

## June MCQ Compilation

### 1. Consider the following statements about National Programme for Organic Production and Participatory Guarantee Systems

1. NPOP certified products can be traded in export and in the domestic market, while PGS-India certified products can be traded only in the domestic market.

2. Both the programmes are implemented by APEDA under the Ministry of Commerce & Industries.

**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**

**Explanation**

**National Programme for Organic Production**

- The **Agricultural and Processed Food Products Export Development Authority (APEDA)** under the Ministry of Commerce & Industries is implementing the National Programme for Organic Production (NPOP).
- The programme involves the accreditation of Certification Bodies, standards for organic production, promotion of organic farming and marketing etc.
- All types of agriculture, horticulture and non-food crops are grown under organic certification process.
- Livestock, aquaculture, animal feed processing and handling, mushroom production, sea weeds, aquatic plants and green house crop production have also come under the ambit of organic certification.
- **Organic products are currently exported from India only if they are produced, processed, packed and labelled as per the requirements of the NPOP.**
- As per the established norm of organic production systems, the areas having chemical input usage history are required to undergo a **transition period of a minimum 2-3 years** to qualify as organic. During this period, farmers need to adopt standard organic agriculture

practices and keep their farms under the certification process. On successful completion, such farms can be certified as organic after 2-3 years. The certification process also requires elaborate documentation and time to time verification by the certification authorities.

### **Global Recognition**

- The NPOP standards for production and accreditation system have been **recognized by European Commission and Switzerland** for unprocessed plant products as equivalent to their country standards. It enables India to export unprocessed plant products to these countries without the requirement of additional certification. The equivalency with the EU also facilitates the export of Indian organic products to the **United Kingdom** even in the post Brexit phase.
- Similarly, **The United States Department of Agriculture (USDA)** has recognized NPOP conformity assessment procedures of accreditation as equivalent to that of the National Organic Program (NOP) of the US.
- With these recognitions, Indian organic products duly certified by the accredited certification bodies of India are accepted by the importing countries. APEDA is also in the process of Bilateral equivalence with South Korea, Taiwan, Canada, Japan etc.

### **PGS-India**

- Participatory Guarantee Systems (PGS) for India programme for local and domestic market was launched by the **Ministry of Agriculture and Farmers Welfare** with an aim to make the certification system affordable and accessible without the need for third party certification agencies.
- PGS-India is a quality assurance initiative that is **locally relevant, emphasizes the participation of stakeholders**, including producers and consumers and operates outside the frame of third party certification.
- In the PGS framework, people in similar situations (in this case smallholder producers) assess, inspect and verify the production practices of each other and take decisions on organic certification.
- The certification is in the form of a documented logo or a statement.

### **Difference between NPOP and PGS India Certifications**

- Both the programmes (NPOP and PGS-India) are independent of each other and products certified under one system cannot be processed or labeled under another system. While

**NPOP certified products can be traded in export and in the domestic market, PGS-India certified products can be traded only in the domestic market. Hence statement 1 is correct.**

- Under the NPOP framework, **Accredited certification agencies** authorized under the programme are certifying organic producers. PGS-India programme was launched with an aim to make the certification system affordable and accessible **without the need for third party certification agencies**. Under the PGS, farmers in a group inspect each other's land and vouch for its organic credentials.
- While NPOP is implemented by **APEDA** under the **Ministry of Commerce & Industries**, PGS-India is facilitated by the **Ministry of Agriculture and Farmers' Welfare** through **National Centre of Organic Farming (NCOF)** as its Secretariat. Hence **statement 2 is incorrect**.

**Why in the News?**

- Union Food Processing Minister Harsimrat Kaur Badal recently said that India's organic food market is growing at 17 per cent annually and has the potential to grow at a faster pace on rising demand for health and wellness food products across the world.
- 2. It is a national park in the state of Assam, India. The national park hosts two-thirds of the world's great one-horned rhinoceros. It is a World Heritage Site. It was declared a Tiger Reserve in 2006.**

**The above description refers to which of the following national parks?**

- a) Kaziranga National Park
- b) Manas National Park
- c) Orang National Park
- d) Dibru Saikhowa National Park

**Answer: A**

**Explanation**

**Kaziranga National Park**

- Kaziranga National park is a 430 square kilometer area sprinkled with elephant-grass meadows, swampy lagoons, and dense forests are home to more than 2200 Indian one-horned rhinoceros, **approximately 2/3rd of their total world population.**
- It is located at the **edge of the Eastern Himalayan biodiversity hotspots** – Golaghat and Nagaon district of Assam.
- **The river Brahmaputra flows through this national park.**
- **In the year 1985, the park was declared as a World Heritage Site by UNESCO.**
- The park is the breeding ground of elephants, wild water buffalo, and swamp deer, Hoolock Gibbon, Tiger, Leopard, Sloth Bear, etc.
- **Over the time, the tiger population also increased** in Kaziranga, and that's the reason why Kaziranga was declared as Tiger Reserve in 2006.
- Also, the park is recognized as an **Important Bird Area** by BirdLife International for the conservation of avifaunal species as good number of bird species migrate from Central Asia to this national park during the winter season.
- The other National Parks like **Dibrusaikowa**, , **manas**, nameri, **orang** national park are also located in Assam.

#### **Why in the news?**

- The Assam government has approved more arms to the forest guards of Kaziranga National Park. It has also approved Commando training for forest guards thus treating them on par with the State police personnel.
- It has approved helicopter services in the Kaziranga for better management of poaching and also to increase the tourist flow in the coming years.
- These steps have been taken after the the Supreme Court in January 2021 urged the Central government to arm forest officers and provide them with bullet-proof vests and vehicles when told that India recorded the “greatest number of mortal fatalities” among forest officials in the world.
- In this regard let us discuss the debate of arming forest guards.



## About arming Forest Guards

### Arguments in favour

- Rising cases of violence against forest rangers by poachers and encroachers.
- Today's wildlife trade/hunting mafia can't be opposed with simple gram sabha or local dwellers as they are heavily armed. A professional, well-trained force is needed to protect forests, with appropriate checks and balances to prevent abuse of power.
- Lack of arms is a threat to the life of foresters. Over 160 of them have died in India during 2012-17 in the line of duty, according to the International Ranger Federation.

### Arguments against the move

- Can disturb the power balance between forest dwellers and the state.
- Forest Guards already have immense powers like, to search and seize forest produce; arrest, charge and send forest dwellers into detention and impose fines, compound offences and auction seized goods. Arming them can lead to exploitation of forest dwellers.
- Arming them can result in alienation of forest guards as they need immense ground support from the local people and undermine their social connectedness.
- It will also contribute to the **"militarisation of conservation"** or "green militarisation", which refers to the use of military/paramilitary logics, practices, and technologies in the name of protecting biodiversity and spaces of conservation.
- Constant patrolling of armed commandos disturbs the social fabric, curtailing basic civil liberties and restricting the collection of natural produce. This deteriorates the basic food basket, impinges upon cultural rights, and causes psychological trauma to children, women and the elderly.

**3. Which the following statements about Bureau of Indian Standards(BIS) is incorrect?**

- a) Bureau of Indian Standards (BIS) is the National Standard Body of India established under the BIS Act 2016.
- b) BIS is responsible for the harmonious development of the activities of standardization, marking and quality certification of goods.
- c) BIS works under the aegis of the Ministry of Consumer Affairs, Food and Public Distribution.
- d) None of the above

**Answer: D**

**Explanation**

**Bureau of Indian Standards(BIS)**

**All the statements are correct.**

- Bureau of Indian Standards (BIS) is the **National Standard Body of India** established under the **BIS Act 2016**.
- BIS is responsible for the harmonious development of the activities of standardization, marking and quality certification of goods.
- BIS works under the aegis of the **Ministry of Consumer Affairs, Food and Public Distribution**.

