

PERFECT

Complete Fortnightly for **UPSC** and **PCS** Exam



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Year : 5

No. : 11

June 2023 / Issue 01

Price : ₹ 55



International Day of Yoga & India's Soft Power Diplomacy

The Kerala Story: Issues Related
to Freedom of Thought
& Expression

Evaluating the Role of National
Investigation Agency in
National Security

Policy Measures & Related
Achievements in the Ethanol
Sector of India

India's Ocean Diplomacy
Through the Indian Ocean
Conference

Emerging Threats to Marine
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Significance of G-20 Disaster Risk
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Message



Vinay Kumar Singh
Founder
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Current Affairs has an important role in the examinations conducted by Union Public Service Commission and State Public Service Commissions. It is necessary for the candidate to have knowledge of relevant information on issues of national and international importance. Perfect 7 Magazine is being presented fortnightly to the students to fulfill this requirement. Preparation of civil services exam is only completed when candidates have holistic knowledge and analysis of the dynamic nature of the current affairs. 'Perfect7' keeps this vision and approach and understands the multidimensional need of students at the content level, so this magazine has presented the current affairs with relevant issues of general studies. Keeping in mind the needs of mains exam, current articles on 7 burning issues, Ethics Case Studies, Biographies of important personalities, coverage of most useful topics of various sections of General Studies and the most important current affairs issues are being covered for Preliminary Examination in which emphasis is being given on national, international, environment, ecology, art and culture, science and technology, economic issues.

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Best wishes.

PERFECT

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Policy Measures & Related Achievements in the Ethanol Sector of India

“Ethanol was rarely discussed in the country about 7-8 years ago. But now ethanol has become one of the major priorities of 21st century India. The focus on ethanol is having a better impact on the environment as well as on the lives of farmers.”

- Prime Minister Narendra Modi

Introduction:

- The Prime Minister, Shri Narendra Modi while inaugurating the India Energy Week (IEW) 2023 in Bengaluru in February 2023 underlined the major role of the energy sector and energy transition in setting the direction of the future of the 21st-century world. He further highlighted the role of ethanol blending in India's strategy of energy transition through De-carbonisation.
- He launched 20% ethanol-blended petrol (E-20) in 11 States/UTs, which was rolled out from April 1st, 2023 as part of a programme to increase use of bio-fuels to cut emissions as well as reduce dependence on foreign exchange-draining imports.

Ethanol and Its Importance for India:

- The energy demand in our country is rising due to our expanding economy, growing population and increasing urbanization. About 98 per cent of the fuel requirement in the road transportation sector is currently met by fossil fuels and the remaining 2 per cent by bio-fuels.
- Ethanol is one of the principal bio-fuels, which is naturally produced by the fermentation of sugars by yeasts or via petrochemical processes such as ethylene hydration. It is used as an alternative Biofuel source.
- Domestic biofuels provide a strategic opportunity for the country, as they reduce the nation's dependence on imported fossil fuels.
- In addition, when utilized with appropriate care, biofuels can be environmentally friendly, sustainable energy sources.
- They can also help generate employment, promote Make in India, Swachh Bharat, doubling of farmers' incomes and promote Waste to Wealth generation.

Policy Measures and Ethanol Blending Programme of India:

- The Government in line with its Energy security, climate change and rural economy enhancement goals, has initiated multi-pronged reforms to boost Ethanol usage in the country.
- The Ethanol Blended Petrol (EBP) Programme was launched in January 2003 while the commercial sale of 5% ethanol-blended petrol in nine States and four UTs started in September,

2006.

- Under the Ethanol Blended Petrol (EBP) Program, an indicative target of 20% blending of ethanol in petrol by 2030 was laid out. Subsequently, the target year for achieving 20% ethanol blending in petrol was also advanced to 2025 by 'The Cabinet Committee on Economic Affairs' (CCEA) in 2020.
- India's Ministry of Petroleum and Natural Gas published its "National Policy on Biofuels" in 2018, and further amended it in June 2022. The policy's objective was to reduce the import of petroleum products by fostering domestic biofuel production. The National Policy on Biofuels was amended in 2022 to:
 - » Advance the deadline to reach the blending target of 20% bioethanol in petrol, from 2030 to 2025-26.
 - » Make additional feedstocks eligible for the production of biofuels.
- Again, on the occasion of World Environment Day 2021, Prime Minister Narendra Modi released the "Report of the Expert Committee on Roadmap for Ethanol Blending in India 2020-2025". The report suggested: (i) an annual roadmap for the production and supply of ethanol till 2025-26, and (ii) systems for countrywide marketing of ethanol.

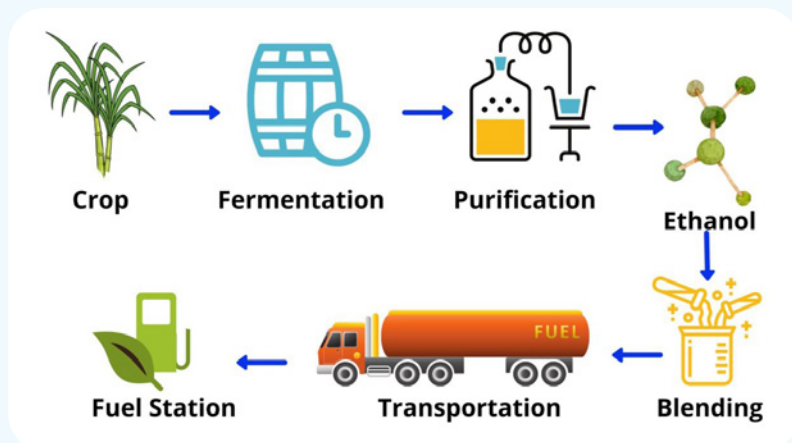
Key Observations and Recommendations are as Follows:

- India's requirement for ethanol for petrol blending will increase from 173 crore liters in 2019-20 to 1,016 crore liters in 2025-26.
- Fuel blended with 20% ethanol (E20) should be launched in a phased manner from April 2023 to ensure the availability of E20 by 2025.
- One liter of ethanol from sugar requires about 2,860 liters of water. In view of the need for water conservation, the report recommended that suitable incentives should be used to
 - » Source ethanol from less water-intensive crops.
 - » Promote production from maize and second-generation sources.
- In order to use higher ethanol blends, vehicles need to be designed holistically to prevent engine failure and low fuel economy. To ensure production of ethanol-blended petrol compatible vehicles in the future, the Committee recommended that:
 - » E20 material compliant and E10 tuned engine vehicles may be rolled out across the country from April 2023.

- » Vehicles with E20 tuned engines can be rolled out from April 2025.
- The government has notified the administered price of ethanol since 2014. For the first time during 2018, the differential price of ethanol based on feed stock utilized for ethanol production was announced by the government.

Achievements of Ethanol Sector in India:

- India is projected to witness the largest increase in energy demand of any country over the next two decades, accounting for close to 28 per cent of incremental global growth in energy demand. Use of ethanol, extracted from sugarcane as well as broken rice and other Agri produce, will



- help the world's third largest oil consumer and importing country cut its reliance on overseas shipments. India currently is 85 per cent dependent on imports for meeting its oil needs.
- Use of E20 leads to an estimated reduction of carbon monoxide emissions by about 50 per cent in two-wheelers and about 30 per cent in four-wheelers compared to E0 (neat petrol). Hydrocarbon emissions are reduced by 20 per cent in both two-wheelers and passenger cars.
 - As much as 440 crore liter of ethanol was blended in petrol during the supply year ending November 30, 2022. For the next year, 540 crore liters procurement is being targeted with an eye to start larger volumes of blending.
 - The target of achieving average 10 per cent blending was achieved in June 2022, much ahead of the target date of November 2022. Encouraged by the success, the government advanced the target of 20 per cent ethanol blending in petrol from earlier 2030 to 2025. India saved as much as Rs. 53,894 crore in Foreign Exchange from 10 per cent blending besides benefiting the farmers.
 - The programme gives sugarcane farmers an

additional source of income. During the last eight years, ethanol suppliers have earned Rs. 81,796 crore while farmers have got Rs. 49,078 crore. The country saved Rs 53,894 crore in foreign exchange outgo. Also, it led to a reduction of 318 lakh tonnes of carbon-dioxide (CO₂) emissions.

- The current annual ethanol production capacity in the country is about 1,037 crore liters which include 700 crore liters of molasses-based and 337 crore liters of grain-based production capacity. As per the Roadmap prepared by NITI Aayog which is based on the projected sale of petrol, the estimated requirement of ethanol for blending with petrol is 542 crore liters for 2022-23 and 1016 crore liters for ESY 2025-26.

➤ Second-generation (2G) ethanol bio-refineries are being set up at Panipat (Haryana), at Bathinda (Punjab) and Bargarh (Odisha), each with a production capacity of 100 kilo liter per day and at Numaligarh (Assam). Oil firms have procured 80.09 crore liters of ethanol up to January 30, 2023, for blending in petrol during the ESY 2022-23 and 6 crore liters of biodiesel for blending with diesel during the financial year 2022-23.

WayForward:

- Quoting International Energy Association, the Prime Minister remarked that India's energy demands will be highest in the present decade. India has set the target of producing 500 gigawatts of power -- about 50% of the country's total energy requirement, through non-fossil fuel sources by 2030.
- Cabinet Committee on Economic Affairs (CCEA) in FY19 approved 'Pradhan Mantri JI-VAN Yojana' for providing financial support to integrated bio-ethanol projects using lignocellulosic biomass and several renewable feedstocks. These factors would highly favor the growth of the Indian Ethanol industry in the future.
- As has been rightly said by Brazilian President Lula De Silva- "Ethanol blending will help India achieve the set target and the goal of energy transition. The growing use of biofuel will be an inestimable contribution to the generation of income, social inclusion and reduction of poverty in many poor countries of the world."

India's Ocean Diplomacy Through the Indian Ocean Conference

The 6th Indian Ocean Conference on Security of the Indian Ocean was held in Dhaka with the participation of Bangladesh's Prime Minister Sheikh Hasina, Indian External Affairs Minister S Jaishankar, President of Mauritius Prithviraj Singh Rupan along with representatives of Maldives and Singapore. The sixth edition of the Indian Ocean Conference was organised by the Ministry of Foreign Affairs of Bangladesh in association with the New Delhi-based think tank India Foundation. Bangladesh Prime Minister Sheikh Hasina stated that Indian Ocean holds an important place not only for Bangladesh but for all the countries in the region due to its geographical location. In this important event, India has presented its vision and supported another important meeting related to the security of the Indo-Pacific region. The Indian External Affairs Minister recently arrived in Stockholm on his first visit to Sweden to attend the second EU Indo-Pacific Ministerial Forum. Addressing the European Union and global leaders, he said that the Indo-Pacific is increasingly reaching a central role in the direction of global politics. The issues it raises include those related to the problems inherent in the established model of globalization. The meeting took place at a time when the Indo-Pacific region is witnessing aggressive actions by China in South China Sea and East China Sea. Without mentioning China's name, the Indian external affairs minister categorically said that a multipolar world, which the European Union favours, is possible only by multipolar Asia. India said that "in such engagement with the Indo-Pacific, the EU will naturally seek like-minded partners." India continues to show special interest and activism in explaining the threat to multilateralism in Asia and Europe from China, which talks about the Asian Dream, Asia's multipolar economy and wants to make politics a unipolar economy.

Goals and Vision of India's Ocean Diplomacy:

- Whether it is the Indian Ocean or the Pacific Ocean, India's vision is clear. India believes that countries around the world should act in accordance with the provisions of the United Nations Convention on the Law of the Sea in terms of maritime governance and should not try to violate the maritime sovereignty of any country. No country should try to create artificial islands in the Indo-Pacific region nor they should consider important international trade routes as their monopoly. No country should encroach illegally into the exclusive economic zone of any country, nor they should become an obstacle in the path of sustainable development goals by indulging in illegal fishing, or unregulated unreported fishing. There should

be sensitivity among nations at the policy level between sustainable development, sustainable consumption, and sustainable fishing. Before the race for over-exploitation of marine resources makes the ocean barren, the countries of the Indian Ocean must agree on how to make the Indian Ocean a zone of peace and prosperity. Everyone has a right to the sea. The exploitation and possession of resources in the sea should be done in accordance with the rules and regulations and if any country tries to trap the coastal countries of the Indian Ocean in a debt trap and lends to countries for unsustainable investment projects and development projects or to fulfill their vested interests by promoting infrastructural diplomacy in the countries of the Indian Ocean. It is the responsibility of not only India but all Indian Ocean countries to try to control such elements. It is imperative that the small island nations in the Indian Ocean should understand that they do not give access to any of their important strategic port airports to countries like China. India calls for freedom of navigation for all nations, big or small, in the Indo-Pacific region so that the benefits of ocean trade or blue economy can reach all countries.

India Emphasised the Economic Sovereignty of Countries at the Indian Ocean Conference:

- In a veiled/indirect attack on China, the Indian external affairs minister stated in Dhaka that when nations disregard legal obligations or violate long-standing agreements, the trust suffers huge losses. He was referring to China. He made it clear that debt generated by non-viable projects is an important shared concern in the Indian Ocean region. India has been opposing the USD 60 billion 'China-Pakistan Economic Corridor' as it passes through Pakistan-occupied Kashmir, giving China access to the Arabian Sea through the Gwadar port in Pakistan's Balochistan province. India has termed the project as a violation of its territorial integrity and sovereignty. Therefore, adhering to laws and norms and respecting rules has become an important natural aspect of ocean security to create a stable international order.

India's Policy on Climate Management in the Indo-Pacific region with QUAD:

- The Quad member countries have focused in recent times on climate change, global warming management and the promotion of renewable energy in the Indo-Pacific region. The Quad member countries have launched the Quad Climate Change Adaptation and Mitigation Package (Q CHAMP) which aims to strengthen

mitigation and adaptation efforts to combat climate change and global warming. Q CHAMP will also include ongoing activities under the Quad Climate Working Group such as emphasis on green shipping and development of green ports, development of a common green corridor framework, etc. This effort is a step towards the development of a low-carbon economy. Under this, the emphasis is on increasing the contribution of each member country of the Quad in the field of clean energy cooperation. The work to cut methane emissions from the natural gas sector with an emphasis on clean hydrogen will be done under the 'Q Champ'. The Quad countries have welcomed the contribution of the Sydney Energy Forum in this direction. Under this initiative, a strategy has been prepared for climate information services of Pacific Island countries. The emphasis is on disaster risk reduction and building infrastructure resilient to the shocks of disaster climate change. In particular, under the aegis of the Coalition for Disaster Resilient Infrastructure, emphasis has been laid on working in this direction. The Q Champ includes capacity building and cooperation for clean fuel ammonia, carbon recycling and advance high integrity carbon markets under Article 6 of the Paris Agreement, sharing of knowledge on climate smart agriculture 'sub-national climate action' and emphasis on ecosystem-based adaptation.

Role of Colombo Security Conclave in Securing the Indian Ocean:

- In the last two years, the Colombo Security Conclave has held meetings at the national security advisor level, deputy national security advisor level and at the level of India's narcotics control bureau, with the recent meeting held under the auspices of the NCB in March this year. This forum is known for discussing the challenges related to the interest of the coastal countries of the Indian Ocean and finding a way to find solutions. It is noteworthy that effective steps are being taken by the law enforcement agencies of the members of the Colombo Security Conclave to deal with narcotics trafficking and organized crime and mutual cooperation has also been ensured on this matter.
- In these meetings, India's emphasis has been laid on cyber security and recommendation for better use of cyber technology. Bangladesh seeks India's cooperation in the safe return of the displaced Myanmar nationals to their country at such a forum. Thousands of displaced Myanmar nationals are getting attracted to insurgency, radicalisation and drugs, and this is an effective

platform for India to effectively address the issue. The economies of Indian Ocean countries are largely dependent on maritime safety and countries like Maldives are still not free from the possibility of smuggling, organized crime and terrorism. Maldives says that the members of the Colombo Security Conclave will have to share information, skills and knowledge on the issue of security. Its member countries like India, Maldives, Sri Lanka, Mauritius, Bangladesh and Seychelles talked about increasing the level of cooperation in combating cyber security, terrorism, radical forces, drug trafficking, as well as combating illegal, unreported and unregulated phishing and environmental damages.

- These countries are part of India's Neighbourhood First Policy, India's Extended Neighbourhood Policy, Sagar Vision, Indo-Pacific Strategy and Island Diplomacy. They are of great importance in terms of India's maritime trade interests in the Indian Ocean. The Colombo Security Conclave, which worked as a trilateral maritime cooperation mechanism in 2011, cooperates in areas such as: maritime safety, counter-terrorism, counter-radicalisation, combating smuggling and organised crime, cyber security, humanitarian assistance, disaster relief assistance, etc.
- Peace, stability and prosperity of the Indian Ocean region is essential for the security and development of all these countries. The Indian Ocean is crucial for many ocean-based industries, especially shipping. Be it the Malacca Strait or the Strait of Hormuz, the Gulf of Bab Almandev or the Gulf of Yemen, the expansion of the Arabian Sea or the Andaman Sea including the Bay of Bengal, all these water bodies are witness to the glorious importance of the Indian Ocean. The coastal countries of the Indian Ocean are facing many problems simultaneously today. Terrorism, growing extremism Islamic fundamentalism, smuggling of narcotics and weapons through the sea route remain serious challenges. To deal with these, the countries of the Indian Ocean have to come together. This is the reason that in the last 3 years, many countries of the world as well as regional organizations have adopted the Free and Open Indo-Pacific Strategy. Bangladesh adopted its Indo-Pacific strategy this year. Earlier, countries like Germany, European Union, Canada, and South Korea launched the Indo-Pacific Strategy to protect their diverse interests in the Indo-Pacific region. The European Union has also launched the Global Gateway Initiative.

Emerging Threats to Marine Biodiversity

A recent report titled 'Measuring Underwater Noise Level Radiated by Ship in Indian Water' highlights the challenge faced by marine biodiversity. According to the report man-made underwater intensive emissions from marine ships, and boats operating in Indian waters are posing a threat to marine mammals. These marine mammals include bottlenose dolphins, manatees, pilot whales, seals and sperm whales. Underwater noise emissions in Indian waters have a serious negative impact on many activities related to the behaviour of marine mammals such as mating, communal interaction, feeding, cluster cohesion, and foraging (finding food by marine organisms) affecting marine biodiversity. It is noteworthy that the main energy for many behavioural activities of marine mammals is dependent on sound and their activities are being affected due to noise pollution inside the ocean.

Marine Biodiversity Affected by Human Intervention in Coastal Areas:

- Recently, the Comptroller and Auditor General of India also released an important report towards environmental protection. The CAG of India said that due to the lack of sewage treatment facilities in urban local bodies across the coastal areas of India, the degradation of oxygen has become a serious challenge for marine organisms in the sea. The CAG also said that human life has been threatened as well, due to the increase in the number of toxic elements in the seafood web and food chain.
- The CAG further said that the Coastal Regulation Zone Notification 2011 prohibits dumping of effluents and industrial effluents in coastal waters and the notification also stated that practice of dumping untreated waste and industrial effluents into coastal areas should be stopped.
- The CAG felt the need to have an action plan to tackle pollution in coastal areas and waters in a time-bound manner and submit it to the Environment Ministry of India for technology and financial support. The Central Pollution Control Board's March 2021 report "National Inventory of Sewage Treatment Plants" states that sewage production in Gujarat is estimated at 5,013 million litres per day (MLD), while the total treatment capacity (including the proposed) is estimated at 3,378 million litres per day (MLD). Only by working on a strategy to fill this gap can save the marine environment.

Marine Biodiversity Affected by the Destruction of Coral Reefs:

- Due to climate change and warm waves of the

sea, massive corals are disappearing on reefs in the tropics. Coral reefs are being destroyed in many parts of the world including India. Records of the presence of 44 years of coral around Lizard Island, at the northern end of Australia's Great Barrier Reef, were examined and the study found that 16 per cent of coral species have not been seen for many years and are either threatened with local extinction or they are disappearing from the region. This is worrying because extinctions at the local level often indicate widespread and eventually global extinction events. India has rich marine biodiversity with a huge coastline of more than 7,500 km. From whale sharks, turtles and large mammals such as whales, dolphins and dugongs to colourful fish and sharks including shiny sea cliffs, they not only increase the diversity of marine life but also create many resources of human interest. Millions of people depend on these resources of maritime trade and transport, food, mineral resources, cultural traditions and spiritual values and inspiration from this, tourists from all over the world are also attracted to them. Despite the huge economic, ecological and cultural values of marine life in India, the marine species and sea turtles here face a variety of challenges, including poaching. Managing such challenging situations requires coordination, action and people's participation which will help in the long-term conservation of marine species and their habitats.

- According to the World Wildlife Fund (WWF) calculations, the world's coral reefs are worth about US\$800 billion and about 850 million people on Earth depend on coral-based ecosystems for food security and livelihoods. About 100 countries are benefiting from fisheries, tourism and coastal security due to the biodiversity present in the coral reefs. A quarter of these 100 countries have 15% of their GDP dependent on tourism. According to a WWF report, coral reefs generate an annual profit of USD 30 million worldwide. The fish industry and tourism are losing \$5.7 million and \$9.6 million respectively annually due to damage caused to them by bleaching and other reasons. The biggest economic damage from global coral degradation is expected to be in Southeast Asia, Australia and the islands of Oceania. The Indo-Pacific region accounts for 60 per cent of the USD 30 million contribution of coral reefs to the global economy. Despite covering only 0.2 to 0.25% of the earth's marine area, corals protect a quarter of two million species of marine

life. For many island countries and tropical countries, they act as protection and relief from the effects of weather. Coral formations also serve as genetic museums and are also called marine rainforests due to their biodiversity.

Protection of Seagrasses is Essential:

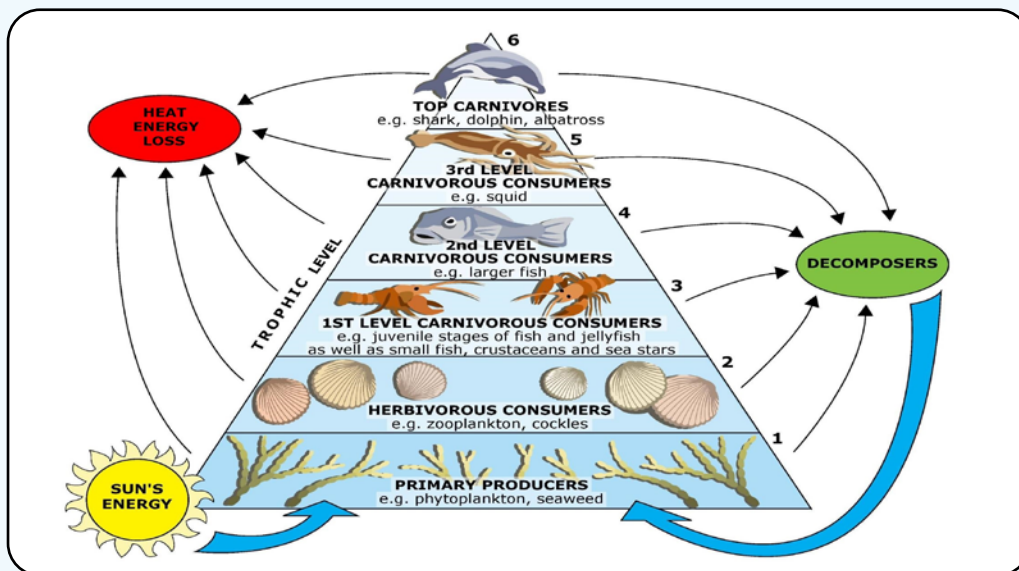
- Seagrass is the grass found underwater in the sea and oceans. Seagrasses are flowering

Efforts for Conservation of Marine Biodiversity In India:

- Recognizing the need to have a conservation paradigm for the giant marine fauna and turtles, the Ministry of Environment, Forest and Climate Change released the 'Marine Mega Fauna Stranding Guidelines' and 'National Marine Turtle Action Plan' in 2021 in New Delhi.

The Environment Ministry of India has also prepared a policy for the rescue and management of marine animals stranded on the seashore or in a boat.

- India has expressed its commitment to the target of the Global Biodiversity Framework (GBF), especially target 3. Target 3 of the new Biodiversity Framework



marine plants, adapted to oceanic conditions. Seagrasses are commonly found in shallow beaches and sometimes form extensive dense grassland grasses. About 72 types of seagrass species are found in temperate and tropical oceans all over the world. Seagrass is of utmost importance to ocean ecosystems and humans living in coastal areas. Seagrass plays an important role in improving water quality, absorbing CO₂ and emitting oxygen. It also provides a natural habitat and refuge for hundreds of species of fishes. Seagrass serves as a base for coastal food webs. Since this grass is commonly found in mountainous areas, it helps to prevent beach erosion and reduce the impact of destructive storms. Sunscreen, which protects against the sun's ultraviolet rays, is also now becoming a threat to marine life. Studies have found that chemicals found in sunscreen lotions are accumulating on the seagrass of the Mediterranean Sea. Scientists have discovered ultraviolet filters on the stems of *Poseidonia Oceanica*. *Poseidonia oceanica* is a species of seagrass found on the coast of Mallorca.

represents an important commitment as it will require cooperation on a global scale

- Of the 23 target of Global Biodiversity Framework, target 3, colloquially known as "30x30", requires that "at least 30 percent of terrestrial, inland waters, and coastal and marine areas, in particular Areas of particular importance for biodiversity and ecosystem functions and services, effectively protected and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures are done."
- India's first Dugong Conservation Reserve has been established in the Gulf of Mannar in the Palk Strait in Tamil Nadu for the protection of the marine animal Dugong (Sea Cow).
- Better coordinated action can reduce threats to marine species and their habitats, restore degraded marine habitats, increase public participation, and advance scientific research can be increased, exchange of information on marine mammals, sea turtles and their habitats can be further enhanced.

Evaluating the Role of National Investigation Agency in National Security

The National Investigation Agency (NIA) recently arrested a member of the Kashmir-based terror outfit Jaish-e-Mohammed (JeM) for his alleged involvement in a terror conspiracy case in Jammu and Kashmir. The NIA arrested him on the ground that he was in constant touch with a Pakistan-based Jaish-e-Mohammed commander. It is clear from this that Pakistan-sponsored terrorism remains a challenge in Kashmir, even though its severity has decreased slightly. Apart from this, the National Investigation Agency is currently engaged in breaking the link between mafia gangs, gangsters and terrorists in the country, especially in North India. Where are the gangsters getting weapons from, how gangsters are promoting illegal smuggling of arms to promote crime, and how small criminals are getting foreign weapons, these are the focus points of investigation carried out by NIA. Recently, the National Investigation Agency has also revealed the involvement of a Gangster from Punjab in the supply of Jigana pistols. It is clear from this that the nexus between organized crime networks and terrorists still exists as a challenge to the law and order of the country.

National Investigation Agency Attacks Naxalism and Maoism:

➤ The NIA investigation team probing the Naxal attack on the DRG group in Dantewada in Chhattisgarh had reached Bihar and Jharkhand. The central agency NIA launched search operations at more than 14 locations in these two states. The search operation was carried out at the hideouts of people associated with CPI (Maoist) or their supporters. A statement issued by the NIA said that an FIR was registered on April 25, 2022. It was found that the already-banned CPI (Maoist) was expanding its organisation in the country. Apart from Chhattisgarh, this expansion is also being carried out in Bihar and Jharkhand. For this, people associated with the organization are trying to mislead the youth. Members of the organization's politburo and central committee have also been named in this regard. The NIA has arrested a fugitive self-styled chief of the Jharkhand-based banned Naxal outfit, the People's Liberation Front of India (PLFI). "The accused had 102 criminal cases against him and had a reward of Rs 30 lakh. It is thus clear that the NIA is working under a special strategy to eliminate Left Wing Extremism in India. Effective measures are being taken by

NIA to stop funding, recruitment, and training of Naxalites. The PLFI, formerly known as Jharkhand Liberation Tigers (JLT), has been investigated by the NIA to be responsible for hundreds of terror incidents in Jharkhand, including several murders using firearms. "This organization used to lure unemployed youth by giving them motorbikes, mobile phones and easy money. After training, they are equipped with deadly weapons to carry out terrorist incidents. Extortion is PLFI's major source of income and the organisation has been targeting coal traders, railway contractors and various private entities involved in development projects in various districts of Jharkhand. The Naxal outfit had also forged alliances with various criminal gangs. Therefore, action is being taken against all of them.

Emphasis on NIA's Multi-Faceted Role in National Security:

➤ The role of the NIA has been very important in strengthening India's internal and national security. Be it actions against individuals with links to the Islamic State in Iraq and Syria (ISIS), stopping the emergence of jihad culture in India by the Popular Front of India, cyber terrorism or narco-terrorism, or blocking funding routes of Naxalites and Maoists, the NIA has played its role actively. The NIA also unearthed several layers of the Umesh Kolhe murder case in Amravati last year. In this case, the NIA had found that efforts were being made to increase Islamic fundamentalism in the country. Earlier, it was filing of a charge sheet against the accused of smuggling fake Indian currency notes from Bangladesh, or filing of a charge sheet against 16 accused based in the US, UK and Canada for pro-Khalistan activities, arrest of an absconding Khalistani terrorist extradited from Cyprus, action against those involved in carrying out illegal activities of Khalistan Liberation Force (KLF) by selling drugs smuggled from Pakistan. Be it the case of ISIS or most importantly the conspiracy of the terrorist organization ISIS in India, NIA had a multi-faceted role as an active federal investigation agency.

NIA Against Drug Trafficking and Narco-Terrorism:

➤ NIA has conducted raids against illegal drug mafias in Chengalpattu, Tamil Nadu. This search operation of NIA is related to the illegal trade of drugs and weapons in India and Sri

Lanka. The NIA has considered it a serious case as the case pertains to the suspected activities of the Sri Lankan drug mafia working with a Pakistan-based supplier. Evidence of such a link is constantly coming out. The Enforcement Directorate (ED) had last year attached assets worth Rs 3.59 crore of four accused named in the case of seizing drugs and weapons from Sri Lankan nationals in a Sri Lankan boat named 'Ravihansi'. The ED had initiated a money laundering probe based on a case registered by the NIA and under the Prevention of Money Laundering Act (PMLA). It was found that the proceeds from the sale of drugs were to be used to procure the next consignment of drugs and promote the activities of the banned terrorist organisation Liberation Tigers of Tamil Eelam.

NIA Against Separatism, Religious Fundamentalism:

➤ The form of terrorism that has been initiated by terrorist organizations like ISIS to get hold in India and other countries is classified as religious terrorism and this form of terrorism poses a deadly threat to the internal security, national security and secular fabric of the country. The religious terrorism with which ISIS intends to establish a pan-Islamic state is more dangerous for countries like India because by misinterpreting religious texts, youth is pushed towards extremists, religious fanatics and instilling feelings of religious prejudice, jealousy, malice, hostility in their minds and can now promote online extremism to carry out this task better. The work is being done. In a way, it is the work of promoting cyberterrorism. To deal with this, the NIA is the authorized agency to investigate, file charge sheets, and prosecute terrorism-related cases in India, which carries out this task through its special courts. Last year, a special NIA court had sentenced a Chennai based person to seven years rigorous imprisonment for conspiring to join terror outfit ISIS in the country. NIA while giving information to the special court, had said that during the investigation of ISIS conspiracy cases in India, it was found that ISIS continues to be active in plotting a larger conspiracy to recruit resident and non-resident Indians in India and abroad. The special NIA court had sentenced a man with ISIS links to seven years in jail and was extradited from Sudan. The legal sections under which such offenders are punished by the special NIA court are: Section 120B (criminal conspiracy) of the Indian Penal Code, Section 18 (conspiring to commit a terrorist act), Section 18-B (recruitment of persons for the

terrorist act), Section 38 (being a member of a terrorist organisation) and Section 39 (aiding a terrorist organisation) of the Unlawful Activities Prevention Act.

New Rights, and Powers Given to NIA:

- With an aim to break the link between terrorism in various forms and its organised crime, the NIA Amendment Act, 2019 last year empowered the NIA to deal with terror cases, cybersecurity-related matters, counterfeit currency trading offences, explosive device-related offences, human trafficking cases and also to keep such persons under investigation and those who commit scheduled offences against Indian citizens outside India or affect the interests of India. The importance of such legislation is understood when the country is found to be indulging in cyber crimes in India by professional terrorists of terrorist organizations like ISIS giving online legitimacy to violence for religious fundamentalism in the country as found in the above new case.
- Evidence of ISIS's presence in India has been provided from time to time by the Ministry of Home Affairs and the NIA. The Ministry of Home Affairs of the Government of India has clarified that it has come to the notice of central and state security agencies that some people from different states, have joined the Islamic State. The Home Ministry has also said that the NIA has registered 17 cases related to the presence of IS in Telangana, Kerala, Andhra Pradesh, Karnataka and Tamil Nadu and arrested 122 accused persons. The NIA investigation has revealed that the Islamic State (IS) is most active in Kerala, Karnataka, Andhra Pradesh, Telangana, Maharashtra, Tamil Nadu, West Bengal, Rajasthan, Bihar, UP, Madhya Pradesh, and Jammu and Kashmir. India's Ministry of Home Affairs had publicly confirmed the presence and activism of ISIS in Indian states in September 2020. The spread of radicalisation among youth in India is evidenced in the 26th report on the UN's Analytical Support and Sanctions Monitoring Team relating to the Islamic State, Al Qaeda and other related individuals and entities. The report said that many members of IS and Al Qaeda are in Karnataka and Kerala. It is also feared in the report that there are about 200 members in the Hind-Wilayah affiliated to ISIL.
- The strategy to deal with ISIS activism in India needs to be multi-layered and multi-dimensional and is being done under the leadership of the NIA. ISIS has been using various internet-

based social media platforms to spread its ideology. Given this, the concerned agencies are continuously monitoring cyberspace and action is being taken as per law. The Home Ministry has clarified that the central government has information on how these people are being financed and how they are getting help from abroad to carry out their terrorist activities. Therefore, as part of the strategy to curb terror financing, special emphasis has been laid on dealing with fake currency notes, black money, money laundering, and hawala business.

