate safety measures.	Various other schemes: The government has also prioritized women in many schemes such as the MUDRA scheme, STAND UP India, MGNREGA etc. to boost women employment.

Way forward:

1. **Financial awareness:** Increasing women's economic independence through improving financial literacy, access to financial services and assisting women to develop their employment prospects is important.
2. **Child-care subsidies:** Child-care subsidies should be provided to free up mothers' time to enter the labour force which would have significant implications in increasing female employment. Child-care subsidies can also have positive spillover effects on the

education of young girls for they no longer have to be left behind to take care of their younger siblings.

3. **Education:** Education, upskilling and reskilling over the life course, especially to keep pace with rapid technological and digital transformations affecting jobs are critical for women's and girl's health and wellbeing, as well as their income-generation opportunities and participation in the formal labour market.
4. **Employment Quotas:** Gender-based employment quotas can play an important role to put more women in visible positions and possibly change social norms around women and work.
5. **Gender diversity in private-sector organisations:** Private sector companies should focus on human resources policies and practices to promote gender diversity. There should be specific company measures to recruit, retain, promote and develop women. Companies should also take measures to tackle unconscious biases amongst both men and women workers.

Women continue to face many barriers to enter the labour market and to access decent work. Article 16 provides equality of opportunity for all citizens in matters relating to employment. Thus, the goal must be not merely to increase female labour force participation, but to reduce overall mindset and gender gap.

Q.25) It is said that India has been a 'hot zone' for the emergence of new zoonotic (animal-derived) pathogens for over a decade. In light of this, discuss the need of strengthening healthcare infrastructure to handle any risk of epidemics in India.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the issues and need of strengthening healthcare infrastructure to handle any risk of epidemics in India.

Conclusion. Way forward.

India, being a tropical nation, faces a high risk of epidemics. According to the Global Health Security Index 2019, most Asian countries, including India are facing significant risks and are unprepared for outbreaks of major infectious diseases. The recent epidemics of Nipah virus and acute encephalitis syndrome call attention to the important changes that need to be made in the country's public health infrastructure to prevent any situation of future epidemic.

Need of strengthening healthcare infrastructure:

1. **Rapid urbanisation:** The rapid urbanisation has raised new challenges to sanitation and healthcare. Given its urban congestion, the slum clusters around the cities and poor waste disposal system, India is at high risk of epidemics.
2. **Socio-economic factors:** There are demographic and socio-economic factors that put India at strong risk for communicable diseases, including its large population and changes in agricultural practices that introduce zoonotic pathogens like swine flu, Zika etc.
3. **Geography of India:** Sub-tropical climate provides a ground for germination of diseases. Due to a cumulative effect of poverty, population load and climatic factors India's population is seriously susceptible to diseases.
4. **Less number of hospitals:** Penetration of healthcare infrastructure is much lower than that of other countries and than the global average. The bed density in the country is

0.7 per 1,000 population, far below the global average of 2.6 and WHO benchmark of 3.5. There are only 23,582 government hospitals, according to the National Health Profile 2018.

5. **Poor Rural healthcare:** More than 70% of India's population lives in rural areas and there are only 25,650 primary health centres to cater to their needs. According to health information only 31.5% of hospitals in the total are situated in rural areas.
6. **Shortage of staff:** India faces a shortage of about 6 lakhs doctors, one million nurses, and a large number of paramedical staff.

Measures to improve healthcare infrastructure in India:

1. **Improving strong surveillance:** The first step for improving defence against outbreaks is strengthening surveillance mechanisms. The early detection must be focused on surveillance and monitoring.
2. **Investing in research and development (R&D):** The management of an infectious disease outbreak is greatly dependent on vaccine development. The efforts must be made for rapid pooling of resources and financial assistance for R&D in vaccination of emerging threats of epidemics.
3. **Collaborative effort:** Central and state health agencies must act in tandem. The media, too, must help in increasing awareness without triggering panic.
4. **Multi-sectoral coordination:** Adequate public health systems and multi-sectoral coordination at early, local stage play an important role in containing diseases that could lead to national and global spread like SARS and Ebola.
5. **Working with international agencies:** National governments and international health agencies should work together to adopt urgent measures towards building the resilience of public health ecosystems in preventing and combating infectious diseases.

The solution to combating infectious disease outbreaks lies in sustained, collaborative and institutionalised global efforts. States have a clear obligation to define their responsibilities and enhance their contributions to make the country safer.

Q.26) Critically examine the role of media as a watchdog in a democracy.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the role of media as a watchdog in a democracy and various challenges for the same.

Conclusion. Way forward.

Media constitutes the 4th pillar of democracy. It plays an important role in keeping democracy alive and thriving. The role of the media is vital as a watchdog for uncovering errors and wrongdoings in the democracy. The Press Freedom Index, released by Reporters without Borders in 2019, ranked India 140 out of 180 countries. This reflects less freedom to media in the country impacting its role as watchdog.

Role of media as a watchdog in a democracy:

1. **Reporting:** Media reporting on public affairs and investigations into wrongdoing in the administration of public affairs is a must for a healthy democracy. This includes exposing frauds or corruption cases that personally benefit politicians.
2. **Audit:** Media plays an important role in auditing government policies and spending. An unbiased media is important for transparent reporting.

3. **Awareness:** Media is important to educate people on issues that are of utmost importance for society. E.g. Increasing number of rape cases are threat to society and reflect state failure to stop it. Media help in generating awareness about these social issues.
4. **Accountability:** Media ensures accountability of the government by exposing the bad state of democracy. By playing its watchdog role, the media help bring about reforms and in the long term, assist in creating a culture of transparency and government accountability.
5. **Platform for debate:** An election cannot be deemed democratic unless the public is fully able to participate. As such, the media are vital in ensuring that there is a transparent platform for debate and participation of the representatives in various national debates and discussion which allow citizens to choose accordingly.
6. **Bridge:** The media is a bridge between the citizens and the government. It help ciitizen's voice to reach government and help in highlighting various issues in the society.
7. **Informal opposition:** Media also acts as an informal opposition, especially in case of an opposition less in numbers in the legislature. It criticise and debate on various government policies and schemes.

Various challenges:

1. **Censorship:** The political leaders encourage censorship of media. Various efforts are made to control and contain media through stringent norms and regulations.
2. **Sedition law:** Section 124a of IPC under which sedition is punishable by life imprisonment endanger the freedom of journalists. This lead to fear among journalists to work freely,
3. **Corruption:** Paid news, advertorials and fake news are threat to free and unbiased media. All this leads to favouritism and hinders unbiased reporting.
4. **Political influence:** Corporate and political power has overwhelmed large sections of the media, both print and visual, which lead to vested interests and destroy freedom.

Way forward:

1. **Legislation:** Although India has the Press Council of India and specific regulations, the country needs more detailed law regarding the media to protect not only the freedom of expression and speech but also journalists' safety.
2. **Strengthening justice system:** Strengthening the courts, the police, and the justice system, and the rule of law is important to provide adequate protection for journalists.
3. **Better regulation:** Efforts must be made to enable regulations that would lower the barriers to media ownership and reduce concentration of media ownership.
4. **Independent agencies:** There is a need to establish independent press councils, media watch groups, Ombudsmen, and other media self-regulatory bodies autonomous from the government.
5. **Incentivise:** Government must Institute awards and other forms of recognition for excellence in watchdog reporting.

India is the biggest democracy in the world and the press and media play an important role in keeping the democracy thriving. Media should be neutral in airing views, as it is a vital link between government and Indian citizens. Media is thus necessary for smooth functioning of democracy.

Q.27) Despite constitutional mandate the inter-state council has not come of age. Discuss.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various reasons for the non-effective functioning of the Inter-State Council.

Conclusion. Way forward.

Inter-State Council (ISC) is a constitutional body as provided by Article 263 of the Constitution of India to deal with federal issues. Its mandate is to inquire and advise on interstate disputes and to provide recommendations for better policy coordination. Although the council was established for promotion of cooperation and coordination, it has been ineffective.

Reasons of non-effective functioning of Inter-State Council:

1. **Underutilisation:** Underutilization of the council is one of the major problems. Despite repeated assertions by different Commissions, the ISC has held only 10 meetings in the last 22 years of its existence and made tardy progress in addressing inter-State disputes.
2. **Advisory in nature:** It is merely an advisory body with no bindings on either the centre or the state. Thus, often its recommendations are ignored by the government at the centre as well as the states.
3. **Lack of expertise:** It lacks technical and management experts along with the autonomy that is required for effective functioning.
4. **Not participatory:** There is no presence/engagement of the civil society in the council which makes it less participatory and cooperative.
5. **Not permanent body:** The Inter-state council is not a permanent constitutional body for coordination between the states and Central government. Rather, the President can establish it at any time if it appears to him that the public interests would be served by the establishment of such a council.

Way forward:

1. **Regular meeting:** It is important that the council meets regularly and within a fixed time frame so as to effectively address the problems/matters pertinent to the prevalent times. Punchhi commission had recommended strengthening and activating the ISC and said that ISC must meet at least thrice a year.
2. **More authority:** Suitable amendments must be made to Article 263 so as to give more power and authority to the council rather than merely being an advisory body.
3. **Adequate manpower:** The council must be staffed by technical and management experts so as to carry out its functions more effectively.
4. **Civil society engagement:** The council should also engage the civil society in its functioning so as to become truly participative.
5. **Making it permanent:** ISC must be made a permanent body which was one of the important recommendations of the Sarkaria Commission.

The Inter-state council mandate was inter-State coordination on issues such as river water disputes, problems pertaining to the location, funding and execution of mega projects, ecosystems management, development of tourism etc. The ISC has not been able to achieve

much progress on these fronts. Thus, effective measures are needed to strengthen ISC in order to make it able to fulfil its mandate.

Q.28) Discuss various threats and challenges to cyber-security in India. What initiatives are being taken by the government to enhance cyber-security in India?

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various threats and challenges to cyber-security in India.

Conclusion. Way forward.

The number of people having access to the internet In India is increasing day by day. Despite the untapped potential, India already is the 2nd largest online market worldwide. Although the advancement of technology and the internet has brought with it all related benefits but has also led to an increase in the cybercrime affecting people globally. The crime like the Pegasus snooping scandal, Wannacry attack has shown vulnerability of India to cyber-crime threats.

Various threats and challenges to cyber-security in India:

1. **Cyber terrorism:** It is premeditated, politically motivated attack against information, computer systems, computer programs, and data which results in violence.
2. **Digital Data Threat:** Growing online transactions have generated bigger incentives for cybercriminals. Besides, establishments looking to mine data (customer information, results of product surveys, and generic market information), they also create intellectual property that is in itself an attractive target.
3. **Cyber warfare:** It involves the actions by a nation-state or international organization to attack and attempt to damage another nation's computers or information networks.
4. **Cyber Infrastructure Concerns:** Most equipment and technology systems are vulnerable to cyber threats just like any other connected system. Although the government has set up National Critical Information Infrastructure Protection Centre (NCIIPC), it is yet to identify and implement measures to protect critical information infrastructure.
5. **Lack of specialists:** Globally, India ranks 2nd in terms of the number of Internet users after China (Internet World Stats, 2017). However, India has a negligible base of cyber-security specialists, when compared to internet user base.
6. **Lack of robust law enforcement mechanisms:** India's approach to cyber security has so far been ad hoc and unsystematic. Despite a number of agencies, policies and initiatives, their implementation has been far from satisfactory.
7. **Lack of Coordination:** Due to the existence of too many agencies with overlapping functions in the field of cyber security, coordination between these agencies is poor.

Initiatives are being taken by the government to enhance cyber-security in India:

1. **Information Act, 2000:** The Information Act, 2000 (amended in 2008) is the primary law for dealing with cybercrime and digital commerce in India.
2. **National Cyber Security Policy, 2013:** The policy provides the vision and strategic direction to protect the national cyberspace.
3. **The CERT-In (Cyber Emergency Response Team - India):** CERT-In has been operational since 2004. It is the national nodal agency for responding to computer security incidents as and when they occur.

4. **Indian Cyber Crime Coordination Centre (I4C):** The Union Government has decided to set up I4C. It will be apex coordination centre to deal with cybercrimes.
5. **Cyber Swachhta Kendra:** Launched in early 2017, the Cyber Swachhta Kendra provides a platform for users to analyse and clean their systems of various viruses, bots/ malware, Trojans, etc.
6. **Cyber Surakshit Bharat:** Ministry of Electronics and Information Technology, launched the Cyber Surakshit Bharat initiative to spread awareness about cybercrime and building capacity for safety measures for Chief Information Security Officers (CISOs) and frontline IT staff across all government departments.
7. **The Cyber Warrior Police Force:** In 2018, the government announced its plans to introduce CWPFF. It is proposed to be raised on lines of the Central Armed Police Force (CAPF).
8. **Cyber-Crime Prevention against Women & Children' Scheme:** Implemented by the Ministry of Home Affairs, the scheme aims to prevent and reduce cyber crimes against women and children.

Way Forward:

1. **Building capabilities:** There is an urgent need to build capabilities and capacity for application, equipment and infrastructure testing.
2. **Human resource:** Immediate attention has to be given to human resource development which would increase the number of experts who can effectively manage the cyber security of the country.
3. **R&D:** Investments should be made on R&D to develop more innovative technologies to address increasing cyber security threats.
4. **Policy and Governance:** It is important to bring a robust policy and effectively implement the same. Further, duties and responsibilities should be defined clearly for smooth functioning and better coordination among departments and stakeholders.
5. **Awareness:** A periodic awareness campaign by the government and big private organizations should be conducted to aware people about cyber security threats.
6. **Strengthening Private Partnership:** It is important to strengthen the public-private partnership on cyber security.

Cyber-security is needed in the present era of increasing connectivity. Although the government has taken many proactive steps, much needed to be done to enhance the country's cyber-security. It is important to bring a robust policy and effectively implement the same.

Q.29) Critically examine the impact of tagging of India as a developed nation by United States Trade Representative (USTR).

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the impact of tagging of India as a developed nation by United States Trade Representative (USTR).

Conclusion. Way forward.

Recently, the U.S. removed more than a dozen countries, including India, from its list of countries that are classified as developing and tagged them as developed economies, thus

stripping them of various trade benefits. The move would have a significant impact on India.

Impact of tagging of India as a developed nation by United States:

- 1. Impact on subsidy:** A developing nation tag means a country will get a certain advantage in terms of subsidies and tariff than a developed nation. India will be removed from such advantages, which would impact its subsidy efforts.
- 2. Implementation of trade initiatives:** The developing countries get a longer time to implement global initiatives and more flexibility in adopting measures to boost international trade. For example, a developing nation like India can provide larger input subsidies and MSP as compared to developed nations. India might have to implement these measures earlier.
- 3. Countervailing duties:** The preferential treatment with respect to Countervailing Duties (CVD) investigations falls under the US' Generalized System of Preferences (GSP) scheme. India is the largest beneficiary nation under the GSP. India no longer in the list of developing countries allows the USA to hold a CVD investigation.
- 4. Tariff war:** The growth effects of a tariff war could rise further if countries that are stripped of their developing economy status decide to retaliate by imposing tariffs on goods that they import from the U.S.
- 5. Cost of goods:** It will increase the overall tax burden on Indian goods entering the USA, thus making it costlier than before.
- 6. Overall trade:** With an impact India's overall outbound trade with the US, specific exports from India in a diverse set of sectors such as jewellery, leather, pharmaceuticals, chemicals and agricultural products may face higher costs and competition.

Recently, India offered to scale back tariffs on American dairy and other products that are imported into India. Rather than tagging India as a developed nation, efforts must be made to enhance bilateral relations. Protectionism would not benefit any country.

Q.30) Discuss the shift of India's foreign policy towards Pakistan in the light of recent attacks.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the recent shift of India's foreign policy towards Pakistan.

Conclusion. Way forward.

India's foreign policy towards Pakistan since independence has been of more tolerance and restraint. India has always followed the policy of talk and dialogue despite various attacks and wars on its territory emanating from Pakistan. India always followed Panchsheel principle, when it comes to dealing with its neighbours. Unfortunately, neither dialogue nor its efforts have worked due to continuous support to terrorism by Pakistan. In recent times, there is a significant shift in India's foreign policy towards Pakistan.

Recent shift of India's foreign policy towards Pakistan:

- 1. Confrontation:** India's stance to negotiations is shifting towards a confrontation approach from one of repeat dialogue with less action. Post-Balakot, India has shunned the attitude of non-confrontation.

2. **Zero toleration for terrorism:** India has adopted more of zero tolerance attitude to terrorism emanating from Pakistan. By sending 12 Mirage 2000 jets of the Indian Air Force across the Line of Control and bomb Jaish-e-Mohammed biggest training camp at Balakot, inside Pakistan, India has shown a never-seen-before resolve. Strategic restraint has shifted to strategic strike.
3. **Global isolation:** India has made every effort to make Pakistan isolated at the global arena. It has reached FATF to list Pakistan as a terror finance country.
4. **Global reach out:** India has left no stone unturned to reach out to international community to deface the Pakistan support to terrorism. Two days after the Pulwama terror attack, the Ministry of External Affairs briefed the envoys of 25 major countries, including the P5 as well as Japan, Germany, South Korea and Australia, and convinced them about Pakistan's hand in the attack. A demarche to Pakistan preceded this meeting.
5. **More aggressive stance:** The stance used this time is more aggressive. The stance of taking moral stands– peace over war has not been able to convince India on Pakistan's loss efforts against terror.
6. **No negotiation attitude:** Despite not having a law as the US does on not negotiating hostage situations, India has told the world that it effectively will not negotiate. When Wing Commander Abhinandan was captured by Pakistan, despite being offered to negotiate his return, India flatly refused to negotiate.

India's change in foreign policy towards Pakistan is based on limited confrontation with no compromise on security approach. A state of low intensity conflict exists between India and Pakistan in the disputed region of Kashmir. The Indian and Pakistani relationship is complex and works at many levels. The recent efforts like Kartarpur corridor is much needed initiative if two countries have to move forward with an effort to work closely to tackle terrorism.

Q.31) What are issues related to urban local bodies in India? Suggest measures to strengthen urban local bodies in India.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various issues related to urban local bodies in India. Mention measures to strengthen urban local bodies in India.

Conclusion. Way forward.

Indian cities are expanding rapidly. With growing urban population, city infrastructure such as water supply, sewerage, solid waste management are under pressure and require appropriate government efforts. There is a need to strengthen urban local bodies to deal with rising pressure on urban governance.

Various issues related to urban local bodies in India:

1. **Financial condition:** The first and most serious problem facing the urban local bodies is the acute scarcity of finance. City municipalities do not collect enough taxes. The Economic Survey of 2018 pointed out municipalities do not realise the full potential of property tax.
2. **Excessive State Control:** There is also strict control exercised by the state government over urban bodies. This proves to be more of a curse than a boon, because, instead of

providing guidance and support through the control mechanism, the control turns out to be negative, restricting the functioning of these bodies.

3. **Irregular Elections:** Elections to urban bodies have suffered constant postponement for indefinite lengths of time. In some States, elections to urban local bodies have not been held for years, defeating the goal of decentralised governance.
4. **Poor governance:** The largest reason for the poor condition of India's cities is the failure of municipal governance. There is a lack of planning and governance at the urban local body level.
5. **Lack of management capacity:** Indian municipalities do not have the management capacity to either plan economic activity or execute it. The system of recruitment fails to bring in the best men. Several vacancies are not filled for years and transfers are effected at the free will of the senior bureaucrats and the government.
6. **Corruption:** In these bodies corruption, favouritism and nepotism are rampant. In the case of most of the bodies, the state government is empowered to take disciplinary action and the urban body has very little control over its personnel.
7. **Urban planning:** Urban planning is done at the state government level and municipalities have little or no role in it. There is no direct responsibility for the consequences of planning as long as the municipality completes the plan. Poor planning, poor accountability, and poor governance have led to disasters.
8. **Lack of coordination:** Poor coordination among centre, state, and various departments at local level lead to poor implementation of urban policies. Inability to coordinate leads to administrative inefficiency and thus poor urban governance.

Measures to strengthen urban local bodies in India:

1. **Greater autonomy:** The urban local bodies should be given greater autonomy. India needs to follow a devolved model that empowers urban local bodies. Municipalities should be more autonomous in their functioning, so that they can deliver quality service.
2. **Governance Reforms:** Governance reform are needed as catalyst for change. The Government may consider the adoption of a common categorisation of urban bodies across the country so as to assist a systematic planning process and devolution of funds. All areas having population more than 10 lakh should be defined metropolitan areas.
3. **Timely elections and recruitment:** For strengthening ULBs, a minimum level of staffing should be provided in metropolitan areas. Elections to ULBs should not be, generally, delayed beyond six months.
4. **Encouraging public-private partnership:** Successful PPP programs should be formulated at both state and city levels to fund city development. Role of the state should be to create an enabling environment with an aim to expand and deepen private sector investments in infrastructure.
5. **Planning:** Government needs to coordinate at various levels with regard to implementation of various programmes. The urban local bodies should prioritise the development programmes. Any mega project envisaged needs to be developed taking into account the views of all the stakeholders.
6. **Holistic approach:** It is important to integrate various urban development and related programs at local, state and national levels to develop sustainable city or metropolitan regions. Urban institutions should be strengthened and roles of different organisations should be fixed.

Urban local government institutions are constituted for the maintenance and planned development of urban areas. The objective is to ensure that suitable levels of infrastructure

and services are available to the citizens. In many parts of India, the quality of life in urban areas is miserable and the citizens lead a difficult life. To overcome this problem, a series of reforms need to be initiated by the Indian government to strengthen local-level governance.

Q.32) What are the salient features of the Assisted Reproductive Technology Regulation Bill, 2020? Discuss its significance.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss salient features of the Assisted Reproductive Technology Regulation Bill, 2020. Significance of Assisted Reproductive Technology Regulation Bill, 2020.

Conclusion. Way forward.

Assisted Reproductive Technology (ART) is a contraceptive technology that helps couples who are unable to conceive naturally to bear children with the aid of technology. In recent times, the ART market has grown. To regulate this practice and in light of increasing commercialisation ART Bill, 2020 is introduced in parliament.

Salient features of the Assisted Reproductive Technology Regulation Bill, 2020:

- 1. Mandatory Testing:** The bill makes provision for pre-genetic implantation testing that will allow doctors to test embryos for any possible abnormal chromosomes before they are transferred to the uterus. This is to avoid any genetic diseases in the population born through these technologies.
- 2. Code of conduct:** A National Board will be formulated, which will lay down a code of conduct to be observed by those operating ART clinics. The Board will also formulate minimum standards for laboratory and diagnostic equipment and practices to be followed by human resources employed by clinics and ART banks.
- 3. Regulatory Boards at State Level:** The States and Union Territories will have to form State Boards and State authorities within three months of the notification of the proposed legislation. The State Board shall have the responsibility to follow the policies and plans laid by the National Board for clinics and Banks in the State.
- 4. Database:** A national registry and registration authority, which will maintain a database to assist the national Board to perform its functions.
- 5. Stringent Punishment:** The Bill proposes for a stringent punishment for those practising sex selection, sale of human embryos or gametes, running agencies and rackets for such unlawful practices.

Significance of Assisted Reproductive Technology Regulation Bill, 2020:

- 1. Regulation:** The major benefit of the bill would be that it will regulate the Assisted Reproductive Technology services in the country. According to a registry maintained by the Indian Council of Medical Research, there are 1,269 ART clinics in India that need regulation.
- 2. Safe ART:** The bill makes provisions for safe and ethical practice of assisted reproductive technology services in the country through proper testing.
- 3. Confidentiality:** The Bill will ensure confidentiality of intending couples and protect the rights of the child born through ART. Consequently, infertile couples will be more ensured/confident of the ethical practices in ARTs.
- 4. Prevent exploitation:** A market projection (by Fortune Business Insights) said the size of the ART market is expected to reach \$45 billion by 2026. Among Asian countries, India's ART market is pegged at third position. Undoubtedly, this also led to a plethora

of legal, social and ethical issues. The bill is important to protect the affected women and children from exploitation.

5. **Reproductive rights:** The bill along with the surrogacy bill would safeguard the reproductive rights of women. The bill will strengthen reproductive rights of women by maintaining privacy of women (fundamental right to privacy as in K.S. Puttaswamy) and preventing their over-exploitation.

Assisted reproductive technology has grown by leaps and bounds in the last few years. India has one of the highest growths in the ART centers and the number of ART cycles performed every year. However, in spite of so much activity in India, there is yet no standardisation of protocols and reporting is still very inadequate. Thus ART bill is necessary.

Q.33) Discuss various reasons for prevalence of corruption in implementation of welfare programmes. Suggest some measures to reduce it.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. What are various reasons for corruption in implementation of welfare programmes? Mention measures to reduce this corruption.

Conclusion. Way forward.

Welfare schemes are the programmes that are meant to improve lives and provide support to vulnerable people in the society. Indian Government, at all levels, announces welfare schemes from time to time like Antyodaya Anna Yojana, Bharat Nirman, etc. Although these programmes have helped to alleviate poverty and benefit many, most of the programmes are mired with leakages and corruption.

Various reasons for corruption in implementation of welfare programmes:

1. **Lack of scrutiny:** Government schemes are meant to implement at local level. Lack of effective scrutiny through timely inspections, audits lead to unaccountability and gross mismanagement of funds.
2. **Lack of awareness:** Due to illiteracy and unawareness of various government schemes and its provisions lead to corruption. False beneficiaries, fake documents are used to misuse funds meant for the benefit of schemes.
3. **Weak enforcement of laws:** Weak enforcement of laws for punishing corrupt has led to a sense of fearlessness among corrupts. India's anti-corruption law has failed to punish the corrupt and instil fears regarding corruption.
4. **Political inaction:** Most of the time, officials involved in corruption have political backing. Many times politicians or their family members are involved in corruption. Thus, any effort to punish the culprit goes in vain due to political interference.
5. **Centralised administration:** The welfare bureaucracy is deeply centralised that comes at the cost of building a local government system that is genuinely responsive to citizen needs.
6. **Judicial delays:** Judiciary in India is overburdened. A case of corruption drags for years. In the meantime, the culprit is able to destroy the evidence against him and influence the judiciary.
7. **Weak local governance:** Local governance is must for effective implementation of welfare programmes. Due to absence of strong Panchayats and lack of effective local scrutiny the programmes are used as an opportunity for corruption.

Way forward:

1. **Tight scrutiny:** The only way to fix India's broken welfare state is by curbing discretion and tightening scrutiny. Timely inspections are must to prevent any leakages.
2. **Universal basic income:** The 2017 economic survey has argued that by moving resources directly to beneficiary accounts, income transfers have the potential of cutting down bureaucratic layers. This could curb discretion, simplify monitoring and therefore reduce corruption.
3. **Technology:** A technology-based reforms are needed to streamline the administration of fund transfers by reducing administrative layers.
4. **Deeper reforms:** Transparency with deeper reforms like enhancing human resources, technical skills and building citizen awareness will have the positive effects on transparency
5. **Strengthening local governments:** Efforts must be made to strengthen capacities of local administrators and Panchayats to deliver the scheme well.

Corruption in welfare programmes leads to fiscal waste and hinder the development of society. Schemes like MGNREGA, PDS, mid-day meals etc. had been mired with controversies of corruption. A proper scrutiny with stringent punishments are needed.

Q.34) Discuss various features of India's Neighbourhood First' policy.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss salient features of India's Neighbourhood First' policy.

Conclusion. Way forward.

India shares its geographical boundary with Afghanistan, Bhutan, Bangladesh, Maldives, Pakistan, Nepal and Sri Lanka. India's policy towards its immediate neighbourhood is based on efforts to build peace and cooperation in South Asia. Its neighbourhood first policy, accords primacy to nations in periphery with focus on encouraging trade, connectivity and people-to-people contact.

Salient features of India's Neighbourhood First' policy:

1. **Immediate priority to neighbours:** Priority is to improve the relations with immediate neighbours as peace and tranquillity in South Asia is essential for realizing development agenda. The neighbourhood first policy of actively focuses on improving ties with India's immediate neighbours.
2. **Dialogue:** It focuses on vigorous regional diplomacy by engaging with neighbouring nations and building political connectivity through dialogue. First initiative in this direction was extending an invitation to all heads of government of SAARC countries for the oath taking ceremony of the Prime minister in 2014.
3. **Resolving bilateral issues:** Focus is on resolving bilateral issues through mutual agreement. For instance, India and Bangladesh have signed a pact to operationalise the historic Land Boundary Agreement (LBA).
4. **Connectivity:** India has entered into MoU with members of the South Asian Association for Regional Cooperation (SAARC). These agreements ensures a free flow of resources, energy, goods, labour, and information across borders.
5. **Economic Cooperation:** It focuses on enhancing trade ties with neighbours. India has participated and invested in SAARC as a vehicle for development in the region. One

such example is the Bangladesh-Bhutan-India-Nepal (BBIN) grouping for energy development i.e. motor vehicles, waterpower management and inter-grid connectivity.

6. **Technical Cooperation:** The policy put emphasis on technical cooperation. Recently a dedicated SAARC satellite was developed to share the fruits of the technology like tele-medicine, e-learning etc. with the people across South Asia.
7. **Disaster management:** India's offer cooperation on disaster response, resource management, weather forecasting and communication and also capabilities and expertise in disaster management for all South Asian citizens. For example, India provided immense assistance to its neighbour Nepal in the aftermath of the 2016 earthquake.
8. **Military and defence cooperation:** India is also focusing on deepening security in the region through military cooperation. Various exercises like Surya Kiran with Nepal, Sampriti with Bangladesh aim to strengthen defence relations. Also, India has committed to play a greater role in capacity building of the Afghan National Army by providing training to them.