**Why in the news?**

**RDSO** (Research Design & Standards Organization) of Indian Railways has become the **FIRST** Institution to be declared Standard Developing Organisation (SDO) under "**One Nation One Standard**" mission on BIS ( Bureau of Indian Standards) which is Institution under Department of Consumer Affairs.

**4. Consider the following statements about Indian Meteorological Department**

- 1) It has the responsibility of forecasting, naming and distribution of warnings for tropical cyclones in the Northern Indian Ocean region
- 2) It is the principal agency under the Ministry of Earth Sciences (MoES).

**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**

**Explanation**

- **Statement 2 is correct:** India Meteorological Department was established in 1875. It is the **National Meteorological Service of the country** and the principal government agency in all matters relating to **meteorology, seismology and allied subjects**. IMD is the **principal agency** under the **Ministry of Earth Sciences (MoES)**
- **Statement 1 is correct:** IMD is also one of the **six Regional Specialised Meteorological Centres** of the **World Meteorological Organization**. It has the responsibility for forecasting, naming and distribution of **warnings for tropical cyclones in the Northern Indian Ocean region**, including the Malacca Straits, the Bay of Bengal, the Arabian Sea and the Persian Gulf.

**Mandate**

- To take meteorological observations and to provide current and **forecast meteorological information** for optimum operation of weather-sensitive activities like agriculture, irrigation, shipping, aviation, offshore oil explorations, etc.
- To warn against severe **weather phenomena like tropical cyclones, norwesters, dust storms**, heavy rains and snow, cold and heat waves, etc., which cause destruction of life and property.
- To provide **meteorological statistics required for agriculture**, water resource management, industries, oil exploration and other nation-building activities.
- To conduct and **promote research in meteorology** and allied disciplines.
- To detect and **locate earthquakes and to evaluate seismicity** in different parts of the country for development projects.

**World Meteorological Organization (WMO)**

- The World Meteorological Organization (WMO) is an **intergovernmental organization with a membership of 193 Member States** and Territories.

- It originated from the International Meteorological Organization (IMO), the roots of which were planted at the **1873 Vienna International Meteorological Congress**.
- Established by the ratification of the WMO Convention on 23 March 1950, **WMO became the specialised agency of the United Nations** for meteorology (weather and climate), operational hydrology and related geophysical sciences a year later.
- The Secretariat, **headquartered in Geneva**, is headed by the Secretary-General. Its supreme body is the World Meteorological Congress.

**5. Consider the following statements about Agricultural and Processed Food Products Export Development Authority (APEDA)**

- 1) The Agricultural and Processed Food Products Export Development Authority (APEDA) was established by the Government of India under the Agricultural and Processed Food Products Export Development Authority Act, 1985.
- 2) The Authority replaced the Processed Food Export Promotion Council (PFEPCC).
- 3) It functions under the Ministry of Commerce and Industry.

Which of the statements given above is/are correct?

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

**Answer: D**

**Explanation**

**All the statements are correct.**

- The **Agricultural and Processed Food Products Export Development Authority (APEDA)** was established by the Government of India under the **Agricultural and Processed Food Products Export Development Authority Act, 1985**.
- The Authority replaced the Processed Food Export Promotion Council (PFEPCC).
- It functions under the **Ministry of Commerce and Industry**.

## **Functions of APEDA**

- **Development of industries** relating to the scheduled products for export by way of providing financial assistance or otherwise for undertaking surveys and feasibility studies, participation in enquiry capital through joint ventures and other reliefs and subsidy schemes;
- **Registration of persons as exporters** of the scheduled products on payment of such fees as may be prescribed;
- **Fixing of standards and specifications** for the scheduled products for the purpose of exports;
- **Carrying out inspection** of meat and meat products in slaughterhouses, processing plants, storage premises, conveyances or other places where such products are kept or handled for the purpose of ensuring the quality of such products;
- **Improving of packaging** of the Scheduled products;
- **Improving of marketing** of the Scheduled products outside India;
- **Promotion of export oriented production** and development of the Scheduled products;

## **Products monitored**

- APEDA is mandated with the responsibility of **export promotion and development** of the following scheduled products:
  - **Fruits, Vegetables and their Products.**
  - **Meat and Meat Products.**
  - **Poultry and Poultry Products.**
  - **Dairy Products.**
  - **Confectionery, Biscuits and Bakery Products.**
  - **Honey, Jaggery and Sugar Products.**
  - **Cocoa and its products, chocolates of all kinds.**
  - **Alcoholic and Non-Alcoholic Beverages.**
  - **Cereal and Cereal Products.**
  - **Groundnuts, Peanuts and Walnuts.**
  - **Pickles, Papads and Chutneys.**
  - **Guar Gum.**
  - **Floriculture and Floriculture Products.**

- **Herbal and Medicinal Plants.**

- In addition to this, APEDA has been entrusted with the responsibility to monitor **import of sugar.**

**APEDA authority**

- APEDA Authority consists of the following members namely:
  - A **Chairman**, appointed by the Central Government
  - The **Agricultural Marketing Advisor** to the Government of India, ex-official.
  - One member appointed by the Central Government representing the Planning Commission
  - Three members of Parliament of whom two are elected by the House of People and one by the Council of States
- **Eight members** appointed by the Central Government representing respectively; the Ministries of the Central Govt.
  - (i) Agriculture and Rural Development
  - (ii) Commerce
  - (iii) Finance
  - (iv) Industry
  - (v) Food
  - (vi) Civil Supplies
  - (vii) Civil Aviation
  - (viii) Shipping and transport
- **Five members** appointed by the Central Government by rotation in the alphabetical order to represent the States and the Union Territories
- **Seven members** appointed by the Central Govt. representing
  - (i) Indian Council of Agricultural Research
  - (ii) National Horticultural Board
  - (iii) National Agricultural Cooperative Marketing Federation
  - (iv) Central Food Technological Research Institute
  - (v) Indian Institute of Packaging
  - (vi) Spices Export Promotion Council and
  - (vii) Cashew Export Promotion Council.
- **Twelve members** appointed by the Central Government representing

- Fruit and Vegetable Products Industries
- Meat, Poultry and Dairy Products Industries
- Other Scheduled Products Industries
- Packaging Industry
- **Two members** appointed by the Central Government from amongst specialists and scientists in the fields of agriculture, economics and marketing of the scheduled products.

**6. Consider the following statements about Index of Eight Core Industries**

- 1) The Eight Core Industries together comprise more than 50 per cent of the weight of items included in the Index of Industrial Production (IIP).
- 2) It is released by the Office of Economic Advisor, under the Ministry of Commerce and Industries.
- 3) The base year of the ICI is 2011-12.