➤ Keeping in view the seriousness of the fact that

NIA (Amendment) Bill 2019 – Key Points

Three major changes have been proposed under the NIA (Amendment) Bill 2019 with an aim to promote zero tolerance towards terrorism. These include:

Provisions	Existing Provisions	Proposed Amendment
SCOPE	NIA can investigate offences under Acts such as the Atomic Energy Act, 1962 and the Unlawful Activities Prevention Act, 1967.	Scope extended to investigate offences related to human trafficking, counterfeit currency, manufacture or sale of prohibited arms, cyber-terrorism, and offences under the Explosive Substances Act, 1908.
JURISDICTION	NIA officers have the same power as other police officers and these extend across the territorial boundaries of the country.	NIA officers to have the power to investigate offences committed even outside India.
SPECIAL TRIAL COURTS	The Centre to constitute special courts for trials under the purview of NIA.	To enable the Central government to designate sessions courts as special courts for such trials.

radicalisation, fanaticism, extremist mentality on religious and other grounds, terrorist activity through stereotyping, separatist movements, and jihadi ideology have got an opportunity to flourish. Keeping in view the seriousness of this, the Ministry of Home Affairs of the Government of India has also recently conducted a comprehensive study to assess the current situation of radicalization of all types of radicalization in the country and accordingly work for the internal security of the country. This is the first time in the country that research to ascertain the status of radicalisation in the country is being carried out. Under this, the term radicalisation will be statutorily defined and accordingly, necessary amendments will be recommended in the Statutory Activities (Prevention) Act, 1967. The National Law University, Delhi, which is directing this study and research under the aegis of the Ministry of Home Affairs, has clarified what kind of radicalisation is prevalent in the country, what are the reasons for it, what are the factors that promote it and how the thinking of radicalisation can be eliminated. All these studies will be

carried out in a religiously neutral manner.

➤ The Counter-Terrorism and Counter Radicalization (CTCR) Division has been created under the Ministry of Home Affairs, Government of India, to deal with extremism and radical thinking in the country. It gives direction to the efforts of counter-terrorism, radicalisation, Unlawful Activities (Prevention) Act, National Investigation Agency Act, Fake Indian Currency Network (FICN) and Financial Action Task Force (FATF) to curb terror financing, black money and money laundering. In addition, to deal with radicalisation, it is necessary to develop a sense of credibility towards governance among the misguided youth through the Civic Action Program and Perception Management Strategy in an effective manner in areas affected by radicalization, separatism and terrorism by the Armed Forces of India and paramilitary forces. Effective regulation of social media platforms is necessary to prevent the spread of jihadi literature, documents, etc.

➤ Extremism, terrorism and radicalisation cannot be defeated by the use of force alone and nations must recognise the need

for a holistic approach. Preventing the use of the web and social media to promote extremist and violent ideologies, preventing the use of religious centres in radicalising youth and recruiting terrorist activists, and to promote tolerance are essential measures for nations to take. In this context, the contribution of initiatives such as Uruguay's Saab and Hedayeh Centre can be exemplified by advancing countering extremist ideologies and international counter-insurgency cooperation online. There is a need to set up similar anti-extremism centres in India as well. In addition, the modern education system, which sensitively reflects human values, democratic values and concerns, human rights and national integration, needs to be skillfully placed in extremism-affected areas. The emphasis should be on how to eradicate the radicalised thinking and ideology of the misguided youth under the de-radicalisation strategy. The Maharashtra model for de-radicalisation has been studied under the aegis of the Ministry of Home Affairs to free the misguided youth from their radical thinking, and success has been achieved to a certain extent in this direction.

International Day of Yoga & India's Soft Power Diplomacy

On 21st June the whole world is going to celebrate International Yoga Day. In this series, several programs have also started to commence at various levels. India's Ministry of External Affairs already become active to spread the importance of Yoga in all the embassies or high commissions of India around the world. India believes that it is necessary to take advantage of the important role of Yoga in promoting global peace, security, stability and prosperity. The way the problems of war, crime, civil war, domestic violence, human rights violations are prevalent in the world today, one of the major reason behind all this can be attributed to the distorted minds of people and community as a whole. Yoga has power to transform a person with a distorted mind into a person with a stable mind, which can give a better work culture to an individual, family, society, country and global community.

At present, the whole world is recognizing the importance of Yoga as many societies have achieved the status of peaceful societies by connecting with yoga culture. Citing a study by AIIMS Delhi, AYUSH Secretary Padma Shri Rajesh Kotecha has said that the importance of yoga in overall health has been proved. In a comparative study between gym goers and those who practice yoga, it was revealed that yoga practitioners have more sato guna and gym goers have more rajo guna and tamo guna. Keeping all these attributes, yoga at the core, recently the All India Institute of Ayurveda (AIIA) under the Ministry of AYUSH of India started its celebrations to commemorate the 9th International Yoga Day.

Furthermore, in order to better adapt and tackle climate change, an environment-friendly lifestyle is the biggest need of the world today and Yoga has shown its way to the world. Yoga is the cultural heritage of India and it should be promoted at the global level to protect the environment, envisioning the mission LiFE. Yoga was first mentioned in the oldest book Rigveda. This spiritual mode is based on a subtle science, which aims to bring harmony between the body and the mind. To understand the importance of yoga, we first need to know what yoga is. Yoga is the result of the tireless meditation of sages for thousands of years. Our sages have defined yoga as 'Samtvam Yoga Uchyate', which means balance in both happiness and sorrow. Yoga has united the world, given new meaning to global values and brought different health systems closer to each other.

Yoga and COVID Pandemic Management:

- The whole world has been going through difficult times of COVID-19. Yoga and Ayurveda have

helped in controlling the pandemic. According to reports, the psychological distress of COVID-19 patients is still reflected in the lifestyles of people, often ignored and not addressed. There have also been reports of suicides following anxiety and acute depression. According to news received from various countries, many patients faced major distress during the pandemic due to quarantine anxiety and fear of worsening symptoms. Complications such as respiratory distress, hypoxia, fatigue and insomnia and other symptoms were observed. The interventions of yoga and naturopathy systems have helped in the recovery of COVID-19 patients. Simple breathing exercises like pranayama have been helpful for increasing SPO2 levels in patients with COVID symptoms and those with respiratory distress.

Yoga in the Modern Age:

- Swami Vivekananda was one of the prominent yogis who spread yoga in modern times. The main purpose of doing yoga during this period was to remain physically fit. Ramana Maharshi, Ramakrishna Paramahansa, BKS Iyengar, K Pattabhi Jois, Paramahansa Yogananda, participated in the spread and popularization of Hatha Yoga, Vedanta Yoga and Bhakti Yoga. Yoga has been undergone vast changes over the centuries, but as it enters the 21st century, the essence of yoga has been to harmonize the soul, mind, body and nature in a sense of oneness.

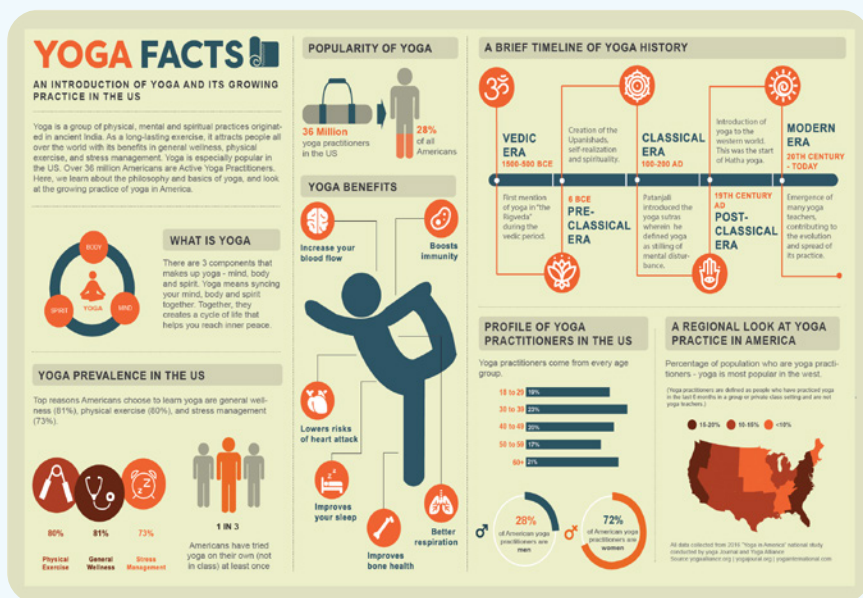
Yoga and Cultural Diplomacy :

- Prime Minister Narendra Modi, in his address to the United Nations General Assembly in 2014, had proposed to celebrate June 21 as International Yoga Day. On September 27, 2014, PM Modi talked about doing yoga together in the United Nations General Assembly. After this, the General Assembly accepted this proposal on December 11, 2014 and since then International Yoga Day came into existence. It is also seen as India's soft power diplomacy. The growing popularity of yoga at the global level has strengthened the cultural relations of India and many countries on this basis. Along with European countries, the popularity of yoga has also increased in countries like China. In the same order, the fifth International Yoga Day program was also organized in China.
- The Indian Ambassador Vikram Misri said that Yoga represents the aspirations of the people of India and China, which is beneficial to work together in the spirit of "friendship and cooperation". Nouf Marwai, who was officially

selected as the first female yoga teacher in Saudi Arabia, has been awarded the Padma Shri by India as part of its yoga diplomacy so that yoga can spread in the Arabian or Gulf regions. It is due to the initiative of India that Saudi Arabian Sports Ministry organized a yoga workshop in Jeddah. The Yoga Workshop was organized under the banner of 'Arab Youth Empowerment Program' in which representatives from 11 Arab countries participated. These Arab countries include the United Arab Emirates, Oman, Yemen, Palestine, Egypt, Libya, Algeria, Morocco, Tunisia, and Mauritania.

Importance of Asana and Pranayama:

- Yoga includes various types of pranayama and yoga actions like Kapalabhati, which are the most effective breathing exercises. By practising them regularly, people get relief from respiratory problems, effectively managing conditions like high and low blood pressure. Yoga is a treatment that if practised regularly every day, helps in getting rid of diseases gradually. It brings many positive changes in our bodies and also helps in regulating the processes of body parts. Yogic kriyas like Kapalabhati, Anulom-Vilom, Bhramari and Bhastrika Pranayama are beneficial in reducing weight, managing diabetes, and dealing with mental stress, etc, aiding one to live a healthy lifestyle. There are several yoga asanas that work in managing various health conditions. For instance, Swastikasana helps in removing leg pain, Gomukhasana helps in removing arthritis, Gorakshasana helps to increase blood circulation in muscles and Yoga mudrasana helps to make the face beautiful and concentrate the mind. Inhalation and release of oxygen is the most important part of the respiratory system during yoga and in order to get benefits from yoga, safe and regular practice is required.



- Haryana Chief Minister Manohar Lal Khattar has announced to set up a Yoga University in an area of 100 acres in Haryana. He said that there are 550 primary health centres in the state, out of which more than half of the centres will be connected with AYUSH. Haryana is the first state in the country to set up a Yoga Commission. Yoga instructors are being appointed in all the states of the country including Uttarakhand, and Himachal Pradesh. The study of yoga is also being promoted in colleges and universities.
- India is chairing the G-20 this year. We have a special responsibility to advance our soft power of yoga to enrich the health and well-being of the people of the world. This year we plan to demonstrate the Common Yoga Protocol (CYP) in the Arctic and Antarctic regions. The amazing response to the Yoga Festival in Jaipur has strengthened our efforts to make Yoga a global healthcare movement.

Benefits of Yoga:

- The benefits of yoga are available even to the elderly, women and pregnant women. Yoga has hidden properties to cure many diseases, health conditions like diabetes, high and low blood pressure, heart disease, kidney failure, liver failure, throat problems and many other mental illnesses. Practicing yoga in daily life protects us from many diseases including cancer. Yoga works a long way for prevention of cancer and easy yoga poses can help the survivors to encourage resilience of their body and face the hurdle calmly. Even doctors in the country and around the world have accepted this, the treatment of certain diseases, that cannot be cured by medicines, is also possible in yoga. By doing regular yoga, all the organs of the body work smoothly, different parts of the body benefit from different asana of yoga.

The Kerala Story: Issues Related to Freedom of Thought & Expression

Recently a movie called The Kerala Story has raised questions regarding India's national internal security, sovereignty and freedom of expression. In this context, it becomes imperative to analyze how to strike a balance between nationwide literacy on issues of national internal security and social communal harmony in the country so that the purpose of cinema, which is also called the mirror of society, is also fulfilled and the formula of national integration remains unaffected. There is no doubt that the influence of ISIS ideology in some parts of India has increased in the last few years and especially among the youth who have developed sympathy for this terrorist ideology to the extent that they have been influenced by it and are getting associated with it.

'The Kerala Story' tells the story of Hindu and Christian girls in Kerala who were first lured into love jihad and later sent to Iraq, Syria and Afghanistan to become ISIS terrorists. This film is made on the claim of the disappearance of 32 thousand girls and the incident related to it. In 2016, 21 people from Kerala left the country to join the Islamic State jihadist terror group, according to a BBC report. One of the students had converted to Islam before marriage. She was eight months pregnant when she left the country, the report said. The reason for this was believed to be love jihad. For the first time in India, the Christian churches of Kerala coined the term 'Love Jihad'. The church said that 'love jihad' has also been included in the modus operandi of fundamentalists to expand Islam. Its form and name have changed over time, but its ultimate goal has been conversion. A well-planned strategy has been devised to brainwash both men and women of South India and prepare them for anti-national activities by linking them to religious fanaticism, extremist thinking, religious orthodoxy, and religious prejudices. Instilling sympathy for the ISIS ideology in the minds of a large number of Indian women has been a challenge to national internal security.

The US State Department's report on terrorism "Country Reports on Terrorism, 2020" claimed that 66 Indian-origin fighters were involved in the global terrorist organization Islamic State. According to this, no Foreign Terrorist Fighter (FTF) returned to India during the year 2020. The US report said that the NIA had investigated 34 cases related to the Islamic State and arrested 160 people, including 10 al-Qaeda members from Kerala and West Bengal in September 2021. At the same time,

the report commended India's counter-terrorism agencies, including the NIA, for proactively detecting and deterring international and regional terrorist forces.

Union Home Ministry data collection agencies claim that since 2014, 62 youths from India have been identified, who had joined ISIS. The data also says that 68 Indians who settled abroad, have links with ISIS. About 95 per cent of these 130 Indians, are from south India. As many as 274 people have been arrested for having links with ISIS or its affiliates due to constant surveillance by Indian security agencies. Recently, the National Investigation Agency (NIA) carried out simultaneous raids at 100 locations in Tamil Nadu, Kerala and Karnataka. It was reported that ISIS was recruiting youths through videos. The NIA had received information about many such videos in the recent past in which youth were being brainwashed.

It is necessary to work against such tendencies to maintain the values of secularism in India and also not to harm communal harmony and that is why the Kerala Story movie was also produced based on freedom of thought and expression, in which an attempt was made to tell how Islamic fundamentalism was strengthened in the South Indian states.

How did religious extremist thinking/ thought develop in women, and how women were ready to support terrorist organizations? An analysis of this reveals that conversion and love jihad have been a major reason where a normal woman was willing to convert herself into a terrorist under these circumstances. Political analysts also believe that the way religious communal polarization has been promoted today, issues like uniform civil code, triple talaq law have also come up, and people of certain religions have chosen the path of religious fundamentalist thinking.

Nevertheless, it is equally crucial that any movies produced on the basis of freedom of thought and expression should not display any exaggeration, prejudice and unilateral thinking. There is no doubt that ISIS has influenced the youth, and women of south Indian states, but there should be clarity as to how many of them went to ISIS-active countries, and how many large-scale conversions or love jihad were used to get recognition from Islamic Taliban ideology.

Article 19(1)(a) of the Constitution of India guarantees every citizen the right to freedom of speech and expression. Its meaning includes the

right to know, freedom of thought and the right to freedom of the press. Section 19(2) defines when freedom of thought and expression can be restricted. After independence, when the Constitution was made, Article 19 gave all the rights to the Indian citizens, for which they had fought a long battle. Many rights have been given in the Constitution from Articles 19 to 22 and all the rights of Article 19 have been given only to Indian citizens. If someone is a foreign citizen, he has not been given these rights. Freedom of speech and expression means that an Indian citizen can express his views by writing, speaking, printing, gesturing or in any manner, but Article 19(2) also talks about the circumstances when freedom of speech can be restricted. Those circumstances are-

- » India's sovereignty and integrity are under threat.
- » Threat to the security of the state.
- » There is a risk of deteriorating friendly relations with foreign states.
- » There is a risk of deterioration of public order.
- » Damage to the interests of decency or morality.
- » Contempt of court.
- » Defame someone.
- » Encourage crime.

Provisions Relating To Freedom Of Religion In India:

- The Constitution of India, while declaring India a secular country, gives some religious rights as fundamental rights so that secularism, freedom of the individual in matters of religion and religious communal harmony in the country are maintained. But there is a need to take action on misuse of these rights. This thing is also evident from the movie called Kerala Story. The Indian Constitution gives the following religious rights to every citizen.
- **Article 25:** It promotes religious freedom, which includes the right to freely profess, practice and propagate any religion.
- **Article 26:** It gives freedom to manage religious affairs.
- **Article 27:** It sets freedom in the form of payment of taxes for the promotion of any particular religion.
- **Article 28:** It gives freedom to attend religious instruction or religious worship in certain educational institutions.
- In India, a person has the freedom to propagate his religion, but it is a crime to support or

promote the ideology like ISIS in the propagation of religion. The fundamental right of religious freedom gives a person the right to change religion at voluntary level, but it is a crime to link someone with terrorist ideology or action by seducing them through love jihad or by forcing them to convert religion.

- It is noteworthy that states like Karnataka, Arunachal Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Odisha, Uttar Pradesh and Uttarakhand have passed laws prohibiting religious conversion. In March 2022, the Haryana State Assembly passed the Haryana Prevention of Religious Conversion Bill, 2022 against religious conversion through inducement, coercion or fraud. There itself in August 2022, the Himachal Pradesh government also passed the Himachal Pradesh Freedom of Religion (Amendment) Bill, 2022, which sought to criminalize mass conversions.

Global spread of The Kerala Story:

- The Kerala Story was released on more than 200 screens in the US and Canada. The film's director Sudipto Sen believes the film is a mission that transcends the creative boundaries of cinema. This is a movement that should reach people all over the world. It is necessary to spread awareness at the level of media, social media, movies against those things that promote human rights violations, and fundamental rights violations, which work against the territorial integrity and sovereignty of the nation. The exploitation and near extinction of minorities (including Hindus, Jains, Sikhs, Buddhists and Christians) in Pakistan, Bangladesh and Afghanistan are some of the most inhuman issues, the brutality of ISIS in bringing Islamic state rule around the world, the exploitation of minorities in China by the Communist Party of China, the Communist-based dictatorship of North Korea, Boko Haram, Conversion rackets and many other inhuman activities are taking place in large parts of the world. Action against these is necessary at the level of the media as well. Overall, it can be said that it is necessary to support initiatives to promote mutual trust between different religious communities to maintain communal harmony in India, but at the same time, issues of national security which are influenced by religious factors cannot be compromised.

Significance of G-20 Disaster Risk Reduction Working Group Meeting

Reference:

Recently, the second meeting of the G-20 Disaster Risk Reduction Working Group was held in Mumbai on 23-25 May 2023.

Introduction:

Disaster Risk Reduction Working Group meetings are being organized in the G-20 meetings being held under the chairmanship of India. Three meetings will be held in this working group, the second meeting of which was held recently in Mumbai from 23 to 25 May 2023. 122 delegates participated in this meeting in which representatives of different countries, as well as representatives of the private sector, were also present. It is noteworthy that the Disaster Risk Reduction Working Group is a part of the Sendai Framework (2015 to 2030) on Disaster Risk Reduction.

About Disaster Risk Reduction Working Group:

- The Disaster Risk Reduction Working Group is a part of the Sendai Framework. This working group is being organized under the G20 chairmanship of India in 2023. It is noteworthy that there are 3 meetings of this action plan, which are as follows:
 - » The first meeting, Gandhinagar 29 March to 1 April 2023
 - » Second meeting Mumbai, 23 to 25 May 2023
 - » Third meeting 24 to 26 July 2023, Chennai (proposed)

The meetings of the Disaster Risk Reduction Working Group:

So far, two meetings of the G-20 Disaster Risk Reduction Working Group have been held under the leadership of India, in which the risks related to disasters and the measures to deal with them were discussed. These risks and measures are described as follows-

Major discussions during the first meeting:

- In this meeting, the Disaster Risk Reduction Working Group urged the governments of the G20 countries to pay attention to the anti-disaster system as well as the social security system.
 - Along with this, the Disaster Risk Reduction Working Group had been authorized to conduct a mid-term review of the work of the Sendai Framework during this meeting.
- In this meeting, attention was paid to 5 major priorities. These are as follows-
- Restoring a global disaster early warning system.
 - Commitment towards making infrastructure systems disaster resistant.
 - Strong National Financial Framework for Disaster Risk Reduction.
 - Strengthening national and global disaster response systems.

- Enhancing the application of ecosystem-based approaches to disaster risk reduction.

Major conclusions of the second meeting:

In this meeting held in Mumbai, the representatives mainly discussed the following topics –

- Importance of financing disaster resilient infrastructure and disaster risk reduction
- Consider the legal backing of an institutional framework that would do the following –
 - » Investment support in infrastructure projects
 - » Protection against fragmentation of infrastructure projects
 - » Boost the execution of infrastructure projects
- Role of social protection systems in reducing the impact of disasters on the most vulnerable population groups.
- Discussion on the roadmap of the Disaster Risk Reduction Working Group for the next three years.

India's role during the second meeting:

- India offered support through the co-development of compendiums in the areas of data management, early warning, and early action, resilient infrastructure, and financing for disaster risk reduction
- Environment-Based Approach to Disaster Risk Reduction
- Bringing disaster risk reduction to the forefront of the G-20.

Importance of the meetings of the Disaster Risk Reduction Working Group:

Emphasizing the need for collective action by the G20 countries for disaster risk reduction:

The Disaster Risk Reduction Working Group has underlined the need for collective action by the G20 countries for disaster risk reduction and in this context presents the following arguments –

- The total population of G-20 countries is 4.7 billion and these countries also concentrate the most wealth in the world. These countries are more vulnerable to disaster risk and natural disasters as a result of the practices used for this wealth concentration.
- 4 G-20 members are among the top 10 vulnerable countries in the latest World Risk Index.
- The collective average annual loss of the G-20 countries due to disasters is US\$ 218 billion. This amount is 9% of the combined infra investment by these countries.
- In this way, there is a need for a collective solution for the collective problem.

Discussion on key practices to reduce disaster risk:

- Some of the key practices for disaster risk reduction have been discussed during both these meetings. For example, support of investment in infrastructure projects, commitment towards

making infrastructure systems disaster resistant, the importance of data management, early warning and early action, assistance in disaster financing, etc.

Review of Sendai Framework:

- During the meetings, the Disaster Risk Reduction Working Group had been empowered to conduct a mid-term review of the Sendai Framework on Disaster Risk Reduction (2015 to 2030). The progress of the Sendai Framework will also be evaluated through this process.

Discussion on the linkage of disaster with other areas:

- It has become clear from the discussions in these meetings that there is a need to adopt an environmental approach and social security to reduce disaster risk. Therefore, this meeting links disaster risk with other areas including environmental social security.

Short term strategy:

- The meeting of the Working Group on Disaster Risk will not only run this year but will be continued for three consecutive years. In this situation, we can say that from these meetings we will soon have a sound strategy for disaster risk.

Challenges in Front of the Recommendations Drawn During the Meetings:

- A national financial system for collective financing and disaster management has been discussed during these meetings. Therefore, developed countries must invest in disaster risk reduction in developing countries. But the protectionism being created in the present world is a major challenge in front of this recommendation.
- Climate change is a major problem at present and to reduce it, various commitments have been fixed for different countries in the successive meetings of the UNFCCC. But most of the countries are not showing much interest in fulfilling the commitments made by UNFCCC. In such a situation, there is doubt whether he will fulfill the recommendations given by the working group for disaster risk reduction or not.
- It has been discussed during these meetings that disaster risk reduction needs to be linked with other sectors including environment and social security. But during these discussions, it was not told how to prepare a strategy by linking disaster with social security or the environment.
- It has been talked about continuing this meeting for three consecutive years, but whether 3 years is sufficient for the reduction of disaster risk is a big question.

Preparation for Future Challenges:

Some other major strategies that can be adopted to reduce disaster risk are described below–

- Better financing for disaster risk reduction.

Though the need for funding has been discussed during these meetings, the biggest challenge concerning funding will be its effective implementation. Most of the countries will not be able to meet the financial requirements of disaster risk reduction through government budget only. In this situation the private sector and the practice of collective financing of G-20 countries will have to be accepted.

- While developing infrastructure, it is necessary to keep in mind that the construction of cities should be sustainable. While developing cities, the conditions like protection of the environment, and reduction in poverty and inequality must be considered simultaneously. Through these practices, the risk and vulnerability to disasters can be reduced.
- At present, attention is being paid to infrastructure development in many countries including India. This infrastructure like roads, airports, railway lines, etc. should be made resilient to infrastructure disasters.
- Disaster risk needs to be seen as a global problem instead of a regional problem and different mitigation strategies must be made for different disasters at global, national, sub-national, and local places and their effective implementation must be ensured.
- Applications of science and technology for disaster management should be promoted.



Other Facts

Initiatives for Disaster Risk Reduction:

- On a global scale:
 - » Climate Risk and Early Warning System (CREWS)
 - » Sendai Framework for Disaster Risk Reduction 2015-2030
 - » Green Climate Fund Regional Guidelines on Climate Information and Early Warning Systems
- Initiatives of India:
 - » Coalition for Disaster Resilient Infrastructure (CDRIS)
 - » National Disaster Management Plan (NDMP)

Conclusion:

Several plans and practices were discussed during the two meetings of the Disaster Risk Reduction Working Group. However, it is necessary that the challenges related to disaster risk are highlighted during the third meeting and efforts are made to achieve the goals of the Sendai Framework by promoting global cooperation on this.



National Issue

1. Model Prison Act, 2023

Why in News:

Recently The Ministry of Home Affairs (MHA) has prepared the 'Model Prisons Act 2023' which will replace a British-era law to overhaul the prison administration that will focus on the reformation and rehabilitation of inmates.

Model Prison Act 2023:

- The existing jail statute does not prioritise offenders' rehabilitation and reintegration into society. The new statute focuses on giving convicts education, vocational training, and mental health assistance so that they can lead productive lives following their release.
- In this relevant provisions of the Prisons Act, 1894, Prisoners Act, 1900 and Transfer of Prisoners Act, 1950 have been incorporated.
- The Model Prison Act of 2023 may serve as a guide text for states to implement in their jurisdictions.
- The Bureau of Police Research and Development (BPRD) completed it in cooperation with state jail officials, correctional professionals, and other stakeholders.
- A prison development board oversees prison design, development, and upkeep.
- Prisoners may be granted parole, furlough, remission, or early release to encourage good behaviour and ease their transition to freedom.
- Separate accommodation for women prisoners, transgender inmates, and other vulnerable groups.
- The physical and mental well-being of prisoners through health care, education, vocational training, counselling, etc.
- It would fill holes in the current Act by offering guidelines on the use of technology in prison administration and introducing provisions for convicts' release, furlough, and remission to reward good behaviour.

Prisons Act 1894:

- The Prisons Act of 1894 was passed on March 22, 1894, and went into effect on July 1, 1894. The legislation was enacted to amend Indian jail laws.
- The act's Chapter II addresses prison upkeep and officials. The Act allows for the appointment of prison officers, including the superintendent, medical officer, jailer, and such officers as considered essential.
- The Inspector General will be in charge of the jail and will perform tasks as instructed by

the State. The authorities must make suitable accommodations for detainees' accommodation within the jail.

Way Forward:

The Model Prisons Act 2023 is intended to serve as a guiding document for states to implement in their respective jurisdictions. It would also assist India in meeting its duties under several international human rights and jail standards accords and treaties. It is believed that the new act would have a good impact on the lives of convicts and society as a whole.

2. Data Governance Quality Index

Why in News:

Recently, the Ministry of Ports, Shipping, and Waterways (MoPSW) was placed second out of 66 ministries in the Data Governance Quality Index (DGQI) in evaluation for the December quarter (Q3) for fiscal year 2023. The Ministry received an amazing 4.7 out of 5, demonstrating the Ministry's ongoing commitment to attaining excellence in data governance.

Key Points:

- This study also indicates the reforms that are required to promote seamless data interchange and synergistic usage inside the Ministry, as well as clear paths to attain these goals.
- Data generation, data quality, use of technology, data analysis, use and dissemination, data security and HR capacity, and case studies are among the six crucial elements that make up the DGQI evaluation.
- The National Technology Centre for Ports, Waterways, and Coasts at IIT Madras was entrusted with developing MoPSW's Management Information System (MIS) following DGQI requirements, and it played a critical part in this success.
- The DGQI has evaluated the Management information system (MIS) portals for five MoPSW projects – Sagarmala, R&D, Shipping, Andaman Lakshadweep harbour works (ALHW), IWAI, and Inland Waterways Authority of India (IWT)- in order to improve data flow, improve data quality, and incorporate new technologies such as Artificial Intelligence/ machine learning (AI/ ML).
- Policymakers may correctly identify trends, opportunities, and areas for improvement using a data-driven approach. Ministries can provide better outcomes for residents by making

educated decisions based on credible data.

Data Governance Quality Index:

- The DGQI is a comprehensive framework that assesses the data governance practices of the Government of India's numerous ministries and agencies.
- Data quality, data security, data sharing, data analytics, data innovation, and data literacy are all covered in it.
- The Ministry of Electronics and Information Technology (MeitY) conducts the DGQI evaluation in partnership with the National Institution for Transforming India (NITI) Aayog.
- Data Generation, Data Quality, Use of Technology, Data Analysis, Use and Dissemination, Data Security and HR Capacity, and Case Studies are the six primary issues covered by the DGQI evaluation.

About the Ministry of Ports, Shipping and Waterways (MoPSW):

- The Ministry of Ports, Shipping, and Waterways encompass within its fold ports, shipping, and waterways sectors which include Shipbuilding and Ship-repair, Major Ports, National Waterways, and Inland Water Transport.
- In 2000, the Ministry named Ministry of Surface Transport was split into two ministries: the Ministry of Surface Transport and Highways and the Ministry of Shipping.
- These two ministries i.e. the Ministry of Shipping and the Ministry of Road Transport amalgamated in 2004 and were renamed the Ministry of Shipping, Road Transport, and Highways.
- The ministry comprises two departments: one for shipping and one for road transport and highways.

Way Forward:

The MoPSW's commitment to data-driven decision-making demonstrates its commitment to successfully serving the people of India. MoPSW has established a high benchmark for other Ministries and Departments to strive for by harnessing data and technology.

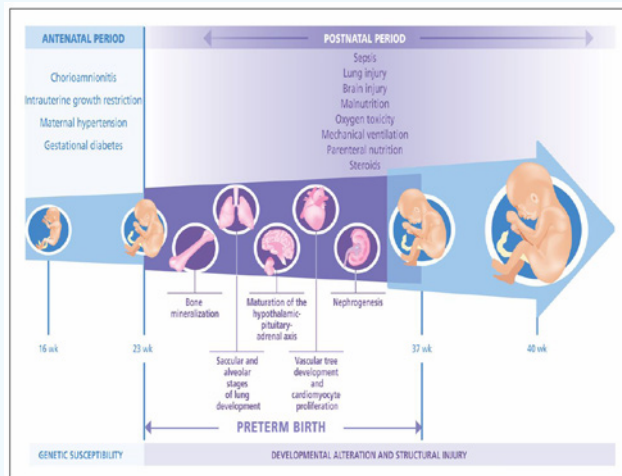
3. Status of Pre-Term Birth in India

Why in News:

According to the report 'Born Too Soon: Decade of Action on Pre-term Birth 2023', almost half of all pre-term births (babies born before the 37th week of pregnancy) in 2020 happened in 5 countries including India, Pakistan, Nigeria, China and Ethiopia.

About the Report:

- The report is released by World Health Organization (WHO), United Nations Children's Fund and Partnership for Maternal, Newborn and Child Health (PMNCH) - the world's largest alliance for women, children and adolescents.
- The report indicates a "silent emergency" for children's survival and health.
- Pre-term births occur earlier than 37 weeks of the expected 40-week full-term pregnancy.



Highlights of the Report:

- 152 million babies were born pre-term and exposed to a high mortality risk in the last decade.
- Every two seconds, a baby is born too soon. Every 40 seconds, one of them dies.
- The five countries (India, Pakistan, Nigeria, China and Ethiopia) accounted for 45% of babies born pre-term around the world.
- An estimated 13.4 million babies were born pre-term in 2020 with nearly one million died from complications.
- In 2020, Bangladesh had the highest estimated pre-term rate (16.2 %), followed by Malawi (14.5%), and Pakistan (14.4%).
- The report finds that pre-term birth rates have not changed in any region in the world in the past decades. The global pre-term birth rate was 9.9% in 2020, compared to 9.8% in 2010.