Various challenges:

1. **Relation with Pakistan:** Relation with Pakistan, remains India's biggest diplomatic and security challenge. India's challenge is to manage relationships with a state which, openly, uses terror as an instrument of state policy and has fractured, multiple power centres.
2. **Unstable Afghanistan:** Afghanistan remains a challenge too. Fragile within and facing state-sponsored external threat from Pakistan, a possible state collapse would spawn jihadist terrorism in all directions from which India is unlikely to remain immune. Indian diplomacy is active in international efforts to stabilise the country.
3. **China:** China is another big challenge that is increasing its presence around India. The relationship is marked with suspicion over China's policy towards Pakistan, including the construction of the Gwadar port. Also, China-Pakistan economic corridor running through POK.
4. **Anti-Indian sentiments:** Anti-Indian sentiments are getting rooted in the minds of people of region due to perceived notion of India's big brother attitude and its economic dependence to India. For instance, the recent step of Demonetization impacted many countries like Nepal, Bangladesh, Bhutan, Sri Lanka, and Myanmar which use the Indian currency as a parallel currency within their borders.

Way forward:

1. **Transportation:** As the largest country, India should be leading to establish cross-border transport and communication links.
2. **Strengthening Markets:** India should work with its neighbour in strengthening their markets and its own infrastructure to its neighbours.
3. **Dialogue:** India must ensure its neighbour of continuous support for their development. Efforts must be made to strengthen Indian exports in the region.
4. **Soft power:** India's soft power and common culture provide an opportunity for India to strengthen its cultural roots further in the region.

India's immediate neighbourhood directly impacts it geopolitically, geo-strategically and geo-economically because of its vicinity. Thus, working with them is important for India to rise as a superpower. Emphasis must be on sustainable and inclusive development.

Q.35) Corporate social responsibility makes companies more profitable and sustainable. Analyse.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how Corporate social responsibility makes companies more profitable and sustainable?

Conclusion. Way forward.

According to UNIDO, Corporate Social Responsibility is a concept whereby companies integrate social and environmental concerns in their business operations. In India, Companies Act, 2013 has made CSR contribution mandatory. According to the concept of CSR, companies have to spend a percentage of their profits towards the welfare of the community they are operating around.

How corporate social responsibility makes companies more profitable and sustainable?

1. **Reputation:** CSR helps in growing the reputation and promote respect of a company which can result in higher sales. It leads to better relationships among stakeholders that enhances performance of organisations.
2. **Investment:** CSR creates positive sentiment in the minds of investors and the public at large. An ethically-based corporate governance leads to more trust in the organisation and its work culture leading to more investors' interest.
3. **Competitive advantages:** A properly implemented CSR concept can bring along a variety of competitive advantages, such as enhanced access to capital and markets, operational cost savings, improved productivity and quality, efficient human resource base, better decision making and risk management processes.
4. **Employees' motivation:** CSR leads to higher retention and better morale of the employees. When employees are convinced of the values of the organisation they are working for, they hold the organisation in high esteem. Perceived social uprightness and moral values can win the employees more than any other incentive plans.
5. **Better Decision Making:** Respect for ethics will force a management to take various economic, social and ethical aspects into consideration while making the decisions. Decision making is better as the decisions are in the interest of the public, employees and company's own long term good.
6. **Protection of Society:** CSR helps in protecting society in a better way than even the legal system of the country. CSR spent on the reduction of carbon emissions & curbing global warming is helpful for the sustainability of the environment.
7. **Tax benefits:** Tax benefit is given on the amount spent as CSR which helps to increase the profit of the company.
8. **Increase customer base:** CSR increases the presence of a company. For instance, when villages are adopted by the companies & developmental works like providing educational, health benefits etc. are provided, the people come to know about the company which ultimately helps the company increase its customer base.
9. **Sustainable development:** Different activities like cleaning, establishing seed banks, schools, solid waste management units, electrification under CSR help to increase the standard of living of the people & their income which increases demands & leads to growth of the companies indirectly.

Thus a small contribution towards CSR works makes large gains for the company. It is often said actions speak louder than words. Thus CSR activities improve profitability and sustainability of the companies. The need is to encourage CSR & use it with the aim of welfare not just for financial profit by the company.

Q.36) Analyse the role and effectiveness of FATF (Financial Action Task Force) in combating the financing of terrorism.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the role and effectiveness of FATF in combating the financing of terrorism.

Conclusion. Way forward.

The Financial Action Task Force (FATF) is an inter-governmental body which was established to promote effective implementation of legal and regulatory measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system. It is a policy-making body which works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas.

Role of FATF in combating terrorism financing:

1. **Set standards:** The FATF is the global standard-setter for combating money laundering, terrorist financing and the financing of proliferation of weapons of mass destruction (WMD).
2. **Protection:** The role of the FATF is to protect the integrity of the financial system, and enhance its transparency, which contribute towards global security.
3. **Studies:** The FATF conducts and publishes expert operational and strategic studies on risks, trends, and methods. It also develops and sets global policies, standards, best practice, and guidance.
4. **Evaluation:** It evaluates FATF member countries and oversees in close cooperation with the FATF-style regional bodies.
5. **Coordination:** The FATF has developed a series of recommendations that are recognised as the international standard. They form the basis for a co-ordinated response to these threats to the integrity of the financial system and help ensure a level playing field.
6. **Monitoring:** The FATF monitors the progress of its members in implementing necessary measures, reviews money laundering and terrorist financing techniques and counter-measures.
7. **Identify vulnerabilities:** In collaboration with other international stakeholders, the FATF works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse.

Effectiveness of FATF:

1. **Pressure:** The effect of the FATF Blacklist has been significant, and has proven more important in international efforts against money laundering than has the FATF Recommendations. While, under international law, the FATF Blacklist carried with it no formal sanction, in reality, a jurisdiction placed on the FATF Blacklist often found itself under intense financial pressure.
2. **Awareness:** Over a period of time the FATF has gained credibility as a professional organisation, which has succeeded in not only increasing awareness regarding the

challenges being faced by the global financial system, but also human security issues like terrorism.

3. **Money laundering:** The FATF has been at the forefront of international efforts to fight money laundering and combating finance to terrorism. Its efforts have been in conjunction with relevant resolutions of the United Nations Security Council (UNSC).
4. **Investigation:** Terrorist financing investigation and prosecution ensures that terrorist financing offences and activities are investigated and persons who finance terrorism are prosecuted and subject to effective, proportionate and dissuasive sanctions.
5. **Terrorist financing:** FATF makes sure funds are not easily accessible by terror organizations that are causing these crimes against humanity. FATF has become one of the major factors for countries like Pakistan being pressured to take requisite action against terrorists operating from its soil.
6. **Corruption:** FATF has helped to fight against corruption by 'grey-listing' countries that do not meet Recommended Criteria and this helps to cripple economies and states that are aiding terrorist and corrupt organizations.
7. **Cooperation:** Building international cooperation is vital for success, of course. The FATF has intensified co-operation with bodies such as the United Nations, the IMF, the World Bank and the G-20 Finance Ministers and Central Bank Governors.

Thus FATF played an import role of acting as a standard body to put pressure on terrorism funding and money laundering. Any blacklisting of a country cuts the lifeline of terrorist activity supported by the state through blockage of funds. Thus FATF act as a pressure group helping in combating terrorism and money laundering.

Q.37) Discuss the role of National Commission for Scheduled Castes to curb violence against Dalits.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the role and issues related to the National Commission for Scheduled Castes to curb violence against Dalits.

Conclusion. Way forward.

The National Commission for Scheduled Castes (NCSC) is a constitutional body established by Article 338 of the Constitution. It is mandated to investigate and monitor all matters relating to the safeguards provided for the Scheduled Castes and Scheduled Tribes. It is often said that the commissions have not been effective in protecting the rights of Dalits in terms of ensuring the implementation of the safeguards. For instance, honour killings are still prevalent on a wide scale especially against Dalits.

Role of National Commission for Scheduled Castes to curb violence against Dalits:

1. **Investigation:** It is the duty of commission to investigate and monitor all matters relating to the constitutional and other legal safeguards for the SCs and to evaluate their working.
2. **Inquiry into rights:** It is mandated to inquire into specific complaints with respect to the deprivation of rights and safeguards of the SCs.
3. **Law implementation:** The NCSC monitors the implementation of the various legal provisions in force regarding such occurrences.
4. **Collect Statistics:** It collects and comments on the statistics pertaining to cases under the Civil Rights Act, 1955 and the Prevention of Atrocities Act 1989.

5. **Special courts:** A key monitoring activity performed by the Commission pertains to the setting up of special courts for the speedy trial of offences under the Civil Rights Act and the Atrocities Act.
6. **Monitor disposal rate:** It also monitors the case disposal rates of these courts. Over the years, the Commission has conducted several on-the-spot inquiries into complaints of atrocities.

Issues related to the role of National Commission for Scheduled Castes:

1. **Non-binding recommendations:** Atrocities against members of the Scheduled Castes account for 89% of the crimes against SCs and STs combined. Even though the Commission has extensive powers of investigation and inquiry in this area and can fix responsibility and recommend action, its recommendations are not binding.
2. **Less sensitive:** The existing priorities of the Commission are visibly lopsided in favour of the elite of these communities. Since the Commission, for the most part, acts on complaints, it is said that commission have been less than sensitive to the poor Dalits which are engendered by the lack of education or information. The Commission has not used its powers of suo motu cognisance actively enough.
3. **Litigation:** In the matter of criminal investigation, that would require it to follow prevailing rules and procedures pertaining to evidence and prosecution. This retard the effectiveness of the commission by rendering it vulnerable to litigation in the form of appeals to higher judicial bodies and thereby nullifying its operational effectiveness.
4. **Delays:** There are delays in conducting the inquiry and in delivering judgements. Moreover, there is a perception that the Commission tends to confirm the government's position on most cases.
5. **Irregularity:** The Commission is supposed to prepare an annual report for presentation to Parliament. Reports are often tabled two or more years after they have been submitted to the President. Even when Reports are tabled in Parliament, they are frequently not discussed.
6. **Proliferation:** In many policy sectors, as in the case of the Scheduled Castes, the proliferation of institutions has created an institutional confusion in which the roles and powers of each are obfuscated. The duplication and multiplication of institutions has created more confusion.

Way forward:

1. **Additional powers:** Commission should be given additional powers, in the matter of criminal investigation.
2. **Timely Discussion:** The Annual Report is a crucial activity of the Commission, the importance of which is generally overlooked. An amendment is required either in Article 338 itself or in the rules by which the President may fix a period for the discussion of the Report in Parliament.
3. **Undertake studies:** It would be appropriate for the Commission to undertake qualitative studies, commission social anthropologists and other social scientists to undertake such studies, and to institutionalize mechanisms by which contemporary changes and transitions in the social structure can be mirrored, recorded and acted upon.
4. **Database:** There is a pressing need for reliable data on a variety of subjects like the experience of reserved constituencies in parliament as well as the state legislatures, etc. In this manner, the Commission would also become more responsive to societal issues like the changing context of untouchability and intra-group conflicts of interest, and contribute to debates in civil society.

5. **Appointment:** A more thoroughly institutionalized mechanism for appointing the Chairperson, Vice-Chairperson and other members, would be appropriate. As it has been observed that the leadership and personnel are key determinants of the Commission's effectiveness.
6. **More sensitive:** To counter elite biases, the Commission needs to be sensitive to the exclusions that the lack of education and information may engender, and should ideally use its suo motu powers more actively.

NCSC is mandated to curb violence against Dalits through various powers. It is desirable for the Commission to engage in an internal evaluation of its priorities on an ongoing basis and to redefine them in a substantively more egalitarian way so as to accomplish its mandate in the spirit in which it was intended.

Q.38) An independent and integrated judiciary is the basic pillar of parliamentary democracy. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss why independent and integrated judiciary is the basic pillar of parliamentary democracy.

Conclusion. Way forward.

The judiciary has been assigned a very significant role in the Indian democratic system and is a part of the basic structure of our constitution. Its independence is essential for the effective discharge of the duties assigned to it. Independence of judiciary means a fair and neutral judicial system of a country, which can take its decision without any interference of executive or legislative branch of government. In other words, judges are free from restrictions, influence, pressures and threats direct or indirect from executive or legislative.

Independent and integrated judiciary- the basic pillar of democracy:

1. **Protection of individual rights:** Only an impartial and independent judiciary can protect the rights of the individual and can provide equal justice without fear and favour.
2. **Accountability to the people:** Judicial independence is very important to uphold the democratic principle of accountability. It helps to keep the executive and legislature accountable to the people through judicial review and judicial activism.
3. **Constitution interpretation:** A written constitution can hardly be effective in practice without an independent and impartial arbiter of constitutional issues and also that it is necessary to restrain governmental organs from exercising powers which may not be sanctioned by the Constitution. The written constitution is considered as the basic law of land and requires some authority to interpret it without prejudice and self-interest.
4. **Rule of law:** For the maintenance of the rule of law and fair judicial administration, an independent judiciary is of utmost importance. The job of judiciary is to interpret Constitution and laws and make sure the executive and legislature are making decisions based on Constitution and laws.
5. **Prevent arbitrary acts:** Independent judiciary plays an important role in controlling the arbitrary acts of the administration. If the arbitrary act of the administration causes injury to any person, it provides relief to them.

6. **Prevent autocracy:** Judicial independence is important for that a democracy does not transform itself into an autocracy. Without an independent judiciary, we will have dictatorship, as the executive will be able to do whatever it likes.
7. **Free and fair elections:** Independent judiciary ensures universal adult franchise as enumerated in constitution. The judiciary's role in deciding the validity of presidential, vice-presidential, parliamentary and state legislative elections also necessitates independence of the judiciary.

Independence of the judiciary is one of the basic structures of the Indian Constitution. In *S.P. Gupta v. Union of India*, the Supreme Court held that the concept of independence of the judiciary is a notable concept which inspires the constitutional scheme and constitutes the foundation on which the edifice of our democratic polity rests. It is the judiciary which is entrusted with the task of keeping every organ of the state within the limits of the law thereby making the rule of law meaningful and effective.

Q.39) Comment on the relevance of Directive Principles of State Policy in an era of liberalisation and globalisation.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the relevance of Directive Principles of State Policy in the era of liberalisation and globalisation.

Conclusion. Way forward.

Directive Principles of State Policy (DPSP) is enshrined in Part-IV (Article 36 to 51) of the constitution. It guarantees social and economic democracy and tries to establish a welfare state. These are the ideals that the State should keep in mind while formulating policies and enacting laws.

Relevance of DPSP in era of liberalisation and globalisation:

1. **Sustainable development:** DPSP are the principles of a welfare state in India. DPSP are important as it seeks to create a balance between economic progress and competition on one hand and environmental sustainability and social and economic equity on the other.
2. **Inequalities:** With liberalisation and globalisation inequalities have increased as reflected in Oxfam report, which says that India's richest 1% holds over 40% of national wealth. Transition from socialist pattern of society to liberalization and market economy where inequalities were bound to come, it is the duty of the state to reduce these inequalities through tax structure, subsidies, various welfare schemes etc.
3. **Accountability:** DPSPs are important as it allows the citizens to hold the government accountable in their policy formulations and implementation e.g. equality at work, minimum wages etc.
4. **Fair market:** Globalization is based upon competition and monopolistic tendencies in the market. DPSP are important to provide a laissez faire business environment to industries.
5. **Human rights:** Liberalisation and capitalism has scant regards to the human work environment, wages, gender sensitivity and labour concerns. DPSP are relevant to provide a humane work milieu, equal wages for equal work and increase quality of standard of living of workers. It also provides for participation of workers in

management of industries for better harmonisation between workers interest and industrial interest.

6. **Human capital:** Modern industries seeks best talent and most productive labour from the market having required skills and education. DPSP puts an obligation on the part of the government to provide free, compulsory and quality education up to primary level and improve public health.
7. **Environment:** Further it obliges the government to protect and improve the environment and safeguard forest and wildlife in the era of indiscriminate exploitation and deforestation based globalization.
8. **Women rights:** Liberalisation and globalisation has led to women empowerment. DPSP put an onus on the state to work towards women education, equal opportunity, equal wages, uniform civil code etc. that would further enhance women rights. Recent triple talaq act was in this direction.

Thus, DPSP still holds relevance in this globalised world for a better informed, productive, equity based and sustainable developmental model. There is an increasing realisation that these directives act as bedrocks for good governance and socio-economic justice in the society.

Q.40) None of the above (NOTA) system although enables voters 'right not to vote' but is toothless in spirit. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the significance of NOTA option. Explain why NOTA is a toothless option.

Conclusion. Way forward.

NOTA or 'none of the above' is the option which enables the voter in elections to officially register a vote of rejection for all candidates who are contesting. The main objective of the 'NOTA' option is to enable electors who do not wish to vote for any of the candidates to exercise their right to reject without violation of the secrecy of their decision.

Significance of NOTA option:

1. **Disapproval:** NOTA gives people dissatisfied with contesting candidates an opportunity to express their disapproval. For instance, a group of women activists in Kerala out on the road urging people not to elect any candidate if no woman was present in the fray, and a youth group in Tamil Nadu that campaigned for NOTA as a protest vote against corruption.
2. **Participation in voting:** NOTA motivates citizens to participate in elections. Observations have been made that NOTA can influence more citizens to participate in voting.
3. **Prevent bogus votes:** With increased chances of more people turning up to cast their votes, even if they do not support any candidate, it decreases the count of bogus votes.
4. **Enable right to reject:** This enables voters to exercise their right not to choose a candidate and register a vote of rejection.
5. **Right to secrecy:** Earlier, since the ballot paper or EVM showed only the list of candidates, a voter could record his vote under Section 49-O (None of the above) but had to inform the presiding officer at the election booth. This compromised the secrecy

of his ballot. NOTA removed this provision and enabled maintenance of citizen's right to secrecy.

NOTA- a toothless option:

1. **No electoral value:** The vote does not hold any electoral value and is merely symbolic in nature. Even if a majority of votes were cast for NOTA, the candidate with the largest vote share would still be the winner.
2. **Not a right to reject:** It has been argued that NOTA is not 'the right to reject' the candidates standing in the election, but instead the 'right to register a negative opinion'.
3. **Lack of awareness:** NOTA has not reached the grassroots level and most people are unaware about the option on the EVM machine or what it entail.
4. **Caste bias:** It has been observed that some of the highest NOTA votes polled are consistently seen in reserved constituencies. This could be interpreted as a refusal of general category voters to vote for an SC/ST candidate- a scenario where NOTA is being misused to uphold caste-based bias.

Way forward:

1. **Re-elections:** If NOTA receives the highest number of votes, re-election should be held in that constituency with a new and fresh candidate. In 2018, the Maharashtra State Election Commission (SEC) issued an order that 'if NOTA received the highest number of valid votes, a fresh election shall be held'.
2. **Barring candidates:** The candidates securing votes less than NOTA would be barred from contesting in that re-election. In November 2018, the SEC of Haryana issued an order where NOTA is treated like a 'fictional candidate' in municipal polls. If NOTA gets maximum vote, none of the 'real' candidates will be declared elected and the elections will be held afresh. The candidates securing votes less than NOTA would be barred from contesting in that re-election.
3. **Cost on candidates:** Political parties that lose to NOTA should bear the cost of re-election. When conducting re-elections, the NOTA button may be disabled to avoid a series of re-elections.
4. **Short time ban:** The candidates who lose to NOTA should not be allowed to contest elections for a defined period of time.
5. **Awareness:** While NOTA is definitely providing a voice to dissent, it needs to be accompanied with efforts to raise voter awareness to prevent the misuse of this measure.

The Supreme Court has anticipated, there will be a systemic change with NOTA and the political parties will be forced to field candidates who are known for their integrity. Efforts must be made to 'strengthen' the impact of NOTA by providing it the power to reject and asking for re-elections if NOTA wins the majority.

Q.41) What is the difference between the fundamental duties and legal duties? Why are fundamental duties as important as legal duties?

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the difference between the fundamental duties and legal duties. Explain why are fundamental duties as important as legal duties?

Conclusion. Way forward.

The Fundamental Duties are defined as the moral obligations of all citizens to help promote a spirit of patriotism and to uphold the unity of India. On the other hand legal duties are the obligation arising from operation of law, a breach of which would constitute illegal act. Both are important and play a significant role in a country's peace and progress.

Fundamental duties	Legal duties
It is a moral obligation towards the nation and its citizens.	It is a legal obligation to uphold law and act accordingly.
They are non-justiciable as the constitution does not provide for their direct enforcement by the courts.	They are justiciable and provide for their direct enforcement by the courts based on laws.
The list of duties is not exhaustive as it does not cover other important duties like casting vote, paying taxes, family planning and so on.	The duties depend on the provisions of laws like payment of taxes is seen as a legal obligation.
Though the Swaran Singh Committee had suggested for penalty or punishment for the non-performance of Fundamental Duties, it was not incorporated.	The non-performance of legal duties may lead to punishment as incorporated under law.

Significance of fundamental duties:

- 1. Constitutional conscience:** Fundamental Duties constitute the conscience of our Constitution. They should be treated as constitutional values that must be propagated by all citizens. For instance, it calls for universal brotherhood.
- 2. Democratic balance:** Fundamental duties establish democratic balance by making the people conscious of their duties equally as they are conscious of their rights.
- 3. Serve as a warning:** Fundamental duties serve as a warning against the anti-national and antisocial activities. For example, burning the national flag, destroying public property and so on.
- 4. Balancing rights:** They serve as a reminder to the citizens that while enjoying their rights, they should also be conscious of duties they owe to their country, their society and to their fellow citizens.
- 5. Source of inspiration:** They serve as a source of inspiration for the citizens and promote a sense of discipline and commitment among them. They create a feeling that the citizens are not mere spectators but active participants in the realisation of national goals.
- 6. Establish constitutional validity:** They help the courts in examining and determining the constitutional validity of a law. In 1992, the Supreme Court ruled that in determining the constitutionality of any law, if a court finds that the law in question seeks to give effect to a fundamental duty, it may consider such law to be 'reasonable'.

Fundamental duties are as important as legal duties and fundamental rights. They remind us of our responsibilities towards our nation and other citizens. These are important to promote harmony, democratic and constitutional values in a country.

Q.42) The power sharing under the sixth Schedule of the Indian Constitution which was expected to be the panacea of the ethno-nationalist identity issues in Northeastern States, have failed to do so. Examine.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss why ethno-nationalist identity issues persist in Northeastern State Despite sixth schedule in place.

Conclusion. Way forward.

The Constitution under 6th schedule contains special provisions for the administration of tribal areas in the four north-eastern states of Assam, Meghalaya, Tripura and Mizoram. The purpose of the sixth Schedule was to grant self-rule to the tribal communities in the hill areas of undivided Assam.

Reason for persistence of ethno-nationalist identity issues in Northeastern States:

- 1. Conflict among ethnic groups:** North east India is rich in diverse ethnic groups having peculiar historical and structural background passing from one generation to another. The region houses over 200 of the 635 tribal groups in the country, speaking a variety of Tibeto-Burman languages and dialects. Therefore for the preservation and the upliftment of their ethnic and cultural uniqueness the groups have been consistently involved in conflict like situation.
- 2. Casteism:** The 6th Schedule was aimed at granting some kind of autonomy to the tribes so that they could be guided by their customary laws and practices and not be pushed to conform to a modern system of governance. Despite the Sixth Schedule, many tribes who came under the larger Assam felt stifled by the authoritative nature of the dominant Assamese caste Hindu rulers.
- 3. Dilution of district councils:** Since these Scheduled Areas are supposed to enjoy autonomy protected by the Constitution, the laws passed by Parliament and the state legislatures do not automatically apply to them. But after Meghalaya was created, the Sixth Schedule was amended with the addition of Article 12 (A). The insertion of Article 12 (A) has in a sense diluted the powers of the district councils as laws passed by Parliament or by the state legislature has supremacy over those passed by the district councils.
- 4. Economic Underdevelopment:** It is alleged that despite contributing a large sum of national earning through exporting natural resources they are not getting enough for their development in return for it. Consequently the ethnic groups such as Karbi, Kuki, Bodo, Naga, Mizu are in continuous conflict and disappointment with the national mainstream sometimes leading to the demand of autonomous status.
- 5. The attitude of the people:** The attitude of the people of plain areas towards the people of hill tribes of east Assam has been perceived to be discriminatory and big brotherly in nature. Therefore a condition of conflict aroused between plains people and hills people on the basis of differences in language and culture.
- 6. Illegal Immigration:** The continuous inflow of foreigners to the North East India has led to the politics of identity movement by ethnic groups. The national as well as international migration in North East India since British colonial period to present time has increased the insecurity level of local inhabitants. The insecurity of various ethnic groups for losing their distinctive identity has resulted in ethnic violence and conflicts.
- 7. Development induced displacement:** The displacement of the tribal people due to developmental projects has evicted them from their own inhabited area. They face major

loss in terms of their land, livelihood, and identity without receiving any compensation or any alternative for acquisition and requisition of their land.

- 8. Ethnicity and politics:** Political deprivation among various groups of north east tribes has resulted in a feeling of regionalism among ethnic groups instead of nationalist feeling.

It is not possible to remove ethnic assertion entirely from our society. Therefore there ought to be a need to protect the identity of all ethnic groups. Role of the government in providing equal status and recognition to all ethnic groups, role of civil society in the spreading of nationalism and peaceful negotiation with insurgents and secessionist groups will positively help in avoiding ethnic conflict in the northeastern region.

Q.43) There are glaring deficiencies in drug regulation that need urgent addressing. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various loopholes in drug regulation in India.

Conclusion. Way forward.

Drug regulation plays a pivotal role in any country as it is critical to protect public health by ensuring the safety, efficacy and quality of drugs. Unfortunately there are so many lacunae in Indian drug regulation, that endanger public health. The Central Drugs Standard Control Organisation regulates the pharmaceutical sector in the country. Last year, the Bureau of Pharma PSUs of India, which implements the Pradhan Mantri Janaushadhi Pariyojana, found 25 batches of drugs supplied to be substandard, reflecting wide gap in India's drug regulation.

Issues in Indian drug regulation:

- 1. Spurious and substandard drugs:** The country has an inadequate regulatory framework and enforcement regime, reflected in occurrences such a production of spurious or low quality drugs. Last year, Indian drug manufacturers received at least 20 letters of warning from the US FDA over the quality of their products.
- 2. Lack of safeguard mechanisms:** Lack of adequate mechanisms to safeguard illiterate and vulnerable patients, prevent informed consent violations and ensure proper functioning of institutional ethics committees.
- 3. Deficiency in CDSCO:** A report commissioned by an Indian parliamentary committee found Central Drugs Standard Control Organisation (CDSCO) struggled with staffing shortages, infrastructure issues and its responsibilities to ensure public safety. Besides, the Central Drugs Standard Control Organisation does not have the capacity to enforce an actual ban.
- 4. Inadequate drug inspectors:** Central and state governments have inadequate numbers of drug inspectors and an overall lack of capacity that leaves them incapable of enforcing recalls and uneven punishing violators.
- 5. Coordination:** Poor communication between state and central drug regulatory bodies compounds the problem. The little-to-no information-sharing between the Centre and the states, and among the states, leads to information asymmetry.
- 6. Poor law implementation:** India has among the toughest legislation that allows for life imprisonment if a drug is found to be spurious. But there is weak enforcement of law, so the number of prosecutions against offenders was low.

7. **Inadequate drug inspectors:** There ought to be one drug inspector for every 50 manufacturing units and one per 200 distribution retailers, according to a formula set out by the *Malshekar committee*. The number of drug inspectors in most states is inadequate. For instance, there was half the number of recommended drug inspectors in Gujarat.
8. **No time limit:** There is no time limit under which drug inspectors working under State Drug Regulation Authorities are expected to complete their inspections.
9. **Ineffective Drugs & Cosmetics Act, 1940:** Once a drug or brand is found to be substandard, all remaining stocks have to be withdrawn as per provisions in the Drugs & Cosmetics Act, 1940. But it rarely has been effective since detection often takes place months after a drug is released in the market. By the time a notification is issued, most stocks have already been sold.
10. **Lack of record:** In addition, neither the inspectors nor the SDRAs are required to maintain a record or repository of information about non-compliant, errant and offending drug manufacturers. The lack of records means that cases of non-compliance seldom lead to prosecutions. Lack of data also made it difficult to identify repeat offenders.

Way forward:

1. **Better coordination:** There is need for greater coordination, accountability and transparency in functioning among different ministries concerned with drug regulation.
2. **Central Drugs Authority:** In 2013, the Ministry of Health attempted to create a 'Central Drugs Authority' that would oversee drug manufacturing. However, the proposal was rejected in parliament. This authority is needed to be established with more powers than CDSCO.
3. **Manpower:** Government should fill vacancies on priority basis. More number of drug inspectors should be recruited to strengthen India's regulatory framework.
4. **Timely action:** Government must ensure that proper implementation of laws and timely action against the culprits is being taken. For this, coordination and information sharing with states must be prioritised.
5. **Banning:** Life-time banning of repeat offenders should be there. Further, the government must strengthen states' regulatory mechanism and empower CDSCO with power to out rightly ban the offenders.

Various committees like Mashelkar Committee Report, Ranjit Roy Chaudhury Committee report etc. have recommended making CDSCO like a body with its own independent staffing and finance. Government must work in this direction. It is important that the government must strengthen India's drug regulation and ensure that offenders are punished under the law.

Q.44) Critically analyse whether the Aadhaar-based biometric authentication has been able to reduce PDS leakages or not.

Ans.