**Which of the statements given above is/are correct?**

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

**Answer: B**

**Explanation**

- The monthly Index of Eight Core Industries (ICI) is a **production volume index**.
- The objective of the ICI is to provide an advance indication on production performance of industries of 'core' nature. These industries are likely to impact on general economic activities as well as industrial activities.
- The Eight Core Industries- **Electricity, steel, refinery products, crude oil, coal, cement, natural gas and fertilizers**- comprise **40.27 per cent** of the weight of items included in the Index of Industrial Production (IIP). **Statement 1 is incorrect.**
- **Industry Weight (In percentage)**
  - Petroleum & Refinery production - 28.04
  - Electricity generation - 19.85
  - Steel production - 17.92

- Coal production - 10.33
- Crude Oil production - 8.98
- Natural Gas production - 6.88
- Cement production - 5.37
- Fertilizers production - 2.63
- ICI is released by the **Office of Economic Advisor**, under the Ministry of Commerce and Industries. **Statement 2 is correct.**
- The base year of the ICI is **2011-12. Statement 3 is correct.**

#### **Why in the News?**

- According to the latest official data, the output of eight core sectors increased by 56.1% in April due to an uptick in production of natural gas, refinery products, steel, cement and electricity.
- The eight infrastructure sectors of coal, crude oil, natural gas, refinery products, fertilisers, steel, cement and electricity had contracted by 37.9% in April 2020 due to the national COVID-19 lockdown.

#### **7. Consider the following statements about the Pradhan Mantri Van Dhan Yojana.**

1. It is an initiative targeting livelihood generation for tribals by harnessing the wealth of forest.
2. Under the program, tribal enterprises such as Van Dhan Self Help Groups and Van Dhan Vikas Kendras are formed for collection, value addition, packaging & marketing of Minor Forest Produces.

#### **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

#### **Explanation:**

- **Statement 1 is correct:** Pradhan Mantri Van Dhan Yojna (PMVDY) is an initiative targeting **livelihood generation for tribals** by harnessing the wealth of forest i.e. Van Dhan.

- Launched by the **Ministry of Tribal Affairs and TRIFED** in **2018**, the programme aims to tap into traditional knowledge & skill sets of tribals by adding technology & IT to upgrade it at each stage and to convert the tribal wisdom into a viable economic activity.
- It is a mechanism for marketing of Minor Forest Produce (MFP) through Minimum Support Price (MSP) & Development of Value Chain.
- **Statement 2 is correct:** Under the program, MFP based tribal groups / enterprises of around 300 members will be formed for collection, value addition, packaging & marketing of Minor Forest Produces. These tribal enterprises will be in the form of **Van Dhan Self Help Groups (SHGs)** which will be a group of 15-20 members and such 15 SHG groups will further be federated into a larger group of **Van Dhan Vikas Kendras (VDVKs)** of around 300 members.
- **TRIFED** will support the VDVks through providing them with model business plans, processing plans & tentative list of equipment for carrying out the value addition work of MFPs.

#### **Why in the news?**

Van Dhan Yojana is set to be expanded this year in the Union Territories of Dadra and Nagar Haveli and Daman and Diu.

#### **8. Consider the following statements about the Production linked incentive (PLI) scheme.**

1. Its objective is to boost domestic manufacturing and attract large investments in the Indian manufacturing sector.
2. At present, the scheme is restricted for Large Scale Electronics Manufacturing in India.

**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**

**Sol:**

- In April last year, the central government had for the first time notified the Production Linked Incentive (PLI) scheme for **mobile phones and allied component manufacturing**.

- Under the scheme, 4% to 6% incentive will be provided on incremental sales of goods manufactured in India. These incentives will be offered for a period of 5 years.
- **Statement 2 is incorrect:** In November, the PLI scheme was **expanded to include 12 more sectors** such as automobile and automobile components, pharmaceutical drugs, textile products, food products, high efficiency solar photo-voltaic modules, white goods such as air conditioners and LED bulbs, and speciality steel products.
- **Statement 1 is correct:** Its objective is to boost domestic manufacturing and attract large investments in the manufacturing sector in the country.

9. The Agricultural and Processed Food Products Export Development Authority (APEDA) is mandated with the responsibility of export promotion for which of the following products?

1. Dairy Products
2. Floriculture products
3. Poultry products

Select the correct answer using the codes given below

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

**Answer: D**

**Explanation**

The Agricultural and Processed Food Products Export Development Authority (APEDA) was established by the Government of India under the Agricultural and Processed Food Products Export Development Authority Act 1985. The Authority replaced the Processed Food Export Promotion Council (PFEPCC) APEDA, under the **Ministry of Commerce and Industries** promotes export of agricultural and processed food products from India.

**APEDA is mandated with the responsibility of export promotion and development of the following scheduled products**

- Fruits, Vegetables and their Products

- Meat and Meat Products
- Poultry and Poultry Products
- Dairy Products
- Confectionery, Biscuits and Bakery Products
- Honey, Jaggery and Sugar Products
- Cocoa and its products, chocolates of all kinds
- Alcoholic and Non-Alcoholic Beverages
- Cereal and Cereal Products
- Groundnuts, Peanuts and Walnuts
- Pickles, Papads and Chutneys
- Guar Gum
- Floriculture and Floriculture Products
- Herbal and Medicinal Plants

**Other Functions:**

- Fixing of standards and specifications for the scheduled products for the purpose of exports;
- Carrying out inspection of meat and meat products in slaughterhouses, processing plants, storage premises, conveyances or other places where such products are kept or handled for the purpose of ensuring the quality of such products;
- Improving of packaging of the Scheduled products;
- Improving of **marketing of the Scheduled products outside India;**
- Collection of statistics from the owners of factories or establishments engaged in the production, processing, packaging, marketing or export of the scheduled products or from such other persons as may be prescribed on any matter relating to the scheduled products and publication of the statistics so collected or of any portions thereof or extracts therefrom;

**Why in the news?**

APEDA organizes webinar to commemorate the World Milk Day in collaboration with Ministry of Fisheries, Animal Husbandry and Dairying for harnessing India's export potential of dairy products

### 10. Consider the following statements about Government e-Marketplace

- 1) It is a 100 percent government-owned company setup under the aegis of the Ministry of Commerce and Industry.
- 2) It is a completely paperless, cashless and system driven e-market place that enables procurement of common use goods and services with minimal human interface.

**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**

**Explanation**

- Launched in 2016, the Government e-Marketplace (GeM) is a **100 percent government-owned company** setup under the aegis of the **Ministry of Commerce and Industry**. **Statement 1 is correct.**
- It is a **completely paperless, cashless and system driven e-market place** that enables procurement of common use goods and services with minimal human interface. **Statement 2 is correct.**
- GeM aims to enhance transparency, efficiency and speed in public procurement.
- GeM was developed with the technical support of the **National eGovernance Division** (Ministry of Electronics and Information Technology).
- In 2017, the government made it mandatory for all the departments and ministries to source goods and services from the GeM.

**Vision**

- To affect an evolution in public procurement promoting a transparent, efficient and inclusive marketplace.

**Mission**

- Institute a unified procurement policy to encourage behavioral change and drive reform.
- Establish a lean, dynamic organization capable of continuous innovation and market driven decision making.

- Build an easy to use, fully automated platform to ensure transparency and efficiency in procurement
- Demonstrate commitment to delivering value by ensuring right quality at right price
- Create a sustainable ecosystem covering all stakeholders and driving inclusive development in India

#### **Why in the news?**

- Minister of Railways, Commerce & Industry, Consumer Affairs and Food & Public Distribution Piyush Goyal recently called upon Government e-Marketplace (GeM) to **expand its scope** and include more participants in GeM portal for public procurement of both Products & Services.
- It was stressed that **integration of GeM with the Railway e-procurement system** towards the Unified Procurement System for buyers should be done expeditiously.