Factors causing pre-term births in India

- Infrastructure for neonatal care needs to be more expansive and last mile.
- Several factors like lifestyle changes, chronic diseases and IVF pregnancies are associated with increased pre-term births in urban centres.
- Even the reduced fertility levels and assisted pregnancies are also not without the risk of pre-

term births.

Recommendations given by the report:

- The report has called for a set of actions including boosting investments in newborn health, accelerating the implementation of national policies, integrating efforts across sectors, and supporting locally led innovation and research to support improvements in quality of care and equity in access.
- Progress must also advance in prevention, having access to quality health services before and during pregnancy to identify and manage risks.

Way Forward:

The report highlights the alarming condition of pre-term birth casualties. With effective implementation of schemes such as Rashtriya Bal Suraksha Karyakram and India Newborn Action Plan, etc. pre-term birth issues can be resolved.

4. Government Makes Unique Id Mandatory for Doctors

Why in News:

National Medical Commission has passed a new resolution making it mandatory for all doctors to have a Unique Identification Number (UID) to practice medicine in India. As per the new rule, the UID will be generated centrally by the NMC Ethics Board, providing the practitioner with registration in NMR and eligibility to practice medicine in India.

Key Features:

- The NMC has also stated that the Ethics and Medical Registration Board of the NMC will maintain a common national medical registration (NMR) for all registered medical practitioners in the country.
- The NMR will comprise records for registered medical practitioners from all State Medical Council registries.
- The NMR will include vital information about the medical practitioner, such as medical qualification, specialty, year of passing, university, name of the institute(s) from which the qualification(s) were earned, and location of employment (name of hospital/institute). The NMR may be accessed by anybody via the NMC's official website.
- According to the NMC announcement, the licence to practice medicine must be renewed every five years. Practitioners will need to apply to the State Medical Council for licence renewal three months before the license's validity expires. The EMRB and NMC will not charge a

fee for upgrading the licence.

- If the State Medical Council denies the licence renewal application, practitioners may submit an appeal to the Ethics and Medical Regulation Board.

About National Medical Commission (NMC):

- The National Medical Commission (NMC) is a statutory body responsible for the regulation of medical education, training, and practice in India.
- It was established in 2019 and replaced the Medical Council of India (MCI).
- The NMC is responsible for maintaining a national medical register (NMR) of all registered medical practitioners in the country.
- The National Medical Council's major goal is to improve the quality of medical education, training, and practice in India.
- It intends to do this by creating and enforcing norms and standards for medical education and practice.
- The NMC is also in charge of ensuring that qualified and competent medical practitioners are available in the country.

Unique Identification Number (UID):

- The UID is a 12-digit identifier generated by the NMC's ethical committee.
- The UID will be connected to the NMR and used in India to identify and track doctors.
- The UID will be required for all doctors who wish to practice in India.
- What is National Medical Register (NMR):
- The NMR is a database that contains information about all registered medical practitioners in India.
- The NMC will keep track of the NMR, which will include information such as the practitioner's name, qualification, specialization, year of passing, and location of employment.

Way Forward:

- The National Medical Commission (NMC) is a regulatory body responsible for maintaining and improving the quality of medical education and practice in India. It aims to ensure the availability of qualified and competent medical professionals in the country and to provide a safe and effective healthcare system for all.

5. CCPA and e-Commerce Platforms

Why in News:

The Central Consumer Protection Authority has issued notices to five e-commerce platforms for selling seat belt alarm stopper clips. The authority

took suo moto cognizance of the matter.

The Seat Belt Alarm Stopper Clips:

- These devices are being manufactured to insert into the seat belt buckle to stop the alarm from sounding when the seat belt is not fastened. According to the data reported by the Ministry of Road Transport and Highways (MoRTH), a total of 16,397 persons were killed in road accidents in 2021 due to not wearing seat belts.
- The seat belt reminders/alarmers alert the drivers and passengers when anyone inside the vehicle has not fastened their seatbelt.
- These seat belt reminders for front-seat passengers are mandatory for all automakers. In September 2022 MoRTH discussed a provision for mandatory seat belt reminders for rear seat passengers also.

Directions Against e-Commerce Platforms:

- The e-commerce platforms like Amazon, Flipkart, Snapdeal, Shopclues and Meesho have been directed by the CCPA to immediately withdraw the sale of such products from their websites. It has also sought the information of manufacturers, sellers, importers, and distributors of these products within 15 days.
- The CCPA in its order stated that these seat belt alarm stopper devices violate the Motor Vehicles Act- 1988 which mandates the seat belt for drivers and passengers. It is also a serious violation of consumer rights and safety norms.

Central Consumer Protection Authority (CCPA):

- The CCPA a statutory body, is set up under the Consumer Protection Act- 2019. It is empowered to prevent unfair trade practices and ensure that no person engages himself in unfair trade practices.
- The CCPA is headed by a Chief Commissioner who is appointed by the Central Government for a 3-year term or until the age of 65 years.
- It has the power to impose penalties on manufacturers, endorsers and publishers of misleading advertisements, ranging from Rs. 10 Lakh to Rs. 50 Lakh and imprisonment up to 5 years.
- It can also order a recall of unsafe goods and services, discontinuation of unfair trade practices and reimbursement of the price paid by the consumers.

Way Forward:

According to WHO, wearing a seat belt reduces the risks of death among drivers and front occupants by 45 to 50% and the risk of death and serious injuries for rear seat passengers by 25%. Therefore, such escaping devices from safety measures not only increase the chance of getting hurt but also

pose hurdles for law-and-order agencies.

6. Ban on Polygamy in Assam

Why in News:

The Chief Minister of Assam H.B. Sharma has announced that the polygamy practice will be banned through legislative actions and an expert committee has been constituted to examine this issue.

What is polygamy?

- Polygamy is the practice of having more than one married spouse-wife or husband. Traditionally, polygamy was the situation of a man having more than one wife.
- The National Family Health Survey-5 (2019-20) reported that the prevalence of polygamy was 2.1% among Christians, 1.9% among Muslims, 1.3% among Hindus and 1.6% among other religious groups.
- The studies have found that the highest prevalence is found in tribal populations.

Legal Status of Polygamy:

- Marriage comes under the regulation of personal laws. Therefore, there is a different legal status of marriage under different religious personal laws.
- Under The Hindu Marriage Act 1955 (THM Act), polygamy is an illegal practice. Buddhists, Jains and Sikhs are included in the THM Act 1955.
- Section 5(i) of the Hindu Marriage Act 1955 lays the down that marriage can be solemnized between two Hindus, if neither party has a spouse living at the time of marriage. Section 17 of the Hindu Marriage Act 1955 states bigamy/polygamy as an offence.
- Under the Parsi Marriage and Divorce Act, 1936 also polygamy has been outlawed. However, despite bigamy being an offence the child born from the bigamous marriage would acquire the same rights as a child from the first marriage under the law.
- Under Muslim Personal Laws i.e., Shariat Act, 1937 Muslim man is allowed to have four wives. But in a landmark ruling, the Supreme Court in Sarla Mudgal v Union of India held that religious conversion to Islam for the sole purpose of bigamy was unconstitutional.

Punishment for Polygamy:

- The Indian Penal Code section 494 (marrying again during the lifetime of husband or wife) penalizes bigamy and polygamy. Usually with respect to India when the first wife files a complaint that her husband has remarried, the

court has to look into whether the husband has entered into a legally valid second marriage.

- The adulterous relationship doesn't qualify as a valid marriage under the law.
- Section 494 of IPC also doesn't apply if a first spouse has been continually absent for the space of 7 years.
- This law provides the punishment for guilty with imprisonment maximum of up to 7 years and a fine also whereas section 495 of IPC protects the rights of the second wife in case of a bigamous marriage.

Issues with Polygamy:

- The United Nations Human Rights Committee states that polygamy violates the dignity of women and calls for its abolishment. The unequal treatment of wives causes several mental issues and problematic family functioning.

Way Forward:

Despite the polygamy has been banned in many religious personal laws but a statewide ban in Assam requires much-analyzed studies to corroborate the move because tribal communities look at these issues with more sensitivity.

7. Article 239 AA

Why in News:

- In relation to Article 239 AA, recently a dispute arose between the Delhi Government and the Lieutenant Governor of Delhi regarding the extent of jurisdiction.

About Article 239AA(4):

- Article 239AA was added by the 69th Constitutional Amendment Act, 1991 on the recommendation of the BalKrishna Committee.
- It provides that the Lieutenant Governor shall act on the advice of the Council of Ministers of the Government of Delhi, but he may place any matter for the consideration of the President, provided that the matter is of the rarest of rare category.
- It is a special power conferred on the Lieutenant Governor in the rarest of rare cases, which gives the Lieutenant Governor of Delhi more power than the Governors of other states.

Key Issues:

- In February 2023, the demand for appointment of a public prosecutor by the Delhi Police in a case related to communal violence in the state (Delhi) was rejected by the Delhi government. The Government said that the Delhi Police's investigation in the said communal violence case has not been found fair by the court. Therefore, the approval of the police panel may

hinder a fair investigation.

- The Delhi Government directed the Home Department to form a panel of the best lawyers in the country to hear cases in the High Court and the Supreme Court in this regard. The government prepared a proposal and sent it to lieutenant governor.
- Disagreeing with the proposal of the Delhi Government on this subject, the Lieutenant Governor reserved the matter for the President and appointed Public Prosecutors, using the power received under Article 239 AA (4) of the Constitution which resulted in conflict.

ARTICLE -239 AA(SAYS ABOUT DELHI)

- DELHI- national capital
- 1991 - 69th amendment -area is under the control of central government -so it is called as national capital territory(replaced by union territories)
- Compulsary one legislative assembly (satta peravai) should be in delhi
- Delhi C.M is appointed by the president .by c.m recommendations other ministers also appointed.
- If the administartion is not good then the lieutant governor inform to president means law brought by c.m is should be temporary stopped

Supreme Court's Judgment on the Dispute:

- According to the Supreme Court, the appointment of public prosecutors comes under the category of "ordinary" matters, so the Delhi government has every right to take a decision in this regard. It is not a rare case in which the Lieutenant Governor intervenes.
- In 2018, the Constitution Bench of the Supreme Court said that the Lieutenant Governor cannot interfere in other matters of the Delhi government except land, police and public order, as well as the "aid and advice" of the Delhi government is also binding on the Lieutenant Governor.
- Further, the Bench said that the Lieutenant Governor does not have the power to take any independent decision. He has to either act on the advice of the Council of Ministers or implement the decision taken by the President in the case referred by him to the President. The elected government has more powers than the nominated lieutenant governor.

Way Forward:

Excessive interference of the nominated Lieutenant Governor in the decisions of the elected government is against the spirit of democracy and decentralisation. Both the Delhi government and the Lieutenant Governor should respect the decision of the Supreme Court. Center (Lieutenant Governor) and State (Government of Delhi) should develop a sense of mutual cooperation to establish cooperative federalism.



International Issue



1. Arab League Reinstates Syria's Membership

Why in News:

The closed-door meeting of foreign ministers of the Arab League recently held in Cairo, the capital of Egypt, in which out of 22 member states, 13 voted in favour of Syria to restore its membership in the Arab League. Syria was ousted from the Arab League in 2011 after President Bashar al-Assad's brutal crackdown on pro-democracy demonstrations, leading to a civil war in the country. The conflict has killed about half a million people and displaced about 23 million.

What is Arab League?

- The Arab League was established in the in 1945 by six countries (Egypt, Iraq, Jordan, Lebanon, Saudi Arabia and Syria). Currently, it has 22 member states, which cooperate with each other on various issues, including economic and military matters. In this league, decisions are taken on the basis of the majority, but there is no binding mechanism for the members to follow the resolutions. It has been criticized on several occasions for internal conflicts and collective inaction on important international issues.



Why did the Arab League Reinstate Syria's Membership?

- The Arab League's decision is the culmination of diplomatic efforts by Bashar al-Assad, who gained widespread sympathy after a massive earthquake in Turkey and Syria in February that killed thousands of people. President Assad tried to solicit humanitarian aid from rival Arab countries and gain their support by ending or easing Western sanctions on Syria.
- The Arab League member states have realized that the stability of the Middle East requires an end to Syria's isolation. In addition, these

countries want some sort of repatriation of refugees in Syria and curbs on Syria's huge multi-billion-dollar illegal drug trade so that countries like Saudi Arabia and Jordan can protect their people from drug addiction.

- Although many countries like Kuwait and Jordan have opposed the decision of the Arab League. They argue that bringing Syria back into the organization without holding it accountable for atrocities, such as indiscriminate bombings and poison gas attacks on its citizens, sends the wrong message.

Way Forward:

Another catalyst in Syria's rehabilitation is the re-establishment of diplomatic ties between regional powerhouse Saudi Arabia and Iran, brokered by China, which took place in March this year. The reinstatement of Syria's membership in the Arab League is a major symbolic victory for Assad. Now it is time for President Assad to take strong steps to end the civil war and curtail the drug trade for the installation of long-term peace and stability in the region.

2. Global Report on Internal Displacement (GRID) 2023

Why in News:

The Global Report on Internal Displacement (GRID) of the Internal Displacement Monitoring Centre (IDMC) was published on May 11, 2023. This annual report stated that 32.6 million people were displaced due to disasters in the year 2022, which was 40% more than in 2021. According to GRID-2023, for the first time since 2016, 6 out of 10 disaster displacements were due to floods, supercell storms. These weather disasters included the 'triple-dip' La Niña effect.

Key points of the report:

- Pakistan had the largest number of displaced people around 8.16 million in the world in 2022, followed by the Philippines (5.44 million), China (3.63 million), India (2.5 million) at the second, third and fourth places respectively.
- The number of displaced people worldwide reached 71.1 million by the end of 2022, a 20% increase from 2021.
- During the same period, conflict and violence caused 28.3 million internal displacements worldwide, with conflict in Ukraine alone displacing some 17 million people.
- Sub-Saharan Africa recorded 16.5 million internal displacements in 2022, up 17% from

the previous year. The largest displacements in sub-Saharan Africa occurred in Nigeria (2.4 million), the reason behind this huge number was severe flooding between June to November.

- The effect of La Nina was less in the East Asia and Pacific region. The average displacement due to disasters in the region is expected to be around 10.1 million in 2022 as compared to 13.7 million in 2021.

‘Triple-Dip’ La Nina:

- The ‘triple-dip’ La Nina is a multi-year cooling of surface temperatures in the equatorial Pacific Ocean, which causes drought, fierce winds and heavy rainfall. According to the WMO, La Nina is the time period of three consecutive Northern Hemisphere winter periods, which began in September 2020 and ended in February 2023. It was the first triple-dip La Niña event of the 21st century. In the Indian context, La Nina is associated with above-average rainfall during the monsoon season, which is the opposite of El Nino.

About Global Report on Internal Displacement (GRID):

- This report published by IDMC is the leading source of data analysis on internal displacement. In 2018, IDMC started monitoring disaster flows (except drought), the report of which was firstly published in 2019. IDMC was established in 1998 by the Norwegian Refugee Council, an international non-governmental organization headquartered in Geneva.

Way Forward:

Generally vulnerable sections of the society are the most affected by extreme weather events, violence, war and discrimination. The global community must take it seriously because without everyone's cooperation we cannot be established a stable, peaceful and prosperous society.

3. Persona Non Grata

Why in News:

Canada on May 8 announced the expulsion of Chinese diplomat Zhao Wei over allegations of intimidation against Canadian opposition Member of Parliament Michael Chong. A day after that, China decided to declare Canadian Consul General Jennifer Lynn Lalonde persona non grata. In her statement, Canadian Foreign Minister Melanie Joly said that Canada will not tolerate any foreign interference in internal affairs..

What is Persona non grata?

- Persona non grata is a Latin phrase which means

‘unwelcome person’ in English. In diplomacy, it refers to a diplomat or foreign person who has been prohibited from entering or staying in a country by any particular country.

- This received diplomatic meaning at the 1961 Vienna Convention for Diplomatic Relations. Article 9 of this treaty states that a country can declare any member of the diplomatic staff persona non grata at any time without explaining its decision.
- Immediately after such declaration, the concerned person usually returns to his home country. If they fail to do so within a reasonable period, that country may refuse to recognize the individual as a member of the mission. This article also states that a person can be declared persona non grata even before he arrives in a country.
- Historically many countries have used it to express their dissatisfaction with the actions of other nations. It became a tit-for-tat practice during the Cold War as both the US and the Soviet Union declared each other's diplomats persona non grata several times.

India and Vienna Convention:

- The Vienna Convention was made in the year of 1961 and came into force on April 24, 1964. India acceded to the Vienna Convention on Diplomatic Relations in 1965 and enacted the Diplomatic Relations (Vienna Convention) Act, in 1972 to give effect to it.
- In the Kulbhushan Jadhav case, the International Court of Justice (ICJ) said that Pakistan violated the Vienna Convention on Consular Relations by denying consular access to Jadhav. The ICJ also held that Pakistan notifying the Indian consulate three weeks after Jadhav's arrest was in violation of the provisions of the Convention.

Way Forward:

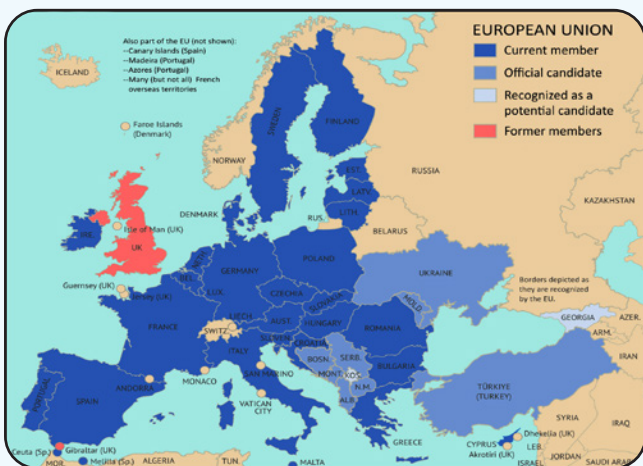
All countries should not misuse international laws to serve personal interests. If there is any difference for any reason, it should be resolved through dialogue at the diplomatic level. When every country starts to follow rules as per mention in the act, the rule of law, freedom and equality can be established in the true sense.

4. India-EU Trade and Technology Council

Why in News:

The first ministerial meeting of the India-EU Trade and Technology Council (TCC) was held in Brussels

(Belgium) on 16th May, 2023. It discussed ways to enhance cooperation in strategic technologies, digital connectivity, clean energy, trade and investment. The Council was co-chaired by Commerce along-with Industry Minister Piyush Goyal from the Indian side and Dombrovski and Vestager from the European Union side.



About India-EU Trade and Technology Council (TCC):

- The formation of this council was announced in April 2022 by Prime Minister Narendra Modi and European Commission President Ursula von der Leyen in New Delhi. Its objective is to strengthen economic and technological ties between India and the European Union. It provides a platform for high-level discussions and cooperation on various aspects of trade and technology cooperation.

Thrust on strategic technologies, digital connectivity and green energy:

- The ministerial meeting focused on strategic technologies, digital connectivity and green energy. These sectors play an important role in shaping the future of trade and technology cooperation between India and the EU. It emphasized fostering innovation, enhancing connectivity and promoting sustainable energy solutions. In this meeting, India emphasized the following issues:
 - » To accelerate the on-going negotiations for Free Trade Agreement (FTA).
 - » Addressing issues of mutual market access.
 - » Reforms in the World Trade Organization as well as enhancing cooperation in many areas of mutual interest.

India-EU TCC Meeting Focus Areas:

- The first Ministerial meeting will prepare a

roadmap for cooperation under the three working groups and provide direction to achieve the desired results before the next ministerial meeting in the coming year. There will be three working groups under discussion at the India-EU TTC meeting:

- » Working Group on Strategic Technologies, Digital Governance and Digital Connectivity.
- » Working Group on Green and Clean Energy Technologies.
- » Working Group on Trade, Investment and Resilient Value Chains.

Way Forward:

The challenges posed by the Russia-Ukraine war, China's growing imperialist policies, climate change and rising radicalism are threats to human civilization. Because these countries value freedom, equality, fraternity, human rights and rule of law as very important, therefore better India-EU relations become essential for world peace and security.

5. 6th Indian Ocean Conference 2023

Why in News:

6th Indian Ocean Conference Organized in Bangladesh from 12 to 13 May 2023 was inaugurated by Bangladesh Prime Minister Sheikh Hasina whose central theme was "Improving and expanding connectivity in the Indian Ocean region." The conference was attended by over 150 delegates including representatives from regional groupings such as SAARC, BIMSTEC, and the D8.

Organizer:

- The India Foundation, Ministry of Foreign Affairs of Bangladesh in collaboration with the S. Rajaratnam School of International Studies.
- The theme of the conference was – "Peace, Prosperity and Partnership for a Resilient Future".

About Indian Ocean Conference:

- Indian Ocean Conference (IOC) was launched in the year 2016 in a joint partnership with Delhi think tank India Foundation, Singapore, Sri Lanka and Bangladesh. Its main objective is to provide a common platform to ministers, scholars, thinkers, diplomats, bureaucrats and doctors from the governments of the littoral countries.
- The first edition of the Indian Ocean Conference (IOC) was held in the year 2016 in Singapore and the fifth in the year 2021 in Abu Dhabi, United Arab Emirates.

"SAGAR" Initiative:

- The "SAGAR" initiative (Security and Growth

for All in the Region) was launched in the year 2015. It is a strategic initiative of India. Indian Ocean Conference (IOC), Provides a consultative forum for the Indian Ocean countries to discuss possibilities of regional cooperation for “SAGAR”.

Key points of the conference

Regional connectivity:

- India is a major factor in the Indian Ocean region and has to face various challenges for better connectivity in this region. The nation has called for collective efforts to improve connectivity, which will have important long-term economic, political, and strategic consequences.
- Indian Foreign Minister S. Jaishankar emphasized the significant revolutionary implications/outcomes of improving connectivity with South-East Asian countries (ASEAN). India has also expressed a desire to develop multi-modal connectivity in the Gulf and Central Asia.

Emphasis on compliance with legal obligations and agreements:

- International laws, treaties and agreements have often been violated by China. India clearly said that for the establishment of a stable international order, it is necessary to follow international laws, rules, norms and agreements.

Emphasis on shared and targeted efforts:

- Shared and targeted efforts are necessary to ensure peace, stability and prosperity in the Indian Ocean region. The conference also emphasized important issues like climate action, environment, security, trade, counter-terrorism initiatives, extremism and radicalism and solutions to the problems arising out of it.

Transparent loan system and Sustainable Projects:

- India has emphasized transparent lending practices and real/practical projects. Many small countries like Nepal, Sri Lanka and others are trapped in China's debt trap and they have to approve Chinese projects even if they don't want to.

Way Forward:

The Indian Ocean region covers about 20% of the world's total ocean area and is home to about one-third (2.7 billion) of the global population. The joint efforts of the Indian Ocean Conference will help in balancing the global power. Along with this, unwanted interference from China in this area will be stopped. India's trade with ASEAN countries and growth in economic development will get a boost. India will be able to save its maritime neighbours from the debt trap of China. The tendency of China to build military bases in neighbouring countries of India will be stopped, which will give India a

strategic advantage. It will help in the development of the blue economy. It is noteworthy that 15% of the world's fishing area is found in the Indian Ocean region only. The commencement of maritime connectivity between India, ASEAN and other Indian Ocean countries will accelerate trade and economic development, as well as help in solving regional and global problems such as environment, energy, climate change, terrorism, piracy, etc.

6. South Asia Gas Enterprise (SAGE)

Why in News:

Recently 2,000 kilometre-long energy corridor linking the Middle East and India was proposed by SAGE. The project will result in annual savings of about Rs.7,000 crore in the import of natural gas as compared to the import of the same quantity of Liquefied Natural Gas (LNG).

About “SAGE”

- South Asia Gas Enterprise (SAGE) is an international consortium of companies specializing in Deepwater pipeline projects. This enterprise has sought the support of the Petroleum Ministry and other entities to develop an undersea gas pipeline from the Gulf to India.
- According to Subodh Kumar Jain, director of SAGE, the technical and financial feasibility of the project has been completed, and positive feedback has also been received from various stakeholders. Now diplomatic and political support is needed to take it forward as it requires long-term government-level agreement.

About “MEIDP”

- The “Middle East-India Deepwater Pipeline” (MEIDP) is an undersea transnational gas pipeline project between Iran and India (Porbandar) was conceived about a decade ago, but could not be launched due to Western sanctions.

Key Issues:

- It is a 2,000 km long energy corridor that aims to connect the gas-rich Gulf/Middle East regions with India for the transportation of natural gas to meet India's energy needs.
- New major gas discoveries have recently been made in Oman, the United Arab Emirates and Saudi Arabia, and the Middle East plans to spend more than \$120 billion to increase gas production by 14 billion cubic feet per day (bcfd) by 2030. This is an opportune moment to establish long-term government-level agreements for the pipeline project.
- Avoiding geo-politically sensitive areas, Oman and the United Arab Emirates can be reached through the Arabian Sea. The project will provide

an option to import gas from several countries including Oman, UAE, Saudi Arabia, Iran, Turkmenistan and Qatar, which collectively have significant gas reserves of 2,500 trillion cubic feet (tcf).

- According to SAGE, demand for affordable/cheaper gas is increasing in the power and fertilizer industries. Compared to liquefied natural gas (LNG), gas pipelines are more cost-effective for distances of up to 2,500–3,000 km, because of the higher expenses associated with gas liquefaction, transportation, and regasification. Additionally, LNG prices are volatile.
- Under the proposed 20-year long-term supply contract, the project aims to deliver 31 million metric standard cubic meters per day (MMSCMD) of gas to India. Other buyer countries will also be able to buy gas from the Middle East by paying SAGE a \$2 to \$2.25 per metric million British thermal units (mmBtu) pipeline fee.

Conclusion:

This will reduce India's cost of gas imports and help in meeting the energy needs easily. India will have a strategic advantage and India's relations with the Middle East/West Asia and Gulf countries will be strengthened. India will be able to meet the goal of clean energy and reduction in carbon emissions at an affordable rate.

7. FIPIC Summit

Why in News:

Recently, the 3rd Forum for India–Pacific Islands Cooperation (FIPIC) Summit was held in Port Moresby, Papua New Guinea. It was co-chaired by India and Papua New Guinea's Prime Minister and attended by 14 Pacific Island Countries (PICs).

Major Highlights of the Third FIPIC Summit:

- India supports the sovereignty and integrity of all countries and emphasised the shared priority of reforming international institutions to amplify the voice of the Global South.
- India also unveiled a 12-point development programme in areas of healthcare, cyberspace, clean energy, water and small and medium enterprises in PIC, according to which:
 1. India will establish a super-speciality cardiology hospital in Fiji, introduce dialysis units and sea ambulances in all 14 PICs, and establish Jan Aushadhi Centres to provide affordable medicines.
 2. India will support the development of the small- and medium-scale enterprise sector in each Pacific Island nation.

3. India also pledged to provide desalination units to address water scarcity issues.

- Indian Prime Minister along with his Papua New Guinea counterpart also released the Tamil classic 'Thirukkural' in Tok Pisin (the official language of Papua New Guinea) to bring Indian thought and culture closer to the people of this southwestern Pacific nation.

About FIPIC:

- The Forum for India–Pacific Islands Cooperation (FIPIC) was launched during PM Modi's visit to Fiji in November 2014.
- FIPIC includes 14 island countries – Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu – which are located in the Pacific Ocean, to the northeast of Australia.

Objective:

- To enhance India's relations with the PICs in various fields such as trade, investment, tourism, education, health, agriculture, renewable energy, disaster management and climate change.
- FIPIC also provides a platform for dialogue and consultation on regional and global issues of mutual interest.
- To further strengthen this initiative, FICCI is launching Business Accelerator for Forum for India - Pacific Islands Cooperation (FIPIC) on 7th September 2015 by launching the website (www.ficci-fipic.in) of the Accelerator Program.

The main objectives of the business accelerator are:

- Provide necessary information and facilitation to businessmen on both sides regarding prospects of Trade and Investment
- Facilitate meetings between the concerned businessmen from both sides
- Exchange of business delegations between India and Pacific Islands Countries (PICs)
- Online & Offline Match-Making Services
- Organising Events/ Trade Fairs

Conclusion:

India and the Pacific island countries (PIC) share historical and cultural ties and have been engaging with the PICs through various bilateral and multilateral platforms, such as the Non-Aligned Movement, the United Nations and the FIPIC. India's engagement with the PICs is driven by its vision of a free, open and inclusive Indo-Pacific region, as well as its commitment to support the development aspirations and climate resilience of the PICs. Forum for India–Pacific Islands Cooperation will further boost the ties between India and Pacific countries.



Environmental Issue



1. Plastic Pollution can be reduced by 80% till 2040: UN Reports

Why in News:

Recently, the United Nations Environment Program has stated that plastic pollution can be reduced by 80% till 2040. This would require major changes, but these efforts would still be convenient and economical.

Important Features of Reports:

- The report outlines the changes it states are required to end plastic pollution and create a circular economy.
- The UNEP describes the report as a solutions-focused analysis of concrete practices, market shifts, and policies that can inform government thinking and business action.
- According to the report, promoting reuse options, including refillable bottles, bulk dispensers, deposit return schemes, and packaging take-back schemes, can reduce 30% of plastic pollution by 2040.
- According to the analysis, decreasing plastic pollution by an extra 20% by 2040 is possible if recycling becomes more reliable and economical.
- It also claims that eliminating fossil fuel subsidies, following design criteria to improve recyclability, and taking other steps will raise the proportion of commercially recyclable plastics from 21% to 50%.
- Plastic now contaminates the whole world, from Mount Everest's top to the deepest waters. Microplastics are consumed through food and drink, as well as inhaled, and have been identified in people's blood and breast milk.
- In March 2022, 193 countries agreed to end plastic pollution, with negotiations on a legally binding agreement by 2024 now underway, hosted by UNEP.

About United Nations Environment Programme (UNEP):

- Its headquarters are located in Nairobi, Kenya.
- The United Nations Environment Programme (UNEP) is in charge of coordinating environmental responses across the United Nations system.
- Maurice Strong, the organization's first director, founded it following the United Nations Conference on the Human Environment in Stockholm in June 1972.
- The organisation also creates worldwide environmental treaties, publishes and promotes

environmental science, and assists national governments in meeting environmental goals.

How does plastic pollution affect humans:

- Plastic pollution, accumulation in the environment of synthetic plastic products to the point that they create problems for wildlife and their habitats as well as for human populations.
- Humans are exposed to a large variety of toxic chemicals and microplastics through inhalation, ingestion, and direct skin contact, throughout the plastic lifecycle.
- The toxic chemical additives and pollutants found in plastics threaten human health on a global scale. Scientifically proven health effects include causing cancer or changing hormone activity (known as endocrine disruption), which can lead to reproductive, growth, and cognitive impairment.

Microplastics:

- Microplastics are small pieces of plastic, less than 5 mm (0.2 in) in length, that occur in the environment as a result of plastic pollution. Microplastics are present in a wide variety of products from cosmetics to synthetic clothing to plastic bags and bottles. Many of these products easily enter the environment as waste. Microplastics are divided into two types: primary and secondary microplastics.
- **Primary microplastics:** They are the smallest particles that are designed for commercial use and are used in the manufacture of microfiber cloths and other fabrics. Examples: Microbeads found in personal care products, plastic pellets and plastic fibers, etc.
- **Secondary microplastics:** These are formed from the breakdown of larger plastics such as water bottles.

Source of Micro Plastics:

- Polyethylene (PE) - plastic bag, six-pack ring,
- Polypropylene (PP) - ropes, bottle caps, gears,
- polystyrene (expanded) - bait boxes, cups
- Polystyrene (PS)- Utensils
- Polyvinyl chloride (PVC) - film, pipe,
- Polyamide or Nylon - gear, rope
- Polyethylene terephthalate (PET) - bottles, strapping
- Polyester Resin + Glass Fiber- Fabric
- Cellulose Acetate - Cigarette Filters

Way Forward:

The research also suggests ending fossil fuel subsidies, which assist to lower the cost of new plastic items, disincentivizing recycling and the development of alternative materials. Almost all

plastics are made from basic materials derived from fossil fuels.

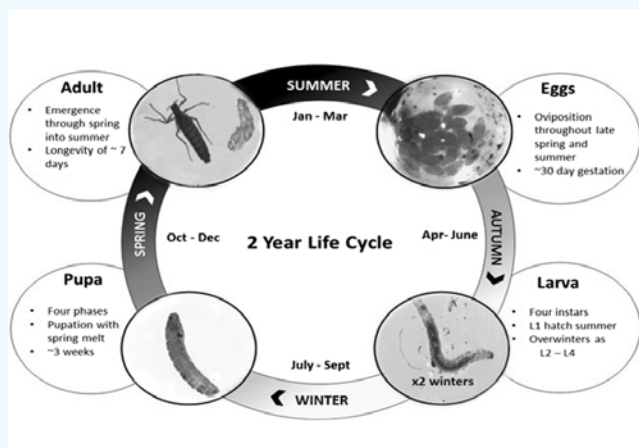
2. Eretmoptera Murphy

Why in News:

A new study by the British Antarctic Survey (BAS) has found that Antarctica's Signy Island, half of which is always covered by ice, has been infested with a flightless midge 'Eretmoptera mурphy' for years. At present, Eretmoptera mурphy has become a major problem as this small insect has spread over a large area with multiplying populations, which is rapidly changing the ecological structure of the island.