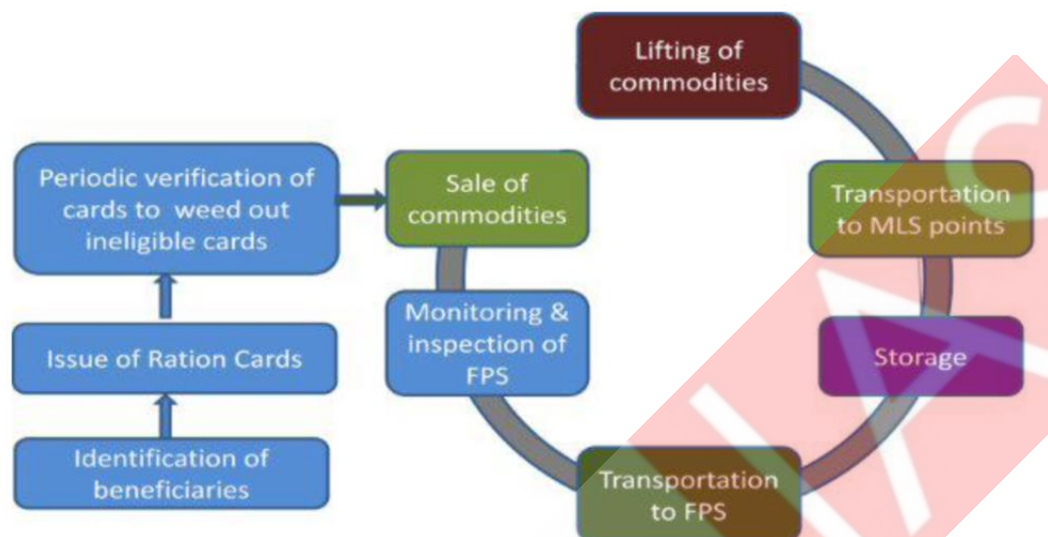
Demand of the question

Introduction. Contextual introduction.

Body. Discuss if the Aadhaar-based biometric authentication has been able to reduce PDS leakages or not.

Conclusion. Way forward.

India has been ranked at 102nd place among 117 economies in the Global Hunger Index (GHI) 2019. To tackle India's hunger issue government introduced National Food Security Act which provides monthly subsidised food grains through public distribution system (PDS). The PDS has historically suffered from high rates of leakage (often exceeding 50%). To tackle this, Aadhaar-based biometric authentication (ABBA) was launched.



Benefit of Aadhaar-based biometric authentication:

- 1. Prevent false beneficiaries:** Leverages are largely due to ghost and duplicate beneficiaries using fake identities to avail these benefits. ABBA help in reducing these ghosts and vastly improve efficiency in welfare delivery.
- 2. Reduction in leakages:** After the complete rollout of ABBA, the government began disbursing grain to ration shops on the basis of authenticated transactions. The researchers found that this significantly reduced the total disbursement of grain and consequently, leakages.
- 3. Better Beneficiary experience:** A study in Andhra Pradesh, where biometric authentication reduced leakages has reflected improved beneficiary experience due to less waiting time and timely availability of grains.
- 4. Enable individual entitlements:** Linking Aadhaar to ration card holders enables the government to provide individual, rather than household entitlements. This makes allocations more transparent and also addresses the challenge of larger households receiving insufficient foodgrain.
- 5. Community participation in monitoring:** Communities in both rural and urban India have turned to Right to Information, as well as public activism, in order to access FPS records and monitor the functioning of ration shops. Clear accountability through Aadhaar authentication, as well as the use of electronic records, make data more available for community monitoring and strengthen the use of RTI in PDS.

Issues of Aadhaar-based biometric authentication:

- 1. Minimal impact:** A recently released study, based on randomised-controlled trial in Jharkhand found that ABBA by itself did not significantly change either leakage or the value of PDS goods received by households on average.
- 2. Quantity fraud:** The main vulnerability today, is not identity fraud (e.g. bogus cards), but quantity fraud. PDS dealers often give people less than what they are entitled to, and pocket the rest. ABBA is powerless to prevent quantity fraud.

3. **Reduced beneficiaries:** For the beneficiaries who had not linked an Aadhaar to their ration cards at baseline, ABBA reduced the value of benefits received and increased the fraction of beneficiaries receiving no benefits at all due to lack of Aadhaar linking.
4. **Exclusion errors:** Attempts to reduce corruption has generated exclusion errors and pain to genuine beneficiaries.
5. **Extra burden:** To claim ration worth Rs. 40, beneficiaries in the Aadhaar system incurred an additional Rs. 7 of costs than those in the old system. This is a 17% extra cost burden of the value of the benefit they were entitled to receive.

Way forward:

1. **Increasing internet penetration:** The Aadhaar-based solution will be strengthened by the expanding mobile and internet connectivity across India.
2. **Cash transfer:** Instead of distributing food at subsidised price, the government may transfer cash directly to the account of the poor. They may be provided with an option to choose between cash transfer and subsidised food.
3. **Universal basic income:** Universal basic income to poor can help in uplifting them. It empower them economically and allow them to use money according to their needs.
4. **Using other identification methods:** Other than Aadhaar, identity cards like voter can be used to link with PDS and provide benefit.

ABBA although was aimed to reduce leakages has made limited impact. It has not removed all the issues in PDS like quantity fraud. Rather, Aadhar based authentication has led to many issues and pain to the poor. Thus, other alternatives like direct cash transfer or universal basic income must be explored.

General Studies 3

Q.1) Mindless unsustainable sand mining has become a major environmental problem. In light of this discussion, salient features of 'Enforcement and Monitoring Guidelines for Sand Mining 2020' released by the Ministry of Environment, Forests and Climate Change.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss threat of illegal sand mining on environment and salient features of Enforcement and Monitoring Guidelines for Sand Mining 2020.

Conclusion. Way forward.

Sand Mining is an activity referring to the process of the removal of sand from rivers, streams and lakes. Sand is mined from beaches and dredged from ocean beds and river beds. There are no official figures for the amount of sand mined illegally, but in 2015-16, there were over 19,000 cases of illegal mining of minor minerals, which include sand, in the country. To stop illegal mining, the Ministry of Environment, Forest and Climate Change (MoEF) issued Enforcement and Monitoring Guidelines for Sand mining. These guidelines focus on the effective monitoring of the sand mining.

Illegal sand mining in India- an environmental threat:

- 1. Threaten ecosystem:** Within aquatic ecosystems, sand supports organisms that are vital to the food chain. The removal of large amounts of sand increases water salinity and destroys the habitats of the organisms residing in the ecosystem. This, in turn, affects other animals and even humans who rely on fish and fresh water from these rivers and lakes. For instance, In Periyasampuram in Tuticorin district of Tamil Nadu, fish catch has come down, ground water has turned brackish and the sea has entered the village due to coastal sand mining.
- 2. Causes Erosion:** Unregulated mining of large volumes of sand along beaches leads to their erosion. By removing too much sediment from rivers, sand mining leads to the erosion and shrinking of river banks. It also destabilizes the ground and causes the failure of bridges, dikes, and roads. For instance, In Karnataka, rampant sand mining is leading to coastal erosion. The government is now forced to spend crores of rupees to form a barrier against coastal erosion.
- 3. Threaten species:** Illegal sand mining is thought to be a major cause for several animal species residing in the Ganga from the iconic Gangetic dolphin to the Gharial and Northern River Terrapin to teeter on the verge of extinction today.
- 4. Floods:** Large-scale sand mining destabilised the banks and beds, affecting the natural flow of rivers and streams and increasing risks of floods. A study by the WWF, says that mining is responsible for a 90% drop in sediment levels in major rivers, including the Ganges-Brahmaputra-Meghna River. This has resulted in the shrinking of the delta regions of these rivers, leaving residents extremely vulnerable to flood, land loss, contaminated drinking water and crop damage.
- 5. Economic cost:** Sand mining destroys the aesthetic beauty of beaches and river banks, and also makes the ecological system in these areas unstable. If such beaches and riverside areas are popular tourist destinations, then the tourism potential of such areas will be lost.

Salient features of Enforcement and Monitoring Guidelines for Sand Mining 2020:

1. **River audits:** According to guidelines, states need to carry out river audits and should put detailed survey reports of all mining areas online and set up dedicated task forces at district levels.
2. **Effective monitoring:** The enforcement guidelines focus on the effective monitoring of sand mining from the identification of sand mineral sources to its dispatch and end-use by consumers. The transportation of Sand should take place only in vehicles which are installed with GPS and have been registered with the state government.
3. **Transparency:** The guidelines push for online sales and purchase of sand and other riverbed materials to make the process transparent. They propose night surveillance of mining activity through night-vision drones.
4. **Check on illegal mining:** Guidelines emphasise use of technology through remote surveillance, drones to curb illegal mining. In order to curb illegal mining, it is very necessary that the general public is aware of the legal source of sand according to guidelines. It is suggested that the state government should develop an online portal for sale and purchase of sand. It is also suggested that the controlled price model is more effective in controlling illegal sand mining.
5. **Cooperative federalism:** In cases where rivers become district boundaries or state boundaries, the districts or states sharing the boundary shall constitute the combined task force for monitoring of mined materials, mining activity and participate in the preparation of District Survey Reports (DSR) by providing appropriate inputs.
6. **Survey:** The guidelines say the detailed survey needs to be carried out for quantification of minerals and the demand and supply of the riverbed material through market survey, including the future demand for the next five years.
7. **Environmental impact:** The need for replenishment study for river bed sand is also required in order to nullify the adverse impacts arising due to excessive sand extraction. No riverbed mining will be allowed during the monsoon.

Sand mining is a necessary practice that will continue. In India, there is enough sand to do so in a sustainable way when mining is targeted at the right areas, but corruption makes enforcing industry regulations quite difficult. It is necessary that the state governments must ensure mining volumes do not exceed the predetermined sustainable mining quantity proposed.

Q.2) Despite several measures to reduce vulnerability of climate-induced disasters, the farm sector and farmers continue to suffer losses. Discuss various reasons for this and suggest some measures.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss why farm sector and farmers continue to suffer losses?

Conclusion. Way forward.

To ensure farmers' welfare government has launched various initiatives like Pradhan Mantri Kisan Samman Nidhi (PM-KISAN), loan waiver. Unfortunately, despite various efforts farmers continue to suffer losses. With climate change, farmers are at risk of various disasters like droughts, floods, landslides degradation that has added to farmers' plight. Due to continued failure and acute agrarian distress farmers, face continued debt and low income trap, a condition in which farmers are mired in continuous cycle of low income and debts.

Why do the farm sector and farmers continue to suffer losses?

1. **Lack of Awareness:** Despite various government welfare initiatives many farmers are unaware of such initiatives. Lack of knowledge hinders farmers from getting benefits from such schemes. Many farmers have never heard about direct cash transfer.
2. **Benefitting few:** The government schemes and policies are being mostly benefitting big farmers having large landholding. Various subsidies never reach the hands of poor and small farmers. Thus, the majority of farmers are under distress and burden of debt.
3. **Narrow approach:** The crisis of agriculture is widespread with different segments of the agricultural sector- food crops, non-food crops, and livestock economy being affected. The widespread nature of the crisis implies that any solution has to address all its dimensions. Unfortunately, the narrow approach has offered piecemeal solutions without addressing the root causes. While these may provide temporary relief to the farming community, they are unlikely to prevent another crisis a few years from now.
4. **Post-failure reliefs:** Most of Indian policy in response to agrarian distress is based on providing subsidy or post failure reliefs in term of loan waivers. Due to continued failure and acute agrarian distress farmers, face continued debt and low income trap.
5. **Structural issues:** Falling MSPs, leakage and wastage in transit, fluctuating prices because of global imports-exports, lack of cold storage and adequate food processing, etc. has only increased the cost of agriculture and low income profits to farmers.
6. **Shrinking land-holding size:** Average size of landholdings have shrunk from 2.28 hectares in 1970 to 1.08 hectares in 2015 (NABARD). Fragmentation forces farmers into subsistence farming which affects their capacity to invest in land and productivity, hence perpetuating poverty. Small holding size makes the diffusion of advanced technologies difficult.

What should be done?

1. **Distributive Expenditure:** The disparity in agriculture expenditure and growth drivers, mainly the subsidiary sectors, must be addressed. Despite higher growth in livestock and fisheries sector, only moderate to low expenditure was recorded. Expenditure on livestock and fisheries must be increased, as they are mainly connected with resource-poor families in rural areas and also to raise the decelerating growth rate.
2. **Strengthening FPOs:** Farmer Producer Organisations (FPOs), which are currently facing operational and structural issues governed by different Acts and funded by various sources, may be strengthened by bringing them under one institution, preferably an FPO Development and Regulatory Authority.
3. **Affordable Technology:** Affordable technologies must be developed and deployed particularly in rural and remote areas where digital literacy of farmers has improved considerably. Technology can help farmers with increased returns.
4. **Investment:** Investment measures or an incentive-based system is essential to scale up sustainable practices such as agroforestry, climate-smart agriculture, ecosystem services, conservation agriculture and others. Increasing corporate social responsibility will help to tap more private investments besides encouraging private players in potential areas where production sustainability is possible.
5. **Farm data agency:** The government must establish a farm data agency, which can consolidate, collate and maintain farm data available at various platforms. Ongoing efforts of digitisation of land records must also include farmer-centric advisories.

Farm sector needs more governmental efforts. Linking procurement to minimum wage, general inflation and the overall quality of living index, and freeing the farmer of loan and investment burdens, will enable elimination of agrarian distress. These measures will help

achieve this faster than all the well-intentioned government policies supposed to benefit the farmers all these years.

Q.3) Economic survey 2019, pitch for wealth creation as a means of prosperity and welfare for all. Critically comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how wealth creation is a measure of welfare or not.

Conclusion. Way forward.

An increasing GDP and wealth creation in a nation is often seen as a measure of welfare and economic success. According to the Economic Survey 2019-20, wealth creation can act as a means of prosperity and welfare for all. However, one can't be sure that wealth creation means welfare. Recently released Oxfam Inequality Report has highlighted that the richest 1% in the world have more than double the wealth of 6.9 billion people combined. In India, 9 billionaires own as much wealth as the bottom 50% of the country's population, reflecting wealth creation does not necessarily mean welfare.

Wealth creation- a measure of welfare:

1. **Demand creation:** Wealth created by an entrepreneur correlates strongly with raw materials procured by the entrepreneur's firms. The demand of raw material, benefits the suppliers by supplying raw materials to the entrepreneur's firms benefiting others.
2. **Capital expenditure:** Wealth created by an entrepreneur correlates strongly with the capital expenditures made by the entrepreneur's firms, which proxies the benefits that manufacturers of capital equipment reap by supplying such equipment to the entrepreneur's firms.
3. **Benefit common citizens:** Wealth created by an entrepreneur helps the country's common citizens. Tax revenues enable Government spending on creating public goods and providing welfare benefits to the citizens.
4. **Purchasing power:** Wealth creation in the economy ultimately enhances the livelihood of the common person by providing him/her greater purchasing power to buy goods and services.
5. **Reduce poverty:** More wealth means more taxation and thus more revenue in the hands of the government. This can be used by the government in a targeted way to uplift millions out of poverty through welfare measures like MGNREGA and subsidies or cash transfer.
6. **Employment:** There is a direct relationship between trade and employment. More capital investment and wealth creation lead to growth of economy and lead to creation of jobs. This ensures the welfare of many and helps many come out of poverty.
7. **Investment in social sectors:** More wealth with companies ensures more spending in sectors like health, education etc. Further, more wealth means more Corporate social spending through Corporate Social Responsibility.
8. **Redistribution:** Wealth from rich and some sectors of economy can be redistributed to poor and other sectors. For example, IT sector wealth creation helps the government to earn revenue from the sector and allow it to spend it on sectors in crisis like agriculture.

Wealth creation- not a measure of welfare:

1. **Inequality:** Sustained increase in the wealth, concentrates income in the hands of the few owners of capital. It doesn't necessarily mean welfare for the poor. It is in a way is restricted by lower wages of workers and high wages of company owners.
2. **Crony capitalism:** If left unchecked, growing inequalities can not only slow down growth, but also generate instability and disorder in society. The consequence of the rich accumulating ever more capital and wealth, is that economic and, consequently, political power become increasingly concentrated in the hands of a wealthy few. This skews policy making processes towards overly representing the interests of these wealthy elites.
3. **Sustainability:** A high GDP level does not necessarily ensure that the living conditions of future generations will be as good as they are now, i.e. there is no guarantee of sustainable development. Standards of living can be sustained over time by maintaining the existing production facilities and by ensuring future access to the necessary commodities, environmental benefits and well-educated labour (human capital).
4. **Taxation:** Wealth doesn't necessarily mean more welfare. As the rich accumulate wealth, they tend to not give tax to the government and use various means for tax avoidance. For example, tax havens are used by corporations in order to not pay tax.

Wealth creation is a necessary evil. Merely wealth creation doesn't ensure welfare. It fails to account for the multi-dimensional nature of development or the inherent short-comings of capitalism, which tends to concentrate income. Without real redistribution wealth creation only increases inequalities in real terms. Full-proof mechanisms are necessary to ensure wealth creation as a measure of welfare.

Q.3) What is ISRO's Young Scientist Programme 2020? Discuss its need and significance.

Ans.

Demand of the question

Introduction. What is ISRO's Young Scientist Programme?

Body. Discuss the need and significance of ISRO's Young Scientist Programme.

Conclusion. Way forward.

Indian Space Research Organisation has launched a special programme for school children called 'Young Scientist Programme' (YSP) or 'Yuva Vigyani Karyakram' (YUVIKA) which is primarily aimed at imparting basic knowledge on space technology, space science and space applications to the younger ones. The programme will include talks, experience sharing by the eminent scientists, facility and lab visits, exclusive sessions for discussions with experts, practical and feedback sessions.

Need of the program:

1. **Scientific temper:** Such a programme is needed to constantly engage youngsters across India and to capture their scientific temperament. The YSP will inspire students across schools and colleges.
2. **Manpower:** Growth of the space sector is hampered by the scarcity of graduates and technicians with relevant skills and qualifications. Catching them at a young age would help students to acquire required skills and enter space careers at a later stage.
3. **Career in space:** The space industry is the fastest growing industry today and promises to be one of the most important sectors for job creation in the future. Space careers include being a space scientist, space engineer, mathematicians and even

administrators. Programmes like YSP will motivate youth to take interest in space activities and develop a career in it.

4. **Future scientists:** YSP is important to develop future scientists especially in the space sector. It would help in building a diverse community of next-generation scientific leaders.
5. **Experience sharing:** Schools have limitations when it comes to offering real-time training experience in space science. Limitations are due to lack of supportive curriculum, space, time and expertise of in house faculty. Thus, such a programme will bring several advantages like well-researched content, experienced faculties and defined learning process to the school.

Significance of the program:

1. **Interest in space activities:** Its intent is to arouse their interest in the emerging areas of space activities. Indian students can reach for the skies if inquisitiveness is provided to them. The interest in space is instilled in them right from the school days, the students can really go big in the field of space and astronomy.
2. **Awareness:** Many students do not know about space activities in the country. The program is aimed at creating awareness amongst the youngsters who are the future building blocks of our Nation.
3. **Rural involvement:** Rural students lack means to get information about space activities and how to make a career in it. Students belonging to the rural area have been given special weightage in the selection criteria.
4. **Leadership skills:** YSP would help in developing leadership skills and a fuller understanding of global, regional and industry agendas.
5. **Platform for engagement:** The YSP will provide the students an excellent opportunity and open discussion platform for a scientific and personal experience and exchanging ideas. Scientists will present and discuss their activities in laboratory medicine, benefit from career skills development.

It is difficult for children to maintain an interest in science just from their activities in school. Thus, it is important to foster their interest outside the classroom through such programs. Young science program of ISRO will play an important role in inspiring students in space activities.

Q.4) What are various bottlenecks to infrastructure creation in India? Discuss the significance of the National Infrastructure Pipeline (NIP) for infrastructure creation.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various bottlenecks to infrastructure creation in India. Mention significance of National Infrastructure Pipeline (NIP) for infrastructure creation.

Conclusion. Way forward.

Economic development of any country, along with other factors, depends on the infrastructure development. India is aiming to be a \$5 trillion economy by 2025 which needs spending of about \$1.4 trillion (Rs. 100 lakh crore) over five years on infrastructure. India can increase economic growth to full potential, provided it improves the infrastructure facilities, which are at present not sufficient to meet the growing demand of the economy. Failure to improve the infrastructure in the country has certainly, slow down India's growth

process. There is a wide gap in railways, roads, energy infrastructure that hinders India's growth.

Various bottlenecks to infrastructure creation in India:

1. **Financing:** The infrastructure projects are highly capital intensive and funding has been one of the major impediments in achieving the infrastructure goals. Due to rise in NPA banks are not giving loans to private firms easily.
2. **Land Acquisition:** Land acquisition has been the single largest roadblock for the development of infrastructure. Several projects have been stalled or delayed due to land acquisition issues. One primary reason has been resistance from farmers or local communities whose land is being acquired. There was generally a huge difference between the price offered by the agency than the prevailing market value, which resulted in major disputes and litigation.
3. **Delay in regulatory clearance:** Most of the infrastructure projects in India suffer from delays in completion. This is mainly due to an inadequate regulatory framework and inefficiency in the approval process. Infrastructure projects require multiple sequential clearances at various levels of government.
4. **Complex Environmental clearance:** Environmental safeguards and guidelines are evolving, which are complex in nature. Clearly, better governance will be a big help in mitigating long delays in infrastructure projects.
5. **Capacity of private players:** Infrastructure projects in India are becoming larger in size and complexity and such projects require financial patronage and additional project management skills which most medium-to-small Indian companies currently lack.

Significance of National Infrastructure Pipeline (NIP) for infrastructure creation:

1. **\$5 trillion goal:** India's growth potential has not been achieved mainly due to poor infrastructure in various sectors. The National Infrastructure Pipeline would help in improving the infrastructure and realising the growth potential. To achieve the GDP of \$5 trillion by 2024-25, the National Infrastructure Pipeline is important.
2. **Positive sentiment:** India can't achieve high growth without investment. NIP will build investor confidence as identified projects are likely to be better prepared, exposures less likely to suffer stress given active project monitoring, thereby less likelihood of NPAs.
3. **Fiscal space:** Well-developed infrastructure enhances the level of economic activity, creates additional fiscal space by improving the revenue base of the government, and ensures quality of expenditure focused on productive areas.
4. **Better Projects:** The National Infrastructure Pipeline will ensure that infrastructure projects are adequately prepared and launched. It will provide a better view of project supply, provides time to be better prepared for project bidding, reduces aggressive bids in project delivery, and ensures enhanced access to sources of finance as a result of increased investor confidence.
5. **Rural infrastructure:** It will strengthen agricultural and rural infrastructure. Irrigation and rural infrastructure projects would account for 7.7 lakh crore each.
6. **Connectivity:** It will further increase the connectivity in India, especially in rural areas. Road projects will account for Rs. 19.63 lakh crore while another Rs. 13.68 lakh crore would be for railway projects.

The development of India's infrastructure presents a huge task as well as a huge opportunity. The key issues that need to be addressed for a major step-up in infrastructure development. The National Infrastructure Pipeline is an ambitious plan that would include Greenfield and brownfield projects costing above Rs 100 crore each. It will also enable

robust marketing of the pipeline of projects requiring private investment through the India Investment Grid (IIG), National Investment & Infrastructure Fund (NIIF), etc.

Q.5) What is public-private partnership (PPP)? Discuss various advantages and issues related to public-private partnership (PPP) in India.

Ans.

Demand of the question

Introduction. What is public-private partnership (PPP)?

Body. Discuss various advantages and issues related to public-private partnership (PPP) in India.

Conclusion. Way forward.

According to World Bank, public-private partnership (PPP) is a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance. Public-private partnerships typically are long-term and involve large corporations on the private side. Some of the commonly adopted forms of PPPs include build-operate-transfer (BOT), build-lease-transfer (BLT), design-build-operate-transfer (DBFO), operate-maintain-transfer (OMT), etc. A key element of these contracts is that the private party takes on a significant portion of the risk.

Various advantages of public-private partnership (PPP):

1. **Access to private sector finance:** India has a very large infrastructure need and an associated funding gap. PPPs can help both to meet the need and to fill the funding gap. PPP projects often involve the private sector arranging and providing finance. This frees the public sector from the need to meet financing requirements from its own revenues (taxes) or through borrowing.
2. **Better infrastructure:** They provide better infrastructure solutions than an initiative that is wholly public or wholly private. By shifting the responsibility for finance away from the public sector PPPs can enable more investment in infrastructure and increased access to infrastructure services.
3. **Increased transparency in the use of funds:** A well-designed PPP process can bring procurement out from behind closed doors. The PPP tender and award process based on open competitive bidding following international best practice procedures lead to transparency.
4. **Less delays:** They result in faster project completion and reduced delays on infrastructure projects by including time-to-completion as a measure of performance and therefore of profit.
5. **Risk distribution:** Transfer of risks is the most important advantage of PPP projects. In PPP projects, there is a possibility to transfer most or all of the risks to the private entity. The private entities explore opportunities, even though they involve risks.
6. **Constant cash flow:** The state budget is formed of fixed budgets for each ministry. Major investments are temporary modifications of the budget of a ministry, and this problem can be difficult to deal with within the budgetary process. Avoiding major investments by having a constant cash flow is an important driver when the state looks at the advantages of PPP.

Various issues related to public-private partnership (PPP) in India:

1. **Uncertainties:** PPPs often cover a long-term period of service provision (eg. 15-30 years). Any agreement covering such a long period into the future is naturally subject to

uncertainty. If the requirements of the public sponsor or the conditions facing the private sector change during the lifetime of the PPP, the contract may need to be modified to reflect the changes. This can entail large costs to the public sector.

2. **Policy and regulatory gaps:** Inadequate regulatory framework and inefficiency in the approval process have been considered as serious disincentives for developers and contractors. For example, more than two years were needed for the Gujarat Pipavav port project to receive the necessary clearances after achieving financial closure. Moreover, most of the large projects involve dealings with various ministries where coordination remains inefficient.
3. **Crony capitalism:** In many sectors, PPP projects have turned into conduits of crony capitalism. It is worth noting that a large chunk of politically connected firms in India are in the infrastructure sector, which have used political connections to win contracts in the past.
4. **Renegotiation:** While private firms accept stringent terms of PPP contracts initially, they lose no opportunity for renegotiating contracts, in effect garnering a larger share of public resources than originally planned. Rather than being an exceptional clause, renegotiation has become the norm in PPP projects in India.

Way forward:

1. **Checking Viability:** PPPs should not be used to evade responsibility for service delivery to citizens. This model should be adopted only after checking its viability for a project, in terms of costs and risks. Further, PPP structures should not be adopted for very small projects, since the benefits are not commensurate with the costs.
2. **Risk allocation and management:** Public-Private Partnership PPP contracts should ensure optimal risk allocation across all stakeholders by ensuring that it is allocated to the entity that is best suited to manage the risk. A generic risk monitoring and evaluation framework should be developed covering all aspects of a project's life cycle.
3. **Strengthening governance:** The Prevention of Corruption Act, 1988 should be amended to distinguish between genuine errors in decision making and acts of corruption by public servants.
4. **Strengthening institutional capacity:** A national-level institution should be set up to support institutional capacity building activities and encouraging private investments with regard to PPPs. Independent regulators must be set up in sectors that are going for PPPs. An Infrastructure PPP Adjudication Tribunal should also be constituted. A quick, efficient, and enforceable dispute resolution mechanism must be developed for PPP projects.
5. **Strengthening contracts:** The private sector must be protected against such loss of bargaining power. This could be ensured by amending the terms of the Public-Private Partnership PPP contracts to allow for renegotiations.

The success of Public-Private Partnership to a large extent depends on optimal risk allocation among stakeholders, the environment of trust and robust institutional capacity to timely implementation of PPP projects. To foster the successful implementation of a PPP project, a robust PPP enabling ecosystem and sound regulatory framework is essential.

Q.6) Describe the salient features of Indian Government's Mission on Nanoscience and Technology and the scope of its application in the development process of the country.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the salient features of Mission on Nanoscience and Technology. Mention scope of application of nanotechnology in the development process of the country.

Conclusion. Way forward.

Nanotechnology primarily refers to the use and creation of particles that are smaller than 100 nanometre. The Government of India launched the Nano Mission in 2007 as an umbrella capacity-building programme. As a result of the efforts led by the Nano Mission, today, India is amongst the top five nations in the world in terms of scientific publications in nanoscience and technology. The Nano Mission has resulted in some useful products like Nano hydrogel based eye drops, pesticide removal technology for drinking water, water filters for arsenic and fluoride removal, Nano silver based antimicrobial textile coating, etc.

Salient features of Mission on Nanoscience and Technology:

- 1. Capacity-building in research in nanoscience and technology:** Mission focus on funding of basic research in nanotechnology by individual scientists and groups of scientists and creation of centres of excellence for pursuing studies. The mission is funding about 235 individual scientist-centric research projects on fundamental research in Nano-systems. This will lead to fundamental understanding of matter that enables control and manipulation at the nanoscale.
- 2. Infrastructure Development for Nano Science & Technology Research:** Mission aimed at establishing a chain of shared facilities across the country with sophisticated equipment required for Nano research. It also focuses on establishing linkages between industry and research and educational institutions and promoting public private partnerships (PPPs).
- 3. Nano Applications and Technology Development Programmes:** Mission aim to catalyse Applications and Technology Development Programmes that would lead to products and devices.
- 4. Human Resource Development:** The project aims to create a large skilled manpower base through effective education and training to researchers and professionals in diversified fields so that a genuine interdisciplinary culture for nanoscale science, engineering and technology can emerge.
- 5. International Collaborations:** Apart from exploratory visits of scientists, organization of joint workshops and conferences and joint research projects. It focuses on promoting foreign collaboration in nanotechnology programmes.

Scope of application of nanotechnology in the development process of the country:

- 1. Agriculture:** Nanotechnology can be used in agriculture and food production in the form of Nano sensors for monitoring crop growth and pest control by early identification of plant diseases. These Nano sensors can help enhance production and improve food safety. With inputs related to water use, fertiliser and pesticides delivered in nanoscale productivity and yield can be increased.
- 2. Medical applications:** Development of newer drug delivery systems based on nanotechnology methods is being tried for conditions like cancer, diabetes, fungal infections, and viral infections and in gene therapy. Nanotechnology has also found its

use in diagnostic medicine as contrast agents, fluorescent dyes and magnetic nanoparticles.