#### **11. Consider the following regarding Sacred grooves**

1. Sacred groves comprise patches of forests or natural vegetation that are usually dedicated to local folk deities.
2. These spaces are protected by local communities because of their religious beliefs and traditional rituals that run through several generations.
3. Invasion by exotic weeds such as Lantana camara and Prosopis juliflora is a serious threat to some groves.

#### **Which of the above statements is/are correct?**

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

**Answer: D**

#### **Explanation**

#### **SACRED GROVES OF INDIA :**

- **Sacred groves comprise of patches of forests or natural vegetation – from a few trees to forests of several acres – that are usually dedicated to local folk deities. These spaces are protected by local communities because of their religious beliefs and**

**traditional rituals that run through several generations. Hence statement 1 and 2 are correct.**

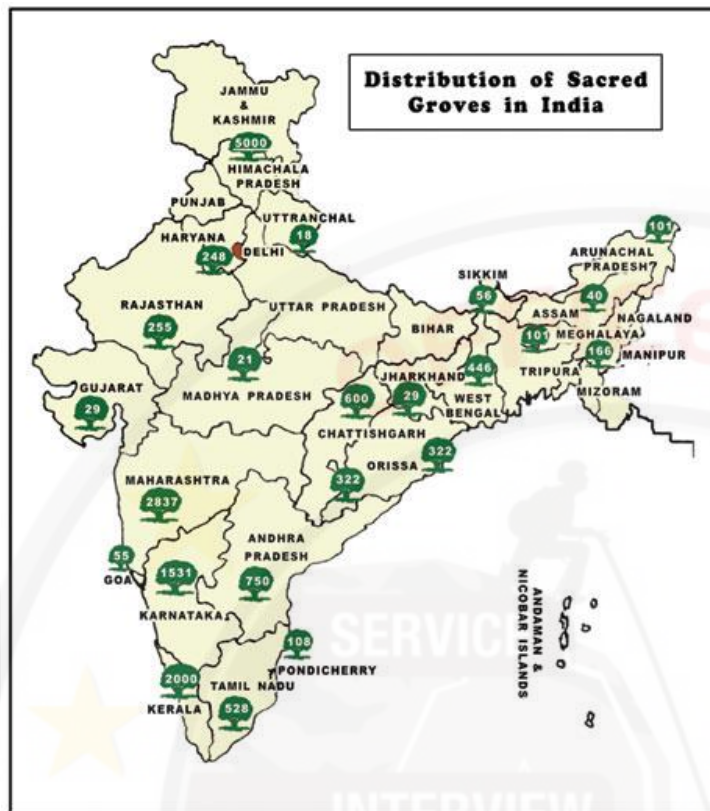
- The degree of sanctity of the sacred forests varies from one grove to another. In some forests even the dry foliage and fallen fruits are not touched. People believe that any kind of disturbance will offend the local deity, causing diseases, natural calamities or failure of crops. For example, the Garo and Khasi tribes of northeastern India completely prohibit any human interference in the sacred groves.
- India having abundance of sacred groves, it known by several names such as kavu in Kerala, devaravana or devarakadu etc. in Karnataka, sarana or jaherthan in Jharkhand, dev van in Himachal Pradesh, devrai or devgudi in Maharashtra, ki law lyngdoh or ki law kyntang etc. in Meghalaya, vanis or kenkris etc in Rajasthan, kovilkadu in Tamil Nadu, and umanglai in Manipur.
- Himachal Pradesh has the highest number of sacred groves.

#### **Classification**

- **Traditional Sacred Groves** – It is the place where the village deity resides, who is represented by an elementary symbol.
- **Temple Groves** – Here a grove is created around a temple and conserved.
- Groves around the **burial or cremation grounds.**

#### **SIGNIFICANCE**

- **Conservation of Biodiversity** – The sacred groves are important repositories of floral and faunal diversity that have been conserved by local communities in a sustainable manner. They are often the last refuge of endemic species in the geographical region.
- **Recharge of aquifers** – The groves are often associated with ponds, streams or springs, which help meet the water requirements of the local people. The vegetative cover also helps in recharging the aquifers.
- **Soil conservation** – The vegetation cover of the sacred groves improves the soil stability of the area and also prevents soil erosion.
- **Source of local medicine** – The local tribal population rely upon some plants in the sacred groves to heal themselves.
- **Carbon sink** – The groves act as an effective carbon sink and are also self-sustainable ecosystem, which reinforce scientific reasons for conservation



### Threats to the Sacred Groves:

- The threats vary from one region to another and even from one grove to the other. But the common threats identified are:
  - Disappearance of the traditional belief systems, which were fundamental to the concept of sacred groves. These systems and their rituals are now considered mere superstition.
  - Sacred groves in many parts of our country have been destroyed due to rapid urbanization and developmental interventions such as roads, railway tracks, dams including commercial forestry.
  - Encroachment has led to the shrinkage of some of the largest groves in the country.
  - Many grooves are suffering due to 'Sanskritisation' or the transformation of the primitive forms of nature worship into formal temple worship.
  - **Invasion by exotic weeds such as *Eupatorium odoratum*, *Lantana camara* and *Prosopis juliflora* is a serious threat to some groves. Hence statement 3 is correct.**
  - Pressures due to increasing livestock and fuelwood collection.

### Why in the news?

- A Puducherry based non-profit, Indigenous Biodiversity Conservation has started an initiative called '**Uyir Moochu**' Initiative.
- Under this eco-restoration of the sacred grooves around the Puducherry and Marakkanam-Pondicherry-Cuddalore stretch is being undertaken. This area hosts around 163 sacred grooves and is home to several endemic species.
- This region belongs to **Tropical Dry Evergreen Forests (TDEF)** which are second most vulnerable forests after mangroves. IBF has identified 88 rare, endemic and near threatened plant species found in TDEF for conservation as part of 'Uyir Moochu' Initiative.
- As a part of the initiative, the organisation is collecting the seeds of the vulnerable plants of these sacred grooves and raising them in the nursery.
- The local communities are made aware about the sacred grooves and their importance, further the nursery grown plants are distributed among the communities. Their main objective is to strengthen the bond that the local communities shared with the sacred groves.

### 12. With reference to the 'One Nation, One Ration Card' system, consider the following statements.

1. Under the system, the beneficiary will be able to buy subsidised foodgrains from any Fair Price Shop (FPS) across the country.
2. Ration card portability is aimed at providing intra-state as well as inter-state portability of ration cards.

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

**Explanation:**

- Before the 'One Nation, One Ration Card' system, a ration cardholder can buy food grains only from an FPS that has been assigned to her in the locality in which she lives.
- **Statement 1 is correct:** However, under the 'One Nation, One Ration Card' system, the beneficiary will be able to buy subsidised foodgrains from **any Fair Price Shop (FPS) across the country**.
- The biggest beneficiaries will be **migrant workers** who move to other states to seek better job opportunities.