Key Points of Study:

- Eretmoptera mурphy feasts dead organic matter and causes rapid decomposition of plants. This increases soil nitrate levels by three to five times compared to areas of the island where the midge is absent and only native invertebrate species live.
- According to the study, this raised nitrate levels in the island's soil to levels previously seen only in areas inhabited by larger species such as penguins or seals. This happened because the population density of midge larvae reached over 20,000 per square meter at some sites.
- The study attributed the spread of Murphy on the island due to the arrival of scientists and researchers. It is possible that they clung to the soles of researchers and tourists who walked over their colonies. The other fear is that it can spread through other islands as it can survive in water.



- Midge activity on Signy Island, in combination with climate change, potentially 'opens the door' for other species to become established, which could further exacerbate climate change.

About Eretmoptera Murphy:

- Eretmoptera mурphy is an invasive species on Signy Island, Antarctica. It is native to South Georgia, a sub-Antarctic Island that was accidentally introduced to Signy Island in the 1960s during a botany experiment whose spread became apparent in the 1980s.

Way Forward:

The Antarctic has been characterized by having had very few invasive species so far, but the invasion of the midge has made it clear that the harsh living conditions because of extremely low temperatures, moisture, and nutrient availability no longer serve as an impenetrable fortress. Protecting the ecosystem should be a very high priority because this can increase the global warming crisis in the future.

3. Sea Butterflies: Threatened by Climate Change

Why in News:

Recently, it has been observed that Ocean acidification is not only more dangerous for shelled, smaller sea butterflies but can impact the entire ocean food web.

Key Highlights:

- Beautiful sea butterflies, which are a suborder of sea snails, are small animals that play an important part in marine ecology. According to a new study, the tiniest species in this group located in the Southern Ocean are especially sensitive to climate change and their number is dwindling in a warming world.
- The free-swimming sea snails known as shelled pteropods reside at or very near the ocean's surface. They have the same strong feet as snails, but instead of gliding across solid surfaces, they swim around in the water using these feet as flappers.
- As the sea absorbs an increasing quantity of carbon dioxide (CO₂) that turns the water more acidic, the thin outer casing, or the 'homes' of these small sea butterflies, dissolve. This leaves them exposed, making it difficult for these delicate species to survive.
- The ocean is the most acidic in winter because cooler water absorbs more CO₂. This means, the winter months are the most dangerous for the shelled sea butterflies.

About Sea Butterflies:

- Small marine gastropod mollusks referred to as sea butterflies or pteropods are a subfamily of the Thecosomata. They are renowned for both

their function in marine ecosystems and their distinctive shell structure.

- Planktonic creatures known as sea butterflies have unique shell structures. Their shells are thin, transparent, and frequently shaped like a butterfly's wings. The sea butterflies secrete shells, which shield their delicate bodies from the elements.
- The main food source for sea butterflies, which are herbivorous creatures, is phytoplankton, a type of tiny plant that lives in the water.

How does Climate Change Affect the Sea Butterfly Population?

- Higher ocean acidity is a result of the ocean absorbing more carbon dioxide and there is a decrease in the carbonate ions' availability, which are essential for shell development and maintenance.
- Climate change is causing an increase in ocean temperature which in turn is causing alterations in the amount and distribution of marine butterflies.
- Oxygen levels drop in oceans that are warmer and more stratified, affecting the energy balance and respiration of sea butterflies.

Way Forward:

With increased emissions, ocean acidification accelerates and continues throughout the spring, coinciding with the spawning and larval phases of sea butterflies. Prolonged exposure to acidic circumstances can harm larval development, lowering the amount of healthy adults who would normally contribute to the population.

4. Milkweed Butterflies

Why in News:

A recent study published in the Journal of Insect Conservation shed light on the migration pattern of milkweed butterflies in Southern India and its relation to Southwest Monsoon. This research would help in the conservation of these beautiful creatures against global warming, land use changes and habitat degradation.

Milkweed Butterflies:

- The milkweed butterflies or Danainae is a subfamily of the family Nymphalidae, the brush-footed butterflies. These butterflies lay their eggs on various milkweed plants.

Distribution:

- Some 300 species of milkweed butterflies exist worldwide. Most of them are found in Tropical Asia, Africa, Europe, North America and the Caribbean region.

- Some popular members of this group such as Monarch butterflies are also found in the temperate regions.

Key Findings of the study:

- It is noted that after the southwest monsoon, milkweed butterflies migrate westward from the Eastern ghats and plains to the Western ghats to protect themselves from scorching heat.
- From October to April, most of the milkweed butterflies are found in the western Ghats in congregate numbers at specific sites during winter and dry seasons. It is also found in the research that in their eastward migration, the wings of the majority of butterflies are battered more than that in the westward journey.
- Another finding of the study shows that dominant species like the Dark blue tiger and Double-branded crow are not found breeding in the mid and high-altitude evergreen and semi-evergreen forests of the Western Ghats.

Region of Migration:

- The Eastern Ghats complex of the Yercaud Hills (Shevaroy Hills), Panchamalai, Kolli Hills, and Kalvarayan serve as major originating places for the migrating species.
- The movement was also observed towards the Western Ghat hill ranges, Nilgiris, The Anamalai Tiger Reserve, and Palani Hills in Tamil Nadu and Parambikulam Tiger Reserve in Kerala.

Significance of Migration:

- The migration of milkweed butterflies plays a crucial role in the ecological sphere. They are pollinators so their movement impacts the entire ecosystems. These are also indicator species, so they provide information on the overall condition of the ecosystem and of other species in that ecosystem.
- They also reflect the quality and changes in environmental conditions as well as aspects of community composition.

Threats:

- The change in the rainfall pattern, turbulent weather patterns and habitat destruction are the leading challenges to the survival of these species.

Way Forward:

The study of a micro creature like butterflies' migration pattern and feeding behaviour would come in handy to explore the interconnectedness of plant and animal life. Therefore, intensive research and studies are required to protect biodiversity in changing climatic patterns.

5. Flying Gecko

Why in New:

Recently, a team of researchers from Mizoram University and Max Planck Institute for Biology, Tübingen, Germany found a new species of gecko in Mizoram along the Indo-Myanmar border. This new species can glide and the researchers have named it the parachute gecko.

Key features:

- Geckos are tiny, usually, carnivorous lizards that live in warm areas all over the world. Their vocalization and booming mating cries set them apart from other lizards.
- The new species was discovered in Mizoram's Lawngtlai town and other tropic forest regions. Lawngtlai is around 1,600 miles southeast of New Delhi, and Mizoram is a border state to the northeast. The state is bounded to the west by Bangladesh, to the east by Myanmar, and the north by the rest of India.
- Gekko Mizoramensis is the name given to the new species after the state of Mizoram. The species reported in Mizoram has previously been detected in South Asian countries such as Bangladesh, Myanmar, Thailand, and Cambodia.
- The new species is related to Gekko popaensis, but its shape and colour pattern are distinct. The newly found species differs from its sibling species by 7-14%.
- The new species is an arboreal that lives on trees and is around 20 cm long. It is nocturnal and can glide from one tree to another.
- Flying geckos are indigenous to Southeast Asia and belong to the subgenus Ptychozoon. These lizards, sometimes known as gliding geckos or parachute geckos, can jump between trees.

About Gekko Mizoramensis:

- Ptychozoon is a subgenus of the Gekko genus.
- They are prevalent in Southeast Asia and are one of 13 species known worldwide.
- Ptychozoon lionotum, or smooth-backed gliding gecko, was the sole species known in Mizoram prior to the discovery of this species.
- Its range has expanded into Bangladesh, Myanmar, Thailand, and Cambodia, as well as Mizoram.
- It is arboreal and nocturnal, gliding from one tree to the next.
- The new species is most closely related to its sister species Gekko popaensis, from which it varies in uncorrected pairwise sequencing divergence of 7-14% as well as discrete changes in morphology and colour pattern.

- The species is paraphyletic, with several cryptic species.

Other Species of Lizards in India:

- **Indian Golden Gecko-** (Tamil Nadu, Odisha, Andhra Pradesh) is native.
 - » It is listed in Schedule 1 of the WPA (Wildlife Protection Act).
 - » IUCN Red List: Least Concern (LC)
- **Tokay gecko-** widespread in the Indo-Malayan region
 - » Conservation Status: Schedule 4 of the WPA.
 - » IUCN Red List: Least Concern (LC).

Way forward:

The researchers named the new species after the northeastern state of Mizoram due to its widespread prevalence and collection across the region. This naming practice honours the state's diverse biodiversity and highlights Mizoram's importance in the area of herpetology.

6. Cyclone Mocha

Why in News:

The latest tropical storm "Cyclone Mocha" that recently formed in the Bay of Bengal and is making headlines across India.

About Cyclone Mocha:

- Cyclone Mocha is one of the names proposed by Yemen, based on a small fishing village in the country known for its coffee production.
- With a recorded wind speed of 277 kmph, Mocha became the strongest cyclone to form in both the Arabian Sea and the Bay of Bengal since 1982 along with Cyclone Fani in terms of speed and intensity.
- At the same time, in Amfan (2020) at a speed of 268 kmph, Toktai recorded a speed of 222 kmph in 2021.

What are Cyclones?

- A cyclone is a low-pressure system that forms over warm water. Generally, high temperatures anywhere mean the existence of low-pressure air, and low temperatures mean high-pressure air.
- Cyclones in India are powerful weather systems characterized by low-pressure areas with strong winds and heavy rainfall.
- This wind system rotates inward (counter-clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere) around a strong low-pressure center.
- Cyclones in India usually occur in the Bay of Bengal and the Arabian Sea.

What are tropical cyclones?

- A tropical cyclone is an intense circular storm

that originates over warm tropical oceans and is characterized by low atmospheric pressure, high winds, and heavy rain.

- A distinctive feature of tropical cyclones is the eye, a central area of clear skies, warm temperatures and low atmospheric pressure.

Factors responsible for cyclone formation:

- Warm sea surface temperatures.
- Coriolis force.
- Atmospheric instability.
- Low vertical wind shear.
- Formation of the low-pressure area.

How are the Names of Cyclones Decided?

- Cyclones that form in each ocean basin around the world are named by Regional Special Meteorological Centers (RSMCs) and Tropical Cyclone Warning Centers (TCWCs). There are six RSMCs in the world, including the India Meteorological Department (IMD) and five TCWCs.
- In recent years, the IMD has begun to include names of cultural significance in the list of names. Example - Cyclone Amphan.

Way Forward:

To effectively deal with calamities the nations must prepare contingency plans based on forecasts and manage community preparedness in real-time by the United Nations High Commissioner for Refugees, the International Organization for Migration, the World Health Organization and the International Federation of Red Cross and Red Crescent Societies. This should include pre-positioning of medical supplies, food and emergency shelter. In this series, India started 'Operation Karuna' to help Myanmar devastated by Cyclone Mocha (Mokha) which originated from the Bay of Bengal.

7. Jumbo Census

Why in News:

The manual survey conducted by the forest officials in the Seshachalam Hills and Koundinya Wildlife Sanctuary have shown the presence of a sizable amount of elephants in this region.

The Jumbo Census:

- This census has been conducted by the forest officials during their three days visits to these regions. They have spotted the presence of footprints, dung, and several vital signs of their presence.
- This survey suggests that there may be 50 to 60 elephants present in the Railway Kodur, Rajampeta, Sanipaya and Balapalle ranges.

The Seshachalam Hills and Koundinya W.S.:

- The Seshachalam hills are a part of the

Eastern Ghats in Andhra Pradesh. They are a group of seven hills namely, Seshadri, Neeladri, Garudadri, Anjanadri, Vrishabhadri, Narayanadri and Venkatadri.

- This site has been designated as Biosphere Reserve in the year 2010.
- The census team has stated that in the core belt of the Seshachalam hills, there is an abundant number of waterholes present. The rivers Pincha, Cheyyeru and Gunjana meander through the vast terrain.
- The Koundinya Wildlife Sanctuary and Elephant Reserve is the only sanctuary in Andhra Pradesh with a population of Asian Elephants. This wildlife sanctuary is located in the Chittoor district and is covered by the southern tropical dry deciduous and thorn forests. These forests have the Kaindinya and Kaigal tributaries of the Palar River.

The Most Favourable Site for Jumbos:

- The census has also highlighted the suitable conditions present in these regions for elephants-
- In this region, a massive number of natural waterholes (approx. 1000) are present. The ample amount of fodder and natural water resources place this region as a safe habitat for elephants.
- The absence of tomato and sugarcane crop cultivation in surrounding villages of Seshachalam hills has contributed to the negligible reporting of man-animal conflict.

The Asian Elephant:

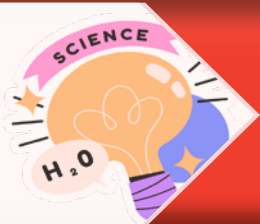
- India has a large number of wild Asian Elephants, estimated at 29,964 according to the 2017 census by Project Elephant. It constitutes 60% of the species' global population.
- The Indian Elephant is included in Schedule I of the Indian Wildlife (Protection) Act, 1972 and in Appendix I of the Convention on International Trade in Endangered Species of Flora and Fauna (CITES). They are listed as Vulnerable Species under IUCN Red List.

Threats and Conservation Measures:

- The elephant population in India is on the brink and the challenges like Human-Animal Conflict and loss of natural habitat are a major concern.

Way Forward:

The elephant population is shrinking at a faster rate even with the sustained efforts of governments like the MIKE program and Proj. Elephant. Therefore the monitoring and surveillance system alongside the elephant regions is crucial for their conservation.



1. IBM - NASA to Convert Satellite Data into High Resolution Maps

Why in News:

IBM in collaboration with NASA unveiled a new geospatial foundation model designed to convert satellite data into high-resolution maps of floods, fires, and other landscape changes to reveal the planet's past and hint at its future.

Details of the Geospatial Foundation Model:

- This model is a part of IBM's watsonx.ai, a nextgen enterprise studio for AI builders to train, test, tune, and deploy both traditional machine learning and new generation AI capabilities.
- The goal of the NASA and IBM collaboration is to provide an easier way for researchers to analyse and draw insights from large NASA datasets related to Earth processes.
- This collaboration is part of NASA's Open-Source Science Initiative (OSSI), a commitment to building an inclusive, transparent, and collaborative open science community over the next decade.
- The new geospatial foundation model is designed to enable the first steps by converting NASA's satellite observations into customised maps of natural disasters and other environmental changes.
- This model will be applied to NASA's Harmonized Landsat Sentinel-2 (HLS) dataset.

IMPACT (Interagency Implementation and Advanced Concepts Team):

- IMPACT is a component of NASA's Earth Science Data Systems (ESDS) Program and is charged with expanding the use of NASA Earth-observing data through innovation, partnerships, and technology at NASA's Marshall Space Flight Center in Huntsville, Alabama, USA.
- For the foundational geospatial model, IBM is working with NASA's IMPACT.

Potential Applications:

- Helping to estimate climate-related risks to crops, buildings, and other infrastructure;
- Valuing and monitoring forests for carbon-offset programmes; and
- Developing predictive models to help enterprises create strategies to mitigate and adapt to climate change.

Way Forward:

The foundation geospatial models make deploying Artificial Intelligence significantly more scalable, affordable, and efficient.

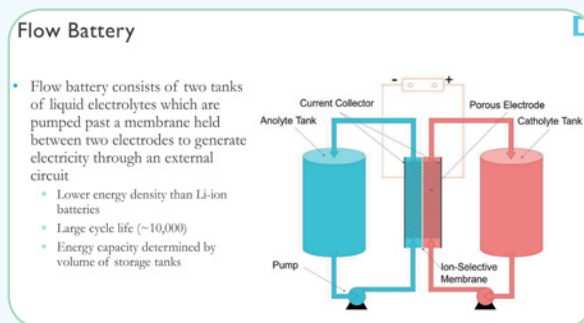
2. Flow Batteries in Solar and Wind Farms

Why in News:

The research team in IIT-Madras have developed a 'non-aqueous all organic redox flow battery (NORFB)' that is supposed to replace the conventional aqueous flow batteries. They can be used in renewable energy storage grids.

What are Flow Batteries?

- Flow batteries are different from conventional batteries as energy is stored in solid electrodes in the latter one. A flow battery is a rechargeable battery in which electrolyte flows through one or more electrochemical cells from one or more tanks. When space is not a constraint, flow batteries are deemed to be good energy-storing devices.
- Their size can be more easily extendable than conventional electrode batteries.



Battery Type:

- **Lead acid battery:** Lead-acid batteries are the most commonly used type of battery. This is the oldest battery among rechargeable batteries. It has the second lowest energy-to-weight ratio, second only to nickel-cadmium batteries. It has the ability to provide high current for a short period of time. Apart from the above properties, it is also very cheap due to which it is widely used in cars, trucks, other vehicles and uninterruptible power sources.
- **Nickel-cadmium battery:** A nickel-cadmium battery is a type of rechargeable battery whose electrodes are nickel oxide hydroxide and metallic cadmium. Its advantages include availability in all sizes, it can be easily carried around. Use of cadmium has environmental concerns.
- **Lithium ion batteries:** Lithium ion battery is a re-chargeable battery. These batteries are often

used in consumer electronics today and are one of the most popular rechargeable batteries for portable electronic devices.

Why are non-aqueous and organic features added?

- IIT-M has improved the conventional aqueous flow batteries (water-based electrolyte) to improve their efficiency in the following two aspects:
 - » The water interferes by undergoing electrolytes and reducing the operating voltage limit and energy density,
 - » They corrode battery components.

Advantages of NORFB:

- The improved version of the flow battery is developed by using a new type of electrolyte-pyrylium salts (organic chemicals).
- They can be used to store electricity in solar and wind farms. This can readdress the issue of intermittency and maintain grid stability.
- With suitable structural modifications, it would allow high-voltage operations. The researchers have used cheap and easily developable catholyte which would cut the manufacturing cost of these batteries.
- Along with the benefits associated with a non-aqueous flow battery, the addition of an organic aspect would increase the energy density of the battery.
- Organic flow batteries also have higher scalability (capacity proportional to tank size) that allows more flexibility and optimization of system performance.
- These batteries are also environmentally friendly.

Challenges associated with Flow or redox battery:

- The non-aqueous all-organic redox flow battery (NAORFB) is set to readdress most of the issues posed by conventional flow batteries. But following are the some possible challenges associated with the new improved redox battery:
 - » Their huge weight is going to pose a challenge to their mobility. As to achieve more capacity, the electrolyte tanks have to be large enough.
 - » Its large size would make it only suitable for stationary applications.

Way Forward:

The improved redox flow technology would establish a new standard in battery manufacturing industries. This research is going to pave the way for the NORFB battery manufacturing sector which has sizable existing and potential demand in the non-renewable energy sector.

3. Mitochondrial Donation Treatment

Why in News:

Recently Mitochondrial Donation Treatment (MDT) was utilized to successfully deliver a baby in the United Kingdom. It is also known as a three-parent baby since the newborn has genetic material from three parents. To prevent the infant from acquiring the mother's mitochondrial illness, cutting-edge technology was applied.

Key highlights:

- Mitochondrial Donation Treatment is available to families with severe hereditary mitochondrial disorders who do not pass the gene on to their offspring.
- It's a type of IVF in which damaged mitochondrial DNA in the patient's eggs is replaced with healthy mitochondrial DNA from a donor egg.
- The majority of the baby's DNA comes from its parents, with only a little portion coming from the donor, whose mitochondria were used to fertilise the egg.
- Although the term "three-parent babies" is commonly used in the media, the majority of the baby's DNA comes from its two parents, with just about 0.1% coming from the donor.
- Mitochondrial Donation Treatment (MDT) is a method that involves creating a child through IVF using the genetic material of the parents and the mitochondrial material of a donor. Mitochondrial material is derived from mitochondria, which are found in the nucleus of a cell.

What are mitochondria?

- They are membrane-bound cell organelles that serve as the cells' energy producers by producing the necessary energy for the cell's metabolic operations.
- The mitochondrial energy is stored in a tiny molecule known as adenosine triphosphate (ATP). Mitochondria have their own set of chromosomes.
- **Mitochondrial diseases** - When the mitochondria are damaged and do not create enough energy, organ function suffers. The disorders caused by mitochondrial mutations are known as mitochondrial diseases.
- Mitochondrial disorders can only be handed down through the mother.

Advantages and Concerns of Mitochondrial Donation Treatment:

- The primary benefit is obvious: MDT will provide

families stricken by significant mitochondrial disease with the opportunity to have healthy children free of a tragic and frequently life-limiting condition.

- Many children born with such genetic diseases would not have to go through the agony of growing up or dying as a result of them at such a young age.
- These techniques have the potential to minimize newborn mortality.
- As beneficial as this technique may be, it comes with a fair share of concerns as well.
- Social Concerns develop as a result of the Tri paternal element since children generated by these procedures may suffer emotional pain as a result of prejudice or may face legal challenges.
- The ethical, legal, and societal challenges addressed by these reproductive procedures are contentious, and they are largely responsible for their widespread prohibition.

Way Forward:

Even though research into mitochondrial donation treatment is still in its early stages, mitochondrial donation is a godsend for the great majority of people who suffer from mitochondrial illnesses and have no known cure.

4. E-Skin

Why in News:

The California-based Stanford University research team led by Zhenan Bao have developed a soft, flexible electronic skin that can mimic the function of natural skin. The technology aims to provide a covering for prosthetic limbs so that they can provide sensory feedback and improve control for amputees.

The E-Skin:

- Electronic skin or e-skin refers to flexible, stretchable and self-healing electronics that can mimic the functionalities of human or animal skin.
- This development has been made to develop a soft and flexible prosthetic skin which can also transmit electrical signals to the brain (somatosensory cortex in the brain) to allow the wearer to feel pressure, strain or changes in temperature.

How does e-skin work?

- The healthy living skin comprises mechanical receptors tasked with sensing information and converting it into electrical pulses. Then these pulses are transmitted through the nervous system of the brain to react further. This mechanism has been designed artificially by the

Californian research team.

- The e-skin will need sensors and integrated circuits made from rigid semiconductors. A flexible, thin layer of polymer is also designed to be used as a dielectric (thin semiconductor layer). These sensors can transform physical changes into an electrical pulse and send it to the brain.

Applications of e-Skin:

- The researchers' team has anticipated that the e-skin can be used for people who have suffered major injuries or the people who suffer from sensory disorders. People with e-skin-covered prosthetic limbs can also experience different kinds of sensations that can replenish their social life.

Challenges with e-skin:

- The development of e-skin is still at the experiment level. The current version of e-skin is tested on the rat which was connected to the rat's somatosensory cortex (region of the brain involved in processing physical sensations). This requires implantation into the brain. The research team has stated that they hope to develop a less invasive system that won't have to be implanted into the brain.
- Along with this, the developed e-skin has to be wired to an external power source; it would also require a wireless device for smooth functioning.

Way Forward:

The designing and development of e-skin can introduce a revolutionary change into the prosthetic limb sector. But it would be a cutting-edge technology that is expected to be expensive. So the broad-level utilization of this scientific marvel will require a regulated mechanism at the world level so that every country can be benefitted from this development.

5. Human Pan-Genome Map

Why in News:

The recent study published in Nature Journal describes a pangenome reference map, built using 47 anonymous individuals mainly from Africa, Caribbean, Americas, East Asia and Europe.

What is Genome Sequencing?

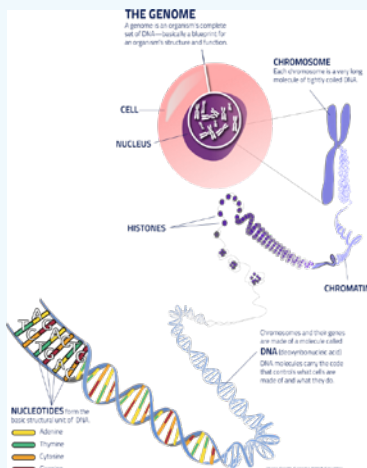
- The Genome is an entire set of DNA instructions found in a cell. It contains all the information needed for an individual to develop and function.
- Genome Sequencing is the method used to determine the precise order of the four bases (Adenine, Thymine, Guanine and Cytosine) and how they are arranged in chromosomes. The chromosome is a contiguous stretch of DNA

string which in turn is composed of millions of individual building blocks called nucleotides or bases.

- Genome sequencing helps us to understand human diversity at a genetic level and how prone humans are to certain diseases.

The reference Genome Map:

- The reference map or reference genome map is like a standard map that scientists use when they sequence and study new genomes. It serves as a guide to compare and understand the difference between the newly sequenced genome and the reference genome.



The first reference map was built in 2001 and it helped scientists discover thousands of genes linked to various diseases, and better understand the diseases like cancer at the genetic level.

- But this reference map contained gaps, and errors and was not representative of all human beings.

The Pan-Genome Map:

- Scientists have developed the pangenome map to address the gap and errors in reference map. The pangenome map is represented like a graph, unlike the previous linear reference genome map.
- Each chromosome in the pangenome can be imagined as a bamboo stem, with nodes where sequences from all 47 individuals come together, indicating similarity.
- The internodes which have different lengths represent genetic variations among individuals from different ancestries.
- Scientists have used long-read DNA sequencing to create a complete and continuous map of the chromosomes in the pangenome map. This technology enabled them to develop a complete, and continuous chromosome map by producing accurate, long DNA strands.

Significance of Pan-Genome Map:

- The 99% of the DNA of any two humans is similar but is still about 0.4% different. This marginal difference is huge in the number of nucleotides

which is around 12.8 million nucleotides.

- The pangenome map of humans can help better understand these differences. It would easily explain the diversity among individuals.
- Along with this, it may provide the following advantage;
 1. Assist in studying genetic variations that contribute to underlying health conditions.
 2. Beneficial to compare and map Indian genomes against the existing accurate reference genomes.
 3. Identify and classify the core genes shared by all or most individuals
 4. Characterisation of variable genes that are present in only a subset of individuals.
- Besides these advantages, this pangenome map has not included the representations from the populous Indian subcontinent and Indigenous groups in Asia, Oceania and West Asian regions.

Way Forward:

The pangenome map would enable scientists to gain insights into the genetic diversity within a species and also identify genes associated with phenotypes or diseases. This map hasn't included the Indian genome sequence but a future pangenome map, hopefully, would include it.

6. ASTR: AI Solution for Cyber Frauds

Why in News:

The Department of Telecommunication (DoT) has developed a tool called Artificial Intelligence and Facial Recognition powered Solution for Telecom SIM Subscriber Verification (ASTR) to bring down cyber fraud by detecting and blocking possible fraudulent mobile connections.

About ASTR:

- The ASTR tool has been developed by the DoT which is an artificial intelligence-based facial recognition tool. It is claimed that it has the capability of running checks on the subscriber database of telecom operators to deduce whether it contains multiple connections associated with the same person.

The Working methodology of ASTR:

- The ASTR tool analyses the SIM subscriber's database to identify the multiple connections associated with the same person. The DoT allows only a maximum of 9 mobile connections can be taken using a single identity proof.
- In any case, if there is a suspected face associated with multiple mobile connections. ASTR will compare this face against a database of images

to identify more than 9 connections linked to the same face against the same face or if the person has taken SIMs under different names, ASTR will flag it as potentially fraudulent.

- The technology named Fuzzy Logic is used to identify similarity or approximate matches for the subscriber names, accounting for typographical errors.

The Fuzzy Logic:

- It is a mathematical approach that deals with uncertainty and imprecise information. It allows for the representation of vagueness and partial truth, unlike traditional binary logic.
- The list of fraudulent connections will be shared with telecom operators, banks, payment wallets, and social media platforms.

The Origin of ASTR:

- The ASTR project has been conceptualized and designed between April 2021 and July 2021 by the DoT's unit in Haryana. The pilot project has been launched in Mewat, Haryana. This pilot project of ASTR detected approx. 5 lakh SIMs from 16.69 lakh active SIMs across all telecom operators as to be fraudulent.

Way Forward:

The AI solution to deal with Cyber frauds would be crucial, as the incidence of identity takeover, phishing scams, and credit card and bank fraud have ramped up. Therefore this is a commending step by the government agency.

7. Growth of Cold-Blooded Animals in Warm Waters

Why in News:

- Recently Scientists have conducted a study on the Eurasian perch (*Perca fluviatilis*) to learn more about cold-blooded creatures. Scientists have questioned the concept whether the cold-blooded marine creatures, such as fish, will decline as the planet warms.

Key Highlights of the study:

- Cold-blooded marine species' bodies will shrink as a result of global warming.
- Cold-blooded animals develop quicker at a younger age and have lower mature body sizes.
- Cold-blooded creatures are also referred to as ectotherms.
- The damaged animals will also grow and die at a faster pace.

About Cold-Blooded Animals:

- Cold-blooded animals rely on their physical surroundings to control their body temperature.

- In comparison, warm-blooded animals ingest food to serve two metabolic goals:-

1. Grow and maintain a healthy body weight.
2. Generate heat to maintain an internal body temperature between 97 and 104 degrees Fahrenheit for mammals and between 106 and 109 degrees Fahrenheit for birds.

- It is more appropriate to call such animals ectotherms because "ecto" is Greek for "external" or "outside" and "therm" is Greek for "heat". In other words, ectotherms must capture heat from the sun, either directly or indirectly, to raise and maintain their body temperature.

Advantages and Disadvantages of Being Cold-Blooded:

- Since cold-blooded animals absorb heat from their surroundings to promote metabolism, they may digest their food for many days and wait up to a week before seeking their next meal.
- All cold-blooded creatures are vulnerable to high-temperature variations, regardless of season.

The Behaviour of Cold-Blooded Animals:

- Because a cold-blooded animal's internal body temperature is determined by the ambient temperature, it must have quick access to a warmer environment to prevent freezing to death. As a result, ectotherms are often concentrated in warmer areas.
- Aquatic ectotherms will seek warmer water to keep their bodies warm. Because all cold-blooded creatures rely on their surroundings to regulate their body temperature, they will seek a cooler habitat to prevent overheating, such as behind a rock, in the shadow of a tree, or colder water.

Warm And Cold-Blooded Animals:

- Cold-blooded creatures rely on their physical environment's temperature to control their internal body temperature. That is, to warm their body, they seek heat (e.g., sunbathing), and to cool their body, they seek cooler temperatures (e.g., a cave).
- Warm-blooded animals rely on food metabolism to control their internal body temperature and have hair (and in some cases fat) or feathers to assist trap heat.

Way Forward:

Conclusively, cold-blooded creatures lack the ability to maintain a steady internal body temperature and must rely on external stimuli to make a decision. Lizards, for example, exhibit various habits in the summer and winter, such as remaining in water or moving to land.



Economic Issues



1. RBI to join GFIN's Greenwashing TechSprint

Why in News:

The Reserve Bank of India (RBI) is looking to address the risks of greenwashing in financial services to boost market confidence in Environmental, Social and Governance (ESG) credentials by taking part in GFIN's Greenwashing TechSprint.

What is Global Financial Innovation Network (GFIN)?

- GFIN was launched in 2019 by the international financial regulator.
- The GFIN is a regulatory network committed to supporting financial innovation in the interests of consumers.
- GFIN provides a more efficient way for innovative firms to interact with regulators, helping them navigate between countries as they look to scale new ideas.
- The GFIN also aims to create a new framework for cooperation between financial services regulators on innovation-related topics, sharing different experiences and approaches.

What is Greenwashing?

- It is a practice of making exaggerated, misleading, or unsubstantiated claims about the environmental benefits of a product, service, or investment opportunity.
- Greenwashing can mislead investors and consumers and harm the overall goal of promoting sustainable finance.
- It creates a perception that a company is taking steps towards sustainability or social responsibility, but in reality, it may be engaging in practices that are harmful to the environment or society.

Objective of TechSprint

- To address the Greenwashing issue, the TechSprint event will bring together international regulators and firms to develop new tools to tackle greenwashing in financial services.
- Firms will get the opportunity to work with regulatory experts, a variety of stakeholders and professionals from across the globe.

Way Forward:

India is moving fast towards ESG requirements. The participation of RBI in a virtual TechSprint will bring coordination among international regulators, firms, and innovators to address sustainable finance as a collective priority and establish a genuine network of ESG-compliant platforms.

2. Unique Economic Offender Code

Why in News:

Central Government is planning to come out with a unique code for each individual or company accused of economic offences.

Unique Economic Offender Code:

- The identification number used to spot the economic offences will be called 'Unique Economic Offender Code'.
- The code will be specific to each offender and will be linked with his/her Aadhaar number, in the case of an individual, or PAN in the case of a company.
- The Central Economic Intelligence Bureau under the finance ministry has made a database of about 2.5 lakh economic offenders.
- The unique code for each accused will help quickly launch a multi-agency probe against them as against the current practice of waiting for one agency to complete its probe and file a chargesheet or prosecution complaint before the same is shared with others for further investigation.

How will the Unique Code work?

- The 'Unique Economic Offender Code' will be alpha-numeric which will be PAN or Aadhaar based for companies and individuals to tag all cases of economic offences.
- The individuals and companies with economic offences will be tagged and have a 360-degree profile.
- The code will be system generated.
- The code will emerge once the police or any central intelligence enforcement agency feeds data into the under-construction central repository of (NEOR) National Economic Offence Records.

About NEOR:

- It is a central repository of all economic offences that will share data related to each economic offender with all central and state intelligence and enforcement agencies.
- The NEOR is being built with a budget of around Rs.40 crore and the Central Economic Intelligence Bureau has been given the task of coordinating with the help of the National Informatics Centre (NIC).
- NEOR will be completed in the next 4-5 months.
- All data from Central and State agencies will be migrated to the National Repository using the API (Application Programming Interface) software, reducing any scope for manual

interference.