3. **Electronics:** The semiconductor industry has been able to improve the performance of electronic systems for more than four decades by downscaling silicon-based devices. Carbon nanomaterials such as one dimensional (1D) carbon nanotubes and two dimensional (2D) graphene have emerged as promising options due to their superior electrical properties which allow for fabrication of faster and more power-efficient electronics.
4. **Textiles and Clothing:** Nanotechnology has shown a huge potential in the textile and clothing industry which is normally very traditional. Coating is a common technique used to apply Nano-particles onto textiles. The success of nanotechnology in textile applications lies in areas of durability, flexibility, wash ability and softness. The use of nanotechnology allows textiles to become multifunctional and produce fabrics with special functions, including antibacterial, UV-protection, easy clean, water & stain repellent and anti-odour.
5. **Energy equipment:** Nanoscales and nanoporous membranes are being used to facilitate production of biomass fuel. Energy transmission could potentially be made much more efficient by using engineered nanomaterials. Throughout the renewable-energy sector, nanotechnology has the potential to increase process efficiencies and process yields, decrease costs and enable energy processes that would not be attainable any other way.

Nanotechnology has emerged as a growing and rapidly changing field. It has potential applications in many sectors and provides new opportunities. It is a rapidly expanding area of research with huge potential to revolutionise our lives and to provide technological solutions to our problems in agriculture, energy, the environment and medicine.

Q.7) Efficient and sustainable treatment of wastewater can provide enormous economic returns and other environmental benefits. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the need for efficient wastewater treatment. Mention potential economic and environmental benefits of treating wastewater.

Conclusion. Way forward.

India is facing a developing situation of water crisis. Continued population growth and urbanisation, rapid industrialisation are all putting pressure on water resources and increasing the unregulated or illegal discharge of contaminated water. This presents a threat to the health and wellbeing of Indian citizens. There are many causes driving this crisis, but it is clear that freshwater and coastal ecosystems across the globe are increasingly threatened. It is clear that future demands for water cannot be met unless wastewater management is revolutionised.

Potential economic and environmental benefits of treating wastewater:

A. Economic Benefits:

1. **Business application:** Wastewater can be used within the business itself or between several businesses through industrial linkages. Industrial water consumption is responsible for 22% of global water use. It is expected that in rapidly industrialising countries, this proportion could increase by a factor of five in the next 10-20 years.

Therefore, there is a strong incentive to use wastewater in-house and locally, based on cost savings alone.

2. **Employment:** Treated wastewater would generate jobs in the recycling industry. With about 7.5% unemployment rate, Wastewater treatment can generate some jobs giving employment to many.
3. **Tourism:** India is focusing on cleanliness and Swachh Bharat. Wastewater treatment means cleaning rivers, lakes and drains. This would help in making cities cleaner and thus would boost the tourism sector, creating more jobs.
4. **Energy resource:** According to recent study by the United Nations' Institute for Water Environment and Health (UNU-INWEH), the world generates about 380 trillion litres of wastewater every year which stores vast amounts of energy and nutrients for fertilisers. The primary source of energy i.e. organic matter can be converted into methane-rich biogas. Energy recovered from such wastewater in the form of methane can generate electricity for up to 158 million households.

B. Environmental Benefits:

1. **Agricultural nutrients:** Wastewater has high nutrient content. If applied safely, wastewater is a valuable source of both water and nutrients, contributing to water and food security and livelihood improvements. In principle, nutrients such as nitrogen, phosphorus and potassium recovered from wastewater produced annually can offset 13.4% of global demand to produce fertilisers. Improved wastewater management can improve the health of farmers by reducing the risk of pathogen exposure.
2. **Irrigation:** Usable water reclaimed from wastewater can irrigate up to 31 million hectares (mha) of land, a UN the study claimed. With agriculture in India being monsoon dependent irrigation is a big issue. Wastewater can provide nutrient rich water to the fields.
3. **Ecosystem health:** Wastewater treatment leads to removal of toxins from water and allows better water bodies, in which aquatic ecosystems thrive.
4. **Reduce global warming:** Wastewater treatment leads to lesser carbon emissions and thus reduces climate change and global warming.

Issues in wastewater treatment:

1. **Inadequate staff:** Operators of wastewater treatment facilities must be adequately trained and certified individuals. Due to lack of trained staff wastewater treatment face major hurdles in most of the Indian cities.
2. **Lack of funds:** Municipalities in major cities have no fund to invest in wastewater treatment. They fail to raise funds through taxation and do not generally invest in wastewater treatment. Further corruption leads to major fund mismanagement.
3. **Sludge Disposal:** Sludge is the residue generated during physical, chemical and biological treatment. A major environmental challenge for wastewater treatment is the disposal of excess sludge produced during the process.

Way forward:

1. **Legal framework:** There is an urgent need for effective legal and policy framework for improved management of wastewater treatment.
2. **Funding:** Municipalities must be motivated to raise funds through taxation. A check on corruption is must with stringent regulations.
3. **Hybrid approach:** What is suitable in Indian context is to adopt a hybrid approach of centralized as well as decentralized planning to bridge the gap in wastewater treatment and abate the water scarcity and rising levels of water pollution.

Municipal wastewater was and still is seen as filth. However, there is a need to change the attitude by recognising the enormous potential economic returns and other environmental benefits from wastewater streams. Treating wastewater efficiently can go a long way in achieving the UN-mandated sustainable development goals (SDG). Indeed, reused wastewater may help address other challenges including food production and industrial development. Wastewater is now seen as a potential resource and its use, or recycling after suitable treatment, can provide economic and financial benefits.

Q.8) Increased investment in agriculture research is an absolute need of the hour. Examine.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the need for investment in agriculture research.

Conclusion. Way forward.

Agriculture and allied sectors account for approximately 14% of India's GDP, and 50% of its entire workforce. Indian agriculture has transformed significantly over the last few decades. The green revolution was a major technological breakthrough which created a lasting impact on Indian agriculture. However, when it comes to investments on Research & Development (R&D) Infrastructure and Technology implementation, a lot more needs to be done. India's public investment in R&D as a fraction of GDP has remained stagnant over the last two decades at around 0.6% to 0.7% of GDP.

Need of investment in agriculture research:

- 1. Food security:** The United Nations estimates India's population (1.39 billion now) to overtake China's by 2027. This will pressure the country's economy, food security and agriculture. Such challenges need to be addressed to feed the largest population in the world. A Second Green/Evergreen Revolution is urgently needed to raise the growth rate of agricultural GDP. An investment in R&D would help create more seeds and increase productivity.
- 2. Climate Change:** Use of biotechnology in agriculture can reduce vulnerability of crops to environmental impact and over dependence on chemical fertilisers to improve yield. Off late, technologies with respect to bio-formulations have been found effective against soil borne pathogens to maintain the productive capacity of agro-ecosystems. R&D is needed for in-house field research and process development for environment-friendly agricultural practices and for educating farmers on land use patterns.
- 3. Farmer distress:** With ever-increasing supply-side constraints, the role of R&D has become increasingly important with the potential to offer long-term solutions for Indian agriculture. Farmers' access to the latest research can help in overcoming issues such as seed problems, pest and disease problems, crop sustainability, climate change, irrigation problems, soil erosion etc. To fulfil its objective of doubling farm incomes by 2022, the govt must hike R&D spend and facilitate private investments.
- 4. Efficient Water Management:** Water is indispensable for all agricultural activities. The unpredictable monsoon rains coupled with increasing demand for food production has made smart irrigation imperative for Indian agriculture. Area-specific R&D on irrigation technologies can play an important role in this regard.

Way forward:

- 1. Increasing investment in R&D:** Investment in agricultural research and education should be raised to provide 2% of the GDP to R&D in agriculture and allied sector to facilitate the development of basic and strategic research.
- 2. Genetic enhancement of crops:** In the field of genetic enhancement, premier institutions should be identified where breeding of specific crops should be carried out. Both molecular and transgenic technologies need to be given equal and high importance.
- 3. Crop-potential mapping:** Development of district-wise crop-potential map is needed to focus research on crop improvement and production management within the potential region for each crop. Block level agro-climatic, land use and socio-economic data collection and analysis should be carried out.
- 4. Climate tolerant and rainfed crops:** Focused research on climate tolerant and rainfed crops of rice, wheat is needed. Under it biofertilizer, zero-tillage and organic nutrient based crop improvement research has to be initiated as priority.
- 5. Strengthening regional research:** Bio-Safety Testing and Research at national and regional level be strengthened and facilities is an absolute necessity. India should focus on high-quality product development research with commercialization prospects to quickly and safely reach the farmers.

R&D generates new technologies and passes them to farmers. In the coming years, agricultural technology will play a vital role in addressing their concerns related to conservation and management of rural resources. In spite of successful R&D initiatives around crop cultivation and protection and huge investments from the private sector, a majority of farmers in India have not been able to get optimum yield in the absence of expert scientific advice. The need of the hour is to bridge the gap between research and practice.

Q.9) What is organic farming? Explain why the use of organic farming should be encouraged in India.

Ans.

Demand of the question

Introduction. What is organic farming?

Body. Discuss the need of encouraging the use of organic farming in India

Conclusion. Way forward.

As per the United States Department of Agriculture (USDA) organic farming is a system which largely excludes the use of synthetic inputs (fertilizers, pesticides, etc.) and relies upon crop rotations, crop residues, animal manures, organic waste, and biological system of nutrient mobilization. Organic farming system in India is not new and is being followed from ancient times. It promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity. Currently India ranks 33rd in terms of total land under organic cultivation and 88th in terms of the ratio of agricultural land under organic crops to total farming area.

Need of encouraging the use of organic farming in India:

- 1. Unsustainable conventional agriculture:** The ill effects of the conventional farming system are felt in India in terms of the unsustainability of agricultural production, environmental degradation, health and sanitation problems, etc. Organic agriculture is needed as an alternative method to the modern system.

2. **Agricultural productivity:** The national productivity of many of the cereal crops, millets, oilseeds, pulses and horticultural crops continues to be one of the lowest in the world in spite of the green revolution. The fertilizer and pesticide consumption has increased manifold but this trend has not been reflected in the crop productivity to that extent. Organic farming has the potential of increased productivity in the long term due to better soil conditions and ecosystems.
3. **Rising population:** With the increase in population there is need to increase agriculture production further in sustainable manner. The scientists have realized that the 'Green Revolution' with high input use has reached its peak and is now diminishing returns. Thus, a sustainable organic alternative is needed.
4. **Employment Opportunities:** According to many studies, organic farming requires more labour input than the conventional farming system. India which has a very large amount of labour unemployment and underemployment can generate agricultural jobs through organic farming in rural areas. In India the organic food market is approximately of Rs. 5.6 billion and is an emerging opportunity for generation of employment and income at village level.
5. **Healthy food:** Several indirect benefits from organic farming are available to both the farmers and consumers. While the consumers get healthy foods with better taste and nutritive values, the farmers are indirectly benefited from healthy soils and farm production environment.
6. **Eco-tourism:** Eco-tourism is increasingly becoming popular and organic farms have turned into such favourite spots in many countries like Italy. Organic farming adds to the beauty of the fields and provides protection to the ecosystem, flora, fauna with increased biodiversity and the resulting benefits to all human and living beings.

Challenges to organic farming in India:

1. **Lack of Awareness:** The most important constraint in the progress of organic farming is the lack of awareness among farmers about the organic farming and its potential benefits.
2. **Marketing Problems:** It is found that before the beginning of the cultivation of organic crops, their marketability and that too at a premium over the conventional produce has to be assured. Inability to obtain a premium price, at least during the period required to achieve the productivity levels of the conventional crop lead to a setback.
3. **Shortage of Biomass:** Many experts and well informed farmers are not sure whether all the nutrients with the required quantities can be made available by the organic materials. Even if this problem is resolved, they are of the view that the available organic matter is not simply enough to meet the requirements.
4. **Inadequate Supporting Infrastructure:** In spite of the adoption of the National Programme for Organic Production, the state governments are yet to formulate policies and a credible mechanism to implement them. There are only four agencies for accreditation and their expertise is limited to fruits and vegetables, tea, coffee and spices. The certifying agencies are inadequate.
5. **High Input Costs:** The small and marginal farmers in India have been practicing organic farming in the form of the traditional farming system. They use local or own farm renewable resources and carry on the agricultural practices in an ecologically friendly environment. However, now the costs of the organic inputs are higher than those of industrially produced chemical fertilizers and pesticides including other inputs used in the conventional farming system.

Way forward:

- 1. Financial support:** Substantial financial support by governments is absolutely necessary to promote organic farming. In India, organic farmers do not receive the benefits of government subsidies as they are targeted at conventional cultivation. Given the low risk bearing capacity, there is a need to make organic farming an attractive proposition. A programme for organic agriculture must be fully supported by the full compensation both in cash and kind to the farmers in the event of the loss of production.
- 2. Market development:** Market development for the organic products is a crucial factor to promote domestic sales. Supplies do not match the demand for organic products in the country and the absence of proper links between the two has been pointed out for the tardy growth of organic farming in the country. An important role of the government in this direction is giving various support to the producer and consumer associations to market the products.
- 3. Awareness:** A vigorous campaign to highlight the benefits of organic farming against the conventional system is essential to increase the awareness of the farmers and consumers.
- 4. Crop identification:** Identification of crops for cultivation on the organic farms is important. For example, soyabean in Madhya Pradesh and cotton in the rainfed areas has great potential.

Unsustainable agricultural practices has proved to be harmful for land, soil and farmers in general. A switch to organic farming can not only help to achieve sustainable agricultural production but would help farmers with rise in income and production. An emphasis should be given to organic farming. Sikkim is being such a state to recognise it early and becoming a 100% organic state. Other states should work for the same.

Q.10) Promoting and strengthening the Micro, Small and Medium Enterprises (MSME) sector can help in achieving inclusive growth. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how MSME sector can help in achieving inclusive growth? Mention challenges faced by MSMEs in India.

Conclusion. Way forward.

The Micro, Small and Medium Enterprise sector is crucial to India's economy. There are 30 million enterprises in various industries, employing 69 million people. Nationwide, Micro, Small and Medium enterprises (MSMEs) have been acknowledged as the engine of economic acceleration and for promoting progress. The sector is critical for employment generation and for the development of Indian economy by increasing the standard of living of the people. In this way the MSMEs play a significant role in inclusive growth of Indian economy.

How can the MSME sector help in achieving inclusive growth?

- 1. Employment:** As MSMEs are usually labour-intensive, they have the ability to create more jobs. MSME sector is the most useful vehicle for inclusive growth in India due to its inherent nature of large scale employment creation in the shortest possible time, especially to people belonging to weaker sections of the society.

- **Rural entrepreneurship:** According to 2011 Census 68.84% people are living in rural areas of India. People in rural areas suffer with unemployment, poor infrastructure facilities which may be solved with the development of the rural entrepreneurs. There is a lot of scope for rural entrepreneurship in MSMEs sector economy which plays a vital role in providing employment and income for the poor and unemployed in rural areas.
 - **Non-agricultural livelihood:** Indian MSME sector offers maximum opportunities for both self-employment and wage-employment outside the agricultural sector and contributes in constructing an inclusive and sustainable society. The rural non-farm sector in the form of rural SMEs absorb those released from agriculture but not absorbed in the urban industries.
 - **Female participation:** 20% of Every 1000 MSMEs in India are women Owned. MSMEs provide a platform for female participation, especially being informal in nature. MSMEs act as an imperative instrument for the development of women and realize the goals of economic growth and development of the nation.
2. **Better pays:** In addition, evidence suggests that small enterprises provide better stability, higher pay and better benefits to their employees than large enterprises and informal firms especially to unskilled labour force. This enables poor to earn more and save more for their welfare.
 3. **Cheap products:** MSMEs comprise the majority of firms which have much deeper and market penetration than foreign firms. Local SMEs are often the principal provider of goods and services in lower and middle income communities. Thus, they provide affordable products to poor and middle income families leading to more savings.
 4. **Reduce inequalities:** MSMEs help in developing infrastructural facilities like roads, power, bridges etc. It reduces the gaps and disparities in income between rural and urban areas. Rural MSMEs can avoid the migration of people from rural to urban areas in search of jobs.

Challenges faced by MSMEs in India:

1. **Problem of Finance:** An important problem faced by micro and small enterprises in the country is that of finance. Most banks are reluctant to lend to MSMEs because from the perspective of bankers, inexperience of these enterprises, poor financials, lack of collaterals and infrastructure.
2. **Problem of Raw Material:** A major problem that the micro and small enterprises have to contend with is the procurement of raw material. Procurement of raw material at a competitive cost and shortage of raw materials is a common problem. The small units that use imported raw material face raw material problems with more severity mainly due to difficulty in obtaining raw material either on account of the foreign exchange crisis or regulator delays.
3. **Access to modern Technology:** The lack of technological know-how and financial constraints limits the access to modern technology and consequently the technological adoption remains low.
4. **Government policy/infrastructure related challenges:** MSMEs face bureaucratic hurdles and red Tapism. Delay in getting power connection, water connection, permission of concerned authorities to discharge effluents, etc. are some of the issues faced.
5. **Marketing related challenges:** Lack of entrepreneurial, managerial and marketing skills and lack of professionally managed top management along with ineffective marketing strategy is a major hurdle in success of MSMEs. Non-exposure to best management practices in manufacturing, marketing, distribution and branding and lack of adequate information hinders their productivity.

- 6. Labour related challenges:** Lack of skilled manpower for manufacturing, services, marketing, etc. is a big issue for MSMEs. Further, multiplicity of labour laws and complicated procedures associated with compliance of such laws impact MSMEs ability to grow.

Way forward to strengthen the Micro, Small and Medium Enterprises (MSME) sector:

- 1. Access to credit:** Government of India and banks should design plans and measures to widen easy, hassle-free access to credit. Ministry of MSME implemented Credit Guarantee Fund Scheme for providing financial assistance to MSMEs. Government must ensure that banks should enable timely credit to MSMEs. The establishment of the MUDRA (Micro Units Development & Refinance Agency Ltd.) bank under the Pradhan Mantri MUDRA Yojana has been a major initiative.
- 2. Coherent policy and regulatory frameworks:** Coherent regulatory frameworks can provide an enabling environment to foster MSME development. Barriers to entry, including technical regulations, compliance with Environment, Health and Safety (EHS) standards, labour laws and regulations need to be addressed.
- 3. Infrastructure:** Government should provide enhanced development and upgrade existing rail & road network and other infrastructure facilities in less developed and rural areas to boost growth and development of MSMEs.
- 4. Human capital:** Skill development and imparting training to MSME workers is a crucial step to increase the productivity of the sector. The government should emphasise predominantly on skill development and training programs. Skill India, Startup India are important initiatives in this direction.
- 5. Technological know-how:** There should proper research and development in respect of innovative methods of production and service rendering. Further, the government should promote and subsidise the technical know-how to Micro and small enterprises.

Therefore, while emphasizing the crucial role of MSMEs in creating employment, it could be useful to highlight their potential as decent jobs providers. This means not only formulating policies at enterprise level for improving human capital, efficiency and productivity of MSMEs, but also launching structural transformation that provide a regulatory framework conducive to their growth.

Q.11) What do you understand by 'formalisation of economy'? Discuss various merits and demerits of formalisation.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various merits and demerits of formalisation.

Conclusion. Way forward.

Formalisation of the economy means bringing companies under the regulatory regime of government and subject to laws related to manufacturing and income tax. According to Economic survey 2018, formalisation includes firms providing some kind of social security to their employees and when they form a part of the tax net.

Advantages of formalisation:

- 1. Increased tax returns:** Informal operations pose many challenges to the government, like the inability to raise tax revenue, collect data, and regulate firms. Formalisation leads to more tax revenues with an increase in tax-to-GDP ratio. Formalisation provides

a level-playing field for tax-compliant entities, expanding the tax base so that the burden falls more equitably on all the players rather than a select few.

2. **Scale and productivity:** Formal firms can more easily increase production and employment, moving to a larger, more efficient scale of operation and potentially bringing in higher revenues and profits. It helps firms get access to formal credit, comply with the law, and avoid paying fines.
3. **Social spending:** Due to more revenues to the government it leads to more investment in the social sector. With increased revenue government can invest in education, health, skill development etc.
4. **Reduce black money:** It becomes tough to involve in money laundering and illegal activities as transparency will increase. Due to formalisation companies have to show balance sheets and comply with rules and regulations.
5. **Labour welfare:** Transitioning economy towards formality brings benefits by establishing the rule of law and provide benefits of labour laws to entrepreneurs and workers. It enforces minimum wages and proper documentation of benefits by the employer. Formal jobs also end up ensuring the dignity of labour; enable productivity improvements, as well as access to formal training.
6. **Growth and development:** Formalisation facilitates doing business, improves the investment climate. This encourages growth and development of a nation.

Issues related with formalisation:

1. **Loss of jobs:** In India, which currently faces an unemployment problem, the informal sector provides the vast majority of opportunities both for its youth and for people coming off the farm to earn incomes. Formalisation can lead to loss of employment due to various reasons.
2. **Skill requirement:** The labour and MSMEs may lack skill and resources to comply with formal rule and regulations. For example, GST turned out to be complex to most of the small industrial units that led to loss to them.
3. **Red-Tapism:** According to a 2015 study by the Centre for Civil Society, there are 44 central statutes and over 150 state statutes governing every aspect of the employee-employer relationship. The process of formalization is too burdensome and costly for small enterprises to remain competitive.
4. **Cost of compliance:** Most informal sector works on low labour cost and increased tax compliance, thereby making them profitable. Formalisation would lead to rise in input and labour cost making many informal units non-productive.
5. **Ability to do business:** Informal firms are able to improve their ability to do business in various many ways. For example, small entrepreneurs gain from forming effective associations with their peers. They also benefit greatly from 'mentoring'. They cannot afford the loss of income by taking time off for training under formal rules.

The thrust of the Indian government's policies should not be to reduce the size of the informal sector. Rather, it must be to improve working conditions for the citizens who earn incomes in the sector. Their safety at work, their dignity, and their fair treatment by employers must be the thrust of any reform.

Q.12) 'E-commerce has tremendous potential to benefit farmers, small-scale industries and indigenous communities'. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how E-commerce can benefit farmers, small-scale industries and indigenous communities.

Conclusion. Way forward.

E-Commerce is a business model “enables a firm/individual to conduct business over an electronic network, typically the Internet.” The consumer and seller or service provider interaction gets better and more efficient. It has a tremendous potential to benefit farmers, small-scale industries and indigenous communities.

How can E-commerce benefit farmers, small-scale industries and indigenous communities?

A. Farmers:

1. **Accessibility:** It helps by providing an accessible nationwide market for the farmer with equal prices for the quality of his produce.
2. **Middlemen elimination:** E-Commerce presents an advantage to both consumers and farmers. It eliminates most middlemen and inventory reduction which makes it easy for a farmer's to pass on the benefits to consumers at low prices. For instance, eNAM platform has helped farmers by directly connecting them to markets removing middlemen.
3. **Better sales:** For the farmers, it promises more options for sale. It would increase their access to markets through warehouse based sales and thus obviate the need to transport his produce to the mandi.
4. **Marketing:** It has been successfully used by a few enterprising people in agricultural marketing. For instance, Big Basket, amazon, books orders from online consumers and delivers sorted and cleaned groceries, vegetables and fruits to them.

B. Small-scale industries:

1. **Increased Business Reach:** One of the most significant advantages of e-commerce is that it connects small business to the people where it's not possible for them to be present physically. By having an online store, one can sell your products/services from a single location thereby increasing profits. As business reaches more people, the customer base would grow, which will directly impact the number of sales and boost revenue.
2. **Low Operational Cost:** One of the benefits of having an online store is that industries don't have to build physical stores at all the locations where they want to sell products/services. A single e-Store would serve the purpose. This will keep your business operational cost on the lower side.
3. **Feedback:** It provides an opportunity for customers to provide feedback directly to the seller, who can remove various discrepancies and ensure better products. While in a retail environment it is difficult to get customer reviews, it is much more comfortable and hassle-free online. One can ask customers for reviews online and build credibility by publishing these on social media platforms and other channels.
4. **Ease of Product tracking:** Tracking a product online can be one of the most significant advantages of an e-commerce. One can quickly know the status of his

inventory especially. Alternatively, one can also track products that will soon run out of stock in inventory and make it available beforehand.

C. Indigenous communities:

1. **Access:** With many Indigenous people living in remote communities, opportunities for traditional face-to-face commerce are extremely limited. Even in urban centers, the cost of setting up bricks-and-mortar shop-fronts limits business prospects for many Indigenous people, despite the high demand for their art, crafts and cultural tourism services. E-commerce potentially allows Indigenous people to sell direct to the public and keep all the profits, as well as accessing a much larger market while continuing to dwell on their traditional lands and maintaining their traditional culture.
2. **Middlemen elimination:** E-Commerce presents an advantage to indigenous communities by removing middlemen. It eliminates most middlemen and which makes it easy for communities to earn all the profits, which is usually snatched by middlemen.
3. **Inclusive development:** E-commerce helps promote efforts to harmonize modern technologies with traditional and indigenous knowledge for sustainable rural development.

Thus, e-commerce has a lot of potential in furthering benefits to farmers, small industries, and indigenous communities to reap profits. It provides platforms for them to connect with consumers directly and reap profits while providing quality products and services.

Q.13) What is India's genome mapping project? Discuss its significance and potential benefits.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss significance and potential benefits of human genome sequencing. Mention various challenges.

Conclusion. Way forward.

India's Genome Project is a government-funded project to sequence more than a thousand individuals from diverse ethnicities to create a genome database for India. The Genome India Project, a collaboration of 20 institutions including the Indian Institute of Science and some IITs, will enable new efficiencies in medicine, agriculture and the life sciences.

Significance and potential benefits of human genome sequencing:

1. **Healthcare:** Participants of genome-sample collections represent diversity of the country's population. It will help in following ways:
 - a) **Personalised Medicine:** The first obvious use would be in personalised medicine, anticipating diseases and modulating treatment according to the genome of patients. Several diseases develop through the interplay of the environment with multiple genes, which differ across populations.
 - b) **Determining gene-disease link:** Human genome sequencing is important to establish a link between diseases and the unique genetic make-up of each individual. For instance, cardiovascular disease generally leads to heart attacks in South Asians. If such propensities can be mapped to variations across genomes, it is believed public health interventions can be targeted better.

- c) **Better understanding of diseases like cancer:** While genes may render some insensitive to certain drugs, genome sequencing has shown that cancer too can be understood from the viewpoint of genetics, rather than being seen as a disease of certain organs.
 - d) **Drug efficacy:** Another advantage of genome sequencing is that information regarding drug efficacy or adverse effects of drug use can be obtained. Drugs developed in the Western world and sold in India are pricey and may not be effective on the Indian gene. Mapping of India's genetic landscape is critical for next generation medicine.
2. **Agricultural usage:** It will enhance India's scientific capabilities. Next step would be genome mapping of crops that would help in better understanding of the genetic basis of susceptibility of crops to blights, rusts and pests. It may become possible to deter them genetically, and reduce dependence on chemicals.
 3. **Evolutionary studies:** Global science would also benefit from a mapping project, which would provide data useful for the mapping of the spread and migration of a range of life forms in the old World and thus would help in better understanding of human evolution.

Challenges and issues related to genome sequencing:

1. **Accuracy:** How accurately and reliably genome sequencing measures genome variants is a big challenge.
2. **Use of genetic information:** The role of most of the genes in the human genome is still unknown or incompletely understood. Further, most physicians are not trained in how to interpret genomic data. Therefore, a lot of the information found in a human genome sequence is unusable at present.
3. **Regulation:** The volume of information contained in a genome sequence is vast. Policies and security measures to maintain the privacy and safety of this information are still new. India today has only loose regulations for this budding field. The Indian Council of Medical Research, the apex body that regulates clinical trials in India, has no specific guidelines to govern genetic testing laboratories.
4. **Medical ethics:** The introduction of whole genome sequencing may have ethical implications. Genetic testing has potential downsides such as genetic discrimination, loss of anonymity, and psychological impacts.
5. **Data and storage:** After collection of the sample, anonymity of the data and questions of its possible use and misuse would need to be addressed. Companies have access to sensitive personal information, which could be hacked or sold to third parties without participants' consent. India is yet to pass a Data Privacy Bill with adequate safeguards. Launching a Genome India Project before the privacy question is settled could give rise to another set of problems.
6. **Social issues:** The question of heredity and racial purity has obsessed civilisations, and more scientific studies of genes and classifying them could reinforce stereotypes and allow for politics and history to acquire a racial twist.

Way forward:

1. **Training:** It is important to train more clinicians for gene data interpretation and rope in more labs for sequencing. Training more physicians to study medical genetics for speedier analysis is needed.
2. **Data security:** Given the sensitivity of genomic data, every effort must be made to minimise the likelihood of data breaches and to maintain public trust in institutions that gather, store and use such data. A practical and feasible solution to build such a

reliable and safe database is the application of blockchain technology to secure genomic data.

3. **Effective policy:** There is a need for a comprehensive and effective policy to guide the use of genomic information, with significant emphasis on protecting the privacy of research subjects. One way to make this possible is through 'dynamic consent' by which people who wish to participate in a research project can register themselves and provide consent on an ongoing basis.
4. **Collaborative effort:** A collaborative and harmonised efforts is needed to balance sharing of genomic data with an individuals' privacy. A framework must be designed transparent enough to specify the purpose of the collected genomic data and the duration for which it will be stored in the database.

Given the benefits of genome sequencing, it will help in better understanding of the human body and processes and will help in treating earlier untreatable diseases. Although there are some issues and challenges, these can be handled and resolved.

Q.14) What is Agricultural Protection Zoning? Discuss its need and importance.

Ans.

Demand of the question

Introduction. What is Agricultural Protection Zoning?