#### **How will the system of ration card portability work?**

- **Statement 2 is correct:** Ration card portability is aimed at providing **intra-state as well as inter-state portability** of ration cards.
- The new system, based on a technological solution, will identify a beneficiary through **biometric authentication** on electronic Point of Sale (ePoS) devices installed at the FPSs, and enable that person to purchase the quantity of foodgrains to which she is entitled under the NFSA.
- While the **Integrated Management of Public Distribution System (IM-PDS) portal** (<http://www.impds.nic.in/>) provides the technological platform for the inter-state portability of ration cards, enabling a migrant worker to buy foodgrains from any FPS across the country, the other portal (**[annavitran.nic.in](http://annavitran.nic.in)**) hosts the data of distribution of foodgrains through E-PoS devices within a state.
- Once the 'one nation one ration card' system takes effect in a given state, the beneficiary family **can purchase food grains from different locations**. For example, a migrant worker staying in a different state can buy his or her share of the subsidized food grains from any FPS in the state where they work while the remaining family members will be able to buy their quota of the supplies back at home.

#### **Since when has the One Nation, One Ration Card System been in the works?**

- Work on this ambitious project started about two years back when the government launched a scheme called Integrated Management of Public Distribution System (IM-PDS) in April 2018 to reform the public distribution system in the country.
- The PDS system was marred with inefficiency leading to leakages in the system. To plug the leakages and make the system better, the government started the reform process.

- For this purpose, it used a technological solution involving the **use of Aadhaar to identify beneficiaries**. Under the scheme, the **seeding of ration cards with Aadhaar** is being done.
- Simultaneously, **PoS machines** are being installed at all FPSs across the country. Once 100 per cent of Aadhaar seeding and 100 per cent installation of PoS devices is achieved, the national portability of ration cards will become a reality.

**13. Consider the following statements about Mega food parks**

- 1) The primary objective of the Scheme is to provide modern infrastructure facilities for the food processing along the value chain from farm to market.
- 2) Functioning of Mega Food Parks is closely monitored by the Ministry of Agriculture and Farmers Welfare

**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

**Explanation**

- The Mega Food Parks scheme aims to provide a **mechanism to bring together farmers, processors and retailers** and link agricultural production to the market so as to ensure **maximization of value addition, minimization of wastages** and improving farmers' income
- **Statement 1 is correct:** The primary objective of the Scheme is to **provide modern infrastructure facilities for the food processing** along the value chain from farm to market with a **cluster based approach** based on a hub and spokes model
- It includes creation of infrastructure for **primary processing and storage near the farm** in the form of **Primary Processing Centres (PPCs)** and **Collection Centres (CCs)** and common facilities and enabling infrastructure like roads, electricity, water, ETP facilities etc. at **Central Processing Centre (CPC)**

- These PPCs and CCs act as **aggregation and storage points** to feed raw material to the food processing units located in the CPC
- Food Processing being capital incentive activity, **common facilities are created at CPC** to be used by the processing units on hire basis. This helps in **reducing the cost of individual units** significantly and makes them more viable
- The scheme envisages a **one-time capital grant of 50% of the project cost** (excluding land cost) subject to a maximum of Rs 50 crore in **general areas** and **75% of the project cost** (excluding land cost) subject to a ceiling of Rs. 50 crore in **difficult and hilly areas** i.e. North East Region including Sikkim, Jammu and Kashmir, Himachal Pradesh, Uttarakhand and Integrated Tribal Development Project (ITDP) and notified areas of the states
- **Statement 2 is incorrect:** Functioning of Mega Food Parks is closely monitored by the **Ministry of Food Processing Industries** (not Ministry of Agriculture and Farmers Welfare) through a well-established mechanism that includes **detailed scrutiny of the periodical progress reports** of the project by the Programme Management Agency (PMA). The Mega Food Park project is **implemented by a Special Purpose Vehicle (SPV)** which is a **Body Corporate** registered under the Companies Act

#### **Special Purpose Vehicle (SPV)**

- SPV is an entity which is formed for a **single, well-defined and narrow purpose**
- Also called a special purpose entity (SPE), it is a **subsidiary created by a parent company** to **isolate financial risk**. Its legal status as a separate company makes its obligations secure even if the parent company goes bankrupt

#### **Why in the news?**

The Union Minister for Food Processing Industries Shri Narendra Singh Tomar virtually inaugurated the Indus Best Mega Food Park at Raipur, Chhattisgarh recently.

#### **14. Consider the following statements about the Asian Development Bank (ADB).**

1. Voting power of ADB is distributed equally among all member countries.
2. China is the largest shareholder of ADB.

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: **D**

**Explanation:**

- Founded in 1966, the Asian Development Bank's (ADB) headquarters are in Manila, Philippines. The Asian Development Bank's primary mission is to foster growth and cooperation among countries in the Asia-Pacific Region.
- At present, ADB comprises 68 members (including **India**)- of which 49 are from within Asia and the Pacific and **19 outside**.
- **Statement 1 is incorrect:** The ADB was modeled closely on the World Bank, and has a similar weighted voting system where votes are distributed in proportion with members' capital subscriptions.
- **Statement 2 is incorrect:** The two largest shareholders of the ADB are **the US and Japan**.
- ADB is an official United Nations Observer.

**Why in the news?**

The Asian Development Bank and the Government of India recently signed a \$2.5 million project readiness financing (PRF) loan to support project preparation and design activities to upgrade major district roads in Sikkim that will help improve connectivity to important towns, rural areas, and pilgrimage and tourist destinations in the northeastern state.

**15. The Sustainable Development Goals (SDGs) also known as the Global Goals, were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. In this context, which of the following has been assigned the role of overseeing the implementation of SDGs in India?**

- a) National Biodiversity Authority (NBA)
- b) NITI Aayog
- c) Sustainable Development Cell (SDC)
- d) Bureau of energy efficiency

Answer: **B**

### Explanation

- The Sustainable Development Goals (SDGs) were **adopted in September 2015 as a part of the resolution**, 'Transforming our world: the 2030 Agenda for Sustainable Development'
- India is committed to **achieve the 17 SDGs and the 169 associated targets, which comprehensively cover social, economic and environmental dimensions of development** and focus on ending poverty in all its forms and dimension.
- At the Central Government level, **NITI Aayog has been assigned the role of overseeing the implementation of SDGs in the country**
- To spread awareness about the Goals, bring together stakeholders and build capacities for the realization of SDGs, **NITI Aayog has organized several national and regional level consultations.**

### 16. Consider the following statements about the Monetary Policy Committee (MPC).

1. It is a 6-member body entrusted with the task of fixing policy interest rate required to achieve the inflation target.
2. The decisions of MPC are taken by simple majority.
3. It is headed by the Finance Minister who enjoys a casting vote.

**Which of the statements given above is/are correct?**

- A) 1, 2 and 3
- B) 1 only
- C) 1 and 2
- D) 2 and 3

Answer: C

### Explanation:

#### About MPC

- The Monetary Policy Committee (MPC) is a committee of the RBI, headed by its Governor, which is entrusted with the task of fixing the benchmark policy interest rate (repo rate) to contain inflation within the specified target level.
- The MPC has six members

- RBI Governor (Chairperson), RBI Deputy Governor in charge of monetary policy, one official nominated by the RBI Board and remaining 3 members would represent the Government.
- The MPC takes decisions based on **majority vote**. In case of a tie, the **RBI governor will have a second or casting vote**.

#### **Why in the news?**

The Reserve Bank of India, Monetary Policy Committee has announced that the Policy Repo Rate will remain unchanged at 4%, Reverse Repo Rate too will remain unchanged at 3.35% and and that the Marginal Standing Facility and Bank Rate will remain at 4.25%.

#### **17. Consider the following statements about the Purchasing Managers' Index.**

1. It is an indicator of economic health for both manufacturing and service sectors.
2. It is published by the Department for Promotion of Industry and Internal Trade.
3. PMI >50 implies an expansion of business and economic activity, PMI <50 means contraction.