Way Forward:

The 'Unique Economic Offender Code' will further strengthen India's legislative and enforcement actions against money laundering and terror financing.

3. WPI at 34-Month Low

Why in News:

Inflation rate based on Wholesale Price Index (WPI) fell to a near three-year low of (-)0.92 percent in April, slipping into negative territory for the first time in 33 months, according to data released by the Ministry of Commerce and Industry. A high base effect along with moderation in global commodity prices reflected in easing of food, fuel and other input costs.

Key Findings:

- Wholesale inflation rate was 1.34 percent in March 2023 and 5.38 percent in April 2022. The all-commodities index has remained unchanged at 150.0 since February.
- The Consumer Price Index (CPI) had also eased to an 18-month low of 4.7 percent in April 2023.
- This is within the 4+/-2 percent band of the Reserve Bank of India's medium-term inflation target.
- A deflationary trend in WPI, which reflects prices at the producer's end, is likely to reflect later in retail inflation too with a lag.
- Fuel and power inflation also eased below 1 percent at 0.93 percent due to lower prices for LPG, Kerosene and other mineral oils.

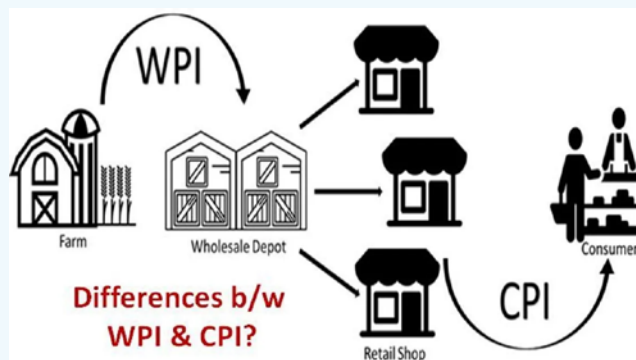
Factors for Decline in WPI:

- A high base effect and easing global commodity prices have helped WPI to slip into a deflationary zone after almost three years.
- The decline in the WPI inflation rate was primarily contributed by the "fall in prices of basic metals, food products, mineral oils, textiles, non-food articles, chemical & chemical products, rubber & plastic products and paper products".

About Wholesale Price Index (WPI):

- It measures the changes in the prices of goods traded in bulk by wholesale businesses to other businesses.
- Published by- Office of Economic Adviser, Ministry of Commerce and Industry.
- Base Year- revised from 2004-05 to 2011-12.
- Components-
 1. Manufactured Products- 64.2%,
 2. Primary articles- 22.6%,

3. Fuel and power- 13.1%.



Consumer Price Index (CPI):

- Released by- National Statistical Office (NSO).
- Base year- 2012.
- It calculates the difference in the price of commodities and services such as food, medical care, education, electronics etc, which Indian consumers buy for use.
- WPI tracks inflation at the producer level and CPI captures in price levels at the consumer level.

Way Forward:

Experts believe that easing global commodity prices will help inflation of manufacturing products stay lower. A lower WPI print could help in pulling retail inflation down with its lagged impact on the core CPI inflation.

4. Open Network for Digital Commerce

Why in News:

The government directed the e-commerce companies and food delivery players to join its digital commerce network ONDC (Open Network for Digital Commerce). Some players like Flipkart and Zomato are trying to set up step down subsidiaries to join the government-backed open Network for Digital Commerce. Other big ones such as Amazon and Swiggy have chosen to stay away so far.

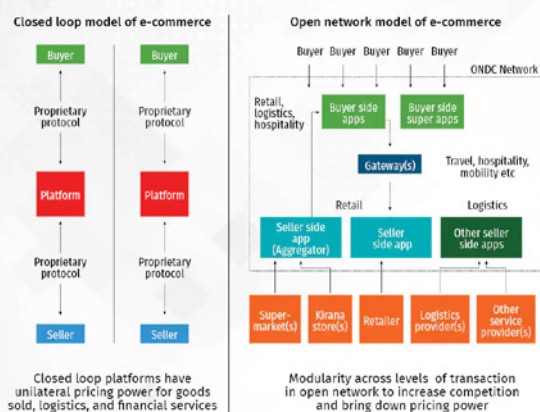
What is Open Network for Digital Commerce (ONDC)?

- ONDC is a non-profit organisation established by the Department for promotion of Industry and Internal Trade (DPIIT), under Ministry of Commerce to develop open e-commerce.
- It was incorporated in 2021 with initial investment from Quality Council of India (QCI) and Protean eGov Technologies Limited.
- ONDC is a network of interconnected e-marketplaces through which sellers can

directly sell their products to customers bypassing any intermediaries.

- ONDC switches from a platform-centric paradigm to an open network, where both the buyer and the vendor must utilise the very same network or application in order to be visible online and conduct business.
- Services provided under ONDS include delivery services for food, groceries, home décor, cleaning essentials, and other products.

HOW INDIA'S OPEN E-COMMERCE NETWORK MODEL PLANS TO DISRUPT PLATFORM POWER



Way Forward:

Government needs to be more clearer with the provisions regarding ONDC in order to make it consensus-based and people-friendly. There should be mechanisms to balance demand and supply-side bottlenecks.

5. US Debt-Ceiling Standoff

Why in News:

United States Treasury Secretary warned of the US defaulting on debt if the President and House of Representatives fail to reach an agreement to raise or suspend the debt ceiling. The US government has hit its \$31.4 trillion borrowing limit.

What is US Debt-Ceiling?

- In the United States, the debt ceiling or debt limit is a legislative limit on the amount of national debt that can be incurred by the U.S.
- Congress adopted a comprehensive debt ceiling, the statutory maximum of debt the government can issue, in 1939, intending to limit its growth.
- Treasury, thus limiting how much money the federal government may pay on the debt it already borrowed by borrowing more money.
- The debt ceiling is an aggregate figure that applies to gross debt, which includes debt in the hands of the public and intra-government accounts.

Benefits of ONDC Platform:

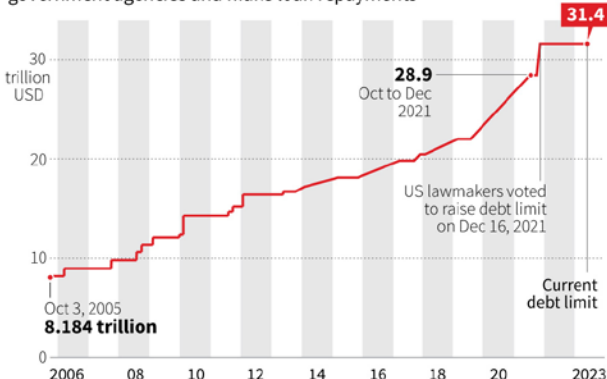
- **Seller-** Get an equal opportunity to compete with large market players and become discoverable online.
- **Buyers-** Enjoy a seamless shopping experience from a wide assortment of products across categories in a single checkout experience.
- **Tech Companies-** Rapid adoption of products and services and achieving scale in go-to-market efforts.
- **FinTech-** Provide credit and financing solutions to all entities engaged in e-commerce.

Challenges Ahead:

- **Complexity-** ONDC is far more complex than UPI which makes it less people-friendly in terms of use.
- **Lack of Awareness-** A mass awareness campaign is required for small scale business owners as they lack technical expertise to be involved in this.
- **Dispute Redressal-** There is a lack of clarity on responsibility for customer service and handling complaints.
- There is this apprehension that ONDC might not provide cheaper goods and services.

US debt ceiling

The amount above which the country cannot issue new loans to fund government agencies and make loan repayments



- About 0.5 percent of the debt is not covered by the ceiling, because expenditures are authorized by separate legislation and the debt ceiling does not directly limit government deficits.
- In effect, it can only restrain the Treasury from paying for expenditures and other financial obligations after the limit has been reached.

What Would put the Country into an Economic

Recession?

- When the debt ceiling is reached without an increase in the limit having been enacted, Treasury will need to resort to “extraordinary measures” to temporarily finance government expenditures and obligations until a resolution can be reached.
- A protracted default could trigger a variety of economic problems including a financial crisis, and a decline in output that would put the country into an economic recession.
- The Treasury Department will now begin using “extraordinary measures” to continue paying the government’s obligations.
- These measures are essentially fiscal accounting tools that curb certain government investments so that the bills continue to be paid.
- Once the government exhausts its extraordinary measures and runs out of cash, it would be unable to issue new debt and pay its bills.
- The government could wind up defaulting on its debt if it is unable to make required payments to its bondholders.

Way Forward:

The debt ceiling crisis is a symptom of political dysfunction. Such a scenario would be economically devastating and could plunge the globe into a financial crisis.

6. SEBI Proposes Surveillance System by MFs to Check Fraud

Why In News:

In a consultation paper, SEBI has suggested that senior management of AMCs should be responsible to ensure that an institutional mechanism is put in place to detect and report possible misconduct by its employees, dealers, stock brokers or any other connected entities.

What Is an Asset Management Company (AMC)?

- An asset management company (AMC) is a firm that invests pooled funds from clients, putting the capital to work through different investments including stocks, bonds, real estate, master limited partnerships, and more.
- AMCs not only provide advice but also make investment decisions based on the client’s investment strategy, risk tolerance and financial situation.
- AMCs manage hedge funds and pension plans. To better serve smaller investors, they create pooled structures such as mutual funds, index funds, or exchange-traded funds (ETFs), which they can manage in a single centralized portfolio.

- AMCs are colloquially referred to as money managers or money management firms.
- AMCs maintain the diversity of their portfolio by investing in both high-risk and low-risk securities such as stock, debt, real estate, shares, bonds, pension funds, etc.
- **Returns-** Returns of the funds are market-linked and depend on the performance of the fund.
- **Regulator-** All AMCs are governed by SEBI and the Association of Mutual Funds in India (AMFI).

About AMFI:

- AMFI is a statutory body formed by mutual fund companies.
- **Vision-** AMFI was formed with the vision of a transparent and ethic-driven financial industry.
- It ensures that every AMC complies with the regulations led by AMFI.
- Banks being sponsors are governed by RBI as



well along with SEBI and AMFI.

About the Securities and Exchange Board of India (SEBI):

- The Securities and Exchange Board of India (SEBI) is the regulatory body for the securities and commodity market in India under the ownership of the Ministry of Finance within the Government of India.
- It was established on 12 April 1988 as an executive body and was given statutory powers on 30 January 1992 through the SEBI Act, 1992.
- The basic function of the SEBI is to protect the interests of investors in securities and to promote and regulate the securities market.

Way Forward:

AMCs should customise their surveillance systems and internal control procedures including alert types, parameters and thresholds based on backtesting of historical data to ensure effectiveness. AMCs should have a documented policy on types of actions to be taken based on the likelihood of wrongdoing and

other relevant factors.

7. MSME in India

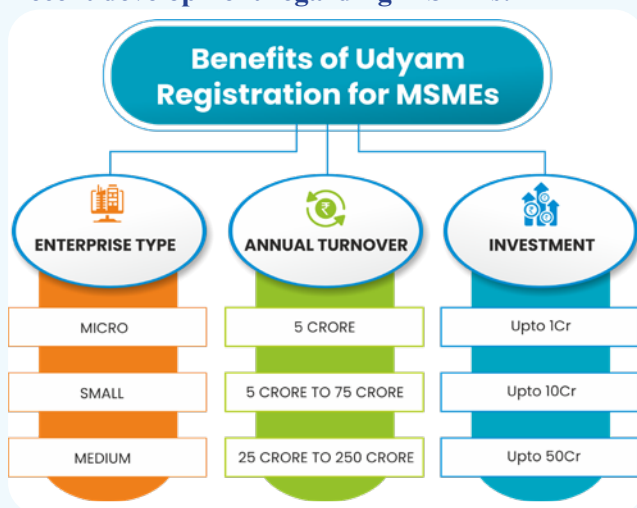
Why in News:

Reserve bank of India has published its annual report for financial year 2023. The report stated that the micro, small, and medium enterprises (MSMEs) record modest recovery. The revenue for MSMEs sector was projected to exceed pre COVID-level. The report also mentioned that Goods and Service Tax Network (GSTN) has been included as financial information provider (FIP) under Account Aggregator (AA) framework to felicitate cash flow based lending to MSMEs.

Definition of MSME

- **Micro Enterprise:** Investment in Plant and Machinery or Equipment not more than Rs.1 crore and Annual Turnover ; not more than Rs. 5 crore.
- **Small Enterprise:** Investment in Plant and Machinery or Equipment not more than Rs.10 crore and Annual Turnover; not more than Rs. 50 crore.
- **Medium Enterprise:** Investment in Plant and Machinery or Equipment not more than Rs.50 crore and Annual Turnover ; not more than Rs. 250 crore.

Recent development regarding MSMEs:



- In recent years, India has seen an increased focus on facilitating entrepreneurship through myriad schemes and initiatives.
- The number of recognised startups in the country has increased from 442 in 2016 to 92,683 in 2023.

- As per the MSME Annual Report of Government of India (2022-23), the micro sector has 63.05 million estimated enterprises, making up for over 99% of the total estimated number of micro, small and medium enterprises (MSMEs) in the country.
- The small sector houses 0.33 million enterprises and the medium sector a mere 5,000 firms.
- In February 2023, government announced in budget 2023-24 that a unified Skill India Digital Platform to be launched in order to enable demand-based formal skilling, linking with employers including MSMEs, and facilitating access to entrepreneurship schemes.
- For further development of MSMEs, government has launched Raising and Accelerating MSME Performance (RAMP) scheme. The scheme aims to improve market and credit access, strengthen institutions and governance at the centre and state levels, improve centre-state connections and partnerships, resolve late payment difficulties, and green MSMEs.
- In November 2021, the Ministry of Micro, Small and Medium Enterprises launched SAMBHAV, a national-level awareness programme to push economic growth by promoting entrepreneurship and domestic manufacturing.
- MSMEs contributes about 29 percent of India's GDP and employ more than 11 crore peoples.



Conclusion:

The Government of India has envisioned doubling the Indian economy to US\$ 5 trillion in five years by 2025. In order to achieve this goal, career opportunities for the young population to be generated and MSMEs have the potential to serve as a key employment generator. Therefore, the government has taken up promotion of MSMEs in order to create new jobs in the sector. In order to achieve these targets, the government should invest in providing more back-end services to improve performance of the MSME sector as it supplies goods and services to big industrial enterprises. At the same time, government should also focus on research and development for MSMEs sector.



Miscellaneous Issues



1. Kapileshwar Temple Got ASI 'Protected Monuments' Cover

Why in News:

The famous Kapileshwar Temple of Bhubaneswar, Odisha, was included in the list of the Archaeological Science Survey (ASI). In particular, the Gazette notification came on 5 May to bring Kapileshwar Temple to the ASI's protected monument list. This decision has been taken for better maintenance and protection of the structure of the temple.

Kapileshwar Temple:

- Kapileshwar Temple was renovated by Gajapati Kapilendra Dev in the 14th century and is known for its exquisite carvings and grand architecture.
- Kapileshwar Temple is a good example of the Kalinga style of architecture, which is known for its elegance and simplicity.
- This temple defines the intensive religious and cultural significance of the people of Odisha along with the rich history of the region.
- Kapileshwar, Shiva Temple, commonly called 'Kapileshwar Temple', is one of the oldest temples in the state of Odisha.
- Lord Shiva is worshipped at this temple under the name Kapileshvara which is situated in the Kapilprasad area which is about 1 km far from the 11th-century-old Lingraj Temple of Bhubaneswar.

Archaeological Survey of India:

- ASI is a major organization for archaeological research and protection of the country's cultural heritage. It was founded in 1861 by Alexander Cunningham.
- The major function of ASI is to maintain archaeological sites, ancient monuments and the remains of national importance.
- It controls all archaeological activities according to the provisions of ancient monuments and archaeological sites under the Act, 1958.
- It works under the Union Ministry of Culture.
- It also controls antiquity and art Treasury Act, 1972.

Way Forward:

- **New funding model discovery and implementation for heritage conservation:** such as public-private participation, crowdfunding and community-based funding. It can help ensure additional financial resources for heritage sites and ensure their sustainable conservation and maintenance.

- **Technology-competent protection:** Advanced techniques for documentation, monitoring and conservation of heritage sites such as remote sensing, virtual reality and data analysis will better aid in conservation and monitoring.
- **New ways to increase business:** Monuments should attract a large number of visitors and encourage their cultural importance. Further, it will provide a livelihood to the local people.
- Declaring the respective site as an abstract heritage.

2. Satellites Reveals Extensive Decline in Global Lake Water Storage

Why in News:

A recent study titled, Satellites Reveals Extensive Decline in Global Lake Water Storage, has shown that more than half of the large lakes and reservoirs around the world are drying up. Climate change and human activities are held responsible for this crisis.

Key Points:

- Lakes play an important role in conserving the world's freshwater reserves. Holding an astonishing 87% of the world's liquid surface fresh water, these bodies of water are essential to diverse ecosystems and human life. But these lakes are threatened by climate change and human activities.
- However, this study underlines the seriousness of the situation and shows that a significant number of these lakes are facing an alarming amount of loss.
- Secondly, the growing demand for water consumption by human activities adds to the problem by putting additional pressure on these already vulnerable bodies of water. Finally, sedimentation emerges as a major cause of storage loss in reservoirs, which effectively affects their overall capacity to hold water.
- The study revealed that 53% of the global lakes in 1972 have shown a statistically significant decline over the period between 1992-2020.
- The decline in water storage poses a direct threat to these ecosystems and communities, which depend on these lakes for various purposes including drinking water, irrigation and recreational activities.

Human Impact and Water Security:

- One-quarter or 25% of the world's population lives in dry lake basins, emphasizing the urgency of addressing this issue.

- Incorporating climate change and sedimentation impacts on sustainable water resource management becomes paramount.
- Emphasizes the importance of considering these factors to ensure the availability and access to water resources for present and future generations.

Way Forward:

603 cubic kilometres of water has been lost from lakes and reservoirs, which is 17 times the amount of water in Lake Mead, the largest reservoir in the United States. These astonishing figures highlight the magnitude of the problem and the dire need for a solution.

3. Sengol

Why in News:

Recently, on the inauguration of the New Parliament Building, the historical and sacred “Sengol” was established by Prime Minister Shri Narendra Modi.

About “Sengol” scepter:

- The word “sengol” is derived from the Tamil word “semmal”, which means “righteousness”.
- The “Sengol” scepter is a long, stick-like object (5 feet) made of silver and covered with gold.
- At the top of the scepter is a carving of a bull called Nandi. This is done to remind everyone about the importance of fair and just leadership in the country.
- It is believed to have links with the Chola dynasty, an ancient kingdom in Tamil Nadu. It is blessed by the chief adhinam (priests) of a prominent religious monastery in Tamil Nadu.
- To bring the ‘Sengol’ scepter to life, Chennai-based jeweler Wummidi Bangaru Chetty took on the task of crafting this historic symbol.

Historical Significance:

Anai Order:

- In the Chola tradition, during the transfer of power ceremony, in addition to the presentation of the scepter, an order called ‘anai’ (‘aanai’ in Tamil) was given to the new ruler.
- The order symbolizes the responsibility to ensure justice and fairness in the region, to govern with unwavering adherence to the principles of ‘Dharma’ and those elected to serve the people should never forget this.”

Suggested by C. Rajagopalachari:

- This is the same Sengol that on special occasion of August 14, 1947, night, Jawahar Lal Nehru along with specially arrived Adhinams (priests) from the Thiruvaduthurai Aadhinam (Monastery) in Tamil Nadu handed over ‘Sengol’

from Lord Mountbatten to Nehru symbolically representing the transfer of power.

- The idea of using the ‘Sengol’ scepter was given by C Rajagopalachari, the last Governor-General of India. He was inspired by a similar ceremony in the ancient Chola dynasty, where power was passed from one king to another.

Way Forward:

History repeated itself on 28 May 2023, when the new Parliament House was dedicated to the nation. On this day, the sacred symbol of just and fair governance was adopted by the Prime Minister Shri Narendra Modi and installed prominently near the seat of the Speaker of the Lok Sabha in the new Parliament Building. It will be displayed for the nation to see and taken out on special occasions. This is the moment which we are celebrating as the nectar festival of freedom.

4. Riverine-Based Religious Tourism Circuit

Why in News:

Recently a Memorandum of Understanding (MoU) was signed connecting seven historical temples along the Brahmaputra River to develop a ‘river bank-based religious tourism circuit’ in Northeast India.

About Riverine- Based Religious Tourism Circuit:

- It aims to promote river tourism and strengthen the tourism sector in Assam. It will be set up as a modern ferry service running on ‘Hop-on Hop-off’ mode.
- The waiting room for passengers at the ferry terminal will be provided with modern amenities in a comfortable environment.
- The circuit proposes to connect seven historic temples on the banks of the Brahmaputra – Kamakhya, Pandunath, Ashvakalanta, Douli Govinda, Umananda, Chakreshwar and Auniati Satra.
- This service will start from Hanuman Ghat, Ujan Bazar and cover all the seven religious places in less than 2 hours. The project will cost Rs 45 crore and will be completed within a year.
- Concerned Agency: The funds will be shared between Sagarmala Development Corporation Limited (SDCL), Inland Waterways Authority of India (IWAI) and Assam Tourism Development Corporation (ATDC).

Site

- Kamakhya
- Pandunath

Spiritual Significance

one of the 51 Shaktipeeths. An ancient temple dedicated to Lord Shiva and Parvati.

- **Ashwakalanta** Holy place associated with Lord Vishnu and his incarnation.
- **Dol Govinda** Dedicated to Lord Krishna; Known for Raas Leela celebrations
- **Umanand** Dedicated to Lord Shiva; located on the Umanand island.
- **Chakreshwar** Holy place with a temple dedicated to Lord Shiva
- **Auniati Satra** Major Vaishnava Monastery and Spiritual Center.

About Brahmaputra River:

- The Brahmaputra River (source: Chemayungdung Glacier) originates in southwestern Tibet and shares its source area with the Indus and Sutlej Rivers.
- It flows through a depression formed by the Indus-Tsangpo Formation region and enters Arunachal Pradesh as the Dihang River.
- After joining the Lohit and Dibang rivers, it is known as the Brahmaputra.
- The left bank of the river is fed by the Dhansiri, Lohit and Dibang Rivers, while the right bank receives the Subansiri, Kameng, Manas and Sankosh Rivers.

Way Forward:

India is showcasing the enormous potential of inland waterways, from ODC and OWC cargo movement through the Brahmaputra to the Ganga Vilas, the world's longest river cruise. The riverine-based religious project will develop the rich potential of inland waterways in Assam and the North Eastern region. Further, various historical, cultural and religious circuits are being developed under the Swadesh Darshan Yojana, Prasad Yojana and Dekho Apna Desh initiative, which will accelerate the development of New India.

5. Reviving the Ancient Buddhist Folklore

Why in News:

The long-awaited Hindi translation of five classical Tibetan Buddhist texts received from Tibet for the first time by India's renowned writer Rahul Sankrityayan (1893-1963) is now ready for print. The Government of Bihar has so far provided an initial amount of Rs 1.55 million to CIHTS out of Rs 19.4 million towards the printing cost.

What are ancient Tibetan Buddhist Manuscripts?

- The sacred texts-the Karma Vibhaga Sutras, the Prajnaparamitahridaya Sutras, a

collection by Acharya Dipankara Srigyana, the Madhyamakalangkarika Karika Bhashya and Tika and an assortment of other rare manuscripts.

- These are Tibetan versions of original Sanskrit texts on Buddhism and its philosophy written on palm leaves.
- These hundreds of volumes of manuscripts cover a wide range of different subjects including astrology, tantra, meditation, medicine, philosophy, justice and law.

Rahul Sankrityayan:

- Rahul Sankrityayan was a linguist as well as a creative polymath.
- He is known to have been fluent in Sanskrit, Pali and Tibetan and was well-versed in literature, philosophy, rare books and the arts.
- Sankrityayan collected over 10,000 Tibetan manuscripts.

About Tibetan Buddhism:

- It was brought from India in the late 8th century CE at the invitation of the Tibetan king Trisong Detsen, who invited two Buddhist masters to Tibet.
- Shantarakshita, the abbot of Nalanda, was the first to come to India, followed by Padmasambhava, also known as Guru Rinpoche and even considered the second Buddha by followers of the Nyingma-pa sect.
- Unique to Tibetan Buddhism is the institution of the tulku (incarnate lama): there have been many such lamas in Tibet, the most famous of whom is the Dalai Lama.
- Other important aspects of Tibetan Buddhism include: the position of teacher or "lama", the relationship between life and death, the important role of rituals and initiations, rich visual iconography, elements of earlier Tibetan religions, chants and meditation practice.

Tibetan Buddhism Groups Founders

- **Nyingmapa** Padmasambhava (This is the oldest community)
- **Kagyupa** Tilopa (988-1069)
- **Sakyapa** Gonchok Gyelpo (1034-1102)
- **Gelugpa** Tsong Khapa Lobsang Drakpa (1357 - 1419)

Way forward:

Translation of this Tibetan literature in Hindi will not only benefit the people of Bihar but the whole country. These translated texts have the potential to make a significant contribution to the preservation and development of the ancient Nalanda knowledge heritage and are a successful attempt to bring the profound teachings and philosophy of Buddhism to a wider audience.

6. Use of Ayurveda and Modern Medicine for Human Clinical Trials

Why in News:

Recently the Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha, Sowa Rigpa and Homeopathy (AYUSH) and the Indian Council of Medical Research (ICMR) finally approved the use of modern medicine (evidence-based medicine) in the treatment of some diseases conditions of national importance and have joined hands to conduct quality human clinical trials to generate evidence on the benefits of using Ayurveda.

Arguments for Collaboration of Ayurveda and Modern Medicine:-

- For decades, AYUSH systems have been used in India as a complementary or an alternative approach to modern medicine.
- However, the lack of scientific validation has been a major obstacle to the acceptance and integration of AYUSH into the mainstream healthcare system.
- ICMR's expertise in conducting clinical trials is expected to help overcome the limitations of earlier studies, which were anecdotal and lacked scientific validation.

Significance of the collaborative initiative between AYUSH and ICMR:-

ICMR's Expertise Established:

- This collaboration is an important step towards achieving quality human clinical trials.
- ICMR's vast experience in conducting human clinical trials is expected to play a vital role in designing and implementing quality trials that meet global standards.
- The involvement of ICMR is a significant advantage that can help overcome the major drawbacks of trials conducted in the past.

Scientific Verification of Combined Medicine:

- Another essential aspect of this initiative is the scientific validation of the combination of Ayurveda and modern medicine.
- The trials conducted under this collaboration are expected to provide substantial evidence on the benefits of integrating Ayurveda with modern medicine.

Implications for the Healthcare System:

Integration of traditional and modern medicine:-

- The collaboration could potentially lead to the development of integrative medical interventions that combine the best of both traditional and modern medicine

- This integration may lead to the development of new treatments and therapies that are more effective and have fewer side effects.

Improving patient outcomes and reducing health care costs:-

- Integrative medicine interventions can provide better outcomes for patients.
- It may reduce health care costs, as patients may require fewer hospitalizations and fewer medical procedures.

Increased acceptance of alternative medicine:-

- This collaboration may also increase the acceptance of alternative medicine by the mainstream medical community.
- Scientific recognition of the benefits of combining Ayurveda with modern medicine may help dispel some medical professionals' scepticism toward alternative medicine.

Way forward:

The collaboration between AYUSH and ICMR to conduct quality human clinical trials to study the benefits of combining Ayurveda with modern medicine is a welcome initiative. This initiative could have far-reaching implications for the healthcare system in India.

7. Wolf-Dog Hybridisation

Why in News:

The Citizen Scientists and researchers from the Grassland Trust have found the first photo-based evidence of Wolf-Dog hybridisation in Pune, India. The research is based on the findings of the Citizen Science Facilities (published in Ecology and Evolution Journal) located in the Peninsular part of India.

The Wolf-Dog Hybridisation:

- Wolf-Dog hybrid is a term used to identify the offspring that resulted from the mating between a wolf and a domestic dog.
- The Citizen Researchers have found a suspected wolf-dog hybrid animal with an unusually tawny coat that was captured in a photograph.
- The research based on their hair strands and further comparative genome sequencing study revealed the occurrence of wolf-dog hybridisation in Peninsular India.

Citizen Science and Citizen Researchers:

- Citizen Science is scientific research conducted with participation from the general public. In this practice, public collaboration is conducted to increase the scientific knowledge of the public. A citizen researcher refers to a person who takes part in the Citizen Researcher Project.

- The Research study is conducted in collaboration with National Centre for Biological Sciences. This is a premier research centre under the Tata Institute of Fundamental Research.

Causes for Wolf-Dog Hybridisation:

- The expansion of human habitats is leading to the fragmentation of wildlife habitats which results in an increased number of interactions between feral (domesticated) and wildlife animals.
- This kind of hybridisation poses a threat to the wild wolf population and disrupts the social structure of wolf packs.

Findings of Research:

- The researchers have analysed that these hybrids are not dead ends (infertile) because both males and females of canids or canines (dogs, wolves, dholes, jackals, foxes etc) are fertile.
- But further interbreeding would dilute the genetic diversity in the wild. It may be possible the key genetic attributes that enable the wolves to survive in the wild might get compromised

due to the introgression of dog genes.

Threat to Indian Grey Wolf:

- The researchers have suspected that this kind of hybridisation would pose a threat to the Indian Grey Wolf.
- The Wildlife Institute of India reported that there are 3,100 wolves in peninsular India. Indian Grey Wolves are already listed as an endangered species in Schedule I of the Indian Wildlife Act- 1972.
- They are distributed in the parts of Rajasthan, Gujarat, Karnataka, Madhya Pradesh, Maharashtra and Andhra Pradesh. These are the top predatory species of grasslands.

Way Forward

The researchers have noted that this scenario, if not controlled, would ultimately lead to an immense reduction in the wolf population. Therefore, there is a need to upscale the conservatory measures like tracking, monitoring and assessing the prey base and understanding the relationship between the human and wildlife.



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News Of National and International Importance

1. 50 Start-ups Exchange Program

- India and Bangladesh have launched a start-up exchange program to promote collaboration and partnership between their entrepreneurial communities.
- The objective of the event is to explore opportunities, share knowledge and enhance cooperation in various sectors such as e-commerce, healthcare, transport and logistics, energy, education and skill development. The framework and objectives of the program were established during the bilateral summit between the Prime Ministers of India and Bangladesh.
- Bangladeshi start-ups participating in the exchange program were introduced to India's "Start-up India" initiative, thereby gaining insight into various aspects of startup establishment and development. The visit of 10 Bangladeshi start-ups to India marked the beginning of the exchange programme, paving the way for future visits and collaboration between the entrepreneurial communities of the two countries.
- The program aims to enhance cooperation in new and emerging sectors, cutting edge technology, entrepreneurship and innovation.
- It provides a platform for start-ups to share experiences, build partnerships and learn from each other's successes and challenges.
- Collaboration between India and Bangladesh start-ups has the potential to drive economic growth, create job opportunities and spur innovation in both countries.

2. Non-Sugar Sweeteners

- The World Health Organization (WHO) has issued new guidelines for non-sugar sweeteners to prevent unhealthy weight gain and reduce the risk of non-communicable diseases (NCDs).
- Non-sugar sweeteners (NSS) such as aspartame, stevia and saccharin are commonly used as sugar substitutes in packaged foods and beverages.
- WHO guidelines suggest that NSS does not provide long-term benefits for weight control and may have unwanted effects, including an increased risk of type 2 diabetes, heart disease and mortality.
- NSS lacks nutritional value and is not considered an essential dietary factor. Alternative ways to reduce sugar intake such as consumption of fruits or sugar-free food and beverages should be explored.
- The guidelines for NSS apply to the general population except for persons with pre-existing diabetes.
- The guideline specifically deals with the consumption of NSS in food and beverages and does not extend to their use in personal care and hygiene products.
- WHO aims to promote healthy eating habits and improve diet quality worldwide by discouraging the use of NSS to reduce the risk of NCDs and promote lifelong health.

3. Khasi Tribe

- The Khasi Hills Autonomous District Council (KHADC) has issued a directive that persons of Khasi tribe who adopt their father's surname will not be eligible to obtain Scheduled Tribe (ST) certificates.
- Jaintias, Garos and Khasis are the three indigenous matrilineal tribes of Meghalaya.

Matrilineal Society:

- The Khasis follow a matrilineal system of society, where lineage and inheritance are traced through the mother, The youngest daughter of the family, the "Ka Khadduh", inherits all ancestral property.
- Most of its people today practice Christianity, whose traditional beliefs are governed by a Supreme Being, The Creator – U Blei Nongthaw.

Festivals:

- The Khasis celebrate various festivals, some of the major festivals include Nongkrem Dance Festival and Shad Suk Mynsiem, which showcase traditional music, dance and rituals.



4. Odisha Millet Mission

- Odisha Millet Mission (OMM) is an important initiative by the Government of Odisha to revive millet cultivation and support the farmers.
- Over 600,000 quintals of ragi have been successfully procured under the Odisha Millet Mission, providing farmers a secure market for their produce. This procurement has been done at the minimum support price (MSP) of Rs 3,578 per quintal.
- Southern Odisha districts such as Koraput, Rayagada, Malkangiri, Kalahandi, Gajapati and Sundargarh reported the highest amount of ragi procurement under OMM.
- Farmers have adopted the System of Millet Intensification (SMI) method to enhance their ragi yield; farmers are now harvesting around 5-6 quintals per acre.
- Local community-based organizations and agricultural experts have played an important role in promoting improved agricultural practices among farmers associated with the Odisha Millet Mission.
- The procurement process has been streamlined through Millets Purchase and Sale (MPAS) online system to ensure efficient management and timely payment to farmers.