Body. Discuss the need and importance of Agricultural Protection Zones.

Conclusion. Way forward.

Agricultural protection zoning (APZ) is a process of designating areas where farming is the primary land use and discourages other land uses in those areas. It includes separation of farming and related activities from other land uses. It is used to preserve agricultural lands and protect working farms from conversion to non-farm uses by prohibiting or restricting development on agricultural lands.

Need and importance of Agricultural Protection Zones:

1. **Sustainable agriculture:** The regulation of land uses in agricultural areas is important to help protect farm lands for long-term use and to ensure a sustainable agricultural industry. It conserves agricultural lands of long-term commercial significance for the production of crops, livestock, or other agricultural products.
2. **Discourage incompatible development:** Agricultural Preservation Zoning prevents land uses that are incompatible with farming. Examples of such uses include landfills, airports, golf courses etc. APZ can help preservation of farmland and discourage development of land uses that are incompatible with agricultural uses.
3. **Protect dependent rural communities:** It promotes and protects dependent rural communities through the enhancement, protection, and perpetuation of the agricultural land to produce food and provide livelihood to them by protecting property rights.
4. **Minimise land use conflicts:** Zoning protects agricultural land by minimizing land use conflicts. As a region develops, the non-agricultural land uses increases and often creates conflict between the farming and non-farming activities. Agricultural zoning prevents these controversies by segregating agricultural lands from non-agricultural land uses.
5. **Maintains the vitality:** Scattered development of non-agricultural buildings interferes with an agricultural operation. Agricultural zoning maintains the vitality of the agricultural sector by retaining a critical mass of agricultural land.

6. **Protect agricultural soils:** Effective agricultural zoning ordinances protect agricultural soils. Agricultural sector requires soils amenable to food production for human and animal consumption. By APZ those soils that are most suitable for agriculture are protected from other development activities that make soils non-suitable.

Limitations of Agricultural Protection Zones:

1. **Limited effectiveness:** 80% of farms in India are marginal to small landholdings. APZ may have limited effectiveness in areas where farming is not well established or is fragmented.
2. **Conflicts:** APZ may lead to conflicts when applied to areas with intense development pressure. For instance, it may generate objections from nearby non-farm residents to routine agricultural activities that result in noise, odour or dust.
3. **Do not guarantee agricultural use:** While zoning limits uses that are inconsistent with farming, zoning does not guarantee the land will remain in production. In 2017, fallow land for India was 24,848 thousand hectares, which are theoretically under agri-use but not acting as productive sites as such.
4. **Fragmentation:** APZ subdivides farms into smaller parcels that are usually too small to be operated economically.

APZ has the prospect of benefiting the farming community. Recently, Tamil Nadu Chief Minister has announced that the Cauvery delta region consisting of eight districts would be declared as a Protected Special Agriculture Zone. The move would help in preventing the implementation of oil exploration projects and other hydrocarbon projects in the Cauvery delta region and will help to ensure food security of the State and livelihood opportunities of the farmers and other agriculture-based labourers.

Q.15) Would you advocate that the income of rich farmers should be taxed in India? Give reasons.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss why rich farmers should be taxed in India and various challenges.

Conclusion. Way forward.

Agriculture employs about 50% of the population contributing approximately 17% to the GDP of the country. According to Indian Constitution, agriculture and the taxation of agricultural incomes has been a state subject. Accordingly, section 10(1) of the Income Tax Act, 1961, exempts agricultural income from taxation by the central government. This has led to rich farmers and landlords immune from the tax net.

Why should rich farmers be taxed in India?

1. **Tax shelter:** The agriculture sector has long acted as a tax shelter. While many experts, over the years, have demanded closing of this loophole, no step has been taken by any government.
2. **Money laundering:** As the 2014 Tax Administration Reform Commission report points out, agricultural income is being increasingly used as a conduit to launder money. Agriculture exemptions are used to route black money by non-agricultural entities.
3. **Equity in taxation:** In 2002, Vijay Kelkar Task Force on direct taxes reported that not taxing agricultural income violates horizontal and vertical equity. In other words, there is no point in leaving rich farmers out of tax and taxing others.

4. **Better subsidies:** Adequate tax data would help the Government to identify the small and big farmers by which the targeted subsidy schemes in future can be rolled out to benefit the needy.
5. **Revenue:** The latest National Sample Survey revealed that 70% of agricultural households in India have marginal holdings (under 1 hectare), and only 0.4% hold over 10 hectares. Just by taxing the incomes of the top 4.1% of agricultural households, at an average of 30%, as much as Rs 25,000 crore could be collected as agricultural tax.
6. **No benefit to small-scale farmers:** It's true that agriculture is the main source of income for the majority of the rural Indian population. But the small-scale farmers have been barely impacted by the tax exemptions under the Indian Income Tax Act, wealthy farmers have reaped the benefits by abusing them.

Various challenges:

1. **Political will:** Many states may have been reluctant to tax agriculture incomes as they do not wish to lose vote bank of farmers. Moreover, India's state legislatures have typically been populated by land owners who have been blocking efforts to impose a tax on themselves.
2. **Cash transactions:** In India in particular, agriculture is harder to tax as it is based largely on cash transactions which are hard to track and trace. Cash transactions not routed through the banking system are difficult to verify and be used for assessment of agricultural incomes.
3. **Burden small farmers:** In a country where 83% of the farming community comprises small and marginal farmers. Many farmers do not hold land and work on contract. Rich farmers would pass on the burden of tax on these farmers.

Niti Aayog member Bibek Debroy recently said that agricultural income should be taxed. In its three-year action plan, Niti Aayog had also recommended taxing agricultural income. The prudent path would be to amend the definition of 'agricultural income' under the tax laws, and impose an appropriate monetary threshold after careful deliberation and study.

Q.16) What is 'National Mission on Transformative Mobility and Battery Storage'? Discuss its importance.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the need and importance of National Mission on Transformative Mobility and Battery Storage.

Conclusion. Way forward.

National Mission on Transformative Mobility and Battery Storage is the framework for a Phased Manufacturing Program (PMP), aimed at localising the production of electric vehicles (EV) and its components within the country. With recent climate change, India has made various efforts to reduce its carbon mission. An effort is made through emphasis on electric vehicles through the FAME scheme.

Need of National Mission on Transformative Mobility and Battery Storage:

1. **Low-cost electric vehicle:** Battery technology is the primary hurdle in having a low cost electric vehicle. So the need for better and affordable batteries is the need of the hour.

2. **Increasing efficiency of vehicles:** There is a need to increase vehicle efficiency. This will help in reducing energy consumption and will enable a vehicle to travel the same distance on a smaller battery.
3. **Need of innovation:** Automobile sector needs to focus on innovation to enhance the performance of electric vehicles.
4. **Focusing battery production:** Indian automobile industry needs a focus on battery life to enhance the performance of EVs. India needs to encourage manufacturing of battery cells in India.
5. **Need of power-electronics:** EVs use power-electronics extensively. Power-electronics industry in India has not kept pace with new developments. India would need a new power-electronics industry. A special effort is needed to promote such industries.

Importance of National Mission on Transformative Mobility and Battery Storage initiative:

1. **Electric vehicle ecosystem:** The Mission will provide mobility solutions that will bring in significant benefits to the Electric vehicle industry, economy and country. The Mission will recommend and drive the strategies for transformative mobility and Phased Manufacturing Programmes for Electric Vehicles, EV Components and Batteries.
2. **Improve air quality:** This mission will help in improving air quality in cities along with reducing India's oil import dependence and enhance the uptake of renewable energy and storage solutions.
3. **Develop domestic manufacturing ecosystem:** The Mission will lay down the strategy and roadmap which will enable India to leverage upon its size and scale to develop a competitive domestic manufacturing ecosystem for electric mobility.
4. **Ease of Living:** Affordable, accessible, inclusive and safe mobility solutions are primary strategic levers for rapid economic development and improving 'Ease of Living' and will benefit all citizens by enhancing the quality of life of citizens.
5. **Employment:** It will also provide employment opportunities through 'Make-in-India' across a range of skills.

India has a significant market potential for batteries and electric vehicles. Electric vehicles are creating a big demand and due to this demand, the cost of batteries will further come down. The National Mission on Transformative Mobility and Battery Storage initiative is an important step in this regard.

Q.17) What are various reasons for the gender gap in STEM (science, technology, engineering and mathematics)-related fields? Suggest some measures to improve women participation in these fields.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various reasons for the gender gap in STEM-related fields. Measures to improve women participation in these fields.

Conclusion. Way forward.

Gender inequality is a big issue in India. India stands at 112th position in the latest Global Gender Gap Index. There is less participation of girls especially in Science, technology, engineering and Mathematics (STEM) Fields. For instance, IIT in 2016 got only 8% female students. This shows a clear gap when it comes to participation in STEM (science, technology, engineering and mathematics)-related fields.

Various reasons for the gender gap in STEM-related fields:

1. **Mindset:** A major factor responsible for this is the mindset that boys are better at science and girls are not. Women are still considered less efficient to men when it comes to STEM related fields is a major misconception.
2. **Fewer role models:** Role models many times are a factor in making career choices. However, there are fewer female role models in the fields of science, math, or engineering for young female students to follow. Moreover, our textbooks too rarely talk about these role models.
3. **Less women specific science institutes:** Only 11% colleges in India which are exclusively for women, majority of which offer arts and commerce rather than science.
4. **Patriarchy:** When comes the question of pursuing a career in science, the entrenched patriarchy in society holds women back. There are patriarchal attitudes in hiring practices or awarding fellowships and grants etc. A male-dominated work environment and gender insensitivity are additional burdens for women scientists.
5. **Economic factors:** This is another major constraint for women in pursuing science. Even for families with greater resources, economic considerations affect the pursuit of science degree as a science which is generally more expensive than an arts or a commerce degree.
6. **Considered as Burden:** Families expect daughters to marry and assume obligations to their husband's family. Many families think that a daughter's education would primarily benefit her in-laws rather than her natal family. Such families traditionally view boys' education differently from girls'.

Government of India initiatives for promoting women in science:

1. **Women Scientist Scheme:** Women Scientist Scheme aims to provide opportunities to women scientists and technologists who desire to return to mainstream science after a break in career due to social responsibilities.
2. **Knowledge Involvement in Research Advancement through Nurturing (KIRAN):** Department of Science & Tech. restructured all women specific programmes under one umbrella called KIRAN. The mandate of the KIRAN programme is to bring gender parity in S&T through gender mainstreaming.
3. **S&T for women:** Science and Technology for women programme was initiated in 1981–82 with the mandate to promote gender equality and empower women at grass root level with inputs of S&T through development, adaptation, adoption, transfer, demonstration of appropriate and successful technologies.
4. **Consolidation of university research for innovation and excellence in women universities' (CURIE):** KIRAN is involved in taking proactive measures through the component- CURIE, to develop state-of-the-art infrastructure in women universities to attract, train and retain promising girl students in S&T domains.
5. **Women technology parks:** Women technology parks (WTPs) act as a single window hub for convergence of diversified technologies, leading to socio-economic development of women through capacity building and adoption of location-specific technologies.
6. **Training and capacity building:** Several training programmes specifically for capacity building of women scientists working in various sectors covering multifarious themes are conducted in partnership with premier institutions including the National Programme for Training of Women Scientists and Technologists in the Government that provided opportunity to over 1000 women scientists to upgrade their knowledge base and skills.

Measures to improve women participation in these fields:

1. **Holistic approach:** Getting more girls and women into STEM education and careers requires holistic and integrated responses that reach across various sectors. Society has to understand that women as an important human resource and can play an important role in economic growth.
2. **Private participation:** Companies can invest in building female talent in a multitude of ways, some of which include providing more internship opportunities for women, giving STEM scholarships to meritorious yet economically backward girls, and focusing on retaining women employees in the workforce to maintain better gender ratios.
3. **Spread awareness:** Awareness needs to be spread among parents that pursuing science for girls is not as difficult as it is presumed. With family support and encouragement, girls can be high achievers in science.
4. **Mentoring:** Along with family support, having teachers who mentor and encourage girls in STEM subjects can have more impact. Mentorship programmes for girls at secondary and senior secondary levels are the need of the hour.
5. **Make education gender sensitive:** There is a need to promote positive stereotypes of roles of women in textbooks. It is important that when girls come out of school, they have the dream to carve a path for themselves. Education for boys at school level should be in the direction of making them gender sensitive.
6. **STEM scholarships to meritorious girls:** Scholarships to meritorious girls at school levels can provide a boost to girls to pursue science at graduate and postgraduate levels and take up science as a career.

Empowering women in science and technology and their full and equal participation is one of the core objectives mentioned in the Science and Technology Policy of the Govt. of India, 2003. Accordingly, there are a number of schemes, mostly in the form of scholarships, introduced by the government. However, evidence suggests that not much progress has been made. There is a need to invest on supporting infrastructure, incentivising institutions to promote gender equity, transparency in decision making etc. to bridge the persisting gender imbalance in STEM major.

Q.18) With growing energy needs should India keep on extending its nuclear energy programme? Discuss the facts and fears associated with nuclear energy.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss need to keep extending the nuclear energy programme. Mention various and fears associated with nuclear energy.

Conclusion. Way forward.

India is growing very fast. The demand for energy in India is growing because of population growth and a developing economy. The NITI Ayog estimated that the country will need to increase its primary energy supply by 3 to 4 times, and electricity generation capacity by 5 to 6 times (2003-04 levels) if it is to meet the energy needs of all its citizens by 2032. With rising energy demand and climate change, it is advocated that India should continue expanding its nuclear energy efforts, in order to provide its citizens a clean and affordable energy alternative.

Need to keep extending nuclear energy programme:

1. **Rise in Energy Demand:** India's energy demands are increasing. Climate change has already started influencing energy demand in most sectors. According to the IEA's

Global Energy & CO₂ status report, India saw primary energy demand increase 4 % or over 35 million tonne of oil equivalent. This accounts for 11 % of global demand growth.

2. **Decrease in Energy Supply:** Energy supply has been negatively affected by changing weather patterns. As water reservoirs decrease due to lower precipitation and increased evaporation, capacity for electricity production from hydropower and other water-intensive generation technologies may decline.
3. **Development:** For a developing nation committed to industrialisation, India's energy demands have grown. Nuclear energy is therefore advocated to be the facilitator to India's development aspirations.
4. **Foreign Policy Nexus:** Nuclear energy plays a substantial role in the formation of bilateral relations among nations. For example, the 2008 Indo-US nuclear agreement did not just support India's domestic power plants but strengthened Indo-US bilateral relations while giving India the recognition of being a responsible nuclear weapon state with strong non-proliferation credentials.
5. **Energy availability:** Although India is the 4th largest energy consumer in the world, it continues to remain energy-poor. In 2013, India's population without access to electricity was estimated to be a staggering 237 million (around 19 percent of the entire population). Thus to provide electricity for 24 hour as envisioned under the Saubhagya scheme, nuclear energy would play an important role.
6. **Climate change:** Due to its emission-free nature, nuclear energy can contribute to global efforts under the Paris Agreement. India's Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC) has outlined goals to reduce the carbon emissions intensity of its economy by 33-35% by 2030 as well as increase the clean energy electricity capacity to 40% of the total installed capacity in the same period.

Issues and fears related with nuclear energy:

1. **Nuclear waste:** Nuclear power generation is not as clean as it is often considered. This is demonstrated in the case of Kudankulam. People have been protesting for decades as they worry that the hot water dispatched from the plant will affect the marine life of the surrounding water sources and subsequently their livelihood.
2. **Displacement:** To build nuclear reactors, it requires huge amounts of land. This would displace local communities who may not want to leave. Further, it is not easy to rehabilitate them and provide them with appropriate compensation.
3. **Hazard risk:** Production and maintenance of nuclear power generators comes with a long list of risks. After incidents such as Chernobyl and the Fukushima disaster, countries such as Germany began to undergo a nuclear phase out shutting down their nuclear energy units.
4. **Health risks:** Nuclear power generation is fraught with ionising radiation, an invisible poison, which is unsafe in all doses, however small. Radiation causes cancers and genetic damage. Nuclear plants expose not just occupational workers, but also the general public, to radioactive hazards in numerous ways.

Nuclear power can help to improve energy security. For a rapidly developing economy such as India, it can make a vitally important contribution to growth. Besides, nuclear power can also reduce the impact of volatile fossil fuel prices and mitigate the effects of climate change. India needs to come up with a durable energy strategy to meet present and future energy demands of its population and industries.

Q.19) What is the 'Nordic Economic Model'? Do you think Nordic Economic Model can be a way forward for a sustainable future?

Ans.

Demand of the question

Introduction. What is the Nordic Economic Model?

Body. Discuss if Nordic Economic Model can be a way forward for a sustainable future or not.

Conclusion. Way forward.

The Nordic Economic model also known as the Scandinavian model, is the combination of social welfare and economic system adopted by Nordic countries (Sweden, Norway, Finland, Denmark, and Iceland). It combines features of capitalism, such as a market economy with social benefits, such as state pensions and income distribution. Important features of the Nordic model include public provision of social services, investment in services associated with human capital, and a strong social safety net.

Why Nordic Economic Model as a way forward for a sustainable future?

- 1. High level of income:** Sweden, Norway, Finland, and Denmark have a combination of high living standards. This has been achieved by high wages, better regulations of unions etc. A high level of income is must to ensure a sustainable future and growth.
- 2. Trust in government:** The citizens have a high degree of trust in their government and a history of working together to reach compromises and address societal challenges through democratic processes. A higher trust in government enables a stable government that can work for the welfare of present and future generations.
- 3. Gender equality:** Nordic countries emphasise on Gender equality resulting in a high degree of workplace participation by women. Female political representation is high. This is important as for a sustainable future, the role and involvement of women is very important as inclusive growth is one of the basis of sustainable development.
- 4. Focus on inequality:** These countries also fare well on measures of inequality with Gini indices consistently ranking them among the most income-equal societies in the world. As Oxfam report highlighted, inequality is a big issue in developing nations. An effort to reduce inequality is important as it would ensure inclusive growth and less poverty.
- 5. Low unemployment rate:** Low levels of unemployment are supported by high levels of engagement between trade unions, the government and employers. This results in a more engaged and democratic workforce. Thus, engagement with trade unions can help a government to create jobs and push the country towards a development path.

Issues related to Nordic Economic Model:

- 1. High taxes:** Opponents of the Nordic model criticize the high taxes. They point out that the Nordic Model redistributes assets, limits the amount of money available for personal spending and consumption and encourages reliance on government-subsidized programs. A country like India can't impose high tax on its citizens, where millions live under poverty.
- 2. Unsustainable future:** If we look at carbon emissions per capita, some Scandinavian countries are ranked quite high. Norway is in 24th place and Finland in 26th, according to the US Department of Energy's Carbon Dioxide Information Analysis Center (CDIAC).
- 3. High degree of government intervention:** High degree of government intervention is a big drawback of Nordic model. India's experience with high degree of government intervention is not good as it led to license raj in past.

4. **High consumption:** On the WWF's scale of ecological impact across carbon, grazing land, cropland, fishing ground, forests and built-up land, Denmark, Finland, Norway and Sweden are all near the top of the chart, consuming considerably more than the world average of 2.7 gha per capita. Thus in the near future it might lead to a resource crisis.
5. **Different economic base:** While the conditions of salaried work are very important for people's life satisfaction in Europe, unionisation won't do much for people in countries where most people work in smallholder agriculture and the informal economy and are often at the sharp end of managing environmental resources and the effects of climate change brought about by consumption in rich countries.
6. **Lesser population:** In prosperity terms, they also enjoy the luxury of having relatively small, homogenous populations across which to spread their wealth.

Thus, it can be said that Nordic model might not work in other countries as the model of prosperity. In the future, there will have to be multiple models of prosperity based on individual circumstances, and the specifics of culture, history, economics and politics with everybody flourishing within their own context.

Q.20) Discuss five key global risks as mentioned in recent, The 'Future of Earth, 2020' report.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss five key global risks as mentioned in The 'Future of Earth, 2020' report.

Conclusion. Way forward.

The Future of Earth, 2020 report has listed five global risks that have the potential to impact and amplify one another in ways that may cascade to create global systemic crisis. The survey identifies— climate change, extreme weather, biodiversity loss and ecosystem collapse, food crises, and water crises, as the most severe in terms of impact as five global risks.

The 'Future of Earth, 2020' report's five key global risks:

1. **Failure of climate change mitigation and adaptation:** Report aptly highlighted that humanity's response to this crisis, including the 2015 Paris Agreement, has not been sufficient to halt climate change. Despite declarations of a climate crisis or climate emergency by the leaders of more than 700 cities, the concentration of carbon dioxide in the atmosphere during 2019 reached more than 415 ppm.
2. **Extreme weather:** Forest fires, floods, droughts, cyclones has become a new normal. The five years from 2014 to 2018 were the warmest recorded over land and ocean since 1880. Across Europe and India, unprecedented heatwaves brought temperatures higher than a scorching 45°C.
3. **Biodiversity loss and ecosystem collapse:** Climate change and global warming is destroying habitat, rapidly and dramatically shifting ecosystems. In 2018, the world's last male northern white rhino died in his Kenyan enclosure, while the Brazilian blue parrot was declared extinct in the wild.
4. **Food crises:** Extreme weather events such as heat waves or droughts impact crop production. For example, after the 2012 heatwave in the United States, maize yields dropped by 13%. Changing rainfall patterns predicted by many climate change scenarios are expected to make food crises more frequent and more severe.

- 5. Water crises:** Climatic Conditions are driving water shortages and power outages. Water tables are declining due to overuse especially for agriculture and the population exposed to heat and water stress is 50% higher than ever.

Interrelation between different Global Risks:

- 1. Acceleration of global warming:** Extreme heat waves can accelerate global warming by releasing large amounts of stored carbon from affected ecosystems, and at the same time intensify water crises and/ or food scarcity.
- 2. Increased Vulnerability:** The loss of biodiversity weakens the capacity of natural and agricultural systems to cope with climate extremes, thus increasing vulnerability to food crises.
- 3. Further strain:** Strains on food production are expected to increase, as a result of various forces including climate change, biodiversity loss, and a global population on the rise.

The Future of Earth, 2020 report highlights important global risks. It highlights the urgency to collaborate and coordinate globally to fight climate change and associated risks. Merely setting climate targets would not help.

Q.21) Explain, what reverse osmosis (RO) systems are and how do they work? Why does the Environment Ministry want to regulate RO-based water filtration systems?

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss what are reverse osmosis (RO) systems and their working mechanism. Explain why the Environment Ministry is seeking a ban on RO-based water filtration systems.

Conclusion. Way forward.

Reverse Osmosis system is a technology that removes contaminants from water by using pressure to force water molecules through a semipermeable membrane (reverse osmosis). During this process, the contaminants are filtered out and flushed away, leaving clean, drinking water.

Mechanism of working of RO systems:

- 1. High external pressure:** It works by using an external high-pressure pump to increase the pressure on the salt side of the RO.
- 2. Semi-permeable membrane:** The pressure forces the water across the semipermeable RO membrane, leaving around 95% to 99% of dissolved salts behind in the reject stream. This is the essential principle of an RO system.
- 3. Salt concentration:** The amount of pressure required depends on the salt concentration of the feed water. Higher the concentration of salt, higher is the pressure required.
- 4. Activated carbon components:** It uses activated carbon components, such as charcoal and carbon black that can filter out contaminants as well as organic substances such as bacteria.
- 5. Cross filtration:** To avoid build-up of contaminants, cross flow filtration is used that allows water to remove contaminant and also allow enough turbulence to keep the membrane surface clean. An RO membrane rejects contaminants based on their size and charge and provides desalinated water.

Why does the Environment Ministry want to regulate RO-based water filtration systems?

1. **Wastage:** In making tap water pass through multiple stages of cleaning, RO systems end up wasting a lot of water. Anywhere between 3-5 times more water is wasted.
2. **Remove beneficial minerals:** Another concern with RO is that it filters out calcium, zinc, magnesium, which are essential salts needed by the body. Drinking such water over time could be harmful.
3. **Risk of infection:** The National Institute of Virology claimed that most filtration methods did not eliminate Hepatitis E virus, posing a high risk of infection.
4. **Contamination risk:** Also, the devices which purify water for drinking purposes need to use parts that are food grade. There could be contamination from the device as well, most common being dissolution of plastics and metals in the highly purified (active) RO water.

In May 2019, the National Green Tribunal has asked MoEFCC to frame rules for the use of RO filters and also banned the use of RO purifiers in locations where total dissolved solids are low. RO systems definitely lead to water wastage. Thus, its regulation is necessary in order to save water and prevent the developing situation of water crisis. It is also important that the government must ensure the quality of drinking water in most of the states.

Q.22) What are the major Initiatives taken by the government for enhancing productivity of agriculture and efficiency of agricultural markets? Suggest some measures to improve agricultural productivity and efficiency of agricultural markets.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss major Initiatives taken by the government for enhancing productivity of agriculture and efficiency of agricultural markets. Suggest some measures for the same.

Conclusion. Way forward.

Agricultural efficiency is always a cause of concern in the country. According to the crop yield data of the government, India's rice yield was 2191 kg/hectare, while the global average stood at 3026 kg/hectare and that of wheat is 2750 kg/hectare as against the world average yield of 3289 kg/hectare. The government has always made efforts in various ways to enhance agricultural productivity with the aim of doubling farmers' income.

Major government Initiatives to enhance agricultural productivity and efficiency of agricultural markets:

1. **Pradhan Mantri Annadata Aay SanraksHan Abhiyan (PMAASHA):** PM-AASHA was launched in 2018 with 3 components i.e. Price Support Scheme (PSS), Price Deficiency Payment Scheme (PDPS) and Private Procurement & Stockist Scheme (PDPS).
2. **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)- Per Drop More Crop:** PMKSY launched with focus on enhancing water use efficiency through expansion of cultivable area under assured irrigation, improve on-farm water use efficiency to reduce wastage of water, enhance the adoption of precision-irrigation and other water saving technologies, enhance recharge of aquifers and introduce sustainable water conservation practices.
3. **Pradhan Mantri Fasal Bima Yojana (PMFBY):** PMFBY was introduced to provide better insurance coverage for agricultural crops and thereby mitigate risk.

4. **Soil Health Card scheme:** It aims to assist State Governments to issue soil health cards to all farmers in the country. Soil health cards provides farmers information on the nutrient status of their soil along with recommendation on appropriate dosage of nutrients to be used for their soil conditions.
5. **E-NAM:** National Agriculture Market (eNAM) is a pan-India electronic trading portal which networks the existing APMC mandis to create a unified national market for agricultural commodities.
6. **Micro Irrigation Fund (MIF):** The fund has been set up under NABARD, which will provide this amount to states on concessional rate of interest to promote micro-irrigation.
7. **National Mission For Sustainable Agriculture (NMSA):** National Mission for Sustainable Agriculture (NMSA) has been formulated for enhancing agricultural productivity especially in rainfed areas focusing on integrated farming, water use efficiency, soil health management and synergizing resource conservation.
8. **Paramparagat Krishi Vikas Yojana (PKVY):** PKVY is an initiative to promote organic farming in the country. According to the scheme, farmers will be encouraged to form groups or clusters and take to organic farming methods over large areas in the country.
9. **Livestock insurance Scheme:** This scheme aims to provide protection mechanisms to the farmers and cattle rearers against any eventual loss of their animals due to death with the ultimate goal of attaining qualitative improvement in livestock and their products.
10. **National Scheme on Welfare of Fishermen:** This scheme was launched to provide financial assistance to fishers for construction of house, community hall for recreation and common working place.

Some measures to enhance agricultural productivity and market efficiency:

1. **Irrigation Facilities:** Canals, tube wells should be constructed to provide better irrigation facilities for the security of crops. Extensive flood control measures should be adopted to prevent the devastation caused by floods.
2. **Institutional Credit:** To save the farmers from the clutches of moneylenders, adequate credit facilities should be made available at reasonable cheap rates in rural areas. The land mortgage banks and co-operative credit societies should be strengthened to provide loans to the cultivators.
3. **Proper Marketing Facilities:** Marketing infrastructure should be widened and strengthened to help the farmers to sell their products at better prices.
4. **Supply of Quality Input:** The farmer in the country should be supplied with quality inputs at proper times and at controlled prices. To protect the farmer's exploitation, effective steps are needed to be taken to check the sale of adulterated fertilizers as aimed in Pesticide bill, 2020.
5. **Consolidation of Holdings:** In various states consolidation of holdings is not satisfactory. Therefore, efforts should be made towards completing the consolidation work in the specific period of time. Big areas of land which are lying waste, can be reclaimed and made fit for cultivation.
6. **Development of Cottage and Small Scale Industries:** In rural areas, more emphasis should be made to set up cottage and small scale industries. This will raise the income of the peasants and keep them busy during the off season.
7. **Land Reforms:** It is also suggested that efforts should be made to plug the loopholes in the existing land legislations so that the surplus land may be distributed among the small and marginal farmers.

Agriculture is the biggest contributor in terms of employment to the country (about 48% of population). Efforts must be made to enhance the agricultural productivity and market efficiency to deal with agricultural crisis and for food security of the nation.

Q.23) Examine the progress made so far by India, in achieving Sustainable Development Goal of reducing infant mortality.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the progress made so far regarding infant mortality in India and challenges in reducing IMR.

Conclusion. Way forward.

Infant mortality rate means the number of deaths of children below one year of age in a given year per 1,000 live births in the same year. This rate is often used as an indicator of the level of health in a country. Although India has made some progress in reducing infant mortality, it is still high in the world.