**Which of the statements given above is/are correct?**

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

Answer: B

**Sol:**

- **Statement 1 is correct:** Purchasing Managers' Index is an economic indicator which indicates the business activity & economic health of both the **manufacturing and service sectors**.
- **Statement 2 is incorrect:** PMI of India is published by Japanese firm **Nikkei** but compiled and constructed by **IHS Markit**, a London-based global information provider.
- The PMI is an investor sentiment tracking index and is dynamic in nature.
- They are derived from monthly surveys of about 400 private companies.

- Variables used for calculating the PMI are: Output, New Orders, Employment, Input Costs, Output Prices, Backlogs of Work, Export Orders, Quantity of Purchases, Suppliers' Delivery Times, Stocks of Purchases and Stocks of Finished Goods.

#### **How to read PMI?**

- **Statement 3 is correct:** While PMI >50 implies an expansion of business and economic activity, PMI <50 means contraction.

#### **Why in the news?**

India's manufacturing sector recorded the weakest performance in ten months this May, accelerating job losses and Purchasing Managers' Index (PMI) slid from 55.5 in April to 50.8 in May.

#### **18. With reference to Black carbon, consider the following statements.**

1. It is a sooty black material produced both naturally and by human activities.
2. It is a short-lived climate pollutant.
3. When black carbon settles on the surface of snow and ice, it increases their albedo.

Which of the statements given above is/are correct?

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

Answer: A

#### **Explanation:**

- **Statement 1 is correct:** Black carbon is the sooty black material produced both naturally and by human activities as a result of the **incomplete combustion of fossil fuels, biofuels, and biomass**.
- Primary sources include emissions from diesel engines, cook stoves, wood burning and forest fires.
- It comprises a significant portion of **particulate matter or PM**, which is an air pollutant.

- **Statement 2 is correct:** Black carbon is a **short-lived climate pollutant** with a lifetime of only days to weeks after release in the atmosphere. During this short period of time, black carbon can have significant direct and indirect impacts on the climate, glacial regions, agriculture and human health.
- Inhalation of black carbon is associated with health problems including respiratory and cardiovascular disease, cancer, and even birth defects.
- When suspended in the atmosphere, black carbon **contributes to warming** by converting incoming solar radiation to heat. It also influences cloud formation and impacts regional circulation and rainfall patterns.
- **Statement 3 is incorrect:** When black carbon settles on the surface of snow and ice it **reduces their albedo** (the reflecting power of a surface), warms the snow, and hastens melting.

#### Why in the news?

A new research by World Bank (WB) specialists has said that Black carbon (BC) deposits produced by human activity which accelerate the pace of glacier and snow melt in the Himalayan region can be sharply reduced through new, currently feasible policies by an additional 50% from current levels.

#### 19. Consider the following statements about Defence Acquisition Council

- 1) It is the highest decision-making body in the defence ministry for deciding on new policies and capital acquisitions for the three services and the Indian Coast Guard.
- 2) The Prime Minister is the Chairman of the Council.

**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: B**

**Explanation**

## **Defence Acquisition Council**

- The Defence Acquisition Council is the **highest decision-making body** in the defence ministry for deciding on **new policies and capital acquisitions** for the three services and the Indian Coast Guard.
- The **Minister of Defence** is the **Chairman** of the Council.
- It was formed upon the Group of Ministers recommendations on “**Reforming the National Security System**,” in 2001.

### **Objective**

- The objective of the Defence Acquisition Council is to **ensure expeditious procurement of the approved requirements** of the Armed Forces in terms of capabilities sought, and time frame prescribed, by optimally utilizing the allocated budgetary resources.

### **Functions of DAC**

- The functions of the DAC include:
  - (i) in-principle approval of 15 Year Long-Term Integrated Perspective Plan for Defence Forces;
  - (ii) accord of Acceptance of Necessity to acquisition proposals;
  - (iii) categorization of the acquisition proposals relating to 'Buy', 'Buy & Make' and 'Make';
  - (iv) issues relating to Single vendor clearance;
  - (v) decision regarding 'offset' provisions in respect of acquisition proposals above Rs. 300 crores;
  - (vi) decisions regarding Transfer of Technology under 'Buy & Make' category of acquisition proposals; and
  - (vii) Field Trial evaluation.

### **Composition of DAC**

- The composition of the DAC is as follows:
  - a) Defence Minister: Chairman
  - b) Minister of State for Defence: Member
  - c) Chief of Army Staff: Member
  - d) Chief of Naval Staff: Member
  - e) Chief of Air Staff: Member

- f) Defence Secretary: Member
- g) Secretary Defence Research & Development: Member
- h) Secretary Defence Production: Member
- i) Chief of Integrated Staff Committees HQ IDS: Member
- j) Director General (Acquisition): Member
- k) Dy. Chief of Integrated Defence: Staff Member Secretary

#### **Why in the news?**

- The Defence Acquisition Council (DAC) recently has approved proposals concerning Capital Acquisitions of various equipment for modernisation and operational needs of the Armed Forces amounting to approx. Rs 6,000 crore.

#### **20. The artificial waterway Suez Canal connects**

- A. Gulf of Oman and the Persian Gulf
- B. Red Sea and Gulf of Aden
- C. Mediterranean Sea and Red Sea
- D. Mediterranean Sea and Persian Gulf

**Answer: C**

#### **Explanation:**

- Global trade has been impacted after a container ship got stuck in the Suez Canal recently, the 193-km waterway that is pivotal in connecting Europe and Asia.
- Located in **Egypt**, the artificial sea-level waterway was built between 1859 and 1869 **linking the Mediterranean Sea and the Red Sea.**
- As the shortest route between the Atlantic Ocean and lands around the Indian and western Pacific Oceans, the canal is one of the busiest waterways in the world, negating the need to navigate around the Cape of Good Hope in Africa and thus cutting distances by up to 7,000 kms.



## History

- The canal has existed in one form or the other since construction started under the reign of Senausret III, Pharaoh of Egypt (1887-1849 BC).
- In 1799, Napoleon's efforts to build a proper canal were brought to an end due to an inaccuracy in the measurements. In the mid-1800s, French diplomats convinced the Egyptian viceroy Said Pasha to support the canal's construction.
- In 1858, the Universal Suez Ship Canal Company was tasked to construct and operate the canal for 99 years, after which rights would be handed to the Egyptian government.
- The French and British held most of the shares in the canal company. The British used their position to sustain their maritime and colonial interests by maintaining a defensive force along the Suez Canal Zone as part of a 1936 treaty.
- In 1954, facing pressure from Egyptian nationalists, the two countries signed a seven-year treaty that led to the withdrawal of British troops.

## Egypt takes over Suez Canal

- In 1956, Egyptian President Abdel Nasser **nationalised the Suez Canal** to pay for the construction of a dam on the Nile.
- This led to **the Suez Crisis with the UK, France and Israel mounting an attack on Egypt**. The conflict ended in 1957 after the United Nations got involved and was followed by the first instance of the UN Peacekeeping Forces being deployed anywhere in the world.
- Even as the occupying forces withdrew their troops, the UN forces were stationed at Sinai to maintain peace between Egypt and Israel.

### **Suez Canal crisis**

- In 1967, Nasser ordered the peacekeeping forces out of Sinai leading to a new conflict between the two countries. Israelis occupied Sinai and in response, Egypt closed the canal to all shipping.
- The closure lasted until 1975, when the two countries signed a disengagement accord. The canal was the focal point of the Arab-Israeli War of 1973, with the Arab coalition led by Egypt and Syria.