5. 75/25 Initiative

- The Ministry of Health & Family Welfare has launched the “75/25” initiative, a transformative program aimed at revolutionizing the management and prevention of Non-communicable diseases (NCDs) in India.
- **Goal of the Initiative:** The initiative aims to ensure standardized care for 75 million persons with hypertension and diabetes by 2025, with a focus on Primary Health Centers (PHCs).
- **Training Medical Officer:** 40,000 primary health care medical officers will be trained on standard treatment workflow for non-communicable diseases (NCDs) through the SASHAKT portal.
- This training will enable health professionals to provide better services at the community level.

6. Chief Minister Learn & Earn Scheme

- Madhya Pradesh State Cabinet has approved ‘Chief Minister Learn and Earn Scheme’ to provide employment opportunities to the unemployed youth in the state.
- **Skill Development in Various Sectors:** The scheme provides training in about 700 different types of jobs in the fields of Engineering, Hotel Management, Tourism, ITI, Banking, Insurance etc and helping the youth to choose the areas according to their interest .
- Government is also actively promoting self-employment in the State.

7. Kalvari Class Submarine

- The Indian Navy’s sixth and final Kalvari class submarine, Vaghsheer, has begun its sea trials and is expected to be commissioned into the force by early next year.
- The submarine built under Project-75 will increase the combat capability of the Navy at a time when China is increasing its presence in the Indian Ocean region.

Project-75:

- Project 75 refers to India’s ambitious plan to build and acquire six advanced conventional submarines for the Indian Navy.
- The project aims to enhance the country’s naval capabilities and strengthen its maritime defense strategy.



8. Operation Dhvast

- Three people have been arrested in nationwide raids carried out by the National Investigation Agency (NIA) under Operation Dhvast. These raids are on networks linked to terrorists, gangsters and drug smugglers.
- In a coordinated operation with local police, raids were conducted at 129 locations in Punjab, Haryana, Delhi, Uttar Pradesh, Rajasthan, Maharashtra, Gujarat, Chandigarh and Madhya Pradesh.
- NIA action is part of the ongoing efforts to dismantle terrorist networks and their support systems.
- The agency is probing three cases since August 2022, including targeted killings, terror funding for pro-Khalistan organizations and extortion.
- The conspiracy was being hatched in prisons in various states and was being executed by an organized network which included operatives based in foreign countries.
- Some criminals who fled to countries like Pakistan, Canada, Malaysia and Australia are collaborating with jailed persons to plan serious crimes.

9. Law To Protect Health Workers

- Recently the Kerala cabinet approved a stringent law for the safety of health workers.
- It provides for severe punishment in the case of acts of violence.
- It provides for imprisonment of 6 months to 5 years, along with a fine of Rs. 50,000 to Rs. 2 lakh, for those who attempt to commit violence or incite others to commit violence.
- Provision has been made for one to seven years of imprisonment and a fine of Rs. 1 lakh to Rs. 5 lakh for those who commit serious physical violence.
- The act also ensures efficient investigation by police officers not below the rank of an Inspector with a time limit of 60 days.
- The procedures should be completed within one year.
- Special courts will be designated in each district to handle cases related to violence against health workers.
- The new act has expanded the scope of protection to include paramedical students, staff, security guards and others working in hospitals, protecting them from violence within the hospital premises.

10. Forum Shopping

- Recently CJI Chandrachud criticized 'forum shopping'.

What is Forum Shopping?

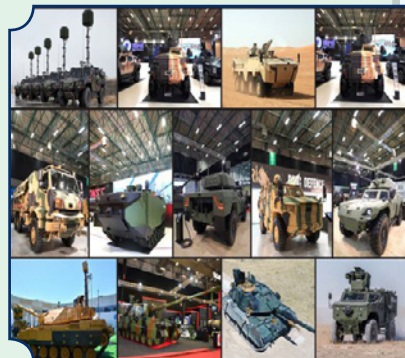
- Forum shopping occurs when litigants or lawyers deliberately petition to transfer their case to a specific judge or court in the hope of a more favorable decision.
- Lawyers consider appropriate forum as part of their litigation strategy, like going to Supreme Court through PIL case to attract more attention etc.
- However coercive attempts to circumvent the normal process or avoid a particular judge are disallowed because of the injustice done to the other party and the potential burden on some courts.
- It gives discretionary powers to the courts to refuse jurisdiction and refer the matter to a more appropriate forum in the interest of justice.
- "Bench hunting" is another term associated with forum shopping, where petitioners seek a specific judge or court to secure a favorable order.

Various Court Judgments:

- In the 1988 case of 'Chetak Construction Ltd. vs. Om Prakash', the Supreme Court emphasized that litigants cannot choose their own forum and declared that every attempt at forum shopping should be strongly opposed.
- The Delhi High Court imposed fines on companies found to be indulging in forum hunting, highlighting the court's commitment to preventing manipulative practices in the legal system.

11. Significant Growth In Defense Production Sector

- The value of defense production in the country has crossed Rs.1 lakh crore for the first time, indicating significant growth in the sector.
- The value of defense production is set to reach Rs. 1,06,800 crore in the financial year 2022-23, as against Rs. 95,000 crore last year and Rs. 54,951 crore five years ago.
- India has focused on the defense manufacturing sector by implementing the following measures:
 - » Import substitution.
 - » A separate budget for domestic purchases
 - » Increase in foreign direct investment.
 - » Ease of doing business
- Government policies have led to increased participation of industries including micro, small and medium enterprises (MSMEs) and start-ups, resulting in a significant increase in defense licenses issued.
- The corporatization of the Ordnance Factory Board (OFB) in 2021 has also contributed to enhanced defense production efficiency and competitiveness. With military hardware exports set to reach a record high of Rs.15,920 crore in FY 2022-23, India's focus is on boosting defense exports, which have seen significant growth in recent years.
- India has been exporting a range of weapons and systems to several countries, including missiles, artillery guns, rockets, vehicles, radars, surveillance systems and ammunition.

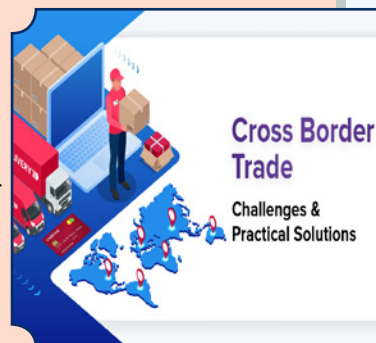


12. Methamphetamine

- Recently the Narcotics Control Bureau (NCB) and the Indian Navy conducted a joint operation off the Kerala coast. The operation resulted in the seizure of 2,500 kg of methamphetamine worth approximately Rs.15,000 crore.
- Methamphetamine (commonly known as meth) is a highly addictive central nervous system stimulant drug.
- It belongs to the amphetamine class of drugs and is chemically similar to amphetamine.
- Methamphetamine is usually manufactured in illegal laboratories and comes as a white crystalline powder that can be snorted, smoked, injected or taken orally.
- The seizure of this drug is the biggest ever in terms of monetary value by any anti-drug enforcement agency in India.
- The operation is part of 'Operation Samudragupt', which aims to eliminate maritime drug trafficking in the Indian Ocean region.

13. Cross-Border Trade Boost

- Pakistan and Iran inaugurated the first border market at Mand-Pishin crossing point on Pakistan-Iran border. The purpose of these border markets is to promote cross-border trade and economic development between the two countries.
- A new power transmission line was commissioned to provide Iranian-electricity to remote areas of Pakistan.
- The joint inauguration is a manifestation of the strong commitment of Pakistan and Iran to uplift the welfare of residents of the neighbouring provinces of Balochistan and Sistan-o-Baluchestan, respectively.
- These initiatives strengthen bilateral ties and helps in advancing cooperation.
- The Mand-Pishin border crossing point is the third on the 959 km long Pakistan-Iran border.



Current Affairs at a Glance

1. Educationist Manoj Soni was recently sworn in as the chairman of the Union Public Service Commission (UPSC).
2. Drug-makers Serum Institute of India and Panacea Biotec have applied to the Indian Council of Medical Research's (ICMR) call for 'Expression of Interest' for collaborative Phase-III clinical trials of indigenous dengue vaccine.
3. In Afghanistan, the Taliban regime has appointed Mawlawi Abdul Kabir as the caretaker prime minister and interim head of the cabinet. The decision was taken by the supreme leader of the Afghan Taliban, Mullah Haibatullah Akhund, owing to the ill health of Mullah Mohammad Hassan Akhund, the acting head of the Taliban regime.
4. Benin and Mali have successfully eliminated trachoma as a public health problem in their countries.
5. SAFE strategies (surgery, antibiotics, facial cleansing, environmental improvement) recommended by WHO have played an important role in combating trachoma. Trachoma is a disease of the eye caused by infection with the bacterium *Chlamydia trachomatis* and is spread through eye and nasal secretions as well as by flies.
6. Chief Minister of Uttarakhand inaugurated the "Patch Reporting App" developed by the Public Works Department to address the issue of potholes on the state's roads.
7. Chief Minister of Himachal Pradesh has announced the formulation of a 'Green Hydrogen' policy with the aim of establishing the state as a major hub for green hydrogen production. Himachal Pradesh has abundant renewable energy resources such as sunlight, water and wind, making it an ideal place to generate green hydrogen.
8. Rayyanah Barnawi and Ali Al-Qarni made history on 21 May 2023 as the first Arab passengers in space aboard a SpaceX Falcon 9 rocket.
9. Praveen Sood took over as the Director of the Central Bureau of Investigation (CBI).
10. Garden Reach Shipbuilders & Engineers (GRSE) Limited has launched the GAINS 2023 initiative to promote innovation in shipbuilding. GAINS 2023 aims to harness the potential of startups and encourage innovative solutions in ship design and construction.
11. Neeraj Chopra became the world number one player in the men's javelin throw rankings. Neeraj Chopra continues to top the charts with 1455 points, 22 points ahead of reigning world champion Anderson Peters (1433).
12. Recently Nigeria has commissioned Dangote Refinery. The refinery aims to address the persistent fuel shortage in Nigeria, which is Africa's largest oil producer.
13. According to the data released by the Ministry of Tourism, India witnessed 6.19 million foreign tourist arrivals during the same period of 2022 as compared to 1.52 million during 2021.
14. The e-office portal of the Pharmacopoeia Commission for Indian Medicine & Homeopathy (PCIM&H) was inaugurated by the Union Minister of AYUSH. The portal focuses on providing guidelines for standardisation, quality control and appropriate use of ASU&H medicines, promoting safety, efficacy and uniformity in traditional medicinal practices.
15. Novel 'Time Shelter' written by Georgy Gospodinov and translated into English by Angela Rodale has won the International Booker Prize 2023. It is the first time a novel originally published in Bulgarian has won the annual award. Last year, the award went to *The Sand Tomb* by Gitanjali Shree, translated into English by Daisy Rockwell.
16. Recently the Chief Minister of Kerala announced that Kerala has achieved the distinction of becoming India's first fully e-governed state. Under this comprehensive e-governance initiative, the Government of Kerala aims to deliver services directly to the public, thereby eliminating the need for citizens to visit government offices in person.
17. The Central Government approved the appointment of Justices RD Dhanuka and SV Gangapurvala as Chief Justices of the Bombay and Madras High Court respectively.
18. Researchers have discovered a new tree species in Arunachal Pradesh and named it *Mayogyne arunachalensis*, reflecting the rich flora of the region.

Why In Broadcast

The National Campaign for Updation and Verification of People's Biodiversity Register (PBR) was launched in Goa on the 22 May (World Biodiversity Day).

Future of PBRs

The national campaign for PBR would assist in following areas:

- Tracing the Habitat change.
- Preventing the Biopiracy.
- To understand the overlap of cultural and natural biodiversity.
- Promote the Inclusive approach in executive exercise.

Biodiversity Management Committee (BMC)

- The BMCs are constituted as per the Biological Diversity Act 2002.
- They are created for "promoting conservation, sustainable use and documentation of biological diversity" by local bodies across the country.
- They have been constituted by the local bodies in States and Union Territories.
- They are entrusted with the preparation of the PBRs in the consultations of local communities.
- It is headed by a chairperson nominated by the local body.
- The members of committee can't be more than 6 persons in which 1/3 and 18% should belong to women and SC/STs respectively.

Aim

- It aims to establish a People's Biodiversity Register in every village of India under Mission Life.

What does it means

- PBR is a comprehensive record of locally available Bio-resource of a particular area or village.
- The bio-resource includes the landscape and demography of any area.
- It is prepared by the Biodiversity Management Committees in consultation with the local communities.

Objective

- PBR is designed as a tool for the formal maintenance of local knowledge with proper validation.
- It is also a record of knowledge, perception, attitude of people about natural resources, plants and animals, their utilization and conservation in a village or a panchayat.

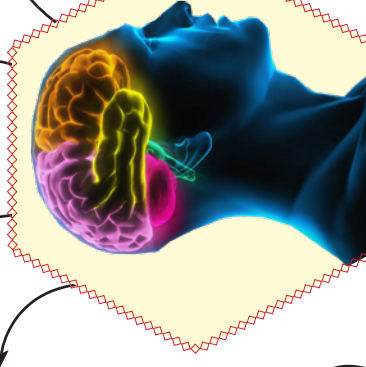
Status of PBR in India

- 2,67,608 PBRs have been prepared by the Biodiversity Management Committees in different states.
- The Ministry of Forest, Environment and Climate Change is also running a program to digitize the PBRs (e-PBR).
- Kolkata was first metropolitan city to prepare a detailed PBR.

Significance

- PBR is a step towards the documentation & preservation of India's rich biodiversity.
- It is the first step towards bridging the gap between intellectual property rights of local people and benefits derived from genetic resources.
- It accumulates the traditional knowledge about biodiversity and enables the local communities to share those benefits.
- It is prepared in accordance with the vision of Mission LIFE (Lifestyle For Environment).
- It also serves as a standard to track the performance level of environment focused strategies.

People's Biodiversity Register

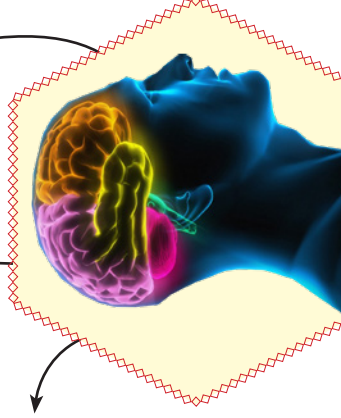


Why In Broadcast

The World Health Organization launched a global network called International Pathogen Surveillance Network (IPSN) to help swiftly detect the threat from infectious diseases, like COVID-19, and share the information to prevent their spread.

More Info

- COVID-19 highlighted the critical role pathogen genomics plays when responding to pandemic threats.
- Without the rapid sequencing of the SARS CoV-2 virus, vaccines would not have been as effective and not have become available as quickly.
- Genomics lies at the heart of effective epidemic and pandemic preparedness and response.
- The IPSN would help address such challenges, since it could give every country access to pathogen genomic sequencing and analytics as part of its public health system.
- The network aims to help ensure infectious disease threats are swiftly identified and tracked and the information shared and acted on to prevent catastrophes like the Covid pandemic.
- It is the latest of several initiatives launched since COVID-19 that aim to bolster the world's ability to prevent and more effectively respond to pandemic threats.



The International Pathogen Surveillance Network

About IPSN

- IPSN is a global network of pathogen genomic actors, hosted by the WHO Hub for Pandemic and Epidemic Intelligence.
- The network rely on pathogen genomics to analyse the genetic code of viruses, bacteria and other disease-causing organisms to understand how infectious and deadly they are and how they spread.
- IPSN enables faster detection of new pathogens and the enhanced tracking of the spread and evolution of diseases.
- The IPSN also supports ongoing disease surveillance and will help detect new disease threats before they become epidemics or pandemics.
- IPSN will provide a platform for connecting countries and regions, improving systems for collecting and analyzing samples.
- The IPSN will have a secretariat within the WHO's Hub for Pandemic and Epidemic Intelligence.
- The network will bring together experts on genomics and data analytics, drawn from governments, academia and the private sector.

Genomics and Infectious Disease

- Genomic technologies play a vital role in the control of infectious disease threats.
- The rapid and accurate analysis of microbial DNA enables detection of new threats and outbreaks.
- This new knowledge is fuelling more effective interventions to prevent and manage the spread of disease.

World Health Organization

- The WHO, headquartered in Geneva, Switzerland, is a specialized agency of the UN responsible for international public health.
- It was established On 7th April, 1948.
- Tedros Adhanom Ghebreyesus, an Ethiopian public health official is the first African origin Director-General of WHO.

Why In Broadcast

Anti-Tobacco Day, also known as World No Tobacco Day, is observed as a global initiative led by the World Health Organization (WHO) to raise awareness about the harmful effects of tobacco use and to advocate for effective policies to reduce tobacco consumption.

Health Effects

Cancer:

Tobacco can cause cancer almost anywhere in your body, including the

1. Blood (acute myeloid leukemia)
2. Bladder
3. Cervix
4. Colon and rectum
5. Esophagus
6. Kidney and renal pelvis
7. Larynx
8. Liver
9. Lungs
10. Mouth and throat
11. Pancreas
12. Stomach

Heart Disease and Stroke:

Smoking is a major cause of CVD and causes one of every four deaths from CVD.⁹ Smoking can:

1. Raise triglycerides (a type of fat in your blood)
2. Lower "good" cholesterol (HDL)
3. Make blood sticky and more likely to clot, which can block blood flow to the heart and brain
4. Damage cells that line the blood vessels
5. Increase the buildup of plaque in blood vessels
6. Cause thickening and narrowing of blood vessels

Chronic Obstructive Pulmonary Disease:

1. Chronic obstructive pulmonary disease

Objective

➤ The objective of Anti-Tobacco Day is to educate the public about the health risks associated with tobacco use, including smoking and smokeless tobacco products.

➤ It highlights the importance of quitting tobacco and encourages governments, organizations, and individuals to take action against tobacco use.

History

➤ In 1987, the World Health Assembly passed Resolution WHA40.38, calling for April 7, 1988, to be "a world no-smoking day."

➤ In 1988, Resolution WHA42.19 was passed, calling for the celebration of World No Tobacco Day, every year on May 31.

Theme

➤ This year the theme of the World No Tobacco Day is 'We need food, not tobacco'.

➤ Around 3.5 million hectares of land are converted for tobacco growing each year globally which is creating food insecurity worldwide.

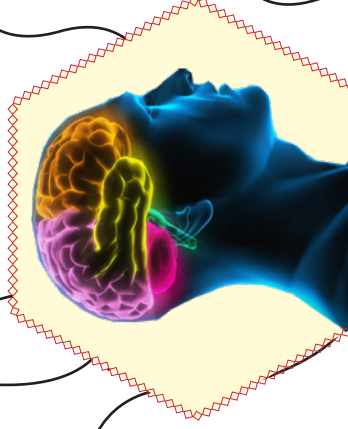
Theme Objectives

➤ Mobilize governments to end subsidies on tobacco growing and use of savings for crop substitution programmes that support farmers to switch and improve food security and nutrition.

➤ Raise awareness in tobacco farming communities about the benefits of moving away from tobacco and growing sustainable crops.

➤ Support efforts to combat desertification and environmental degradation by decreasing tobacco farming.

World No Tobacco Day 2023



(COPD) refers to a group of diseases that cause airflow blockage and breathing-related problems.

2. COPD includes emphysema; chronic bronchitis; and in some cases, asthma.

Smoking During Pregnancy:

1. Women who smoke have more difficulty becoming pregnant and have a higher risk of never becoming pregnant.
2. Smoking during pregnancy can cause tissue damage in the unborn baby.

Why In Broadcast

The Indian Space Research Organisation is collaborating with the Raman Research Institute (RRI), Bengaluru to build the X-Ray Polarimeter Satellite (XPoSat) that is scheduled to be launched later this year.

Introduction

- According to ISRO, “XPoSat will study various dynamics of bright astronomical X-ray sources in extreme conditions”.
- It has been billed as India’s first, and only the world’s second polarimetry mission that is meant to study various dynamics of bright astronomical X-ray sources in extreme conditions.
- The other such major mission is NASA’s Imaging X-ray Polarimetry Explorer (IXPE) that was launched in 2021.

Conclusion

- India’s endeavour to launch the X-Ray Polarimeter Satellite (XPoSat) marks a significant milestone in the country’s space research efforts.
- By utilizing polarimetry techniques, XPoSat will provide valuable insights into the nature and behaviour of these celestial objects, including black holes, neutron stars, and pulsars.
- As XPoSat prepares for its launch, it holds the promise of expanding our understanding of the universe and making notable contributions to the field of astrophysics.

Understanding X-Rays in Space

- X-rays have much higher energy and much shorter wavelengths, between 0.03 and 3 nanometers.
- The physical temperature of an object determines the wavelength of the radiation it emits. The hotter the object, the shorter the wavelength of peak emission.
- X-rays come from objects that are millions of degrees Celsius such as pulsars, galactic supernova remnants and black holes.

The Significance of Polarimetry

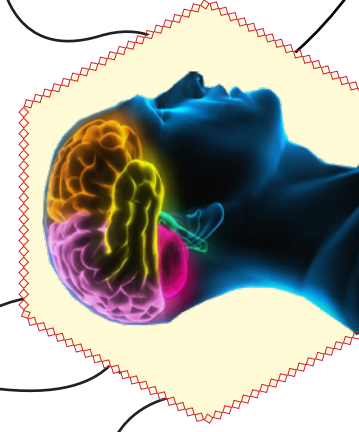
- “Like all forms of light, X-rays consist of moving electric and magnetic waves. Usually, peaks and valleys of these waves move in random directions.
- The field of polarimetry studies the measurement of the angle of rotation of the plane of polarised light (that is, a beam of light in which the vibrations of the electromagnetic waves are confined to one plane) that results upon its passage through certain transparent materials, according to Britannica.

ISRO’s Efforts with XPoSat

- ISRO’s website states that the emission mechanism from various astronomical sources such as black holes, neutron stars, active galactic nuclei, pulsar wind nebulae, etc. originates from complex physical processes and is challenging to understand.
- Space-based observatories are also unable to provide information about the exact nature of the emissions from such sources. Therefore, newer devices are required to measure specific properties.

XPoSat Payloads

- The spacecraft will carry two scientific payloads in a low Earth orbit. The primary payload, POLIX (Polarimeter Instrument in X-rays), will measure the polarimetry parameters (degree and angle of polarization).
- The payload is being developed by RRI in collaboration with ISRO’s U R Rao Satellite Centre (URSC) in Bengaluru.
- The XSPECT (X-ray Spectroscopy and Timing) payload will provide spectroscopic information (on how light is absorbed and emitted by objects). It would observe several types of sources, such as X-ray pulsars, black hole binaries, low-magnetic field neutron stars, etc.



XPoSat

Why In Broadcast

Government will supply 35 million tonne (MT) of iron fortified rice to the 800 million beneficiaries under the National Food Security Act (NFSA) by March 31, 2024, a food ministry official informed on 24 May, 2023.

Technologies Available for Fortification of Rice

There are three main technologies available to produce fortified rice.

- **Coating:** In the coating method, the nutrient (vitamin or mineral mix) is combined with ingredients such as waxes and gums. It is then sprayed on the surface of rice grains in several layers. This is then blended with polished rice at about a ratio of 1:100.
- **Dusting:** In dusting, micronutrients in the form of fine particles are blended with bulk rice. This method makes use of the electrostatic forces between the rice's surface and the micronutrients.
- **Extrusion**

Rice Fortification Technology available in India

- In India, rice is fortified using extrusion technology.
- In this technology, milled rice is pulverized and mixed with a premix containing vitamins and minerals.
- Fortified rice kernels (FRK) are produced from this mixture using an extruder machine.
- FRK is added to traditional rice in ratio ranging from 1:50 to 1:200 resulting in fortified rice nearly identical to traditional rice in aroma, taste and texture.

Standards

Under the Ministry's guidelines, 10 gm of FRK must be blended with 1 Kg of regular rice. According to FSSAI norms, 1 Kg of fortified rice shall contain,

- Iron (28-42.5 mg)
- Folic Acid (75-125 microgram)
- Vitamin B-12 (0.75-1.25 microgram)
- **Rice may also be fortified with following-**
- Zinc (10-15 mg)
- Vitamin A(500-750 microgram RE)
- Vitamin B-1(1-1.5 mg)
- Vitamin B-2 (1.25-1.75 mg)
- Vitamin B-3 (12.5-20 mg)
- Vitamin B-6 (1.5-2.5 mg)

About Rice Fortification

Rice fortification is the process of increasing essential micronutrients in rice, so as to improve the nutritional quality of the food supply and provide a public health benefit with minimal risk to health.

Why Fortify Rice?

- India is a leading rice producing country, with 22 percent of the total global rice production and 65% of India's population consumes rice on a daily basis- the per capita rice consumption in India is 6.8 kilogram per month.
- Rice is therefore a large source of calories and core component of agriculture and nutrition in most of India though low in micronutrients.
- Milling of rice removes the fat and micronutrient rich bran layers to produce the commonly consumed starch white rice while polishing further removes 75-90% of vit. B1, vit. B6, vit. E and Niacin.
- Fortifying rice provides an opportunity to add back the lost micronutrients but to also add others such as iron, zinc, folic acid, vit. B12 and vit. A.

Fortified Rice

Efficacy and Effectiveness Studies on Rice Fortification

Studies conducted in India:

- Rice Fortification Pilot Study in Gadchiroli, Maharashtra, 2018 - 2020.
- Rice Fortification Study in School in Gujarat, 2018-2019.
- Improving the Iron and Vitamin A status in Indian Schoolchildren, 2014

International studies:

- Fortified Rice in Public Child Day Care Centers, Brazil, 2013.
- Fortified Rice in Public Schools in Brazil, 2013.
- Fortified Rice in Child Day Care Centers, Brazil, 2012.
- Clinical impact study of micronutrients fortified rice for teen girls, Indonesia, 2016

Why In Broadcast

India's New Parliament building (NPB) was inaugurated on 28 May, 2023 by PM Narendra Modi. PM installed the historic 'Sengol' near the Lok Sabha Speaker's chair.

The New Building, with New Features

- The NPB will have a built-up area of about 65,000 sq. mt. Its triangular shape ensures optimum space utilization.
- The NPB and the Old Parliament Building to work together as an ensemble. This will facilitate smooth and efficient functioning of operations of the Parliament.
- The NPB will house larger chambers for legislature.
- A larger Lok Sabh Hall with a capacity of up to 888 seats. It is based on Peacock theme.
- A larger Rajya Sabha Hall with a capacity of up to 384 seats. It is based on Lotus theme.
- The Lok Sabha Hall may accommodate up to 1272 seats for joint sessions.
- A Platinum-rated Green Building will be a symbol of India's commitment towards environmental sustainability.

Some Figures

- 2304095 Man-Days employment generated
- 26045 MT steel used
- 63807 MT cement used
- 9689 cubic meter fly ash used

Foundation Stone of the New Parliament Building

PM laid the foundation stone of the new Parliament Building on 10th December 2020 in New Delhi.

Need for the New Parliament Building

- The old Parliament House building construction was started in 1921 and commissioned in 1927. It is almost 100 years old and a Heritage Grade-I building.
- Over the years, the parliamentary activities and the number of people working therein and visitors have increased manifold.
- There is no record or document of the original design of the building.
- The new constructions and modifications have been done in an ad-hoc manner.

Narrow Seating Space for MPs:

- The present building was never designed to accommodate a bicameral legislature for a full-fledged democracy.
- The number of Lok Sabha seats has remained unaltered at 545 based on the delimitation carried out on the basis of 1971 Census.
- It is likely to increase substantially after 2026 as the freeze on total number of seats is only till 2026.
- The Central Hall has seating capacity only for 440 persons.

Distressed Infrastructure:

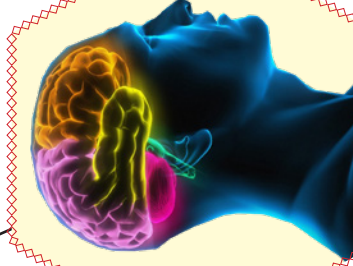
- Over the period addition in services, which were not originally planned, have led to seepages and destroyed the overall aesthetics of the building.
- The fire safety is a major concern as the building is not designed according to the present fire norms.

Obsolete Communication Structures

- In the old Parliament House, the communications infrastructure and technology is antiquated.

Safety Concerns

- There are structural safety concerns of the building.



New Parliament Building

Why In Broadcast

Recently, International Energy Agency published a report titled "World Energy Investment 2023". As per report, About \$2.8 trillion is set to be invested globally in energy in 2023, of which more than \$1.7 trillion is expected to go to clean technologies and remainder, more than \$1 trillion, is going to coal, gas, and oil.

Way Forward

- Much more needs to be done by the international community, especially to drive investment in lower-income economies, where the private sector has been reluctant to venture.
- The financial community has a critical role to play in the massive ramp-up of clean energy spending needed to meet climate goals and the reallocation of capital away from fossil fuels.
- The proliferation of sustainable finance practices is an indicator of this trend, with a growing number of financial institutions pledging to align their financing with net zero scenarios.

International Energy Agency

- The International Energy Agency (IEA) is a Paris-based autonomous intergovernmental-organization, established in 1974.
- It provides policy recommendations, analysis and data on the entire global energy sector.
- The 31 member countries (Including India) and 11 association countries of the IEA represent 75% of global energy demand.
- The IEA was set up under the framework of the Organization for Economic Cooperation and Development (OECD) after 1973 Oil Crisis.

Overview and Key Findings

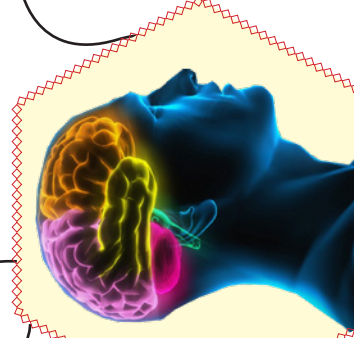
Sustainable Finance:

- Investment in clean energy technologies is significantly outpacing spending on fossil fuels.
- Annual clean energy investment is expected to rise by 24% between 2021 and 2023, driven by renewables and electric vehicles, compared with a 15% rise in fossil fuel investment over the same period.
- Clean energy investments got a boost in recent years, due to strong economic growth and volatile fossil fuel prices that raised concerns about energy security, especially following Russia's invasion of Ukraine.
- The biggest shortfalls in clean energy investment are in emerging and developing economies. However, there are some bright spots, such as dynamic investments in solar in India.

Energy Efficiency:

- Led by solar, low-emissions electricity technologies are expected to account for almost 90% of investment in power generation.
- Global heat pump sales have seen double-digit annual growth since 2021.
- Electric vehicle sales are expected to leap by a third this year after already surging in 2022.

World Energy Investment 2023



R&D and Technology Innovation:

- Globally, public spending on energy R&D rose by 10% in 2022, to nearly USD 44 billion, with 80% devoted to clean energy.
- This trend has buoyed innovation in recent years despite macroeconomic uncertainty.

MCQs based on Preliminary Exam

01. Which of the following are the reasons for the occurrence of multi-drug resistance in microbial pathogens in India?

 1. Genetic predisposition of some people
 2. Taking incorrect doses of antibiotics to cure diseases
 3. Using antibiotics in livestock farming
 4. Multiple chronic diseases in some people

Select the correct answer using the code given below:

(a) 1 and 2 (b) 2 and 3 only
(c) 1, 3 and 4 (d) 2, 3 and 4

02. Rajya Sabha has equal powers with Lok Sabha in:

 - (a) The matter of creating new All India Services
 - (b) Amending the Constitution
 - (c) The removal of the government
 - (d) Making cut motions

03. With reference to the funds under *Members of Parliament Local Area Development Scheme (MPLADS)*, which of the following statements are correct?

 1. MPLADS funds must be used to create durable assets like physical infrastructure for health, education, etc.
 2. A specified portion of each MP's fund must benefit SC/ST populations.
 3. MPLADS funds are sanctioned on yearly basis and the unused funds cannot be carried forward to the next year.
 4. The district authority must inspect at least 10% of all works under implementation every year.

Select the correct answer using the code given below :

(a) 1 and 2 only (b) 3 and 4 only
(c) 1, 2 and 3 only (d) 1, 2 and 4 only

04. Which of the following has/have occurred in India after its liberalization of economic policies in 1991?

 1. Share of agriculture in GDP increased enormously.
 2. Share of India's exports in world trade increased.
 3. FDI inflows increased.
 4. India's foreign exchange reserves increased enormously.

Select the correct answer using the codes given below:

(a) 1 and 4 only (b) 2, 3 and 4 only

(c) 2 and 3 only (d) 1, 2, 3 and 4

05. Along with the Budget, the Finance Minister also places other documents before the Parliament which include "The Macro Economic Framework Statement". The aforesaid document is presented because this is mandated by:

 - (a) Long standing parliamentary convention
 - (b) Article 112 and Article 110(1) of the Constitution of India
 - (c) Article 113 of the Constitution of India
 - (d) Provisions of the Fiscal Responsibility and Budget Management Act, 2003

06. Consider the following pairs :

International agreement/ Organisation	Subject
1. Alma-Ata Declaration	- Healthcare of the people
2. Hague Convention	- Biological and chemical weapons
3. Talanoa Dialogue	- Global climate change
4. Under2 Coalition	- Child rights

Which of the pair/s given above is/are correctly matched ?