Progress made regarding infant mortality:

1. **Fast decline:** India has attained impressive achievements in child survival. A fast decline in Infant mortality rate (IMR) of the country has been observed in recent past. The IMR has dropped by an average rate of 4.56% per year over the last five years.
2. **Low infant deaths:** According to the United Nations Inter-agency Group for Child Mortality Estimation (UNIGME) about 8 lakh infant deaths were reported in India in 2017, the lowest in five years.
3. **Significant reduction:** The majority of the states have witnessed over 50% reduction in both infant and under-5 mortality rates from National Family Health Survey (NFHS)-1 to NFHS-4.
4. **Reduced gender gap:** A female infant is more likely to survive, according to the 2017 Sample Registration Survey (SRS), with the Infant Mortality Rate (IMR) at 33 in 2017.

Challenges in reducing infant mortality rate:

1. **High State variations:** In India there is a high Intra-State and Inter-State variations in IMR, such variations receive less attention from policymakers. The settlements intra state have higher While Kerala, Punjab and Tamil Nadu were the top performing States, Uttar Pradesh, Rajasthan, Bihar, Odisha and Madhya Pradesh were the bottom five.
2. **Poverty:** A major factor believed to influence the rate of infant mortality is poverty. Official estimates place 21.9% of Indians below the poverty line (BPL). This hinders access to quality healthcare especially in rural areas.
3. **Premature deaths.** Premature births account for over 80% of new-born deaths. It is a big challenge to reduce premature deaths as it is due to various reasons like poor maternal health and inter-generational poverty in families.
4. **Illiteracy:** Female literacy rates are less (65.46%), thus leading to less awareness regarding nutrition needed. Babies born to mothers with no education face nearly twice the risk of early death as babies whose mothers have at least a secondary education.
5. **Shortage of trained health workers:** There is shortage of trained workers especially in rural areas. NSSO data found the density of the total health workforce, at 29 per 10,000 population.

Way forward:

1. **Private sector involvement:** The health outcomes cannot be achieved by the government institutions alone and the private sector health facilities have to supplement governmental efforts. The private sector must ensure that the treatment provided by them is not only accessible but also affordable.
2. **Specialized children's hospitals:** A majority of these deaths are preventable. There is a need for setting up more specialized children's hospitals. More such state-of-the-art healthcare facilities have to be set up in rural areas, particularly in remote areas, may be even through public-private partnership.
3. **Removing gaps:** Addressing gaps in quality of health care is the need of the hour in India. Hospitals should ensure that the critical products to save the new-borns are available.
4. **Awareness:** Education campaign should be taken up to aware the mother of the merits of antenatal care, institutional delivery, importance of exclusive breastfeeding, immunisation is important.
5. **Investment:** India continues to show impressive decline in child deaths. The investment on ensuring holistic nutrition under the POSHAN campaign and national commitment to make India open defecation-free by 2019 are steps that will help in accelerating progress further.

SDG goal 3 calls for an end to preventable deaths of new-borns and children under 5 years of age. It is a daunting challenge for India to achieve the Sustainable Development Goals of bringing neonatal mortality from the current level of 25 to 12 per 1,000 live births and under five mortality rate from 43 to 25 per 1,000 live births by 2030. The uptake of the Janani Suraksha Yojana and NRHM needs to be ensured across the states it could address some of the variations in IMR across India.

Q.24) The realisation of the objective of doubling farmers' income necessitates addressal of some of the basic challenges of agriculture and allied sector. Discuss these challenges and suggest measures to overcome them.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various challenges in realisation of the objective of doubling farmers' income.

Conclusion. Way forward.

Agriculture plays an important role in Indian economy. Agriculture and its allied sectors still remain an important sector because of its continued role in employment (about 48%), income and most importantly in national food security. As agriculture supports the majority of Indian population and with government efforts to double farmer's income it is imperative to deal with the challenges of agriculture and allied sectors.

Challenges in realisation of the objective of doubling farmers' income:

1. **Availability of institutional credit:** The realisation of the objective of doubling farmer's income need to overcome the challenge of access to institutional credit. Non-institutional credit to agriculture is around 40%, which not only has exorbitant interest rates but also is exploitative resulting in reduced farm incomes and increased farmer suicides
2. **Insurance coverage:** Farmers in India are exposed to large agriculture risks due to vagaries of nature. Unfortunately, less than 24% of the gross cropped area (against a

target of 40%) is covered under Pradhan Mantri Fasal Bima Yojana leaving the rest farmers vulnerable to farm risks.

3. **Irrigation:** Agriculture in India even today continues to be vulnerable to the vagaries of weather. As per economic survey, around 52% of the farm area is still unirrigated and dependent on rainfall. In India Ultimate Irrigation Potential is 139.9 million hectares but irrigation potential utilized is 80 million hectares.
4. **Investment in agriculture:** One of the reasons for low growth is low investment. Starting with the National Agriculture Policy of 2000, efforts have been made to improve investment, particularly private investment. But the official data shows that between FY12 and FY17 the public investment remained more or less static at 0.3-0.4% of the GDP while private investment fell from 2.7% to 1.8%.
5. **Seed availability:** Good quality seeds are out of the reach of small and marginal farmers. High cost of hybrid as well as genetically modified seeds especially with respect to the seeds of commercial crops is an issue.
6. **Land fragmentation:** There is prevalence of small and marginal farmers, less consolidation of landholdings etc. that lead to land fragmentation. This makes farmers go for subsistence agriculture and it is also difficult for mechanisation.
7. **Farm mechanisation:** There is also a need to address the issue of lower farm mechanisation in India which is only about 40% as compared to about 60 per cent in China and around 75% in Brazil.

Way forward:

1. **Irrigation facilities:** The coverage of irrigation facilities needs to be extended while ensuring an effective water conservation mechanism. Integrated watershed management should be factored in agriculture related policy for enhanced water use efficiency and soil management.
2. **Credit:** An inclusive approach to provision for agricultural credit has to be undertaken to address the issue of skewness in its regional distribution.
3. **Boosting allied sector:** Allied sectors such as animal husbandry, dairying and fisheries sectors need to be given a boost to provide an assured secondary source of employment and income especially for the small and marginal farmers.
4. **Increasing coverage:** Coverage of the food processing sector needs to be scaled up to create an additional source of market for agricultural commodities.
5. **Land reforms:** As the proportion of small and marginal holdings is significantly large, land reform measures like freeing up land markets can help farmers in improving their income.
6. **Mechanisation:** Small holdings of India can be better harnessed through appropriate use of farm mechanisation as the degree of farm mechanisation is low as compared to the other major developing countries like Brazil and China.
7. **Income support:** While Government measures are in operation aimed at improving productivity and its marketing, efforts of farmers need to be supplemented with better coverage of direct income/investment support.
8. **Focus on global markets:** There is a need to give increased focus on exploring global markets for agricultural commodities to give an additional source of market for the surplus of agricultural produce India currently has.

Farmers are in a low income trap and need policy measures. Linking procurement to minimum wage, general inflation will enable elimination of agrarian distress. These measures will benefit the farmers and would enhance their income.

Q.25) Given the fact that the livestock sector has grown significantly over the last five years, it assumes an important role in income, employment and nutritional security. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the role of livestock in the economy. Mention various government initiatives taken for the same.

Conclusion. Way forward.

Livestock sector plays an important role in Indian economy. It contributes 4.11% to GDP and constitutes 25.6% of total Agriculture GDP. Rapid growth of this sector has led to more egalitarian and inclusive growth. Those engaged in it are mostly small landholders and the landless farmers, thereby helping in raising their standard of living.

Role of livestock in Indian economy:

- 1. Employment:** A large number of people in India being less literate and unskilled depend upon livestock for their livelihoods. It provides employment to about 8.8 % of the population in India. The landless and less land people depend upon livestock for utilizing their labour during lean agricultural season.
- 2. Income:** Livestock is a source of subsidiary income for many families in India. Livestock serve as sources of income during emergencies to meet exigencies like marriages, children education, repair of houses etc.
- 3. Nutrition:** The livestock products such as milk, meat and eggs are an important source of animal protein to the members of the livestock owners. The per capita availability of milk is around 375 g/day and eggs is 74/annum during 2017-18.
- 4. Social security:** The animals offer social security to the owners in terms of their status in the society. The families, especially the landless which own animals are better placed than those who do not.
- 5. Gender equity:** Animal husbandry promotes gender equality. More than 3/4th of the labour demand in livestock production is met by women. The share of women employment in the livestock sector is around 90% in Punjab and Haryana where dairying is a prominent activity and animals are stall-fed.
- 6. Protection against disasters:** Livestock are the best insurance against drought, famine and other natural calamities. Majority of the livestock population is concentrated in the marginal and small size of holdings. Further, agricultural productions get valuable organic manure provided by the livestock.

Government Initiatives to promote livestock in India:

Rashtriya Gokul Mission	It aims to develop and conserve indigenous breeds of bovine population. This is important to enhance milk production and to make it more remunerative to the farmers.
National Livestock Mission	Its objective is to ensure quantitative and qualitative improvement in livestock production systems and capacity building of all stakeholders.
National Artificial Insemination Programme	To suggest novel methods of bringing about impregnation in female breeds. Also, to prevent the spread of certain diseases which are genital in nature, thereby enhancing the efficiency of the breed.
National Cattle	To genetically upgrade important indigenous breeds on priority

and Buffalo Breeding Project	basis with a focus on development and conservation.
Animal Husbandry Start-up Grand Challenge	To appreciate innovations coming from the villages to expand the dairy sector in India.

Way forward:

- 1. Sufficient resources:** Providing sufficient fodder and drinking water is the need of hour to increase productivity of livestock rearing in India, in the rain-shadow region.
- 2. Marketing:** Trade Policies like marketing have to be more effective for promotion of various livestock products like egg, fish, milk etc. and providing sufficient price to farmers by reducing the influence of middlemen.
- 3. Promoting indigenous breeds:** Our indigenous breed of cattle shall be promoted, because most foreign breed cattle are not suitable to our climate and even provide low quality. There are some exceptions like Jersey cows, but overall introduction of foreign breeds has not been very successful.
- 4. Training:** Necessary training and subsidies shall be provided to farmers to adopt livestock rearing as an alternate source of income.
- 5. Research and development:** Government shall also focus on Research & Development in the livestock sector to increase per livestock productivity to provide more benefits to small & marginal farmers.

There is a need to encourage livestock husbandry to reap its full potential. If implied with utmost priority, these advice can boost the production. Thus would further attract the landless and small farmers to take advantage of this sector for sustaining their livelihood and make India competent in the global market.

Q.26) There is potential for private care providers and start-ups to be partners in improving India's healthcare system. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss why private care providers and start-ups are important for India's healthcare system?

Conclusion. Way forward.

The healthcare delivery and services landscape in India has evolved significantly over the years. However, India's healthcare system suffers from various issues like high costs, inconsistent quality, inaccessibility to timely care etc. With the launch of Ayushman Bharat, India is aiming to remove these issues and provide healthcare to all. However, this vision can be achieved only with collaborative and outcome-based healthcare delivery both in public and private healthcare facilities.

Why are private care providers and start-ups important for India's healthcare system?

- 1. Penetration:** Data from the National Family Health Survey (NFHS) report that the private medical sector remains the primary source of health care for the majority of households in urban (70%) as well as rural areas (63%). With such a penetration of private care and by promoting healthcare entrepreneurs, India can make its healthcare more efficient and accessible.

2. **Poor public healthcare:** Quality of public healthcare is low. There are often long waiting times in public hospitals. People prefer better healthcare services in which the private sector can emerge as a winner provided affordable costs.
3. **Affordability:** The private health sector is one of the fastest growing areas of the Indian economy. However, due to the fragmentation, for patients, it can be challenging to locate the appropriate healthcare within their budget. Start-ups in digital healthcare and eHealth can potentially play an important role in making healthcare in India more accessible and more affordable.
4. **Accessibility:** Another critical issue faced by Indian citizens is accessibility. Here, digital technology can help. For example, the company Practo makes it easy for patients to find medical specialists, compare reviews by patients, and book appointments online or using a mobile app.
5. **Availability:** In rural areas, healthcare service is mostly unavailable. Quacks are the only available option for some regions in India. Training and mainstreaming them would help Indian healthcare.
6. **Investment:** The Indian healthcare system faces enormous challenges due to the lack of funding for preventive health care, training of healthcare professionals and investment in healthcare infrastructure, especially in rural areas and the weaker states. Startups can alleviate these problems.

Measures to support private care providers and start-ups:

1. **Funding:** Most of the start-ups find it difficult to get funds. Startups need to be well funded. For this, government efforts of start-up India is important. Further efforts must be made to provide them credit easily.
2. **Easing regulations:** Regulations in India are a burden due to complexity. The development of private healthcare and startups would be facilitated by easing the rules. There are no specific regulations for digitising medical care. Therefore, it is important to set specific rules with clear provisions.
3. **Training quacks:** Quack training can help in making rural healthcare affordable and accessible. Focus must be on regulating quacks industry.
4. **Incentives:** Health-care providers and clinicians, given limited bandwidth, often lack the incentives, operational capacity, and frameworks necessary to consider and adopt innovations. This leads to limited traction for start-ups promoting innovative solutions. They must be incentivised with proper tax soaps.

Some shortcomings of the private model of healthcare:

1. **Inequalities:** Private health care facilities give priorities to those who have money to pay, unlike public hospitals which offer equal treatment regardless of whether you have the money or not.
2. **Cost of treatment:** The cost of treatment in private is very high. The cost of private health care coverage is high compared to seeking health care services from public hospitals.
3. **Limited availability:** Private healthcare facilities have limited penetration. Many rural regions lack hospitals and private practitioners choose to work in urban areas.
4. **Discrimination:** Private healthcare hospitals tend to discriminate against patients based on their background. Many doctors refuse to treat patients simply based on their social status.

Through Ayushman Bharat, India has the unique opportunity to develop a robust ecosystem where hospitals actively engage with health-care start-ups by providing access to testbeds, communicating their needs effectively and adopting promising innovations. Start-

ups can be effective collaborators for the most pressing health-care delivery challenges faced by hospitals, as opposed to being mere suppliers of technology or services.

Q.27) Describe briefly what stem cell therapy is and what advantages it has over other treatments?

Ans.

Demand of the question

Introduction. What is stem cell therapy?

Body. Discuss how stem cells therapy works and various advantages of stem cell therapy over other treatments.

Conclusion. Way forward.

Stem cells are undifferentiated biological cells that can differentiate into specialized cells and can divide to produce more stem cells. Treatments or therapies using stem cells to prevent or treat any disease are known as stem cell therapy. Stem cell therapy promotes the reparative treatment of diseased, dead or injured tissue.

How stem cells therapy works?

1. **Stem cell extraction:** The basic process of stem cell therapy starts with taking out of stem cells containing bone marrow and processing the stem cells in a lab.
2. **Specialisation:** Then stem cells are specialized into the necessary adult cell type. These stem cells are manipulated to specialize into specific types of cells, such as heart muscle cells, blood cells or nerve cells.
3. **Implantation:** Then, those mature cells replace tissue that is damaged by disease or injury. This type of treatment could be used to:
 - Replace neurons damaged by spinal cord injury, stroke or other neurological problems.
 - Produce insulin that could treat people with diabetes or cartilage to repair damage caused by arthritis.
 - Replace virtually any tissue or organ that is injured or diseased.
 - The cells could be used to study disease, identify new drugs, or screen drugs for toxic side effects.

Various advantages of stem cell therapy over other treatments:

1. **Potential to Reverse Diseases:** By directing stem cells to differentiate into specialised cell types, there is the possibility to provide a renewable source of replacement cells for those suffering from diseases.
2. **Minimal invasion:** Stem cell therapy is a non-surgical procedure with no incisions of the body. Traditional surgeries leave behind scars that require extended time periods to heal.
3. **Faster recovery:** Since the procedure is quick and minimally invasive, it requires very little to no time for the recovery process. One can get back to their routine work on the next day of the procedure.
4. **Natural healing:** The human body has the potential to heal by itself with the help of stem cell therapy. Once the stem cells are injected at the site of injury, they stimulate the growth of new cells, which repair and heal the damaged tissue.
5. **Prevents complications:** Unlike most of the medical treatments, stem cell therapy comes with no side effects. It also prevents infections and reduces the risk of complications.

Stem cell therapy and science have a lot of potential. It can revolutionise the treatment and pharmaceutical industry. Stem cell treatment is still under research mode in India. Indian Government is supporting various basic pre-clinical and clinical research. In 2013, National Guidelines for Stem Cell Research were released. These guidelines help the clinicians and scientists working in the field to conduct research in a scientific and ethical manner.

Q.28) What is Integrated Nutrient Management (INM)? Discuss various advantages and constraints in the Adoption of the INM System.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various advantages and constraints in the Adoption of the INM System

Conclusion. Way forward.

Integrated Nutrient Management (INM) is the process to maintain the soil fertility and plant nutrient supply at an optimum level for sustaining the desired crop productivity. The aim of Integrated Nutrient Management (INM) is to integrate the use of natural and man-made soil nutrients to increase crop productivity and preserve soil productivity for future generations.

Various advantages of the INM System:

1. **Soil health:** INM help in improvement of the soil physical properties such as granulation, porosity, water holding and drainage capacity, aeration etc. It also leads to improvement in the organic matter content in the soil making soil healthy.
2. **Better yield:** Balanced nutrition to the crops and better nutritional uptake lead to better plant growth and yield.
3. **Environmental benefits:** INM minimizes the deterioration of soil, water and ecosystem by promoting carbon sequestration, reducing nutrient losses to ground and surface water bodies and to atmosphere.
4. **Fruitful utilization of farm wastes:** INM promotes utilisation of farm wastes as a manure and a source of nutrients to crops.
5. **Cost reduction:** Some organic sources are cheaply available hence they help in reducing the production cost.
6. **Judicious use:** Overuse of chemical fertilisers is a big issue in Indian agriculture. INM encouragement of the judicious use of chemical fertilizers.

Various constraints in the Adoption of the INM System:

1. **Lack of knowledge:** Farmers often have inadequate knowledge on use of fertilizers in balanced proportion.
2. **Funding:** Farmers lack access to credit especially in rural areas. They have insufficient funds to buy manure, fertilizer that are important for INM.
3. **Land degradation:** Degradation of lands due to intensive cropping and over-exploitation by the enormous pressure of the ever-increasing population is a big constraint to INM.
4. **Monsoon vagaries:** Indian agriculture is dependent on monsoon. Risk of water deficit during drought prone periods is considered the most important deterrent to fertilizer use. During monsoon, water erosion is a serious threat on soil fertility and productivity.
5. **Limitation of small holdings:** Land is fragmented in India and most of the farmers hold small holdings. This prevents the application of INM at commercial level.
6. **Limitation of biofertilizer:** There are several constraints to effectively utilize and popularize the use of biofertilizer e.g. use of the biofertilizer is crop and location specific, low shelf life of the microorganisms, need for careful handling etc. Moreover, poor-

quality bio-fertilizers that reach the farmers are ineffective and their marketing becomes difficult because the products contain living or latent organisms.

INM is a sustainable way of agriculture. It not only increase crop productivity but also helps in soil, water and biological restoration. Developing awareness among the farmers by extension agencies about the deteriorating soil health, unsustainable production and environmental pollution due to non-use of organics is important to promote INM in India.

Q.29) Government intervention, sometimes though well intended, often ends up undermining the ability of the markets and leads to outcomes opposite to those intended. Illustrate.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the issue of over-regulation by the government and its impact.

Conclusion. Way forward.

Though India has made significant progress in enhancing economic freedom for firms, it is still counted among the shackled economies in the world. In the global indices of economic freedom, India ranks in the bottom half. In the Index of Economic Freedom, India was categorized as 'mostly unfree' with ranking the Indian economy 129th among 186 countries in 2019. One of the reasons for less economic freedom is excessive government intervention that lead to markets not functioning properly.

Issue of over-regulation by government and its impact:

- 1. Distortion:** Any government intervention affects the supply and demand in markets and consequently distorts market equilibrium. For instance, frequent and unpredictable imposition of blanket stock limits on commodities under Essential Commodities Act have distorted the incentives for the creation of storage infrastructure by the private sector and development of national market for agricultural commodities.
- 2. Rise in general price:** Government intervention pushes the general cost of goods and services. For example, the regulation of prices of drugs, through the DPCO 2013, has led to an increase in the price of the regulated pharmaceutical drug vis-à-vis that of a similar drug whose price is not regulated.
- 3. Market inefficiencies:** Government policies in the food grain markets has led to the emergence of government as the largest procurer and hoarder of rice and wheat crowding out. This has led to burgeoning food subsidy burden and inefficiencies in the markets, which is affecting the long run growth of the agricultural sector.
- 4. Impact on welfare measures:** Government intervention leads to the very intention of providing welfare to intended. For instance, debt waivers have disrupted the credit culture and end up reducing the formal credit flow to the very same farmers, thereby defeating the very purpose of the debt waiver provided to farmers.
- 5. Hinder growth of a sector:** Government policies many times act as a hurdle to a sectoral growth. For example, the increasing focus on subsidies is harming the growth of the agricultural sector in the long-run.

Way forward:

- 1. Examining unnecessary interventions:** Each department and ministry in the Government must systematically examine areas where the Government needlessly intervenes and undermines markets.

2. **Direct cash transfers:** The farmers need to be empowered through direct investment subsidies and cash transfers, which are crop neutral and do not interfere with the cropping decisions of the farmer through direct investment subsidies and cash transfers, which are crop neutral and do not interfere with the cropping decisions of the farmer.
3. **Ease of doing business:** Government has recently achieved significant improvement in the Ease of doing business index. Government should keep continuing similar efforts to remove procedural constraints.
4. **Consolidating laws:** Unnecessary laws and regulations must be removed. Government must work in order to make laws simple and clear.

Competitive markets are effective in allocating resources in an economy. However, sometimes, the costs of Government intervention may outweigh the benefits. Thus there is need to eliminate instances of needless government intervention that will enable competitive markets and thereby spur investments and economic growth.

Q.30) Why are land reforms still not complete in India? What are obstacles in its way? Elaborate.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various causes for incomplete land reforms and obstacles.

Conclusion. Way forward.

Land reforms refers to a wide variety of specific programmes and measures to bring about more effective control and use of land for the benefit of the community as a whole. The main objective of the land reforms is to do away with the existing inequalities in the system of landholding and to increase the agricultural productivity. This objective is hindered by the slow pace of implementation of land reform measures.

Various causes for incomplete land reforms and obstacles:

1. **Unclear Legislation:** The legislation enacted for land reforms in India is having certain built-in faults. These include unsatisfactory definition of personal cultivation, inadequate definition of etc.
2. **Lack of Political Will:** Strong political will determination and courage are very much important for the implementation of land reform measures. But unfortunately, this is very much absent in Indian context. The lack of political will is amply demonstrated by the large gaps between policy and legislation and between law and its implementation.
3. **Bureaucratic Obstacles:** Bureaucratic obstacles are also another impediment in the path of implementation of land reform measures in India. The bureaucracy always tried to play safe by following a lukewarm attitude. In some cases, even administrators have joined hands with the politician to grab the surplus land.
4. **Lack of coordination:** The land reform policy in India is being implemented at a slow pace and also in an uncoordinated manner leading to a total delay in implementing the reforms.
5. **Differences in the Laws related to Land Reforms:** The laws related to land reforms have differences in different states. This has resulted in a slow pace of implementation in land reforms and also made it discriminatory. Moreover, these laws could not be implemented simultaneously at the national level in a smooth manner.

6. **Litigation:** The faults and defects in laws related to land reforms has resulted in growing number of litigations which has dampen the spirit of reforms and has also delayed its implementation.
7. **Incomplete Land Records:** Land records collected by the state Governments are incomplete. This has been creating difficulties in determining the ownership of land, leading to implementation of land reforms difficult.
8. **Non-Participation in Government Programmes:** The land reforms in India could not make much headway as a result of non-participation of the people in the Government programmes. In India, marginal and small farmers, tenants and landless agricultural labourers are showing very little interest in the implementation of land reforms as a result of their ignorance and poverty. All these have resulted in the implementation of the programme at a very slow pace.

Way forward:

1. **Effective Implementation:** In order to attain success in land reform measures, steps be taken by the Government for implementing these measures efficiently and also in most effective manner. For this purpose, a time bound programme should be formulated.
2. **Efficient Administrative Machinery:** For implementing the land reforms at a quicker pace, the administrative machinery of the Government should become efficient up to local level. The officials engaged in the department must acquire adequate knowledge on the laws related to land reforms for their smooth and speedy implementation.
3. **Updated Records:** For successful implementation of land reforms, up-to-date land records should be prepared and steps also be taken to up-date the land records continually through computerisation.
4. **Simplifying Legal Methods:** For speedy and smooth implementation of land reform measures the legal provisions relating to it should be simplified. Special courts may need to be set up for speedy disposal of cases in a most economic manner.
5. **Land Reform Laws:** Land reform laws should be made unchallengeable. Raj Krishna Committee has suggested, in this connection that the laws relating to land reforms should be incorporated in the 9th schedule of the constitution so as to make it more firm and unchallengeable.
6. **Popularising Laws:** In order to popularise the laws relating to land reforms there should be comprehensive publicity of such laws among the rural people. These laws should be published in different languages and be distributed through Block Development officials. This sort of publicity would arouse the consciousness of the poor farmers about their rights and duties related to implementation of land reform measures.
7. **Reducing political Interference:** Political interference prevailing in the implementation of land Reforms should be reduced to the minimum level so that land reform laws can serve for the best interest of the country.

Land Reforms have been recognised to constitute a vital element both in terms of the anti-poverty strategy and for modernisation and increased productivity in agriculture. The main challenge before the land reform programme is to dislodge the vested interests on land and legal support offered by the judicial system to those vested interest groups in the guise of sanctity of private property.

Q.31) What are various roadblocks to India-EU Free Trade Agreement? How can these roadblocks be removed?

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various roadblocks to India-EU Free Trade Agreement.

Conclusion. Way forward.

India-European Union (EU) FTA, officially known as the Broad-Based Trade and Investment Agreement, has been being negotiated since 2007. However, it has not been materialised into a deal due to various outstanding issues between India and the EU.

Various roadblocks to India-EU Free Trade Agreement:

- 1. Mobility of professionals:** EU does not have a common working visa system, it restricts free movement of an Indian professional across EU nations. The absence of free mobility of professionals in the EU is a major hindrance and India is seeking a permanent solution to the issue.
- 2. Access to EU market:** Indian companies are finding it increasingly difficult to access the European markets due to the rising non-tariff barriers in the form of technical regulations, phytosanitary measures, industrial standards, conformity assessments or barriers to services exports.
- 3. Intellectual property issue:** One of the obstacles to an agreement are the EU's demands for a stronger intellectual property regime in India and the inclusion of a sustainable development chapter with strong labour and environmental protections.
- 4. Dispute settlement mechanism:** Another area of friction is the EU's proposal to set up an investor-state dispute settlement mechanism, which is incompatible with current Indian laws. This will allow EU investors to challenge the government in front of an international tribunal.
- 5. Legal practices:** Another sticking point is that the EU wants India to liberalise accountancy and legal services. This has met with controversy as India do not allow foreign lawyers and accountants to practice in India.

Way forward:

- 1. Dialogue:** India should make rigorous diplomatic efforts to come to a solution to outstanding issues through dialogue. Effort must be made to make the EU understand issues related to market access and visa.
- 2. Lobbying:** Lobbying in the EU must be emphasised in order to influence EU's lawmakers. Diplomatic efforts through Indian diaspora and business lobby are needed.
- 3. Stronger Trade ties:** Brexit provides a fresh opportunity to India to strengthen its economic relationship with the EU through an India-EU free trade agreement (FTA).
- 4. Foreign Direct Investments (FDI):** Indian government has considerably liberalised the FDI regime in the country and there has been an increase in FDI inflows over the last two years. Further easing of FDI would attract more investors from the EU.
- 5. Boost Immigration from India:** The EU is experiencing a great shortfall in skilled manpower. Brexit would provide a new opportunity for India to push the EU for visa reforms.

India and the EU expect to promote bilateral trade by removing barriers to trade in goods and services and investment across all sectors of the economy. Both parties believe that a comprehensive and ambitious agreement that is consistent with WTO rules and principles

would open new markets and would expand opportunities for Indian and EU businesses. Post-Brexit provides an opportunity for both to negotiate a balanced deal.

Q.32) Discuss India's concept of Indo-Pacific. Why Indo-Pacific region has a strategic significance for India?

Ans.

Demand of the question

Introduction. What is India's concept of Indo-Pacific?

Body. Discuss the strategic significance of Indo-Pacific region for India. Mention various government efforts regarding Indo-Pacific region.

Conclusion. Way forward.

The term 'Indo-Pacific' is a geographic region consisting of the tropical waters of the Indian Ocean, the western and central Pacific Ocean. It has gained currency as a new construct in recent times. Trade dependence and the changing nature of the maritime threat has raised awareness of the importance of ensuring secure seas for the unhindered movement of trade and energy. India supports a rules-based, balanced, and stable trade environment in the Indo-Pacific region.

India's concept of Indo-Pacific:

1. **Geographical extent:** India's idea of the Indo-Pacific starting from Africa to the America, which covers both the Indian and Pacific Oceans, in tandem with that of Japan. It was highlighted by India at the Shangri-La Dialogue in 2018 with the heart of its Indo-Pacific policy being rooted in the Indian Ocean.
2. **Inclusive concept:** According to the Ministry of External affairs, India's policy perspective on Indo-Pacific, include inclusiveness, openness, ASEAN centrality and that the concept is not directed against any country.
3. **Rule based Indo-Pacific:** India's concept of Indo-Pacific emphasise on a shared commitment to maintain and strengthen a rules-based order in the Indo-Pacific in which all nations are sovereign, strong and prosperous is India's emphasis.
4. **Free and open region:** It asks for a free, open and inclusive region that fosters universal respect for international law, freedom of navigation and overflight and sustainable development.
5. **Overall Security:** The focus of India's Indo Pacific initiative and concept is also on connectivity, enhancing maritime security, counterterrorism, non-proliferation and cyber issues.