### **An Economic Lifeline**

- The canal continues to be the lifeline for all trade between the West and East as 10 percent of the global trade passes through it every year. The average 50 ships that pass through it daily carry about \$9.5 billion worth of goods, every day.
- The freight and cargo include everything from crude oil to perishables.

## **21. Consider the following statements**

- 1) India is the largest cultivator of bamboo.
- 2) One of the Objectives of the National Bamboo Mission is to increase the area under bamboo plantation in non forest Government and private lands.

**Which of the above statements is/are correct?**

- a) 1 only
- b) 2 only
- c) Both 1 and 2

d) Neither 1 nor 2

Answer: B

Explanation:

- India is the **world's second largest cultivator of bamboo** after China, with 136 species spread over nearly 14 million hectares. Hence, **statement 1 is incorrect.**

**About National Bamboo Mission:**

- In October 2006, the Government of India (GOI) launched the National Bamboo Mission (NBM) on the basis of the National Mission on Bamboo Technology and Trade Development Report, 2003.
- The NBM's key objective was to address issues relating to the development of the bamboo industry in the country, provide a new impetus and direction and enable the realisation of India's considerable potential in bamboo production.
- **Other objectives include**
- To **increase the area under bamboo plantation in non forest** Government and private lands to supplement farm income and contribute towards resilience to climate change as well as availability of quality raw material for industries. Hence **statement 2 is correct.**
- To improve post-harvest management through establishment of innovative primary processing units near the source of production, primary treatment and seasoning plants, preservation technologies and market infrastructure
- To promote product development keeping in view market demand, by assisting R&D, entrepreneurship & business models at micro, small and medium levels and feed bigger industry
- To rejuvenate the underdeveloped bamboo industry in India
- To promote skill development, capacity building, awareness generation for development of bamboo sector from production to market demand
- To realign efforts so as to reduce dependency on import of bamboo and bamboo products by way of improved productivity and suitability of domestic raw material for industry, so as to enhance income of the primary producers.

**Why in the news?**

- The National Bamboo Mission and the Government e-Marketplace (GeM) have been working together for having a dedicated window on the GeM portal for marketing of the Bamboo Goods (Bamboo based products & Quality Planting Materials).

**22. Consider the following statements about the National Institution for Transforming India, also called NITI Aayog.**

1. It is a statutory body formed on January 1, 2015.
2. One of the objectives of NITI Aayog is to foster cooperative federalism through structured support initiatives and mechanisms with the States on a continuous basis.
3. SDG India Index is published by the NITI Aayog.

Which among the above statements is/are correct?

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

Answer: B

**Explanation:**

- **Statement 1 is incorrect:** The National Institution for Transforming India, also called NITI Aayog, was formed via a **resolution of the Union Cabinet on January 1, 2015. It is neither a constitutional body nor a statutory body.**
- NITI Aayog is the **premier policy ‘Think Tank’ of the Government of India**, providing both **directional and policy inputs.**
- While designing strategic and long term policies and programmes for the Government of India, NITI Aayog also provides relevant technical advice to the Centre and States.

**Objectives**

- **Statement 2 is correct:** To **foster cooperative federalism** through structured support initiatives and mechanisms with the States on a continuous basis, recognizing that strong States make a strong nation.
- To develop mechanisms to formulate credible plans at the village level and aggregate these progressively at higher levels of government.

- To ensure, in areas that are specifically referred to it, that the interests of national security are incorporated in economic strategy and policy.
- To pay special attention to the sections of our society that may be at risk of not benefitting adequately from economic progress.
- To provide advice and encourage partnerships between key stakeholders and national and international like-minded Think Tanks, as well as educational and policy research institutions.
- To create a knowledge, innovation and entrepreneurial support system through a collaborative community of national and international experts, practitioners and other partners.

**Important reports released by Niti Aayog**

- **Healthy States, Progressive India Report**
- **Composite Water Management Index**
- **SDG India Index. Hence, statement 3 is correct.**

**23. Consider the following statements with respect to Organisation for the Prohibition of Chemical Weapons (OPCW)**

1. It is an intergovernmental organisation and the implementing body for the Chemical Weapons Convention
2. All UN members states except Israel and North Korea are parties to OPCW

**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

**Ans: A**

**Explanation**

- OPCW is an **intergovernmental organisation and the implementing body for the Chemical Weapons Convention**, which entered into force in 1997. It oversees the global endeavour to permanently and verifiably eliminate chemical weapons.
- **Headquarters:** The Hague, Netherlands.

- Member states: 193 (**All states party to the CWC are automatically members. 4 UN Member States are non-members: Egypt, Israel, North Korea and South Sudan.** Of these Israel signed CWC but didn't ratified it, rest 3 are non-signatories).
- **Nobel Peace Prize:** The organisation was awarded the 2013 Nobel Peace Prize "**for its extensive efforts to eliminate chemical weapons** with most recent being in Syria civil war".
- The OPCW–The Hague Award: It is **an annual award founded by the OPCW** as a result of their being presented with the 2013 Nobel Peace Prize. The Award honours individuals and institutions that have significantly contributed towards the goal of a world free of chemical weapons.

#### **Why in the news?**

- The head of the international chemical weapons watchdog told the U.N. Security Council that its experts have investigated 77 allegations against Syria, and concluded that in 17 cases chemical weapons were likely or definitely used.

#### **24. The term "sixth mass extinction/sixth extinction" is often mentioned in the news in the context of**

- Widespread monoculture practices in agriculture and large-scale commercial farming with indiscriminate use of chemicals in many parts of the world that may result in the loss of good native ecosystems.
- Fears of a possible collision of a meteorite with the Earth in the near future in the manner it happened 65 million years ago that caused the mass extinction of many species including those of dinosaurs.
- Large scale cultivation of genetically modified crops in many parts of the world and promoting their cultivation in other parts of the world which may cause the disappearance of good native crop plants and the loss of food biodiversity.

D. Mankind's over-exploitation/misuse of natural resources, fragmentation/loss of natural habitats, destruction of ecosystems, pollution and global climate change.

**Answer: D**

**Explanation:**

- Mass extinction refers to a substantial increase in the degree of extinction or when the Earth loses more than three-quarters of its species in a geologically short period of time. So far, during the entire history of the Earth, there have been five mass extinctions. The sixth, which is ongoing, is referred to as the **Holocene/Anthropocene extinction**.
- The five mass extinctions that took place in the last 450 million years have led to the destruction of 70-95 per cent of the species of plants, animals and microorganisms that existed earlier.
- These extinctions were caused by “catastrophic alterations” to the environment, such as massive volcanic eruptions, depletion of oceanic oxygen or collision with an asteroid. After each of these extinctions, it took millions of years to regain species comparable to those that existed before the event.

**Sixth mass extinction**

- According to scientists, the ongoing sixth mass extinction may be the most serious environmental threat to the persistence of civilisation, because it is irreversible. They say that it is **caused by an ever-increasing population and consumption rates**. Further, species are links in ecosystems and, as they disappear, the species they interact with are likely to disappear as well.
- When a species dies out, the Earth’s ability to maintain ecosystem services is eroded to a degree. Humanity needs a relatively stable climate, flows of fresh water, agricultural pest and disease-vector control and pollination for crops, all services that will be impacted as the sixth mass extinction accelerates.
- A recent study analysed 29,400 species of terrestrial vertebrates and determined which of these are on the brink of extinction because they have fewer than 1,000 individuals. Out of the studied species, they concluded that over 515 of them are near extinction, and that the current loss of species, which is based on the disappearance of their component populations, has been occurring since the 1800s.