(a) 1 and 2 only (b) 4 only
(c) 1 and 3 only (d) 2, 3 and 4 only

07. A Parliamentary System of Government is one in which :

 - (a) All political parties in the Parliament are represented in the Government
 - (b) The Government is responsible to the Parliament and can be removed by it
 - (c) The Government is elected by the people and can be removed by them
 - (d) The Government is chosen by the Parliament but cannot be removed by it before completion of a fixed term

08. In the context of India, which one of the following is the characteristic appropriate for bureaucracy?

 - (a) An agency for widening the scope of parliamentary democracy
 - (b) An agency for strengthening the structure of federalism
 - (c) An agency for facilitating political stability and economic growth
 - (d) An agency for the implementation of public policy

- 09.** The *Preamble to the Constitution of India* is:
 (a) A part of the Constitution but has no legal effect
 (b) Neither a part of the Constitution nor has legal effect.
 (c) A part of the Constitution and has the same legal effect as any other part.
 (d) A part of the Constitution but has no legal effect independently of other parts.
- 10.** With reference to the provisions contained in *Part IV of the Constitution of India*, which of the following statements is/are correct ?
 1. They shall be enforceable by courts.
 2. They shall not be enforceable by any court.
 3. The principles laid down in this part are to influence the making of laws by the State.
 Select the correct answer using the code given below:
 (a) 1 only (b) 2 only
 (c) 1 and 3 only (d) 2 and 3 only
- 11.** Consider the following statements :
 1. The President of India can summon a session of the Parliament at such place as he/she thinks fit.
 2. The Constitution of India provides for three sessions of the Parliament in a year, but it is not mandatory to conduct all three sessions.
 3. There is no minimum number of days that the Parliament is required to meet in a year.
 Which of the statement/s given above is/are correct?
 (a) 1 only (b) 2 only
 (c) 1 and 3 only (d) 2 and 3 only
- 12.** With reference to the history of India, consider the following pairs :
 1. Aurang - In-charge of treasury of the State
 2. Banian - Indian agent of the East India Company
 3. Mirasidar - Designated revenue payer to the State
 Which of the pair/s given above is/are correctly matched?
 (a) 1 and 2 only (b) 2 and 3 only
 (c) 3 only (d) 1, 2 and 3
- 13.** Consider the following events in the history of India :
 1. Rise of Pratiharas under King Bhoja
 2. Establishment of Pallava power under Mahendravarman - I
 3. Establishment of Chola power by Parantaka - I
 4. Pala dynasty founded by Gopala
 What is the correct chronological order of the above events, starting from the earliest time?
 (a) 2-1-4-3 (b) 3-1-4-2
 (c) 2-4-1-3 (d) 3-4-1-2
- 14.** Which of the following phrases defines the nature of the 'Hundi' generally referred to in the *sources of the post-Harsha period*?
 (a) An advisory issued by the king to his subordinates
 (b) A diary to be maintained for daily accounts
 (c) A bill of exchange
 (d) An order from the feudal lord to his subordinates
- 15.** The *Gandhi-Irwin Pact* included which of the following ?
 1. Invitation to Congress to participate in the Round Table Conference
 2. Withdrawal of Ordinances promulgated in connection with the Civil Disobedience Movement
 3. Acceptance of Gandhiji's suggestion for enquiry into police excesses
 4. Release of only those prisoners who were not charged with violence
 Select the correct answer using the code given below:
 (a) 1 only (b) 1, 2 and 4 only
 (c) 3 only (d) 2, 3 and 4 only
- 16.** The 'Vital-Vidhvansak', the first monthly journal to have the untouchable people as its target audience was published by:
 (a) Gopal Baba Walangkar
 (b) Jyotiba Phule
 (c) Mohandas Karamchand Gandhi
 (d) Bhimrao Ramji Ambedkar
- 17.** Who among the following rulers advised his subjects through this inscription ?
 "Whosoever praises his religious sect or blames other sects out of excessive devotion to his own sect, with the view of glorifying his own sect, he rather injures his own sect very severely."
 (a) Ashoka
 (b) Samudragupta
 (c) Harshavardhana
 (d) Krishnadeva Raya
- 18.** Indigo cultivation in India declined by the beginning of the 20th century because of:
 (a) Peasant resistance to the oppressive

- conduct of planters
- (b) Its unprofitability in the world market because of new inventions
- (c) National leaders' opposition to the cultivation of indigo
- (d) Government control over the planters
- 19.** Wellesley established the Fort William College at Calcutta because:
- (a) He was asked by the Board of Directors at London to do so
- (b) He wanted to revive interest in oriental learning in India
- (c) He wanted to provide William Carey and his associates with employment
- (d) He wanted to train British civilians for administrative purpose in India
- 20.** With reference to the scholars/litterateurs of ancient India, consider the following statements :
1. Panini is associated with Pushyamitra Shunga.
 2. Amarasimha is associated with Harshavardhana.
 3. Kalidasa is associated with Chandra Gupta - II.
- Which of the statement/s given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
- (c) 3 only (d) 1, 2 and 3
- 21.** With the present state of development, *Artificial Intelligence* can effectively do which of the following?
1. Bring down electricity consumption in industrial units
 2. Create meaningful short stories and songs
 3. Disease diagnosis
 4. Text-to-Speech Conversion
 5. Wireless transmission of electrical energy
- Select the correct answer using the code given below :
- (a) 1, 2, 3 and 5 only (b) 1,3 and 4 only
- (c) 2,4 and 5 only (d) 1, 2, 3, 4 and 5
- 22.** With reference to "Blockchain Technology", consider the following statements :
1. It is a public ledger that everyone can inspect, but which no single user controls.
 2. The structure and design of blockchain is such that all the data in it are about cryptocurrency only.
 3. Applications that depend on basic features of blockchain can be developed without anybody's permission.
- Which of the statement/s given above is/are correct?
- (a) 1 only (b) 1 and 2 only
- (c) 2 only (d) 1 and 3 only
- 23.** With reference to *carbon nanotubes*, consider the following statements :
1. They can be used as carriers of drugs and antigens in the human body.
 2. They can be made into artificial blood capillaries for an injured part of human body.
 3. They can be used in biochemical sensors.
 4. Carbon nanotubes are biodegradable.
- Which of the statements given above are correct?
- (a) 1 and 2 only (b) 2, 3 and 4 only
- (c) 1, 3 and 4 only (d) 1, 2, 3 and 4
- 24.** If you withdraw Rs. 1,00,000 in cash from your Demand Deposit Account at your bank, the immediate effect on aggregate money supply in the economy will be :
- (a) To reduce it by 1,00,000
- (b) To increase it by Rs. 1,00,000
- (c) To increase it by more than Rs. 1,00,000
- (d) To leave it unchanged
- 25.** In India, why are some nuclear reactors kept under "IAEA Safeguards" while others are not?
- (a) Some use uranium and others use thorium
- (b) Some use imported uranium and others use domestic supplies
- (c) Some are operated by foreign enterprises and others are operated by domestic enterprises
- (d) Some are State-owned and others are privately-owned
- 26.** If the RBI decides to adopt an expansionist monetary policy, which of the following would it **not** do?
1. Cut and optimize the Statutory Liquidity Ratio
 2. Increase the Marginal Standing Facility Rate
 3. Cut the Bank Rate and Repo Rate
- Select the correct answer using the code given below:
- (a) 1 and 2 only (b) 2 only
- (c) 1 and 3 only (d) 1, 2 and 3
- 27.** With reference to the Indian economy after the 1991 economic liberalization, consider the following statements :
1. Worker productivity (Rs. per worker at 2004 - 05 prices) increased in urban areas while it decreased in rural areas.

2. The percentage share of rural areas in the workforce steadily increased.
3. In rural areas, the growth in non-farm economy increased.
4. The growth rate in rural employment decreased.

Which of the statement/s given above is/are correct?

- (a) 1 and 2 only (b) 3 and 4 only
(c) 3 only (d) 1, 2 and 4 only

28. In India, which of the following can be considered as *public investment in agriculture*?

1. Fixing Minimum Support Price for agricultural produce of all crops
2. Computerization of Primary Agricultural Credit Societies
3. Social Capital development
4. Free electricity supply to farmers
5. Waiver of agricultural loans by the banking system
6. Setting up of cold storage facilities by the governments

Select the correct answer using the code given below:

- (a) 1, 2 and 5 only (b) 1, 3, 4 and 5 only
(c) 2, 3 and 6 only (d) 1, 2, 3, 4, 5 and 6

29. What is the importance of the term "Interest Coverage Ratio" of a firm in India?

1. It helps in understanding the present risk of a firm that a bank is going to give loan to.
2. It helps in evaluating the emerging risk of a firm that a bank is going to give loan to.
3. The higher a borrowing firm's level of Interest Coverage Ratio, the worse is its ability to service its debt.

Select the correct answer using the code given below :

- (a) 1 and 2 only (b) 2 only
(c) 1 and 3 only (d) 1, 2 and 3

30. Consider the following pairs :

River	Flows into
1. Mekong	- Andaman Sea
2. Thames	- Irish Sea
3. Volga	- Caspian Sea
4. Zambezi	- Indian Ocean

Which of the pair/s given above is/are correctly matched?

- (a) 1 and 2 only (b) 3 only
(c) 3 and 4 only (d) 1, 2 and 4 only

31. With reference to the cultural history of India, consider the following pairs :

1. Parivrajaka - Renunciant and Wanderer

2. Shramana - Priest with a high status
3. Upasaka - Lay follower of Buddhism

Which of the pairs given above are correctly matched?

- (a) 1 and 2 only (b) 1 and 3 only
(c) 2 and 3 only (d) 1, 2 and 3

32. Which of the following 'Protected Areas' are located in Cauvery basin?

1. Nagarhole National Park
2. Papikonda National Park
3. Sathyamangalam Tiger Reserve
4. Wayanad Wildlife Sanctuary

Select the correct answer using the code given below :

- (a) 1 and 2 only (b) 3 and 4 only
(c) 1, 3 and 4 only (d) 1, 2, 3 and 4

33. The term 'Intended Nationally Determined Contributions' is sometimes seen in the news in the context of:

- (a) Pledges made by the European countries to rehabilitate refugees from the war-affected Middle East.
- (b) Plan of action outlined by the countries of the world to combat climate change.
- (c) Capital contributed by the member countries in the establishment of Asian Infrastructure Investment Bank.
- (d) Plan of action outlined by the countries of the world regarding Sustainable Development Goals.

34. With reference to the period of Gupta dynasty in ancient India, the towns *Ghantasala*, *Kadura* and *Chaul* were well known as:

- (a) Ports handling foreign trade
- (b) Capitals of powerful kingdoms
- (c) Places of exquisite stone art and architecture
- (d) Important Buddhist pilgrimage centres

35. Which one of the following statements best describes the term 'Social Cost of Carbon'?

It is a measure, in monetary value, of the:

- (a) Long-term damage done by a tonne of CO₂ emissions in a given year.
- (b) Requirement of fossil fuels for a country to provide goods and services to its citizens, based on the burning of those fuels.
- (c) Efforts put in by a climate refugee to adapt to live in a new place.
- (d) Contribution of an individual person to the carbon footprint on the planet Earth.

36. With reference to *pulse production in India*, consider the following statements:

1. Black gram can be cultivated as both kharif and rabi crop.
2. Green-gram alone accounts for nearly half of pulse production.
3. In the last three decades, while the production of kharif pulses has increased, the production of rabi pulses has decreased.

Which of the statement/s given above is/are correct?

- (a) 1 only (b) 2 and 3 only
(c) 2 only (d) 1, 2 and 3

- 37.** "The crop is subtropical in nature. A hard frost is injurious to it. It requires at least 210 frost-free days and 50 to 100 centimeters of rainfall for its growth. A light well-drained soil capable of retaining moisture is ideally suited for the cultivation of the crop." Which one of the following is that crop ?

- (a) Cotton (b) Jute
(c) Sugarcane (d) Tea

- 38.** What are the advantages of *fertigation* in agriculture?

1. Controlling the alkalinity of irrigation water is possible.
2. Efficient application of Rock Phosphate and all other phosphatic fertilizers is possible.
3. Increased availability of nutrients to plants is possible.
4. Reduction in the leaching of chemical nutrients is possible.

Select the correct answer using the code given below:

- (a) 1, 2 and 3 only (b) 1, 2 and 4 only
(c) 1, 3 and 4 only (d) 2, 3 and 4 only

- 39.** Consider the following minerals:

1. Bentonite
2. Chromite
3. Kyanite
4. Sillimanite

In India, which of the above is/are officially designated as major minerals?

- (a) 1 and 2 only (b) 4 only
(c) 1 and 3 only (d) 2, 3 and 4 only

- 40.** With reference to Ocean Mean Temperature (OMT), which of the following statement/s is/are correct?

1. OMT is measured up to a depth of 26°C isotherm which is 129 meters in the south-western Indian Ocean during January - March.
2. OMT collected during January - March can be used in assessing whether the amount

of rainfall in monsoon will be less or more than a certain long-term mean.

Select the correct answer using the code given below :

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

- 41.** With reference to India's 'Desert National Park', which of the following statements are correct?

1. It is spread over two districts.
2. There is no human habitation inside the Park.
3. It is one of the natural habitats of Great Indian Bustard.

Select the correct answer using the code given below :

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

- 42.** With reference to the history of India, consider the following pairs :

Famous Place	Present State
1. Bhilsa	- Madhya Pradesh
2. Dwarasamudra	- Maharashtra
3. Girinagar	- Gujarat
4. Sthanesvara	- Uttar Pradesh

Which of the pairs given above are correctly matched?

- (a) 1 and 3 only (b) 1 and 4 only
(c) 2 and 3 only (d) 2 and 4 only

- 43.** Consider the following statements :

1. Jet streams occur in the Northern Hemisphere only.
2. Only some cyclones develop an eye.
3. The temperature inside the eye of a cyclone is nearly 10°C lesser than that of the surroundings.

Which of the statement/s given above is/are correct?

- (a) 1 only (b) 2 and 3 only
(c) 2 only (d) 1 and 3 only

- 44.** Consider the following statements :

1. In the first Lok Sabha, the single largest party in the opposition was the Swatantra Party.
2. In the Lok Sabha, a "Leader of the Opposition" was recognised for the first time in 1969.
3. In the Lok Sabha, if a party does not have a minimum of 75 members, its leader cannot be recognised as the Leader of the Opposition.

Which of the statement/s given above is/are correct?

- (a) 1 and 3 only (b) 2 only
(c) 2 and 3 only (d) 1, 2 and 3

45. How is the National Green Tribunal (NGT) different from the Central Pollution Control Board (CPCB) ?

1. The NGT has been established by an Act whereas the CPCB has been created by an executive order of the Government.
2. The NGT provides environmental justice and helps reduce the burden of litigation in the higher courts whereas the CPCB promotes cleanliness of streams and wells, and aims to improve the quality of air in the country.

Which of the statement/s given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

46. Consider the following statements:

1. The Parliament of India can place a particular law in the Ninth Schedule of the Constitution of India.
2. The validity of a law placed in the Ninth Schedule cannot be examined by any court and no judgement can be made on it.

Which of the statement/s given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

47. Regarding the *taxation system of Krishna Deva*, the ruler of Vijayanagar, consider the following statements :

1. The tax rate on land was fixed depending on the quality of the land.
2. Private owners of workshops paid an industries tax.

Which of the statement/s given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

48. Consider the following statements :

1. The Fiscal Responsibility and Budget Management (FRBM) Review Committee Report has recommended a debt to GDP ratio of 60% for the general (combined) government by 2023, comprising 40% for the Central Government and 20% for the State Governments.
2. The Central Government has domestic liabilities of 21% of GDP as compared to that of 49% of GDP of the State Governments.

3. As per the Constitution of India, it is mandatory for a State to take the Central Government's consent for raising any loan if the former owes any outstanding liabilities to the latter.

Which of the statement/s given above is/are correct?

- (a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

49. Consider the following statements :

1. Capital Adequacy Ratio (CAR) is the amount that banks have to maintain in the form of their own funds to offset any loss that banks incur if the account-holders fail to repay dues.

2. CAR is decided by each individual bank.

Which of the statement/s given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

50. Regarding *Wood's Dispatch*, which of the following statements are true?

1. Grants-in-Aid system was introduced.
2. Establishment of universities was recommended.
3. English as a medium of instruction at all levels of education was recommended.

Select the correct answer using the code given below :

- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

ANSWER

1.	(b)	14.	(c)	27.	(b)	40.	(b)
2.	(b)	15.	(b)	28.	(c)	41.	(c)
3.	(d)	16.	(a)	29.	(a)	42.	(a)
4.	(b)	17.	(a)	30.	(c)	43.	(c)
5.	(d)	18.	(b)	31.	(b)	44.	(b)
6.	(c)	19.	(d)	32.	(c)	45.	(b)
7.	(c)	20.	(c)	33.	(b)	46.	(a)
8.	(d)	21.	(d)	34.	(a)	47.	(c)
9.	(a)	22.	(d)	35.	(a)	48.	(c)
10.	(d)	23.	(d)	36.	(a)	49.	(a)
11.	(c)	24.	(d)	37.	(a)	50.	(a)
12.	(b)	25.	(b)	38.	(c)		
13.	(c)	26.	(b)	39.	(d)		

Mains Special: Important Questions based on History & Art and Culture

- 1. Do you agree with the view that terracotta art was the reflection of popular culture? Substantiate your answer with suitable example.**

Ans.

Terracotta is a brownish-red clay that has been baked and is used for making things such as flower pots, small statues, and tiles. Around 200 BCE–300 CE, a large number and diversity of exquisite terracottas were made. This period's terracottas have been discovered in abundance at sites like as Chandraketugarh, Mathura, Kaushambi, and Ahichchhatra. They demonstrate the existence of a diversity of regional styles and methods, as well as a wide range of ornamental themes.

Terracotta as reflection of popular culture:

1. Terracotta was more widely available. While stone sculpture needed the sponsorship of the wealthy, terracotta forms were freely available to the common man throughout history.
2. Many of the terracotta sculptures were cast in moulds and hence mass-produced. This demonstrates its widespread use.
3. A wide variety of impressive terracotta figurines of animals such as dog, buffalo, monkey etc. were found during Harappan period refers to its usage as non-elite art.
4. The figures known as panchahcudā seem to represent a goddess whose worship seems to have been popular all-over north India.
5. Yakshas, yakshis, nagas, and nagis occur in profusion. The worship of Yaksha, Yakshi, nagas and nagis were all associated with popular worship.
6. Not all terracottas were religious in nature. Other themes included romantic couples, animal battles, wrestlers, and youngsters playing with toys. This shows that it is used in everyday life.

However, terracotta art could be strictly stated to be an art of non-elite. There are many references of terracotta sculpture gaining patronage of elite class. During Maurya and Shunga period they did get some patronage to upper section of society like merchants and traders etc. Terracottas are used as a medium of popular culture even in present context. They provided accessibility for the common masses to manifest their beliefs and habits.

- 2. Why Aryabhata I is considered as one of the most prominent astronomer and mathematicians of ancient India? Substantiate your view by giving suitable example.**

Ans.

Aryabhata I was an Indian mathematician and astronomer who lived from 476 to 550 CE and is recognised as a towering figure in both professions. He composed the *Aryabhatiya*/*Aryabhatiyam* and the *Arya-siddhanta*.

Major contribution of Aryabhata I:

Mathematics:

1. He invented a system of expressing numbers with the help of consonants and vowels, based again on the decimal place value principle. Aryabhata was the first known individual to solve Diophantine equations.
2. His definitions of sine (*jya*), cosine (*kojya*), versine (*utkrama-jya*) and inverse sine (*otkram jya*) influenced the birth of trigonometry.
3. He provides simple solutions to complex mathematical problems of the time like summing the first n integers, the squares of these integers and also their cubes.
4. He correctly calculated the areas of a triangle and of a circle.
5. Aryabhata's method of extracting the square root and cube root presupposes the decimal place value of numbers.

Astronomy:

1. The *Aryabhatasiddhanta* is one of the first astronomical works that assign midnight as the start of each day.
2. Aryabhata rightly insisted that the earth rotates daily on its axis around the sun and the movement of stars appeared to be because of the relative motion caused due to the rotation of the earth.
3. Aryabhata used scientific experiments to explain lunar and solar eclipses. According to him, the planets and Moonshine are caused by reflected sunlight.
4. Aryabhata calculated the sidereal rotation (the rotation of the Earth in relation to the stars) to be 23 hours, 56 minutes, and 4.1 seconds in modern time units.
5. Aryabhata gave an astronomical model which stated that the Earth rotates on its axis. His model also gave corrections for the calculations of mean speeds of the planets concerning the Sun.
6. Aryabhata also calculated the length of the year to be 365 days 6 hours 12 minutes 30 seconds, which is only 3 minutes 20 seconds longer than today's figures.

Aryabhata was extensively consulted and quoted

in the subsequent mathematical and astronomical literature across India. He also had huge influence on our neighbouring cultures which translated his writings. Some of his explanations are cited by Al-Khwarizmi and in 10th century CE Al Biruni mentioned that Aryabhata's followers believed that the Earth rotated on its axis. India's first satellite Aryabhata and the lunar crater Aryabhata were named to honour this great Indian scientist.

3. Cornwallis acted on an implicit assumption of a declining trend in agriculture in Bengal in the recent past, and judged the permanent fixation of land revenue to be the best device toward its revitalization. Was Cornwallis' assumption, correct?

Ans.

Lord Cornwallis proposed the Permanent Settlement in 1793. It was an agreement between the East India Company and Bengali landlords to fix land revenue that had far-reaching implications for India.

Circumstances leading to Permanent Settlement:

1. There was a realisation that existing revenue system was not benefiting the company at the same time it was ruining the agriculture.
2. The slow growth of agriculture affecting trade of the company.
3. The colonial nature of the company wanted to extract as much revenue as possible. And this was not happening.
4. It was thought that the only way to improve the situation is to fix the rate permanently. Thus, Cornwallis was sent with specific mandate to streamline the revenue administration.

Expectations from Permanent Settlement:

1. It was thought that it would minimise the breadth of corruption that occurred when authorities could change their assessments at their discretion.
2. If property rights were secured, the landlord would invest money in upgrading the land.
3. The company would get its taxes on a regular basis, and if required, it might increase its income by taxing trade and commerce.
4. It was also easier to collect revenue from a limited number of zamindars than from a large number of peasants.

Impact of Permanent Settlement:

1. Creation of private property in land. However, it was misnomer, as the absolute ownership was retained by the imperial authority. There was frequent sale of property due to failure to pay tax on time.
2. It vested land rights in Zamindars, who previously enjoyed revenue collecting rights. This led to peasant exploitation as they were reduced to tenants of zamindars.

3. There was growth in unofficial middlemen which further impoverished the peasants.
4. There was no improvement in agriculture technology or irrigation.
5. It deepened the socio-economic inequality in the society. As gradually Zamindars acquired enough wealth to lead a luxurious life, while people starved in villages.

Thus, we can say that Cornwallis' assumptions were not correct. Soon British officials soon began to doubt the virtues of this system, while defects became more prominent. Thus, alternative systems like Ryotwari and Mahalwari were devised.

4. In the 18th century while India was rapidly changing under colonial rule it witnessed two kinds of socio- religious movements. In this context differentiate between the reformist and revivalist socio-religious movements in India.

Ans.

In the history of pre-independent India, the 19th century was a period of transition and contestation in the socio-religious sphere as three streams: of reform, revival and rejection of ancient cultural values were woven around the socio-religious movement or social reform movement initiated by eminent intelligentsia of vision and foresight. There were 2 kinds of movements which are differentiated as follows:

Revivalist reform movements:

- Revivalist movements tended to revive former customs or practices and thus take the society back to the glorious past.
- Revivalist movements appealed more to tradition than reason and conscience.
- Revivalist movements believed that the western thinking and missionary propaganda would ruin Indian culture and ethos, and thus there was a need to protect the religion. They were also influenced by the rich cultural heritage of India brought to light by western scholars and found that it was even superior to western culture.
- Examples- Arya Samaj movement, Deoband movement, Wahabi Movement etc.

Reformist movements:

- The reformist movements strived to change the fundamental system and structures of the society through gradual changes within the existing institutions.
- Reformist movements were influenced by the modern Western ideas in the socio-cultural sphere like equality among genders, freedom of choosing life partners etc.
- Leaders of these movements, though accepting modern western ideas, refused to model the society blindly on western lines. They aimed at

modernization, not westernization.

- Example- Brahmo Samaj, Aligarh movement etc.

This movement acted as a catalyst for the emergence of nationalism which ultimately drove away the British from India and made India an independent republic.

5. Indians were more responsible for the failure of the revolt of 1857 than the British repressive efforts. Comment.

Ans.

In 1857, a major but abortive outbreak happened in India, the revolt of 1857, in opposition to the administration of the British East India Company, which worked as an independent power on the behalf of the British crown. The event was known by many names the Sepoy Mutiny, the Indian Mutiny, the Great Rebellion, the Revolt of 1857, the Indian Resurrection, and India's First War Of Independence. It was suppressed a year after it erupted. Other than the heavy suppression there had been many reasons that led to the collapse of this powerful rebellion that are attributed to natives of the country. The explanation in this regard is given as follows:

- **Lack Of Spirit of Nationalism-** The rebellions of the revolt lacked the spirit of nationalism. They supported the sepoys just only because of hatred towards 'Firangi' East India Company.
- **Lack of Pan-India Participation-** The revolt which started from Meerut in 1857 was highly localized and restricted to the northern part of the country like Kanpur, Banaras, Lucknow, Jhansi, and others.
- **Lack of Unity-** There was a lack of unity among rebels, while sepoys of Bengal were revolting against East India Company whereas the soldiers of Punjab and Bombay supported the Company against the sepoys.
- **Lack of All Class Participation-** All classes did not join the revolt and worked against the revolt. Big zamindars and money lenders acted as "break-waters to storm", as they were creations of the British.
- **No support from the ruling class-** The ruling classes of that time were favoured by British policy. They refused to join the revolt and provided active support to the British.
- **Poor Arms And Equipment-** The rebellions were battling generally with swords, spears, lances, and very limited guns and muskets. On the other side, the East India Company was equipped with rearmost munitions of war like the Enfield rifle.
- **Poorly Organized-** Each leader of the revolt fought in their own territory and lacked connections with others.
- **No Common Goal-** The revolt saw no common

idea or goal behind it. After taking control of many regions, leaders and rebels had no forward-looking plan for India.

However, the revolt was suppressed by the British, but the revolt of 1857 played an important role in uniting the Indian people and giving them an awareness of belonging to one country.

6. The emergence of congress was a long-drawn process; it was never a one-shot activity. Do you

agree with the view that formation of Indian National Congress was the logical culmination of

earlier developments?

Ans.

Indian National Congress was formed in December of 1885 under the presidency of W. C. Banerjee, as a common platform and to bridge the regional differences in terms of participation, leadership and demands. One of the view points regarding the formation of Congress is that it was due to A.O. Hume that Congress came into existence. However, looking at the politics of India before the formation of Congress in 1885 points that it was a logical culmination of political activities happening in India.

Pre-Congress organisational efforts:

1. Groups of educated Indians were politically engaged in the three presidencies, forming new organisations to fight for civil liberties and organising countrywide agitations on many national issues. Protests against the Lex Loci Act of 1850, a planned income tax in 1867, the Illbert Bill dispute, and so on.
2. In 1851, the British Indian Association was founded in Calcutta, and it attempted to establish branches in the other two presidencies. This was one of the first attempts to establish all-India connections.
3. Then, in 1877, during the Delhi Durbar, Indian journalists created the Native Press Association and elected S.N. Banerjee as its first secretary. They agreed to meet once or twice a year to address matters concerning the press and the country.
4. The Indian Association (founded in 1876) held a national conference in Calcutta in 1883, and again in 1885.
5. Delegates from various regions of the country met in Madras on the sidelines of the Theosophical Society's annual convention in 1884 to examine the need for a national organisation.

As a result, the formation of a national organisation was unavoidable. However, a mediator was still required to bring all of these regional leaders together under one organisational roof. Hume was appropriate

for this post because, although being a foreigner, he was acceptable to all regional authorities. Thus, it was not Hume that led to Congress formation, rather it was works of earlier decades.

7. The most affected and the most participated faction of Indian society in the struggle for independence was peasants. Evaluate the nature of the peasant movement during the nationalist phase.

Ans.

Every section of Indian society was suffering under the British Government because of colonial policies. The government was only interested in the maximization of rents and in securing its share of the revenue. It made little effort to increase the land's productivity. The farmer was the last to suffer the triple burden of the government, the zamindar, and the moneylender that impoverished them. Therefore they were brutally oppressed and this led to their huge participation in the freedom struggle.

NATURE OF PEASANT MOVEMENTS:

- Peasants emerged as the main force in agrarian movements, fighting directly for their own demands.
- The demands were centred almost wholly on economic issues.
- The movements were directed against the immediate enemies of the peasant—foreign planters and indigenous zamindars and moneylenders.
- The struggles were directed towards specific and limited objectives and redressal of particular grievances.
- Colonialism was not the target of these movements.
- It was not the objective of these movements to end the system of subordination or exploitation of the peasants.
- Territorial reach was limited.
- There was no continuity of struggle or long-term organisation.
- The peasants developed a strong awareness of their legal rights and asserted them in and outside the courts.
- There was a lack of an adequate understanding of colonialism.
- The 19th-century peasants did not possess a new ideology and a new social, economic and political programme.
- These struggles, however militant, occurred within the framework of the old societal order lacking a positive conception of an alternative society.

Some examples of prominent peasant movements are: Champaran satyagrah, Mopla Peasant revolt,

Kheda Satyagraha, Bardoli Satyagraha and Tebhaga Movement.

8. The Swaraj Party relied on construction through obstruction for the sake of reforms - political, constitutional, social and economic - all leading to the achievement of swaraj. To what extent Swaraj Party was able to achieve its goal?

Ans.

The Swaraj party was established by CR Das and Motilal Nehru in January, 1923 after the Gaya session of congress. The name of the party was taken from the term 'swaraj' which means 'self-rule' or 'independence'.

Aims of the Swaraj Party:

- To contest the elections to the new Central Legislative Assembly in 1923 and, once in office, to disrupt official policy and derail the British government by anti-government agitation within the council.
- To obtain the right to form a constitution that suits the condition of the country.
- The programme of Swaraj Party included mass contact, Hindu-Muslim unity and social work as well as social reform.
- The attainment of dominion status for India was declared to be the immediate goal of the party.

Achievements of Swaraj Party:

1. The Swarajist participated in the 1923 elections and they were quite successful. They won 42 seats out of 101 open seats in central legislative assembly.
2. In 1925 Swarajist succeeded in getting Vithal Bhai Patel elected as Speaker of Central Legislature. They also raised some of the important issues like end of repressive laws, restoration of civil rights etc.
3. They blocked government legislation repeatedly. The Governors and Governor General had to use special powers to get government laws passed.
4. They were successful in abolition of production tax on cotton, reduction of salt tax.
5. They also caused to set up Alexander Mundiman Committee for inquiring into the Act of 1919 in 1925.
6. They worked for the removal of untouchability, education of outcastes, organised night schools for adults, day schools for children etc.
7. By far the most important contribution of Swarajist to the constitutional growth of India was Nehru Report.

Failures of Swaraj Party:

1. In 1925, Motilal Nehru accepted membership

Skean committee and Vithalbhai Patel accepted the office of speaker of Central Legislative Assembly. These activities gave the impression as the Swarajist were enjoying the perks of office and they were no longer practising the policy of non-cooperation. This negative impression affected their mass appeal.

2. Nehru Report generated a lot of controversy. It even widened the gulf between Hindu and Muslim leadership.
3. Their strategy was bound to fail as Swaraj could never be won by constitutional means.

The activities of Swarajist helped congress leaders in gaining political experience which came handy in future when greater authority was transferred into Indian hands. It promoted grass root level leadership and extended the depth of Congress organisation.

9. How cultural differences led to the formation of Bangladesh? Highlight the role played by India in Bangladesh Liberation War.

Ans.

Ignorance of the genuine demands of the people of East Pakistan resulted in cultural differences overpowering the synthetic bond created between East Pakistan and West Pakistan in the name of common religion. This gave birth to Bangladesh in 1971.

Cultural Differences that gave birth to Bangladesh:

1. Bengali, the language of East Pakistan different from numerous languages of West Pakistan like Punjabi, Sindhi etc.
2. Moreover, Bengali was largest linguistic group still not recognised as official language of Pakistan.
3. Despite having common religion, there were differences in terms of food, clothing, etc. which were not respected.
4. Imposition of orthodox Islamic practices on relatively liberal Islam of East Pakistan. To illustrate limited rights to women in public sphere.
5. Cultural centre of East Pakistan, Dhaka not recognised as capital despite being the largest city.

India's role in Bangladesh's Liberation War

1. To begin with India provided moral support to the cause of culturally suppressed people of East Pakistan.
2. Indian Army provided support to Mukti Vahini, Bangladesh's liberation army, in the form of arms and training.
3. India assisted Sheikh Mujbir Rehman's party Awami league in gaining support of international community towards their cause.
4. In the event of excesses by Pakistani Army in East Pakistan, India gave refuge to persecuted

immigrants.

5. Indian Army ultimately ensured the surrender of Pakistan's Army.
6. Government of India garnered the support of United nation and international community in favour of creation of Bangladesh.

Thus cultural differences between East and West Pakistan gave birth to regionalism leading to sub-Nationalism and ultimately resulting into bifurcation of Pakistan and birth of Bangladesh in 1971 with the support of India.

10. From "iron curtain" to Berlin wall Communism had a long history. What impact the collapse of communism in Eastern Europe and end of Cold War had on the world?