Strategic significance of Indo-Pacific region for India:

1. **Mineral Resources:** Maritime territories have emerged as depositories of vital resources ranging from fish stocks to minerals and offshore oil and gas. The South China Sea, for instance, is estimated to hold some 10% of the global fish resources as well as 11 billion barrels of oil and 190 trillion cubic feet of gas.
2. **Economic Growth:** According to a report of the Asian Development Bank (ADB), countries in the Indo-Pacific produce over 60% of global GDP, making the region the largest single contributor to global growth. Thus, the region is important for India's economic growth and aim of reaching a \$5 trillion economic goal.
3. **Commerce:** The region consists of many of the world's vital choke points for global commerce, including the Straits of Malacca which is very critical for the growth of the world economy. The Indo-Pacific region also stands at the intersection of international

trade, with around 32.2 million barrels of crude oil pass through annually and 40% of global exports come from the region.

4. **Connectivity:** India is planning to put greater energy to the IORA because the heart of its Indo-Pacific policy is rooted in the Indian Ocean. This integrates the blue economy part of the Indian policy with the security part.
5. **Chinese threat:** China's increasingly active presence in the Indian Ocean region as well as its efforts to expand geopolitical reach in Asia and beyond by the use of trade and military Demand rule based order to secure India's interests and free trade. In the present time, the control of sea lanes and ports would be the game.
6. **Freedom of navigation:** It is important to adhere to freedom of navigation, adherence to rules-based order and stable trade environment. Also for free sea and air lanes, connectivity and upholding international rules and norms.

Government efforts regarding Indo-Pacific region:

1. **SAGAR:** The government has introduced the concept of SAGAR (Security and Growth for All in the Region) and believes in an Indo-Pacific that is free, open and inclusive, and one that is founded upon a cooperative and collaborative rules-based order.
2. **Indo-Pacific Regional Dialogue (IPRD):** In continuation of the process of engaging the global strategic community in an annual review of India's opportunities and challenges in the Indo-Pacific region, the second edition of Indo-Pacific Regional Dialogue (IPRD), 2019 was held in New Delhi.
3. **Maritime exercises:** Being extremely careful of its relationship with China, India has tried to keep away from several military and naval exercises. Though it is one of the major Indo-Pacific powers, it has not allowed countries like Australia to participate in the annual, Indian-led multinational Exercise Malabar.
4. **Participation at international platforms:** India has been an active participant in mechanisms like the Indian Ocean Rim Association (IORA), the East Asia Summit, and ASEAN Defence Ministers Meeting Plus. All these engagements portray India's increasing involvement in the Indo-Pacific.
5. **Dialogue with China:** From the economic point of view, relationship with China is important, as it is India's largest trading partner. From a security perspective, the standoff in the Doklam valley was resolved through dialogue. It was followed by the Wuhan informal summit and efforts are on to improve ties.

The Indo-Pacific region is highly heterogeneous in terms of economic size and level of development, with significant differences in security establishments and resources. Maintaining the delicate balance between the interests of all stakeholders will be a key challenge. Thus, India needs to carefully design its Indo-Pacific policy while keeping its long-term strategic and economic interests in mind.

Q.33) Investment in sanitation is actually a facilitator for broader economic, health and social gains. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how investment in sanitation leads to economic, health and social gains. Also mention Government efforts to improve sanitation in India.

Conclusion. Way forward.

Sanitation is intrinsically linked to health. Improved sanitation has been shown to have great impacts on people's health and economy. Thus, investment in sanitation is important to ensure health of citizens that would lead to other socio-economic gains through less spending on health and diseases.

How investment in sanitation leads to economic, health and social gains?

<p>Economic benefits: Economic benefits of investing in water and sanitation are considerable.</p>	<ol style="list-style-type: none"> 1. Enhance GDP: According to WHO, there is an overall estimated gain of 1.5% of global GDP for every dollar invested in water and sanitation services. 2. Increased productivity: There is greater economic productivity and involvement of workforce in the workplace through better access to facilities. 3. More savings: Poor sanitation causes economic losses associated with the direct costs of treating sanitation-related illnesses and lost income through reduced or lost productivity. Better sanitation reduces these expenditures and leads to savings which are important for banking sectors. 4. Tourism: Poor sanitation also leads to losses due to impact on tourism. People are usually about places to visit that are unclean and have inadequate sanitation facilities. Better sanitation enhances the tourism industry. 5. Recycle economy: Investing in sanitation leads to potential recovery of water, renewable energy and nutrients from faecal waste.
<p>Social benefits: Improved sanitation leads to various social gains especially due to reduced health care costs for individual and society.</p>	<ol style="list-style-type: none"> 1. More social spending: Due to less spending on disease and health, social spending like on education, skills etc. increases. 2. Better income: With better health and reduced diseases, productivity of individuals increases. Further, women's workforce increases due to better sanitation facilities at the workplace leading to an increase in family income. 3. Reduce poverty: The countries where poor sanitation is most widespread have the highest number of deaths of children aged under 5 years as well as the highest levels of malnutrition and poverty and big disparities of wealth. Sanitation helps in reducing poverty by breaking the cycle of poor health and spending on it. 4. Women empowerment: Better sanitation facilities promote dignity and boost safety, among women and girls. It helps in increasing girls' school attendance boosted by the provision of separate sanitary facilities.
<p>Health gains</p>	<ol style="list-style-type: none"> 1. Reduce incidence of diseases: There is clear evidence that shows that hygiene significantly reduces the incidence of diseases like diarrhoea, which is the second leading cause of death amongst children under five years old. 2. Antimicrobial Resistance: Lack of sanitation facilities also results in unnecessary use of antibiotics, thereby spreading antimicrobial resistance. Poor Hygiene leads to microbes getting adapted. Thus improved sanitation can help in reducing incidence of antimicrobial resistance.

Government efforts to improve sanitation in India:

1. **Total Sanitation Campaign:** Total Sanitation Campaign launched in 1986 under name of The Central Rural Sanitation Program to encourage households to finance their own toilets while providing financial assistance to underprivileged.
2. **National Urban sanitation policy:** National Urban sanitation policy was launched to accelerate sanitation in urban areas in 2008 to make our cities open defecation free.
3. **Nirmal Bharat Mission:** Nirmal Bharat Mission launched for rural sanitation and hygiene to provide a framework to keep the environment clean and healthy by eliminating the habit of open defecation, framework for solid & liquid waste management.
4. **Swachh Bharat Mission:** Swachh Bharat Mission launched in 2014 to clean India as a national movement which raised incentives for building toilets. Providing funds for Solid & Liquid waste management in gram panchayats is also a part of it.
5. **Regulatory action:** Making candidates ineligible in panchayat election if they don't have toilets at their home is a good initiative to promote cleanliness.
6. **10 Year Rural Sanitation Strategy:** The Department of Drinking Water and Sanitation has launched the 10 Year Rural Sanitation Strategy (2019-2029). The strategy lays down the roadmap for Open defecation free Plus which is the government's next step in dealing with open defecation and sanitation issues in the country.

Way forward:

1. **Develop National standards and accountability mechanisms:** Health authorities should establish national standards and accountability mechanisms. Lack of quality data limits authorities' understanding of the problem. A national road-map is needed to improve sanitation facilities.
2. **Behavioural Change and culture of cleanliness:** Health authorities should work towards developing a culture of cleanliness and safety in all healthcare facilities. The Swachh Bharat Scheme should give special focus on behaviour change that must be instilled among the community towards hygiene.
3. **Ensure timely data collection:** Authorities should ensure that collection of data on key sanitary indicators should be done on time. It will accelerate progress by promoting continued action and accountability.
4. **Conduct situation analysis and assessment:** An analysis to examine health and sanitation policies, governance structures, and funding is needed. An assessment is necessary for updated figures on sanitation coverage and compliance in health facilities. Together, these documents form the basis for prioritising policies and mobilising resources.
5. **Improve and maintain infrastructure-** Sanitation facilities' infrastructure should be improved to meet national standards. It should be accompanied by various policies inputs.
6. **Engage communities-** Community members play an important role in using and providing feedback on services. They must be included in the development of policies and in the regular review of sanitation coverage and implementation data.

Poor access to safe water and adequate sanitation continues to be a threat to human health. As member states strive to achieve the SDG targets, investment in sanitation is crucial. Emphasis should be placed on interventions likely to yield an accelerated, affordable and sustainable health gain.

Q.34) India needs to build its own technology capability and ensure that the technology available is inclusive in nature. Comment.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss why Indian should build their own technology capability and how to ensure the technology available is inclusive in nature.

Conclusion. Way forward.

Any nation's progress and growth relies on technological superiority. With India's aspiration to become a major global power, it is said that India needs to build its own technological capacity. India cannot become a leading power without its own technological and production capability in conventional arms, in cyberspace and biotechnology.

Significance of building India's own technology capability:

1. **Economic development:** Growing adoption of technology will play a crucial role in India's economic development. Inventions and innovations boost economic growth as was seen most of the developed countries.
2. **Reduce dependence:** At present India's technological needs are mostly fulfilled from imports which put it at a disadvantaged strategic position. For instance major defence technology including missiles, guns etc. are being imported from Russia, Israel etc. India should gradually move from Make in India to Made in India.
3. **Poverty alleviation:** Technology helps lift millions from poverty through technology driven economic growth. For instance, new technologies, such as solar power can provide access to energy. Access to energy enables people to work their way out of poverty, access education and improve their own health.
4. **Agriculture:** Half of India's population is employed in agriculture. Mechanisation in agriculture has not been incentivised as pointed in Economic survey 2020. For instance, high yield varieties are must to ensure agricultural productivity for which technological capabilities must be developed.
5. **Employment:** Building technological abilities would help create employment and reap India's demographic dividend. According to a World Economic Forum's 'The Future of Jobs 2018' report, machines and algorithms in the workplace are expected to create 133 million new roles and jobs by 2022.
6. **Security:** With technology being outsourced, there is always a threat to security and data of the nation. For instance, increasing cyber-threats calls for building India's own capabilities.

How can technologies ensure inclusivity?

1. **Good governance:** Technology helps in good governance by connecting people to the government. For instance, e-governance allows the government to reduce inefficiencies and grievance redressal in various departments.
2. **Education:** Technology enables better and inclusive education. It helps especially people of rural areas through tele-education. For instance, the government has launched Swayam platform to boost online learning in India.
3. **Healthcare:** Technology made healthcare affordable and accessible. Tele-medicine allows doctors to treat patients in rural areas where doctors are not available. Further, enhancing technological capabilities would make health infrastructure affordable and cheap.

4. **Bridge gaps:** There is disparity between urban and rural areas and rich and poor that lead to exclusion and marginalization of certain groups. Technology is crucial towards eliminating these disparities and differences. For instance, it allows rural youth to learn and innovate.
5. **Income generation:** Technology plays an important role in diversifying income. For example, internet penetration helps tribal people to sell their products online through e-commerce platforms and earn for their family.

Way forward:

1. **R&D:** The capability to undertake basic and applied research across a wide-ranging area is essential to generate applications and technologies of tomorrow. The development of a strong technology base is critical to focus such research towards opening up options for the long-term, focused towards meeting the needs of the future.
2. **Technology ecosystem:** India should aggressively work towards the process of accelerating new technologies by tapping into what has already been invented elsewhere for creating an ecosystem of technology know-how, demand and skill creation.
3. **Domestic infrastructure:** The missing piece in achieving overall technology leadership and domestic capabilities is India's hardware and system design capabilities. India needs to seriously undertake development of domestic infrastructure for technologies crucial for its security and economy.
4. **Cashing US-China dispute:** The recent US-China Trade spat has opened up a strategic window of opportunity for becoming part of a Global Value Chain of electronics hardware. India should rapidly capitalize it to fill the gap. India has an edge over China as it is considered as a safer country to share Intellectual property due to its respect for IP and laws to protect it.
5. **Incentives:** India should provide lucrative incentives like subsidized electricity, tax breaks etc. to lure technology giants to set up business in India for building hardware and system software, for both meeting domestic needs and producing cost-effective exports for the rest of the world.
6. **Preventing brain drain:** US government is reportedly considering restricting H1B visa grant for Indians to 15%. India should use this change as an opportunity to retain the top talent from fleeing the country and incentivize them to stay home for developing technology companies with private-public partnerships.

With Digital India and Make in India, India has taken a first step towards building its technological capabilities. A strategy must be further developed to strengthen the domestic market, especially hardware. Government must incentivise industry to develop their technological capabilities.

Q.35) What do you mean by Minimum Support Price (MSP)? Examine the benefit and issues associated with Minimum Support Price.

Ans.

Demand of the question

Introduction. What is the Minimum Support Price?

Body. Discuss various advantages and issues associated with Minimum Support Price.

Conclusion. Way forward.

Minimum Support Price (MSP) is the price at which the government purchases crops for the farmers, to insure farmers against any sharp fall in farm prices. It is announced by the Government on the basis of recommendation of the Commission for Agricultural Costs and

Prices (CACP), at the beginning of the sowing season. The major objectives are to support the farmers from distress sales and to procure food grains for public distribution. It is an important part of India's agricultural price policy.

Importance of Minimum Support Price:

1. **Fixed Remunerations:** The farmers are financially secured against the vagaries of price instability in the market. It provides security to farmers from the risk of crop failure and less production.
2. **Informed decision making:** MSP are announced at the beginning of the sowing season, this helps farmers make informed decisions on the crops they must plant. This advance information helps the farmer to make an informed decision about which crop to sow for maximum economic benefit within the limitations of his farm size, climate and irrigation facilities.
3. **Diversification of crops:** The MSP announced by the Government of India for the first time in 1966-67 for wheat has been extended to around 24 crops at the present. This has encouraged the farmers to grow these diverse crops to maximise their income.
4. **Benchmark for private buyers:** MSP sends a price-signal to market that if merchants don't offer higher than MSP prices the farmer may not sell them his produce. Thus it acts as an anchor or benchmark for the agro-commodity market. It ensures the market prices will not be drastically lower than MSP.
5. **Targeted crops:** MSP is used as a tool to incentivize production of specific food crops which is short in supply. MSP motivates farmers to grow targeted crops and increased production.
6. **Enhance purchasing power:** Slow farm growth and increasing farmer's distress demand for more MSP for farmers. It helps in enhancing the purchasing capacity of farmers.

Various issues associated with Minimum Support Price:

1. **Non-proportional increase:** The support prices that are being provided do not increase at par with increase in cost of production. A rating agency, CRISIL pointed out that the increase in MSP has indeed fallen during 2014-17.
2. **Reach:** The benefits of this scheme do not reach all farmers and for all crops. Not all farmers have been able to get the benefits of MSP because of lack of awareness. There are many regions of the country like the north-eastern region where the implementation is too weak.
3. **Excess storage:** MSP without sufficient storage has resulted in huge piling of stocks in the warehouses. The stock has now become double the requirements under the schemes of PDS, Buffer stock etc.
4. **Market distortion:** It distorts the free market by favouring some particular crops over other crops.
5. **Fiscal burden:** Open-ended procurement of paddy and wheat at MSPs is completely out of sync with market prices and lead to fiscal burden.
6. **Impact agricultural exports:** Hikes in MSP also adversely affect the exports by making Indian farm goods un-competitive especially when international market prices are lower.
7. **Ecological problem:** MSP leads to non-scientific agricultural practices whereby the soil, water are stressed to an extent of degrading ground water table and salinization of soil.
8. **Crop diversity:** MSP affects the crop diversity of india. With MSP cropping patterns get affected as it leads to production of MSP supported crops as it guarantee returns.

Way forward:

1. **Alternate income models:** Instead of relying on MSP alone, the government needs to explore alternate models to boost farmer's income like horticulture.
2. **Market Intervention Scheme:** A counterpart of the MSP is the Market Intervention Scheme under which the state government procures perishable commodities like vegetable items.
3. **Price Deficiency Payment:** To solve the problem of MSP, Both NITI and Economic Survey recommend Price Deficiency Payment (PDP) in which the government pays the farmers the difference between modal rate (the average prices in major mandis) and the MSPs. Some states like Madhya Pradesh (Bhavantar Bhugtan Yojana), Haryana government (Bhavantar Bharapai Yojana) have launched price deficit financing schemes.
4. **Income support:** By moving from price to income support, all market-distorting input and output subsidies can be collapsed into the Pradhan Mantri Kisan Samman Nidhi or PM-KISAN scheme.
5. **Stock diversification:** The government should stock sufficient quantities of all essential food items— not only rice and wheat, that enable effective market intervention, with the interest of poor consumers better taken care of through targeted cash transfers.

Procurement policy of the government needs reforms that are easier to implement. Efforts must be made to balance market price and farmer's support. Cash transfer gives better choices to farmers than imposing subsidies.

Q.36) Discuss the potential application of artificial intelligence in the healthcare system. Also mention, steps taken by the government to promote artificial intelligence in India.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the potential application of artificial intelligence in the healthcare system. Mention the steps taken by the government to promote artificial intelligence in India.

Conclusion. Way forward.

Artificial intelligence (AI) refers to the simulation of human intelligence in machines. These are programmed to think like humans and mimic their actions. Artificial intelligence has a lot of potential applications especially in the healthcare sector. It can be used in diagnosis, treatment design, imaging diagnosis, early detections of disease outbreaks, robot assisted surgeries, virtual nurse assistants etc.

Potential application of artificial intelligence in the healthcare system:

1. **Save lives:** A lot of organisations and medical care centres are relying on AI to save lives. An organization called Cambio HealthCare developed a clinical decision support system for stroke prevention that can give the physician a warning when there's a patient at risk of having a heat stroke.
2. **Managing medical records and other Data:** The first step in health care is compiling and analysing information (like medical records and other past history), data management is the most widely used application of artificial intelligence and digital automation. Robots collect, store, format, and trace data to provide faster, more consistent access.

3. **Treatment plan:** Artificial intelligence systems analyse data and reports from a patient's file, external research and clinical expertise to help select the correct, individually customized treatment plan.
4. **Virtual nurses:** The AI has been used to develop a digital nurse to help people monitor patient's condition and follow up with treatments, between doctor visits. In 2016, Boston Children's Hospital developed an app Alexa that gives basic health information and advice for parents of ill children.
5. **Medication monitoring:** AI helps monitor medication courses of patients. It is very important to ensure proper dose regime to be followed by the patient. For instance, the AiCure app monitors the use of medication by a patient.
6. **Drug development:** Developing pharmaceuticals through clinical trials can take more than a decade. AI can make this process faster and cheaper. Amidst the recent Ebola virus scare, a program powered by AI was used to scan existing medicines that could be redesigned to fight the disease.
7. **Precision medicine:** Genetics and genomics look for mutations and links to disease from the information in DNA. With the help of AI, body scans can spot cancer and vascular diseases early and predict the health issues people might face based on their genetics.
8. **Health Monitoring:** Wearable health trackers like those from FitBit, Apple and others monitors heart rate and activity levels. They can send alerts to the user to get more exercise and can share this information to doctors (and AI systems) for additional data points on the needs and habits of patients.

Government efforts regarding artificial intelligence in India:

National Programme on Artificial Intelligence	It was announced in the Interim Budget 2019. The programme would be catalysed by the establishment of the National Centre on Artificial Intelligence as a hub along with 6 centres of excellence.
National strategy for AI	NITI Aayog came up with a National Strategy for Artificial Intelligence in India focusing on economic growth and social inclusion. It provides over 30 policy recommendations to invest in scientific research, encourages reskilling and training, accelerates the adoption of AI across the value chains, and promotes ethics, privacy, and security in AI.
Task Force on Artificial Intelligence	AI Task Force was formed by the Commerce and Industry Department, Government of India that focuses on India's economic transformation.
International Center for Transformative Artificial Intelligence	NITI Aayog and Tata Institute of Fundamental Research (TIFR) initiated collaboration to set up International Center for Transformative Artificial Intelligence (ICTAI) to conduct advanced research to incubate AI-led solutions in three important areas- healthcare, agriculture and smart mobility.
AI 4 All Global Hackathon	NITI Aayog launched AI 4 All Global Hackathon to promote awareness and develop solutions to address the infrastructure challenges, without compromising on the data privacy while training the AI algorithms.
National Mission on Interdisciplinary Cyber-	It is a programme led by the Union Ministry of Science & Technology to enhance capabilities of cyber-physical

Physical Systems (NM-ICPS)	systems. Budget 2019 allotted Rs. 5 crore for the mission.
AI Ecosystem	<p>In order to create a policy framework and to develop the ecosystem for Artificial Intelligence, the Ministry of Electronics & Information Technology, has constituted 4 committees covering all the aspects of AI. These Committees are:</p> <ol style="list-style-type: none"> 1. Committee on platforms and data for AI. 2. Committee on leveraging AI for identifying National Missions in key sectors. 3. Committee on mapping technological capabilities, key policy enablers, skilling, re-skilling and R&D. 4. Committee on cybersecurity, safety, legal and ethical issues.

Artificial intelligence has a lot of potential for India. Nearly 200 Artificial Intelligence start-ups in India are today innovating and creating AI-based solutions for various industries. It can complement Digital India Mission by helping in the big data analysis which is not possible without using AI. 'Make in India' programme can be strengthened and help India in becoming a major manufacturing hub with AI-assisted technology.

Q.37) Economic survey 2020, highlights that India's aspiration to become a \$5 trillion economy depends critically on promoting 'pro-business' policy than a 'pro-crony' policy. Do you agree? Elaborate.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss why Pro-business policy is important to achieve the \$5 trillion goal.

Conclusion. Way forward.

India aspires to become a \$5 trillion economy by 2025. This will make India the 3rd largest economy in the world. According to the economic survey to fulfil this dream India must promote 'pro-business' policy. This will unleash the power of competitive markets and will generate wealth. Further India needs to prevent 'pro-crony' policies that favour specific private interests.

Importance of Pro-business policy:

- 1. Encourage competition:** Pro-business policies are those that enable fair competition in the country. It leads to equal opportunities for new entrants and thus instil a sense of competition among them leading to overall economic growth.
- 2. Market freedom:** Pro-business policies are pro-people policies. When the government fosters a climate that encourages economic freedom, then market forces work freely to earn profits. It speeds up economic growth and job creation.
- 3. Small scale industries:** Pro-business policies means enabling small scale industry to grow and boost. This not only leads to economic growth but also generates employment. This would help in economic growth.
- 4. Generate revenue:** Pro-business policies are favourable for the new entrants to markets. This in turn leads to market growth, generates wealth and provides tax revenue to the government.

5. **Boost exports:** If India has to achieve the \$5 trillion target it needs to boost exports. Pro-business policies help in boosting exports through a better tax system, removing inverted duties etc. Exports help to enrich the forex reserves as well prevent any BOP crisis. Initiatives like Make in India is a right step.
6. **Prevent monopolies:** Pro-crony policies favour few and led to growth of only powerful and rich corporates. Pro-business policies work towards destroying monopolistic tendencies and enable equal market. \$5 trillion goal can't be achieved by favouring few.
7. **Benefit labour:** Pro-business policies benefit labour too. Cutting the federal corporate tax rate is a good social policy, because it will lead to job growth and rise in wages. This will enable more efficient labour and would boost the economy.
8. **Foreign investment:** Cutting the corporate tax will encourage more business activity from abroad, which will encourage firms to expand their operations and hire more workers.

Way forward:

1. **Labour reforms:** Labour Laws should be reformed as due to the stringent labour laws corporates in India are preferring Capital intensive mode of Production in a country where labour is abundant.
2. **Promoting labour Intensive sectors:** Labour intensive sectors like food processing industry, leather industry, apparel, electronics, gems and jewellery, financial services, and tourism etc. should be encouraged. Appropriate subsidies and tax incentives should be given to incentivise them. Make in India initiative a great step forward which will boost the manufacturing.
3. **Strengthening MSME:** MSME sector should be promoted and supported. Easing regulations, subsidies will help. Also easy availability of credit should be the priority. MUDRA has the potential to create required jobs in India.
4. **Implementing Niti Aayog action agenda:** The Action Agenda has provided several good ideas for job creation, including labour law reforms at the state level. The report emphasizes the role of exports in job creation and recommends establishing coastal employment zones (CEZs), similar to China's special economic zones (SEZs). This agenda must be implemented in letter and spirit.
5. **Entrepreneurship:** The focus of economic policy must be on creating an enabling policy for youth to take up entrepreneurship and create more jobs in the market. India does not need five companies worth 5000 crores turnover but needs 5000 companies of 5 crore turnover.

Pro-business policies are important for economic growth. Initiatives like Make in India, Skill India and digital India are important. India has improved its ease of doing business and moved to 63rd spot recently. Government must ensure that its policies should not turn pro-crony benefiting only a few.

Q.38) Critically analyse the accomplishments achieved through nationalisation of banks in India.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss achievements and criticism related to nationalisation of banks.

Conclusion. Way forward.

Nationalisation of banks has played an important role in the economic growth of India. In 1969, 14 major Indian commercial banks of the country were nationalised and another 6 were nationalised in 1980. This helped not only in economic growth but ensured banking to reach the unprivileged and helped many to come out of poverty.

Achievements due to nationalisation of banks:

1. **Branch Expansion:** Initially, the banks were conservative and opened branches mainly in cities and big towns. There has been a spectacular expansion of bank branches after nationalisation of major commercial banks. The lead bank scheme has played an important role in the bank expansion programme.
2. **Reduction in monopoly:** Initially a few leading industrial and business houses had close association with commercial banks. They exploited the bank resources and prevented new businesses from entering the competition. Nationalisation of banks prevented the spread of the monopoly enterprise.
3. **Increased savings and reduced misuse:** It led to an increase in savings from the general public. Thus, nationalisation of banks ensured the availability of resources to the plan-priority sectors.
4. **Greater mobilisation of deposits:** The public sector banks opened branches in rural areas where the private sector has failed. Because of such rapid branch expansion, the government was able to mobilise rural savings.
5. **Development of Priority Sectors:** An important change after the nationalisation of banks is the expansion of advances to the priority sectors. To achieve this, the banks formulated various schemes to provide credit to the small borrowers in the priority sectors, like agriculture, small-scale industry, road and water transport, retail trade and small business.
6. **Social Banking:** Commercial banks, especially the nationalised banks have participated in the poverty alleviation program launched by the government.
7. **Development of the agriculture sector:** Banks assisted agriculture in many ways. It provided increased finance to agriculture. This helped in reducing exploitation of farmers by money-lenders.
8. **Balanced Regional development:** In a country, certain areas remained backward for lack of financial resources and credit facilities. Private Banks neglected the backward areas because of poor business potential and profit opportunities. Nationalisation helped to achieve balanced inter-regional development and remove regional disparities.
9. **Greater control by the Reserve Bank:** In a developing country like India there is need for exercising strict control over credit created by banks. With nationalisation of banks RBI was able to control them in a better way.
10. **Greater Stability of banking structure:** Nationalised banks led to more confidence in the customers about the safety of their deposits. Besides this, the planned development of nationalised banks imparted greater stability in the banking structure.

Criticism of nationalisation of banks:

1. **Failed in objectives:** The Estimates Committee of Lok Sabha stated that nationalised banks have largely failed in achieving the main objectives of bank nationalisation like removing regional disparities through developing banking facilities in backward areas.
2. **Insufficient help to priority sectors:** In spite of much increase in the loans advanced to the priority sectors, the total help is not sufficient for the large size of these sectors. The rate of increase in the advances to the priority sectors which was rapid in the initial years of post-nationalisation period has slowed down in the later years.
3. **Inadequate Facilities in Rural Areas:** No doubt, much progress has been made in expanding bank branches in respect of bank expansion, deposit mobilisation and credit

expansion in rural areas. But, it is not adequate to meet the financial needs of the population living in the rural areas.

4. **Regional Imbalances:** Though the overall expansion in the bank branches has taken place in the country, their expansion is not equitably distributed among the different states. According to the Reserve Bank's report about half of the banking institutions concentrate in the two regions i.e. southern and western region.
5. **Insufficient Deposit Mobilisation:** Despite good progress on the deposit mobilisation front, much remains to be done. Deposit mobilisation by the public sector banks has been about 16 to 17% per annum since nationalisation. On the other hand, it has been found that the foreign banks and the smaller private banks have received much greater increases in deposits.
6. **Low Profitability:** A major defect of banking after nationalisation is that the nationalised banks are either operating under losses or experiencing falling dividends. The profits of the commercial banks, which were quite high during fifties and sixties, have declined considerably in the post-nationalisation period.
7. **Low Efficiency:** Nationalisation has created a bureaucratic attitude in the functioning of the banking system. Lack of responsibility and initiative, red-Tapism, inordinate delays are common features of nationalised banks. As a consequence, the efficiency of these banks has reduced.
8. **Increasing NPAs:** Govt pressure from the top for implementing even loss making schemes or full waiver of loans for electoral benefits has led to an increase in NPAs to a dangerous level.

Thus nationalisation although has led to many benefits it had many unintended consequences leading to inefficiencies in banking. What is needed is providing more autonomy to banks with a vigilance body on all the top executives of major banks. Otherwise failure of many banks is nearby.

Q.39) Discuss the role of renewable energy resources in order to maintain environmental sustainability with special reference to India.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the role of renewable energy resources in sustainable development. Mention India's efforts towards renewable energy.

Conclusion. Way forward.

Renewable energy (RE) sources are resources which can be used to produce energy again and again e.g. solar energy, wind energy etc. India has taken the lead in the renewable energy sector in the world. As of 2019, 35% of India's installed electricity generation capacity is from renewable sources, generating 17% of total electricity in the country. The country is aiming to expand its renewable energy capacities.

Role of renewable energy resources in sustainable development:

1. **Sustainable development:** Economic development has been strongly correlated with increasing energy use and growth of greenhouse gas (GHG) emissions. Renewable energy can help by contributing to sustainable development by reducing energy imports.
2. **Benefit poor:** In addition, renewable energy offers the opportunity to improve access to modern energy services for the poorest members of society, which is crucial for the

achievement of Sustainable Development Goal. For instance, by installing the solar panels, the poor can access electricity most of the time in the day.