Ans.

Communism gained a strong foothold in the world during the first half of the 20th century, with one-third of the world's population living under some form of communism by the 1970s. However, just a decade later, many of the major communist governments around the world toppled.

Impact of collapse of communism and end of Cold war on the world:

1. The fall of USSR in 1991 resulted in formation of about 15 independent countries: Armenia, Azerbaijan, Belarus, Estonia, Georgia etc.
2. These new nations brought new issues for discussion and resolution to the UN agenda. Breakup of the Socialist bloc and birth of so many new nations led to increased demand for aid and investments from multilateral financial institutions importantly the IMF and the World Bank.
3. The dissolution of USSR and collapse of communist regimes in Eastern Europe also marked an uprising in democratic political environment across the world especially in the newly formed states. End of the Cold War is also seen as heralding of individual freedom and democracy.
4. United States was able to become the dominant global superpower in the years following the Soviet Union's collapse.
5. Since the end of the Cold War, China has expanded to become a major world superpower and the European Union has extended its influence into areas that Moscow once controlled.
6. The end of the Cold War, in addition to the collapse of the ideology of socialism and socialist bloc, coincided with the acceleration of the process of economic globalization.

The collapse of communism and end of Cold War also generated lot of friction which continue even to this

day. Although Communism has nearly died out, there are still five countries that remain Communist: China, Cuba, Laos, North Korea, and Vietnam.

11. What are the major Greek accounts about India? Do you agree with the view that it provides good picture of ancient social, political as well as economic set up?

Ans.

Many who had visited India from afar in the early past recorded their impressions for various purposes, and these are available as Greek, Latin, Chinese and Arabic writings.

Major Greek Accounts:

The earliest references to India in Greek texts date from the 5th century BCE and their frequency increases thereafter. Some of the major Greek accounts are:

1. The Histories written by Herodotus
2. Indica written by Megasthenes as well as Arrian
3. Histories of Alexander the Great by Rufus
4. Geographica written by Strabo
5. Periplus of the Erythrean Sea (unknown author)

Ancient Greek Literature Information from Greek Accounts

Social:

1. They provide detailed information about social conditions like sati, sale of girls by poor parents, slavery etc.
2. Herodotus provides list of tribes with detail. Megasthenes mentions about division of Indian society on the basis of occupation.
3. There are also mention of cloths worn by Indians, food habits and other aspects of every day life.

Political:

1. They give a detailed account of Alexander's Indian campaign and information about number of principalities in north west India at that time.
2. We also get information about the military strength of various rulers like that of Nanda dynasty, Maurya etc.
3. Megasthenes provides good account of Patliputra's administrative setup.

Economic:

1. Herodotus tells us that India was the most prosperous satrapy of the Persian empire.
2. The Periplus of the Erythrean Sea tells us about various Indian ports like Naur, Tondi, Muchiri etc, the imports and exports etc. through which we understand India trade relations
3. Megasthenes tells us that for tax assessment, land was measured as in Egypt and the state officials also monitored the irrigation

channels for the use of water.

Shortcomings of the Greek accounts of India:

1. They missed some of the important aspect of Indian society. Ex- Megasthenes stated that there was no slavery in India. He also divided Indian society into 7 castes.
2. They were mostly concerned with the north western part of India, thus generally leaving other parts.
3. They wrote for an educated Greek audience and their aim was not only to inform but also to entertain. Thus, they often lack accuracy and reliability. Ex- Herodotus account of gold-digging ants.
4. Most of the works of early Greek writers have been lost and are available only in fragments.

Being foreigners, their works were useful because they gave importance to some aspects of India life which Indians used to overlook. But their writings suffer from lack of knowledge and understanding about India. Thus, we have to corroborate with other sources of history to ascertain the validity of these accounts.

12. It was in South India where Bhakti movement gained considerable ground. To what extent Alvars and Nayanars were able to democratize the religious sphere? Explain with reference to participation of women and lower caste.

Ans.

The origins of Bhakti doctrine can be traced back to ancient India's Brahmanical and Buddhist traditions, as well as various scriptures such as the Gita. It was in South India between 7th and 10th centuries that bhakti evolved from a religious doctrine into a popular movement based on religious equality and broad-based social participation for the first time.

Alvars and Nayanars democratised the religious sphere

1. The Shaiva Nayanar saints and Vaishnava Alvar saints of South India spread the doctrine of bhakti to all sections of society, regardless of caste or gender.
2. Some of these saints like Nandanar and Tiruppan belonged to the "lower" castes, while others, such as Karaikkal Ammaiyar and Andal, were women. The saint-poets preached bhakti with great emotion and promoted religious equality.
3. They preached and composed devotional songs in Tamil rather than Sanskrit. All of these characteristics contributed to the movement's popularity.
4. They defied the authority of the orthodox

Brahmans by making bhakti available to all without regard for caste or gender.

Limitations of Alvars and Nayanars:

Case of untouchables:

1. At the social level, it never consciously opposed Brahmanism or the varna and caste systems. It was incorporated into the caste system, and the "lower" castes continued to face various social disadvantages.
2. Despite the emphasis on bhakti as the superior mode of worship, there was no elimination of Brahmanical rituals such as idol worship, recitation of Vedic mantras, and pilgrimages to sacred places.
3. Because these saint-poets did not question the ideological and social foundations of the caste system, the bhakti movement of the South strengthened it rather than weakening it in the long run.

Case of Women:

1. There are very few female bhakti saints. The Nayanmars have three, whereas the Alvars have only one female saint. The leadership was overwhelmingly male.
2. Women were not admitted to Mathas. Only during Ramanuja's time (11th century) and with the growing influence of the Virashaiva movement were women devotees given a more active role in Shaiva bhakti.
3. There was a significant difference between men's and women's bhakti experiences. There was no conflict between the life of a householder and devotion to the god in the case of male saints. However, the female body directly interfered with the bhaktin's path and the bhaktin couldn't balance marriage and family life with devotion.

Although its leadership was dominated by elite groups, particularly Brahmanas, and although it did not overthrow existing social relations, bhakti did create a religious community within which traditional social distinctions could be transcended, at least in terms of the bhakta's relationship with his/her god.

13. It was not only the political sphere into which Turks invaded, there presence is also felt in the cultural sphere. Explain the statement with reference to new architectural innovations brought by Turks in India.

Ans.

Following the invasion of the subcontinent by the Ghurid dynasty, five dynasties ruled over the Delhi Sultanate sequentially. They introduced various new features to Indian political, social, economic as well as cultural system.

Changes introduced by Turks:

1. **Political:** It replaced feudal, multi-centred polity by a centralised state in which Sultan enjoyed practically unlimited power. Nature of Kingship also witnessed change.
2. **Economic:** They brought with them tradition of living in urban areas. Thus, urban economy and related activities got big boost.
3. **Administrative:** Various administrative changes were introduced, like introduction of iqta system, creation of new departments etc. Changes were also brought in military organisation.
4. **Cultural:** They led to the growth of Persian literature, miniature painting, Sufism etc.

New architectural Innovations brought by Turks-

1. **Lime Mortar:** The traditional basic units of construction in Ancient India consisted of clay, stones, wood and occasionally bricks. The simplest cementing material or mortar was plain earth mixed with water. Turks introduced lime mortar as cementing material. It paved the way for the construction of true arch.
2. **True arches, vaults and domes:** Pre-Turkish forms like lintel-beam and corbelling were replaced by the true arches and vaults, and the spired roofs (Sikhar) by domes. The arch and dome were known to the Indians earlier, but they were not used on a large scale. The use of arch and dome led to construction of lofty and impressive buildings. The arch and dome combination also dispensed with the need for a large number of pillars to support the roof.
3. **Stone masonry:** During Khalji period a new method of stone masonry was used. Turks used red sandstone.
4. **Iconography:** Depiction of living being was generally not allowed. The elements of decoration in most cases were calligraphy, geometry and foliation.
5. **New types of buildings:** With coming of Muslim rulers, new types of buildings were constructed. Mosque and tombs were constructed on large scale. Minaret such as Qutub Minar were also constructed. Other than that public buildings like sarai, kachehri, dak chauki etc.

Major buildings built by Turks

1. Qutub Minar
2. Quwwat ul Islam Mosque, Adhai din ka Jhopra
3. Tomb of Hazarat Nizamuddin Auliya
4. Alai Darwaza
5. Tomb of Ghiyasudin Tughlaq etc.

The new architectural features introduced by Turks were later on perfected by Mughals with their own innovations. It led to creation of Indo-Islamic architecture with many beautiful buildings.

14. Famines had stalked India for generations. Though British came up with various policies in this regard, they failed to hit the core of the issue. Give an account of socio-economic impact of famine on India. Also analyse the causes of failure of British famine policies.

Ans.

Since the ancient India we have evidence of famine. These famines were natural calamities. However, during the British rule the incidence of famine increased because of exploitative policy of British government.

Major famines:

- Bengal famine of 1770 which wiped out almost 1/3rd of population.
- 1784, Madras famine
- 1792, North India was struck by a famine.
- 1833, Guntoor famine wiped out 40% of population.
- 1860, famine in Northwestern Provinces.
- 1873-74, famine in Bengal and Bihar
- 1896, famine in different parts of India.
- 1943, Bengal famine

Famine Policy:

1. The East India Company was totally unconcerned about it. Some sort of policy started evolving only after the transfer of power to British Crown.
2. In 1861 Col. Baird Committee was appointed but no significant study was undertaken and situation remained largely unchanged.
3. In 1866 George Campbell Committee was set up. The committee suggested that steps should be taken to generate employment and famine relief measures should be carried out.
4. In 1880 Richard Stretchy Commission was appointed which suggested – (a) A famine code be formulated, (b) Land Revenue should be remitted for famine struck areas etc.
5. After 1896 famine, James Broadwood Lyall commission was appointed but nothing came out.
6. In 1899-00 McDonnell Commission was appointed which recommended (a) Famine Commission be established to coordinate relief measures, (b) Famine code be revised etc.
7. After Bengal famine John Woodhad Commission was appointed which suggested merger of departments of food

and agriculture and steps to be taken to increase agriculture production.

Socio-economic impact of famine:

1. These famines had impact on the long-term population growth, especially between 1871-1921.
2. Breakdown of social systems brought mass migration, overcrowding, poor sanitation, poor water quality etc.
3. The famines lead to widespread unsanitary conditions, catastrophic hygiene standards, and the spread of disease.
4. During “cloth famine,” nearly the entire population of Bengal’s impoverished poor was left naked or clothed in scraps through the winter.

Causes of failure of British Famine Policies:

1. Famines in British era were not due to a lack of food but due to the inequalities in the distribution of food. This was due to undemocratic nature of British Empire.
2. Lack of investment in agriculture which was required to arrest the development of famine conditions.
3. The British policies ignored issues like the drain of the agriculturalists resources into the hands of the revenue intermediaries and money lenders and dealers in agricultural commodities.
4. That Company had faulty famine policies was also accepted by the Report of the Famine Commission in 1880 that spoke of the Company’s half-hearted effort to provide relief.

British government occupied India exclusively for their political and economic interest. Therefore, they felt little to no obligation to care for the increasing death toll among the native population.

15. The political scene in India in 1915, when Gandhi returned, was confused. While highlighting the major events that took place during this period, discuss the role of Gandhi in assuming the central position in freedom struggle.

Ans.

Gandhi arrived in India in 1915. Prior to Gandhi’s arrival, nationalist politics were only practised by a small group of Western educated professionals, whose new skills enabled them to take advantage of the opportunities provided by the Raj.

Situation during Gandhi’s arrival

1. Recently, Capital had been shifted from Calcutta to Delhi which stirred the national politics.
2. World War I had started in 1914 and India

was forced to participate on the behalf of Britain. Massive recruitment for World War I, severe taxes, war loans, and a dramatic rise in prices caused by the War harmed various parts of Indian society and exacerbated the conflicts between British and Indian interests.

3. Annie Besant and Tilak's Home Rule radicalised the Indian politics. They soon came to command a certain degree of power within the Congress.
4. The young revolutionaries in Bengal and the Ghadars in North America attempted to take advantage of the situation by forming alliances with the British's adversaries. Armed robberies increased, as did efforts to obtain weapons and ammunition from Germany. In 1914 the infamous Komagata Maru incidence occurred.
5. The Lucknow Pact of 1916 brought the Congress and Muslim League together and made the idea of Indian self-rule gain greater legitimacy in British political circles.
6. Then there was the Montagu Declaration, which stated that British policy in India would be geared toward promoting self-governing institutions in the future.

How Gandhi assumed central position:

1. Gandhi's work in South Africa had generated respect for Gandhi in Indian political circle.
2. Gandhi adopted a approach of social justice that involved masses. He established Sabarmati Ashram in Ahmedabad in May 1915 where he tried to implement his ideas.
3. Between 1917 and 1918, Gandhi launched three Satyagrahas: Chamaparan, Kheda, and Ahmedabad. Negotiations were reached in all three cases, and Gandhi earned a reputation as a person who took up local problems and achieved actual outcomes, in contrast to the Congress or the Home Rule movement, which mobilized around vague all-India matters that did not always bring results.
4. His method came to viewed as being bottom up rather than top-down.
5. His continued ascendancy to power was made possible by his engagement with Muslims, low caste Hindus, and businessmen — groups who had no place in Congress politics.
6. Gandhi also recruited peoples like Rajendra Prasad, JB Kriplani, Vallabhbhai Patel etc. who played vital roles in peasant and worker mobilisation.
7. In the instance of the Rowlatt Act, despite it sparked indignation among all political

activists, it was only Gandhi who proposed a nonviolent all-India mass protest.

Gandhi's rise to national politics was both due to his personal capabilities and his ideology that was rooted in India as well as due to the situation in Indian politics during his arrival that needed fresh approach.

16. Civil Disobedience Movement created an agency for women in India. However, that freedom or women came with various conditionalities. Examine the role played by women in Civil Disobedience Movement. Was the large-scale participation of women in Civil Disobedience merely symbolic in nature?

Ans.

Gandhiji through his unique methods and techniques like fasting, picketing, spinning charkha etc., with which women can associate themselves, succeeded in ensuring large scale participation of women in Civil Disobedience Movement (CDM) and further national struggle.

Role played by Women in CDM:

1. Mass participation as opposed to few prominent leaders like Annie Besant, Sarojini Naidu in the past, provided strength and base.
2. Women very well understood the impact of costly salt on their household budget, and therefore protested fiercely.
3. Even Gandhiji have asked women to play a leading role in the movement.
4. They promoted and produced khadi as well as boycott of shops selling foreign cloth.
5. During the movement women also fought against social evils like picketing outside liquor shops and opium dens.
6. Women leaders like Sarojini Naidu even led movement, for example leading a raid on Dharsana salt Works.

Large scale women participation was not merely symbolic as

1. It marked the entry of women masses into the public sphere, thus a liberating experience.
2. Methods of the movement like picketing, boycott etc. provided agency to women.
3. Women even fought against the issues which affected them the most apart from government revenues, like liquor sell and consumption.
4. Inspired women's participation even in the revolutionary struggle, for ex Bina Das, Kalpana Dutt etc. in Bengal.
5. Continued large scale participation in subsequent struggles, for example during Quit India Movement.

Limitations to Women's agency

1. Women were still treated as subordinate rather than equal partners.
2. Women participation was largely urban phenomenon.
3. Women specific issues like girl's education, property rights etc. were still not made national issue.
4. Conservative leaders among nationalists were not open to women's participation in public sphere.
5. Most women who joined the nationalist fight hailed from families that had previously been active in Gandhian organisations. As a result, women's politicisation did not result in any dramatic changes in their personal or familial relationships.

Thus, participation of women masses in CDM was certainly the culmination of long drawn efforts of feminist movement and leaders like Annie Besant, Margaret Cousins, Sarojini Naidu etc. in India, still Indian women still have numerous roadblocks that limited their true agency.

17. The Act of 1919 hailed as the harbinger of parliamentary democracy in India, conferred much less than what it promised. Highlight the major features of 1919 Act. Examine how it tried to weaken the national struggle?

Ans.

In light of Montagu's statement (August 1917), the then Secretary of State, Montagu-Chelmsford reforms (1918) for further constitutional reforms were announced on the basis of which Government of India Act, 1919 was enacted.

Main features of 1919 Act

Central Government:

1. Division of subjects into two lists for administration – Central and Provincial.
2. Number of Indian members in Viceroy Executive Council increased from 1 to 3, out of 8.
3. Bicameral legislature was introduced – Lower house or Central Legislative Assembly and the Upper house or Council of States.
4. Legislature could ask questions and supplementary question, pass adjournment motion etc.
5. Legislature could vote a part of budget (around 25%).

Provincial Government:

1. Introduced Dyarchy, that is, government by two independent authorities – executive councillors and popular ministers.
2. Subjects were divided into two list – Reserved (law and order, finance, land revenue etc.), to be governed by executive councillors

and Transferred (education, health, local government etc.), to be governed by popular ministers.

3. Popular ministers responsible to the legislature.
4. Increase in proportion of elected members in Legislative Councils, around 70% of total.
5. Right to vote to women.
6. Separate electorate was expanded to Sikhs, Indian Christians and Anglo Indians.

Shortcomings of the Reforms:

1. At the centre, no control of legislature over the Governor General and his executive council.
2. Division of subjects into Reserved and Transferred was irrational, and thus an unworkable parallel administration in provinces.
3. Though socially important subjects like health, education etc. were given to Popular Ministers but no control over finances.
4. Very limited franchise.

Weakened national struggle as:

1. Provided an illusion of reforms attempted to pacify nationalist leaders.
2. Extension of separate electorate to create further division among Indians.
3. Division among nationalist ranks with regard to appraisal of the reforms.
4. In the backdrop of this carrot, Colonial government have used harsh measures (the stick) against revolutionaries like Rowlatt Act, 1919.

Thus, shallowness and cunningness of 1919 Act could be best summed up in the words of Subhash Chandra Bose, that the Government of India Act, 1919 forged fresh fetters for the people.

18. Demand for states based on linguistic criteria have a long history dating back to latter half of 19th century. In this context, trace the formation of states on linguistic basis in post-independent India. Has the formation of states on the basis of language been a successful exercise?

Ans.

The demand for states based on language arose long before India's independence from British rule. Lokmanya Tilak was perhaps the first national leader to urge linguistic reorganisation of the provinces.

Formation of States on linguistic basis in post-independent India:

1. The congress was initially in favour of dividing the country into provinces based on language, but the partition in 1947 forced the congress to abandon the proposal.
2. Various committees like S.K. Dhar

- commission, JVP committee rejected the demand of linguistic reorganisation of states.
- When Potty Sriramulu sitting on fast unto death for creation of separate state for Telugu speaking died in 1952, it triggered violent agitations.
 - Under these circumstances the government of India created the separate state of Andhra for the Telugu speaking people in 1953.
 - Creation of Andhra intensified similar demands in other parts of India as a result the government appointed Justice Fazl Ali Commission in 1953. On the basis of its recommendations State Reorganisation Act was enacted in 1956 through which 14 states and 6 UTs were created on the basis of language.

Benefits of Linguistic Reorganisation of States:

- It led to nurturing and promotion of the regional languages and culture, strengthening the national integration.
- It also helped in tackling the agitations and demonstration that were going on in various parts of the country.
- The states created on the basis of language were cohesive in nature because the people shared same language and culture.
- It strengthened people's faith in Indian democracy because their demand was accepted by the government.

Negative effects of linguistic based reorganisation:

- It obstructed the process of evolution of one common national identity and it allowed regional identities to remain effective. Regionalism gained strength and centrifugal forces were emboldened.
- The issues of economic development were pushed to low priority. Emotional issues gained upper hand.
- It did not allow the creation of administrative units of equal size. As a result, the concept of federalism could not be implemented effectively.
- The government created 14 states and 6 UTs in 1956 by using language as the basis but it failed to satisfy the demands of every group as hundreds of languages were being used in India at that time. Because of this discontent and dissatisfaction still continued among many groups in India.

In immediate sense the strategy was successful as it helped in countering the challenges being faced by India at that time. In long run the strategy of linguistic reorganisation failed to produce desired result because

the needs of socio-economic development could not get proper attention. Creation of Telangana as the 29th state of Indian Union is the clear example of the failure of strategy of linguistic reorganisation in the long run.

19. The Great Leap Forward pushed by Mao Zedong failed to change China from agrarian society to a modern, industrial society. While examining the impact of the Great Leap Forward on China, discuss the reasons for its failure.

Ans.

Mao Zedong started about rebuilding a broken China after the communist triumph over the Kuomintang in 1949. As a result, Mao launched the 'Great Leap Forward' in 1958.

Problems faced by China: Need for Great Leap Forward

- Following the protracted civil war and conflict with Japan, the country's railways, roads, and other infrastructure had been decimated, and there were chronic food shortages.
- Industry was backward, agriculture was inefficient and incapable of feeding the poor, and inflation appeared to be out of control.
- Mao believed that something new and different was required to address China's unique difficulties – something that was not based on Russian experience.

Aims and methodology of Great Leap Forward:

- The establishment of communes. Millions of Chinese citizens were relocated to communes between 1958 and 1960. On the communes, every work was shared; from childcare to cooking, daily duties were collectivised.
- A significant shift in industrial emphasis. Mao intended to eliminate China's reliance on imported steel and machinery. Instead of aiming for large-scale works like those seen in the USSR and the West, he urged locals to build up backyard steel furnaces where scrap metal could be converted into useful steel.

Why it failed?

- Adopting unscientific farming strategies like planting crops very close together so that the stems could support one another and ploughing up to six feet deep to encourage root growth.
- Families had to meet quotas for steel production, so in desperation, they often melted down useful items such as their own pots, pans, and farm implements.
- Flooding of Yellow River killed almost 2 million people. And in 1960, a widespread

- drought added to the nation's misery.
- Relationship between Russia and China broke down thus Russian withdrew all aid.
 - The Great Leap Forward had set high standards for workers to follow. They set unrealistic expectations for the workers as well.

Impact of Great Leap Forward

- It wreaked havoc on China's ecosystem. Because of the backyard steel manufacturing plan, entire woods were cut down and burned to power the smelters, leaving the region vulnerable to erosion.
- Because the land had not yet been drained, the first autumn of the Great Leap Forward, in 1958, brought a bumper crop in many locations. However, because so many farmers had been sent to work in steel manufacturing, there were not enough workers to harvest the crops. In the fields, food rotted.
- Harvest figures were misreported in order to placate communist authorities. As a result of such exaggerations, party officials took the majority of the food to serve as the cities' portion of the harvest, leaving the farmers with nothing to eat. People in the countryside started going hungry.
- In the end, an estimated 20 to 48 million people died in China as a result of a combination of poor economic policy and adverse climatic circumstances.

The Great Leap Forward was scheduled to last five years, but it was cancelled after only three sad years. In China, the years 1958 to 1960 are known as the "Three Bitter Years." It also has political ramifications for Mao Zedong.

20. Various present day geo-political tensions have their root in past. Discuss the causes of ongoing Russia-Ukraine crisis from historical point of view.

Ans.

The state of global geopolitical tensions is high, and this is having an impact on the global economy, society as well as polity. Roots of various geopolitical of present period could be traced in the past.

Present Geopolitical tensions having roots in past

- Tensions in middle east have long history. Ex- creation of Israel, US-Iran tensions etc.
- India-Pakistan present relations traces its roots in past.
- China-Taiwan relations also have historical causes for their tension.
- North Korea and South Korea conflict is also rooted in past.

- The ongoing Russia-Ukraine war is also due to historical causes.

Historical context of Russia-Ukraine crisis:

- Historically, Russia viewed the Black Sea as central to its security due to its abundance of warm water ports, including Sevastopol in Crimea. Catherine the Great annexed Crimea from the Ottoman Turks in 1783. In 2014 unmarked Russian forces occupied Crimean Peninsula, later annexed by Russia. Russian invasion of Ukraine and annexation of Crimea is continuation of the same policy.
- For centuries Russia is trying to assimilate Ukrainians to Russian civilisation. This cultural assimilation was not liked by nationalist Ukrainians. Present geo-political tension is also manifestation of demand for Ukrainian autonomy.
- Putin stated that modern Ukraine was entirely created by Russia and Russia have deeper ties with Ukrainians. Not intervening in Ukraine would be like abandoning one's own family. In fact Putin have a goal of resurrecting Russia's golden past – Great Russian Civilisation or Empire of history.
- Formation of NATO by western powers created context for Cold War tensions. The present crisis is also due to the fear of NATO military presence at Russian border. Former Soviet republics such as a Lithuania, Estonia and Latvia had already joined NATO which was hardly accepted by Russia. Thereafter Russia drew red line in case of Ukraine and Georgia.
- The longstanding ideological tension between communism and capitalism which fuelled the Cold War is also one of the reasons for the present Russia-Ukraine crisis.
- Historically Russia tried to maintain its sphere of influence in Europe especially in eastern region. The present crisis also aims towards creating influence of Russia in eastern Europe.

We can safely assume that various geopolitical tensions of current period have its roots in history. However, there is constant shift in the geo-politics. Once India and China were considered as brothers. But today they are facing each other in Ladakh region. Thus, both history as well as present determine the status of geopolitics in the world.

MCQs Based on Current Affairs

1. Consider the following statements regarding outer space.

1. Outer space is the expanse that exists between the celestial bodies and beyond the Earth and its atmosphere.
2. Outer space is composed primarily of hydrogen and helium, as well as electromagnetic radiation, magnetic fields, neutrinos, dust, and cosmic rays.
3. The baseline temperature of outer space as determined by the background radiation from the Big Bang is 2.7 Kelvin (-270°C ; -455°F).

Which of the statements given above is/are true?

- A. Only One. B. Only Two.
C. All Three. D. None.

Answer: C

2. Consider the following statements regarding Space traffic management.

1. Space traffic management is a set of technical and regulatory provisions for promoting safe access into outer space, operations in outer space and return from outer space to Earth free from physical or radio-frequency interference.
2. Space traffic management is defined by the International Academy of Astronautics (IAA).
3. Space traffic includes launch vehicles, as well as orbiting objects such as satellites of all sizes and the International Space Station.

Which of the statements given above is/are correct?

- A. Only One. B. Only Two.
C. All Three. D. None.

Answer: C

3. Consider the following statements:

1. Stunting, also known as acute malnutrition, refers to a condition in which a child's weight is significantly lower than what is considered healthy for their height.
2. Wasting, is a chronic form of malnutrition characterized by impaired growth and development in children. It is measured by comparing a child's height to the average height of children in the same age group.
3. Obesity is defined as excessive or abnormal accumulation of fat in the body, leading to adverse health effects.

How many of the statements given above are correct?

- A. Only One. B. Only Two.
C. All Three. D. None.

Answer: C

4. Consider the following:

1. In a small enterprise the investment in Plant and Machinery or Equipment is not more than Rs 10 crore.
2. In a medium enterprise Investment in Plant and Machinery or Equipment is not more than Rs 250 crore.

Which of the above statements is/are correct?

- A. 1 Only B. 2 Only
C. Both 1 and 2 D. Neither 1 nor 2

Ans: A

5. Consider the following statements

1. Microplastics are tiny plastic particles up to 5mm in diameter.
2. Marine litter can be defined as any persistent, manufactured or processed solid material that is discarded, disposed of or abandoned in the marine environment.
3. Globally, plastic items (including microplastics) are the most abundant type of marine litter.

How many of the statements given above are correct?

- A. Only One. B. Only Two.
C. All Three. D. None.

Answer: C

6. Consider the following statements about Gongadi Shawls:

1. Gongadi is a traditional woolen blanket woven by the indigenous Gond communities.
2. They are known for their ability to withstand all weather conditions and remain intact for a long time.
3. Gongadi shawl is produced organically without using any dyes.

How many of the statements given above is/are correct?

- A. Only one B. Only two
C. All three D. None

Answer: B

7. What is the purpose of the "Hunger Hotspots" analysis conducted by the FAO-WFP?

- A. To identify regions with the highest levels of agricultural productivity.
- B. To determine the areas most vulnerable to food insecurity and famine.
- C. To assess the impact of climate change on global hunger trends.
- D. To analyze the nutritional requirements of

different population groups.

Answer – B

8. With reference to the recently published report 'Born too soon: Decade of action on pre-term birth', consider the following statements

1. This report has been released by the World Health Organization (WHO) and UNICEF.
2. According to the report, in 2020, Sri Lanka had the highest number of estimated pre-term birth (16.2%), followed by Malawi (14.5%), and Pakistan (14.4%).

3. Several factors such as lifestyle changes, chronic diseases and IVF pregnancies are associated with an increase in pre-term births in urban centres.

Which of the statements given above is/are correct?

- A.1, 2 B.2, 3
C.1, 3 D.1 only

Answer – C

9. With respect to NASA's IMPACT program, consider the following statements.

1. IMPACT is responsible for expanding the use of NASA's Earth-observing data through innovation, partnerships and technology.
2. TCS, in collaboration with NASA, unveiled a new geospatial foundation model designed to transform satellite data into high-resolution maps under NASA's IMPACT.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

Answer- A

- 10.** Consider the following statements regarding Greenwashing.

1. It is the practice of making exaggerated, misleading, or unsubstantiated claims about the environmental benefits of a product, service, or investment opportunity.
2. It undermines consumer confidence, as people may make purchasing decisions based on misinformation.

Which of the statements given above is/are incorrect?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

Answer – D

11. Consider the following statements regarding 'Unique Economic Offenders Code'.

1. The 'Unique Economic Offender Code' will be alpha-numeric which will be PAN or Aadhaar-based for companies and individuals to tag all cases of economic offences against them.

2. The Central Economic Intelligence Bureau will coordinate the Economic Offenses Repository System with the help of the National Informatics Center (NIC).

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

Answer: C

- 12.** Consider the following statements regarding inflation in India.

1. Consumer Price Index (CPI) is published by Office of the Economic Adviser, Ministry of Commerce and Industry.

2. Manufacturing products have the highest weightage in WPI.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

Answer: B

- 13.** Consider the following statements with respect to Open Network for Digital Commerce (ONDC).

1. ONDC is a network of interconnected e-marketplaces through which sellers, even brands, can sell their products directly to customers bypassing any middlemen.

2. ONDC is a non-profit organization set up under the Ministry of Corporate Affairs.

Which of the statements given above is/are correct?

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

Answer: A

- 14.** Consider the following statements regarding Asset Management Company (AMC)?

1. AMCs maintain portfolio diversification by investing in both high-risk and low-risk securities.

2. All AMCs are regulated by SEBI.

3. AMC is also called Money Management Firm. How many of the statements given above is/are correct?

- A. Only one
B. Only two
C. All three
D. None

Answer – C

Personality



Pandit Ram Prasad Bismil

Kakori Incident: At a Glance:

Under the leadership of Ram Prasad Bismil, 10 people looted the treasury being transported by the British Railways at a place called Kakori in Lucknow on August 9, 1925. They broke the vault in the guard's compartment and absconded by looting four thousand rupees. Ashfaqulla, Chandra Shekhar Azad, Rajendra Lahiri, Sachindra Nath Sanyal, Manmath Nath Gupta, Ram Prasad Bismil etc were involved in this incident. The Kakori incident shook the British empire. The British government announced rewards for helping in arrest of the revolutionaries of the Kakori. After that revolutionaries were arrested and prosecuted on a large scale. He was sentenced to death by court. According to the records, on July 18, an appeal was made by Bismil in the Awadh Chief Court for pardon, while on September 16, mercy-prayer was sent to the Provincial Viceroy, which was rejected. On 16th December he sent a message to the nation. Three days before his execution, he wrote a letter to his mother and friend Ashfaqulla Khan that "the whole country will miss him" and asked his mother to pray so that he could sacrifice his life for his motherland. Before being hanged, when his last wish was asked, he said that he want to see the end of British rule and by saying this he embraced martyrdom. On 19 December 1927 he became immortal forever. Northern Railway has named the Kakori station as Pandit Ram Prasad Bismil Railway Station in his honour. The Government of India issued a multi-coloured commemorative postal stamp on 19 December 1997 in Bismil's birth centenary year. Pandit Ram Prasad Bismil and his creations will always be alive among us.

*"Sarfaroshi ki tamanna ab hamare dil mein hai,
dekhna hai zor kitna baazu-e-qatil mein hai"*

(The desire for revolution is in our hearts, we shall see how much strength lies in the hands of the murderer"). The author of these lines is the great writer, poet Pandit Ram Prasad Bismil, he was one of those great freedom fighters, who got martyred while fighting for the independence of the country from the British rule. Pandit Ram Prasad Bismil was born on June 11, 1897 in Shahjahanpur, Uttar Pradesh. His father Muralidhar was working in Shahjahanpur municipality. Ram Prasad Bismil was a great poet as well as a shayar, he wrote poems in Urdu and Hindi under the name of Unknown, Ram and Bismil and became famous by the name "Bismil Kalmi". He wrote immortal songs like "Sarfaroshi Ki Tamanna" which made a place in the heart of every Indian. Ram Prasad made many Hindi translations of Bengali writings. Some of his works include: 'The Bolshevik Programme', 'A Sally of the Mind', 'Swadeshi Rang', 'Catherine' etc. Rishi Aurobindo's Yogic Sadhana was translated by Ram Prasad Bismil, all his works have been published in a series named 'Sushil Mela'. He was also associated with Arya Samaj where he got inspiration from the book "Satyarth Prakash". Satyarth Prakash is written by Swami Dayanand Saraswati. He was also in contact with Lala Hardayal through Arya Samaj preacher Swami Somdev. Lala Hardayal was a founding member of a revolutionary organization called the Hindustan Republican Association.

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