3. **Energy access:** In India many areas still lack access to electricity. And most of the rural areas lack 24 hour electricity. If solar and wind plants are distributed, there can be minimal electricity generation interruption because weather disruptions in one location cannot be the same in other locations.
4. **Climate change mitigation:** RE technologies provide important benefits compared to fossil fuels, in particular regarding GHG emissions. Renewable energy is a clean source of energy, meaning, it has low or zero carbon and greenhouse emission.
5. **Employment:** Development of renewable sources lead to creation of employment opportunities and actively promoting structural change in the economy. Solar, wind electricity has potential to produce over millions of jobs.
6. **Reduce pollution:** RE technologies also offer benefits with respect to air pollution and health. 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.
7. **Energy security:** Sources of energy like fossil fuels (oil, gas, and coal) are considered limited resources and there is a strong possibility that they will run out in the future. Renewable resources do not deplete over a lifetime and there is zero possibility that they will run out (sustainable source of energy). For example solar and wind energy.

India's efforts towards renewable energy:

1. **Ministry of New and Renewable Energy:** India is the first country in the world to set up a ministry of non-conventional energy resources (now Ministry of New and Renewable Energy (MNRE)). Its public sector undertakings the Solar Energy Corporation of India is responsible for the development of the solar energy industry in India.
2. **Intended Nationally Determined Contributions (INDC):** In the Paris Agreement India has committed to an Intended Nationally Determined Contributions target of achieving 40% of its total electricity generation from non-fossil fuel sources by 2030. 175 GW interim target is 100 GW of solar, 60 GW of wind, 10 GW of biomass and 5 GW of small hydro.
3. **Central Electricity Authority's strategy blueprint:** The country is aiming for an ambitious target of 57% of the total electricity capacity from renewable sources by 2027 in Central Electricity Authority's strategy blueprint. According to 2027 blueprint, India aims to have 275 GW from renewable energy, 72 GW of hydroelectricity, 15 GW of nuclear energy and nearly 100 GW from other zero emission sources.
4. **Commission for Additional Sources of Energy:** Realizing the need for concentrated efforts in this sector, The Government of India established a Commission for Additional Sources of Energy (CASE) in the Department of Science and Technology. The mandate of CASE is to promote research and development activities in the field of renewable energy.
5. **Solar mini-grids project:** As part of the government's initiatives to take renewable energy to remote places, Union Minister for New and Renewable Energy, launched the solar mini-grids project. The Solar Mini Grids project has an objective of taking advantage of the available solutions to promote universal energy access by 2025 and reduce electricity costs and tariffs.

Way forward:

1. **Infrastructure:** To support growing renewable energy, the expansion of transmission infrastructure, for both intra and inter-state should be strengthened.
2. **Domestic content requirement:** It should be carefully assessed to ensure that domestic content requirement does not hinder the growth of solar capacity.

3. **R&D:** Investment in R&D programmes, as well as human resource development is necessary in addition to local content requirements
4. **Institutional strengthening:** Strengthen the institutional structure to facilitate effective flow of central financial assistance. It is also important to strengthen institutional structure to monitor implementation of Government policies and programmes.
5. **Capacity building:** The government also needs to ensure that India's distribution companies have the capacity to continue to purchase renewable electricity, especially if bid prices level off or rise.

Renewable energy technologies are still significantly new to the market. They still lack the much needed efficiency. India must strengthen regional structures so that states can efficiently promote renewable energy usage.

Q.40) Indian textile industry can play an important role in India's inclusive growth. In light of this, discuss the significance of 'Technical Textiles Mission'.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss how Indian textile industry can play an important role in India's inclusive growth and significance of technical textiles mission.

Conclusion. Way forward.

The textile industry has been a symbol of India's cultural heritage. It represents a rich and diverse spectrum of activities with the handwoven sector on the one end and the capital intensive mill sector on the other. The textile industry plays a significant role in Indian economy by providing direct employment to an estimated 35 million people, by contributing 4% of GDP and accounting for 35% of gross export earnings. By contributing towards employment generation and in terms of social welfare it can play a significant role due to its unorganised structure.

Textile industry's role in India's inclusive growth:

1. **Employment generation:** Textile industry is labour intensive and offers maximum employment in the country. It is a source of employment both in rural and urban areas. Textile industry in India can provide indirect employment to many million people, such as cotton growers, processors, cloth dealers, shop keepers, exporters and importers.
2. **Farmer's welfare:** Textile industry needs raw material which is mostly procured locally. For instance, cotton is the main material used for the production of yarn and cloth. The development of the industry encourages farmers to grow more cotton, which leads to income generation in the agricultural sector.
3. **Higher wages:** To the members of unionized labour, it provides secure jobs with wage rates significantly higher than those prevailing in the unorganized sector of the industry.
4. **Government revenue:** It is a source of revenue and means to earn foreign exchange for the government. The industry plays an important role in providing foreign exchange resources by exports. This helps the government to spend more on social welfare and poverty alleviation measures.
5. **Women empowerment:** Textile industry plays a significant role in women employment, especially in rural areas. The number of women employed in the textile industry is on

the increase ever since the liberalisation. According to CMIE (Centre for Monitoring Indian Economy) the industry provides employment to about 15 million women.

6. **Reduce inequalities:** It plays an important role in reduction of inequalities in income and wealth and more even distribution of economic power in the country. It thus plays an important role in the removal of poverty and technological and economic self-reliance of the nation.

Significance of Technical Textiles Mission: Technical textiles are textiles materials and products manufactured primarily for technical performance and functional properties rather than aesthetic characteristics.

1. **Research, Innovation and Development:** The mission will focus on promoting both fundamental research at fibre level and application based research in geo-textiles, agro-textiles, medical textiles etc.
2. **Promotion and Market Development:** The penetration level of technical textiles is low in India varying between 5-10% against the level of 30-70% in developed countries. The mission aims at an average growth rate of 15-20% per annum through market development, market promotion, international technical collaborations, investment promotions and 'Make in India' initiatives.
3. **Export Promotion:** It aims at export promotion of technical textiles enhancing. An Export Promotion Council for Technical Textiles will be set up for effective coordination and promotion activities in the segment.
4. **Education, Training, Skill Development:** The Mission will promote technical education at higher levels. Skill development will be promoted and adequate pool of highly skilled manpower resources will be created.
5. **Inclusive growth:** The Mission will focus on usage of technical textiles in various flagship programmes including strategic sectors. The use of technical textiles in agriculture, dairy and in programmes like Jal Jeevan Mission, Swachh Bharat Mission and Ayushman Bharat will bring an overall improvement in economy, better agricultural productivity and higher income to farmers.
6. **Infrastructure:** The use of geo-textiles in highways, railways and ports will result in robust infrastructure, reduced maintenance cost and higher life cycle of the infrastructure assets.
7. **Waste disposal:** It will also develop suitable equipment for environmentally sustainable disposal of used technical textiles, with emphasis on safe disposal of medical and hygiene wastes.
8. **Indigenous manufacturing:** There is another important component in the research activity aiming at development of indigenous machineries and process equipment for technical textiles, in order to promote 'Make in India' and enable competitiveness of the industry by way of reduced capital costs.

Textile industry occupies a place of unique importance in the economy of the country by virtue of its significant share in industrial production and large workforce employed. A sustained and balanced growth of this industry is, therefore, vital to the economic growth of a country as also for fulfilment of the most essential needs of the people. In this direction technical textile mission is important.

Q.41) What is bioenergy? Discuss how bio-energy can help in meeting India's energy demands.

Ans.

Demand of the question

Introduction. What is bioenergy?

Body. Discuss how bio-energy can help in meeting India's energy demands. Mention various government efforts in reaping bioenergy.

Conclusion. Way forward.

Bioenergy is renewable energy made available from organic materials derived from biological sources. It is the energy derived from biomass such as bagasse, cotton stalk, coconut shell and wood, plants, etc. With global warming and growing concerns biomass can play a vital role especially in rural areas.

Bio-energy role meeting India's energy demands:

- 1. Energy demand:** Bioenergy can help to meet the growing demand for energy within the country, especially in rural areas. Nearly 25% of its primary energy comes from biomass resources and close to 70% of rural population depend on biomass to meet their daily energy needs. Biomass can further help in meeting rural energy demands.
- 2. Climate change mitigation:** Bioenergy provides important benefits compared to fossil fuels, in particular regarding GHG emissions. Biomass recycles carbon from the air and spares the use of fossil fuels, reducing the additional fossil carbon from the ground into the atmosphere.
- 3. Market growth:** The market for renewable energy systems in rural and urban markets in India is set to grow exponentially. Despite this, bioenergy does not figure in most energy studies and is classified as 'non-commercial' energy. Plants like Jatropha, Neem and other wild plants are identified as the potential sources for biodiesel production in India.
- 4. Waste to energy:** Biofuels can augment waste to wealth creation. Being a derivative of renewable biomass resources such as plastic, municipal solid waste, forestry residues, agricultural wastes, surplus food grains etc. it has huge potential to help the country achieve the renewable energy goal of 175 GW.
- 5. Income generation:** Adopting biofuels as an alternative source of energy can significantly improve farmers' income, generate employment opportunities etc.
- 6. Reduce imports:** India's energy demands met by imports are about 46.13% of total primary energy consumption. Bioenergy can help in reducing these imports and boost India's energy security and self-reliance.

Various government efforts in reaping bioenergy:

- 1. 10 GW national target:** Ministry of New and Renewable Energy (MNRE) has set the national target is to achieve 10 GW of installed biomass power by 2022.
- 2. National Policy on Biofuels:** The policy is aimed at taking forward the indicative target of achieving 20% blending of biofuels with fossil-based fuels by 2030.
- 3. Policy for biomass and bagasse cogeneration:** MNRE has further developed a policy for biomass and bagasse cogeneration that will help in meeting India's energy demands. It includes financial incentives and subsidies, both for biomass projects and sugar mills that use this technology.
- 4. Fiscal Incentives:** Government gives 10 years Income tax holidays. Concessional customs and excise duty exemption for machinery and components for initial setting up of Biomass power projects. General sales tax exemption is available in certain States.

5. **Waste to energy projects:** Waste to energy projects are also being set up for generation of energy from urban, industrial and agricultural waste such as vegetable and other market wastes, slaughterhouse waste, agricultural residues and industrial wastes & effluents.
6. **National Biomass Repository:** MNRE also plans on creating a 'National Biomass Repository' through a nation-wide appraisal program which will help ensure availability of biofuels produced from domestic feedstock

Way forward:

1. **Utilising wastelands:** There are about 63 million ha waste land in the country, out of which about 40 million ha area can be developed by undertaking plantations of Jatropha.
2. **Reducing capital costs:** Efforts must be made for reduction in the capital cost of biogas plants, development of materials and techniques.
3. **Institutional support:** Establishing institutional support for programme formulation and implementation is important to utilise established energy mechanisms.
4. **Development of second-generation bi-fuels:** Government must support and promote development of second-generation bio-fuels and related applications.
5. **Establishing standards:** It is important to lay down standards for various bio-energy components, products and systems.

Biomass in Indian energy matrix is very important for remote villages. Even with decades of experience in managing biomass power, still there exists lots of gaps in the supply chain. The main scope for interventions are in collection, improving design and engineering aspects, conducting feasibility studies and focused research and development.

Q.42) Examine the impact of the coronavirus epidemic on Indian economy.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the impact of the corona-Virus epidemic on Indian economy.

Conclusion. Way forward.

Recent coronavirus outbreak has had far reaching consequences on the global economy beyond the disease. Moody's Investor Services has lowered its growth forecast for the Asia-Pacific region to 5.2% for 2020 due to coronavirus outbreak, the impact of which will be more pronounced on China and India. In India, the near-term impact will be felt in supply chains of major conglomerates, especially pharmaceuticals, automobiles and electronics.

Impact of the corona-Virus epidemic on Indian economy:

Overall economy	Sector Wise Impact
Imports: In the latest assessment, credit agency CRISIL's has revealed that novel coronavirus is going to hit the Indian imports if it continues to the first quarter of next fiscal. India is a net importer of China with 56 billion dollars.	Electronics industry: Shutdown of factories in China due to coronavirus is expected to negatively impact the electronics industry in India as Indian players currently do not have the capability to manufacture such semiconductors and components in the short term.
Exports: If the virus epidemic continues for a longer period, Indian export to China	Poultry industry: The scare of COVID-19 and spread of rumours on social media

would also get hit, especially in the area like petrochemicals. India exports 34% of its total petrochemicals to China.	linking chicken to the deadly virus has taken a huge toll on the unsuspecting poultry industry and farmers. Chicken consumption has come down by about 30%, leaving the poultry industry and farmers worried.
Inflation: Inflationary pressures are likely to rise, at least in the short term, due to the environment of uncertainty and disruption in the supply chain.	Tourism industry: The travel and tourism sector will be affected badly. Most of the Chinese citizens are avid travellers, hence the tourism in other countries might feel the ripple effect.
Lesser demand: Commodities like metals, upstream and downstream oil companies, could witness the impact of lower global demand impacting commodity prices.	Pharmaceuticals: Bulk drugs and drug intermediates accounted for 3% of India's imports from China. According to the Trade Promotion Council of India, approximately 85% of active pharmaceutical ingredients (APIs) imported by Indian companies are from China. India's overdependence on China for APIs exposes it to raw material supply disruption and price volatility.

The coronavirus outbreak is not good for the global and Indian economy. India is already undergoing economic slowdown with rise in inflation. There is a need for collaborative efforts to tackle the impact of the epidemic. India must ensure minimal impact of epidemic on its economy.

Q.43) Discuss the importance of Eastern Ghats for Indian biodiversity. Suggest some measures to protect it.

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss the importance of Eastern Ghats for Indian biodiversity. Mention various threats to Eastern Ghats and suggest some measures to protect it.

Conclusion. Way forward.

The Eastern Ghats are a discontinuous range of mountains along India's eastern coast. Stretching about 1,750 km north to south, it runs from the northern Odisha through Andhra Pradesh to Tamil Nadu in the south. They are eroded and cut through by four major rivers of peninsular India viz. Godavari, Mahanadi, Krishna, and Cauvery. It has great importance for Indian biodiversity, as a habitat to many endangered flora and fauna.

Importance of Eastern Ghats for Indian biodiversity:

- 1. Forests:** Eastern Ghats biospheres are rich forests with perennial and semi-perennial streams and other natural resources. The forests include dry evergreen, semi-evergreen forests, tropical dry deciduous forests, dry savannah forests, tropical dry scrub forests, southern tropical thorn forests and subtropical hill forests.
- 2. Flora:** The Eastern Ghats ranges are home to 13% of India's flowering plants. In these mountains exist a reservoir of about 3,000 flowering plant species, nearly 100 of them endemic.

3. **Fauna:** They are also the habitats for wild animals such as elephants, panthers, the Indian bison, bears, deer, wild boar, mongoose, jungle cat and reptiles such as python, monitor lizard, etc. About 290 bird species and nearly 4,000 insects are also found.
4. **Irrigation:** These hills get an average 1,000 millimetres of rainfall, mostly from the north-east monsoon. Rivers like Cheiyaru, Amirthiyaru, Mriganda, Pennaiyaaru, Cauvery etc. originate from the hills of the Eastern Ghats. Their water irrigates the foot hills and nearby plains.
5. **Tourism:** Waterfalls such as the Periyar Falls, Megam Falls, Beeman Falls etc. also make the land fertile apart from drawing tourists.

Threat to Eastern Ghats:

1. **Deforestation:** By making use of the loopholes in the laws and other government rules, trees are removed clandestinely. The aromatic and valuable sandal trees, once growing abundantly in the hills have been indiscriminately felled and illegally removed. These activities have made the hills of Eastern Ghats barren, its streams have run dry and the biodiversity is disappearing gradually.
2. **Mono-cropping:** The tribals living in the hills have not received proper price for the food grain they cultivate. They have thus switched over to mono cropping tapioca, leading to deterioration of land. Mono-cropping in Kolli Hills and Pachamalai has devastated entire hills.
3. **Plantation:** Large-scale plantations of coffee, tea and orchards have been raised in these hills. Silver oak trees grown in these plantations as shade trees are also removed gradually, weakening the fragile ecosystem. Such plantations are considered to be the cause for degradation in places like Yercaud hills, depleting native vegetation.
4. **Invasion:** Non-native species such as poochedi, vengaya thamarai and veli karuvai have become invasive, destroying native species and leading to ecological imbalance.
5. **Illegal mining:** The removal of enormous quantities of bauxite and magnesite ore from Kolli Hills and Servarayan Hills, respectively, led to indiscriminate destruction of forests. Consequently, water resources in these regions have dried up.
6. **Forest fires:** The annual forest fires have become a serious cause for the loss of biodiversity. The pollution caused by the industries established near forest areas also poses a serious threat.

Measures to conserve Eastern Ghats:

1. **Ecotourism:** The concept of ecotourism involving local forest stake-holders may be a boon to not only residents but also the biota of the entire region. While the ecotourism programme takes care of the livelihood of locals by making them stake-holders, the forest and its biodiversity are guarded by eco-tourism management.
2. **Eco-development:** Only if an effective strategy for the eco-development of these regions is developed by involving the local people, the flora, fauna and other natural resources of Eastern Ghats can be protected. Otherwise the future of the Eastern Ghats and its precious biodiversity will be only an illusion.
3. **Afforestation:** Improving tree cover nationally is important and will confer multiple benefits, including modulation of the monsoon, improved air quality and wider spaces for biodiversity to persist.
4. **Effective law implementation:** Law should be implemented properly in letter and spirit. Government must increase the number of forest officials to actively monitor and prevent illegal activities in forests.

The role of the northern Eastern Ghats in harbouring and protecting biodiversity is also being widely recognized in recent years. Several new species discovered in the landscape

recently and records of the presence of a tiger population point to the rich biodiversity thriving in these forests. Efforts must be made to restore the forests and promote eco-development.

ForumIAS

General Studies 4

Q.1) What do you understand by Stereotyping? Critically examine why stereotyping is so common in society today.

Ans.

Demand of the question

Introduction. What is Stereotyping?

Body. Discuss why stereotyping is so common in society today.

Conclusion. Way forward.

Stereotyping is a situation when one judges an individual or a group of people based on his/her own and others opinions and experiences. Stereotypes are characteristics imposed upon groups of people because of their race, nationality, and sexual orientation. Stereotypes are not always accurate and even if positive, can be harmful.

Why is stereotyping common in society today?

- 1. Illiteracy:** Lack of education and awareness has led to stereotyped mindset about particular group or sect. E.g. Many people think that rain is caused by Gods. Thus for good rains they do puja and havan. They don't know that rain is monsoonal and depend upon its variation. They end up wasting money and time on havan.
- 2. Socialisation and upbringing:** People are socialised to adopt the same stereotypes. Stereotypes are usually acquired in early childhood under the influence of parents, teachers, peers, and the media. E.g. A child who sees his friend smoking and being branded as cool by others, would associate smoking with coolness and would develop stereotypes for the same, ultimately smoking.
- 3. Societal Environment:** Stereotypes are the result of a common environment that stimulates people to react in the same way. People are highly similar with each other in how they describe different racial and national groups, although those people have no personal experience with the groups they are describing. E.g. Muslims are commonly branded as terrorists without any discrimination.
- 4. Patriarchal mindset:** Prejudice and bias about women as weak has led to development of stereotypes in human minds, which is deeply ingrained. Although women have come forward breaking shackles, still discriminatory behaviour has kept stereotypes alive. Many women today prefer to become housewives in spite of having good educational qualifications because they think they are made for house work.
- 5. Alienation:** Alienation of the particular subsection leads to the development of stereotypes against the government or the whole sect. Individuals who are discriminated against might develop a feeling of stereotyping that a particular sect or government is against them. E.g. Dalit often see upper caste as oppressor and develop stereotypes against them.
- 6. Social division:** Division on the basis of religion, region, race, ethnicity etc. has deeply affected the psyche of individuals and developed stereotypes against certain sects. E.g. Muslims are commonly branded as terrorists without any discrimination.

Prejudice and social inequality are unavoidable in a multicultural society like India. The need of the hour is to encourage such depressed sections through affirmative action, stricter implementation of anti-discrimination law like that against untouchability, gender harassment. On analysing the society we live in, one can say that transition from industrial to modern and postmodern society up to now has led to a change of the roles well established by our society, namely women perform men's tasks and they get jobs which

seem specific to them. Removing stereotypes in society need strong efforts and readiness for change.

Q.2) What is the difference between attitude and aptitude? Which of the two is more important for leading a successful life?

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Mention difference between attitude and aptitude. Discuss whether aptitude or attitude is more important for leading a successful life.

Conclusion. Way forward.

Aptitude is the potential of a person to do certain things due to the innate ability or accumulated knowledge and experience. Since it has more to do with intelligence, it can be acquired and enhanced through training and experience. Attitude is the way a person understands, perceives and responds to certain situations. It is more of a behavioural aspect and can be improved gradually via introspection and self-motivation. It cannot be quantified.

Differences between attitude and aptitude:

Attitude	Aptitude
Attitude is related to existing abilities and skills with certain perceptions. It is how a person perceives something.	Aptitude is the potential ability to acquire skills, abilities and knowledge. It is more about management of a problem or situation.
Attitude is a positive or negative or indifferent feeling towards a person, object, event or idea.	Aptitude is a competency (ability) to do certain kind of work.
Attitude is associated with character or virtues. It means attitude depends upon underlying values.	Aptitude is associated with skill enhancement, learning and training.
Attitude is a more mental and psychological process. It means a person's attitude is intrinsic and is shaped through his thoughts.	Aptitude is both mental and physical. To develop an aptitude both physical means say visual means and mental processes are important.

What is more important for a successful life: attitude or aptitude?

Several elements play a vital role in achieving success, but it all starts where attitude meets aptitude. If you have the right attitude but lack the required aptitude, success can be difficult. Attitude defines how you work or proceed toward your goal. Aptitude, on the other hand, defines how much potential you have to learn specific skills or gain knowledge that will help you achieve your goal.

A. Importance of attitude:

1. Attitude is the key to success because it can push one forward or slow you down. Right attitude means knowing what you are capable of accomplishing. Ambition, determination, and commitment fuel the right attitude, also known as a positive attitude. A study by Leadership IQ revealed that 46% of hired people are likely to fail in the first 12-18 months on the job. The high failure rate is not because they lack skills or knowledge, but because they do not possess the right attitude.

2. Attitude is one of the most important factors in helping one to get through the highs and lows of life. Since attitude spells how a person copes, whatever perspective one holds will invariably have an effect in one's performance and the way one handle rejection.
3. Attitude often takes precedence because the right attitude helps influence other aspects like emotional intelligence, leadership, team spirit, fraternity, empathy, compassion, which are very vital for a civil servant.
4. The ability to fit in with the culture and values of the company or organisation is crucial which demands a positive attitude to adapt. Many opportunities are lost, withheld, and forfeited because of attitude than from any other cause. For example, a negative attitude can make a student fail in an exam, but never give-up attitude can make him successful.

B. Importance of aptitude: The importance of aptitude also needs to be emphasised. Attitude alone is not sufficient, one must be certain that he has learned the required skills.

1. Aptitude is important as it provides the requisite flexibility, passion and leadership skills that can make or break a candidate's fulfilment of their job description.
2. In a constantly changing work environment, aptitude is crucial if one wants to succeed. If you have the potential to learn new skills and develop them over a time, success will not be far.
3. One of the most important aspects is that aptitude helps to identify one's interest and core strength area. A person can learn and develop skills in working with his strength areas and succeed.

Thus, a balanced approach is probably the best one. An ideal is a combination of experience and a positive attitude. Both attitude and aptitude are important, and emphasising one over the other has definite drawbacks. E.g. MS Dhoni is able to take leadership in any format or team because of his right attitude of remaining patient and supportive towards his team mates with having great aptitude of cricket.

Q.3) What is Information Ethics? Discuss its significance in present times.

Ans.

Demand of the question

Introduction. What is Information Ethics?

Body. Discuss the significance of Information Ethics in present times.

Conclusion. Way forward.

Information ethics is a field of applied ethics that addresses the uses and abuses of information, information technology, and information systems for personal, professional, and public decision making. The impact of emerging technologies on the daily lives of citizens cannot be underestimated as more and more people around the world interact with information and communication technology and generate and acquire information. Information ethics is concerned with ethical, legal and societal aspects of using information and information and communication technologies.

Significance of Information Ethics in present times:

1. **Increased risks:** In the era of digitisation, cyber-risks have increased with increased penetration of the internet. It is important to follow information ethics while dealing with someone's information in order to prevent misuse of the information and data.

2. **Digital piracy:** Illegal downloading has also caused some ethical concerns and raised the question whether digital piracy is equivalent to stealing or not.
3. **State surveillance:** Concerns about state control or private ownership of individual activity on the Internet opens up a whole series of serious ethical problems. The most significant risk with the use of the technology is state surveillance. China's reported use of technologies for surveillance in Xinjiang is such an example.
4. **Copyright issues:** Increasing digital penetration has raised issues of copyright concerns. It is a must to safeguard one's digital property.
5. **Right to privacy:** The Supreme Court (SC) in Justice K.S Puttaswamy vs Union of India case, declared that the right to privacy is an inherent part of the fundamental right under Article 21 of the constitution. Thus, it is important to safeguard an individual's privacy.
6. **Resolving ethical dilemma:** People working in intelligence agencies face ethical dilemmas at work on how to treat public data. For instance, Edward Snowden chose to go the right way by following information ethics and revealing instances of surveillance.
7. **Social media:** Increasing advent of social media, fake news, hate propagandas etc. demand public servant to follow information ethics and put efforts to curb any act which is harmful to larger public.

By applying ethics among information technology, it will make the organization become more successful. By applying the ethics also, we could determine the right and wrong of an individual action. But, it depends on the situation that is faced by the people. Therefore, with ethics, information technology can avoid unethical actions like unauthorized access, disturbing people privacy hacking the information etc.

Q.4) Discuss the ethical issues involved in marketing of a product or service. How can these issues be resolved?

Ans.

Demand of the question

Introduction. Contextual introduction.

Body. Discuss various ethical issues involved in marketing and methods to resolve the same.

Conclusion. Way forward.

Marketing refers to activities of a company associated with buying and selling a product or service. Marketing through advertising, selling and delivery of products to potential customers, is vital for the success of any business. Since it has the potential to influence attitudes, behaviours and priorities, ethical considerations are part and parcel of marketing.

Ethical issues involved in marketing:

1. **Privacy:** Organisations today collect, store and process information relating to customers to be used for targeted advertising. In such cases the concerns for privacy require an effort for informing the customers and acquiring their consent.
2. **Stereotyping:** Marketing campaigns based on generalized studies or common perceptions about behaviours and values of certain demographic groups raise important ethical issues. For example, often women are matched up with household products such as cleaning supplies and are shown as doing domestic work.

3. **Objectivity:** The concern for objectivity is a vital issue in marketing. The lack of objective research on part of the market researcher may legitimize profiting from poverty, cultural stereotypes and racial tensions.
4. **Vulnerable targeting:** Targeting an audience such as children involves ethical consideration. Children have always been an important marketing target for certain kinds of products.
5. **Unethical market exclusion:** The absence of minority groups in marketing in a multi-ethnic society can create image and identity problems among those that are excluded. For instance the adverse industry attitudes to the homosexual, transgender and ethnic minority.
6. **Unintended advertising channels:** Direct marketing is the most controversial of advertising channels, particularly when approaches are unsolicited. TV commercials and e-mail are common examples. Electronic spam and telemarketing push the borders of ethics and legality more strongly.
7. **Misleading advertising:** Many advertising are misleading. For example, misleading the public by showing turning a black face into white.
8. **Negative advertising techniques:** The advertiser highlights the disadvantages of competitor products rather than the advantages of their own.
9. **Anti-competitive Practices:** For instance, Predatory pricing which is practice of selling a product or service at a very low price, intending to drive competitors out of the market, or create barriers to entry for potential new competitors.
10. **Use of brand ambassadors:** Ambassadors endorsing products they don't use or whose authenticity they don't cross check, making profits out of public's reverence of a person, high cost of celebrity eventually extracted from public, puts newer and smaller brands at a disadvantage hurting fair competition.

Resolving Ethical Issues in Marketing:

1. **Regulation:** More than external regulation, marketing needs internal controls and self-regulation. The organisations are expected to develop principles of ethics to guide the marketing process. The establishment bodies such as Advertising Standards Council of India (ASCI) can be seen as a step in this direction.
2. **Consumer protection:** Various Consumer laws protects consumers and competition law protects competitors from unethical practices. Apart from these regulators like CCI, TRAI, IRDA etc. may also be approached for grievance redressal.
3. **Customer participation:** Generally a customer is regarded as only a recipient of products or services. However, if the marketer involves the customer and does things in interaction with the customer it may work to reduce two potential ethical dilemmas of consumer autonomy vs. marketing effectiveness and consumer participation.
4. **Taking responsibility:** An organization should take the responsibility of its actions. The responsibility also extends to the employees and other organizations that the firm deals with like suppliers or dealer agencies. The organization should make sure that any marketing decisions and actions meet the customers' needs and actions should also cater to the broader needs of the society.
5. **Balance the Interests:** Marketing has a number of objectives ranging from providing information about the product/service, stimulating the demand and boosting the sale etc. The organization should focus on the long-term benefits in terms of better branding and customer loyalty while making decisions on ethical issues.
6. **Corporate Social Responsibility:** Customers are getting increasingly sensitive about the production processes and the level of social responsibility of an organization. Customers tend to prefer the products/services from a company which is relatively

more socially responsible. Hence, it is a benefit for the organization to be ethically correct for its customers.

Marketing ethics, regardless of the product offered or the market targeted, sets the guidelines for which good marketing is practiced. To market ethically and effectively one should be reminded that all marketing decisions and efforts are necessary to meet and suit the needs of customers, suppliers, and business partners. A company must have ethical marketing policies to guide their pricing, advertising, research, and competitive strategies.

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