- Most of these 515 species are from South America (30 per cent), followed by Oceania (21 per cent), Asia (21 percent) and Africa (16 percent) among others.

**25. Which among the following is known as risk-free gilt-edged instruments?**

- A. Government Securities
- B. Masala Bonds
- C. Promissory Notes
- D. Green Bonds

Answer: **A**

**Explanation:**

- A government security (G-Sec) is a tradable instrument issued by the central government or state governments. It acknowledges the government's debt obligations.
- In India, the central government issues both: treasury bills and bonds or dated securities, while state governments issue only bonds or dated securities, which are called the state development loans.
- Since they are issued by the government, they carry no risk of default, and hence, are called risk-free gilt-edged instruments.
- Masala Bonds are rupee-denominated borrowings by Indian entities in overseas markets. The bonds are directly pegged to the Indian currency. So, investors will directly take the currency risk or exchange rate risks.
- A promissory note is a financial instrument that contains a written promise by one party (the note's issuer or maker) to pay another party (the note's payee) a definite sum of money, either on demand or at a specified future date.
- A green bond is a type of fixed-income instrument that is specifically earmarked to raise money for climate and environmental projects.

**Why in the news?**

- RBI is about to purchase G-secs worth 1.2lakh crore in the second quarter.

**26. Consider the following statements about Stockholm Conference**

1. It is a global conference to protect human health and the environment from Persistent Organic Pollutants that came into effect from 2004.
2. It led to the creation of the United Nations Environment Programme (UNEP).

**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**

**Explanation**

- The **United Nations Conference on the Human Environment** (also known as the **Stockholm Conference**) was an international conference convened under **United Nations** auspices held in **Stockholm, Sweden** from June 5-16, 1972.
- It was the **UN's first major conference on international environmental issues**, and marked a turning point in the development of international environmental politics.
- It reflected a growing interest in conservation issues worldwide and laid the **foundation for global environmental governance**.
- The Stockholm Declaration provided a **foundation for many of the environmental policies** that have been established in the 113 participating countries.
- The participants adopted a series of **principles for sound management of the environment** including the **Stockholm Declaration and Action Plan for the Human Environment** and several resolutions.
- The Stockholm Declaration, which contained **26 principles**, placed environmental issues at the forefront of international concerns and marked the start of a dialogue between industrialized and developing countries on the link between economic growth, the pollution of the air, water, and oceans and the well-being of people around the world.
- The Action Plan contained **three main categories**:

- a) **Global Environmental Assessment Program** (watch plan);
- b) **Environmental management activities**;
- (c) **International measures to support assessment and management activities** carried out at the national and international levels.

In addition, these categories were broken down into 109 recommendations.

- The declaration emphasizes the need for nations to design **integrative development plans** that combine science and technology in order to lessen air, land, and water pollution and human impact on the environment.
- It urges each nation to create **regulations for protecting wildlife and conserving the natural resources** that are available within that country, and suggests creating national population policies, since overpopulation exacerbates the strain on natural resources.
- The Stockholm Conference also led to the **creation of the United Nations Environment Programme (UNEP)** in December 1972 to coordinate global efforts to **promote sustainability and safeguard the natural environment. Hence statement 2 is correct.**
- **Statement 1 is incorrect and is related to Stockholm convention which is a global treaty** to protect human health and the environment from Persistent Organic Pollutants that came into effect from 2004.
- World Environment Day has been celebrated since 1974 on June 5, to mark the **Stockholm Conference**, held from June 5-16.

#### **Why in the news?**

- World Environment Day is being celebrated all over the world on June 5th 2021 with the theme '**Ecosystem Restoration**'.
- This will also mark the beginning of the **UN Decade on Ecosystem Restoration (2021-2030)**, a global mission to revive billions of hectares, from forests to farmlands, from the top of mountains to the depth of the sea.
- This year's host of World Environment Day is **Pakistan**.

**27. Which of the following statements about Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is incorrect?**

- a) The act makes it obligatory for the State to give rural households work on demand.
- b) If employment is not provided within 45 days of registration, the applicant becomes eligible for an unemployment allowance.
- c) The wages are revised according to the Consumer Price Index-Agricultural Labourers (CPI-AL).
- d) The Ministry of Rural Development (MRD) is monitoring the entire implementation of this scheme in association with state governments.

**Answer: B**

**Explanation**

**About the scheme**

- The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme is the largest social security scheme in the world — guaranteeing **100 days of work** each financial year to **any rural household** willing to do public work-related unskilled manual work at the statutory minimum wage.
- The act makes it **obligatory** for the State to give rural households work on demand. **Option A is correct.**
- In case such employment is not provided within 15 days of registration, the applicant becomes eligible for an **unemployment allowance**. **Option B is incorrect.**
- The **Ministry of Rural Development (MRD)** is monitoring the entire implementation of this scheme in association with state governments. **Option D is correct.**

**Key Features**

- **One-third** of the stipulated workforce must be women.
- **Work site facilities** such as creche, drinking water and shade have to be provided.
- The employment will be provided **within a radius of 5 km**: if it is above 5 km extra wage will be paid.
- The wages are revised according to the **Consumer Price Index-Agricultural Labourers (CPI-AL)**. **Option C is correct.**
- A **60:40 wage and material ratio** has to be maintained.

- Permissible works predominantly include water and soil conservation, afforestation and land development works.
- **Work site facilities** such as crèche, drinking water, shade have to be provided.
- **Gram sabhas** must recommend the works that are to be undertaken and at least 50% of the works must be executed by them.
- **Social Audit** has to be done by the Gram Sabha.

#### Why in the News?

- The Centre has asked the States to split wage payments under the MGNREGA scheme into separate categories for Scheduled Castes, Scheduled Tribes and others from this financial year. The existing system for wages under the scheme is for only one type, that is there is no category wise provision of wage payment.
- However, workers' rights advocates said this will unnecessarily complicate the payment system, and expressed fears that it may lead to a reduction in scheme funding.

#### 28.SAGE portal recently in news is related to which of the following?

- Facilitating organic farmers to sell their organic produce
- E-filing of consumer complaints in the Consumer Commissions
- Facilitate reporting of labour inspections and submission of returns
- Providing one-stop access of elderly care products and services by credible start-ups.

**Answer: D**

#### Explanation

#### Why in the news?

- The Minister of **Social Justice and Empowerment**, virtually launched the **SAGE (Seniorcare Aging Growth Engine)** initiative and **SAGE portal** for elderly persons recently.
- An amount of Rs 100 crore has been assigned for the promotion of the **silver economy**.
- *Silver economy is the system of production, distribution and consumption of goods and services aimed at using the purchasing potential of older and ageing people and satisfying their consumption, living and health needs.*

#### About the Portal and initiative

- The SAGE portal will be a “**one-stop access**” of elderly care products and services by credible start-ups.

- It has been launched with a view to help such persons who are interested in entrepreneurship in the field of providing services for elderly care.
- The SAGE project aims to identify, evaluate, verify, aggregate, and deliver products, solutions and services directly to the stakeholders.
- The Ministry will act as a facilitator, enabling the elderly to access the products through these identified start-ups.

#### Features:

- Start-ups can apply for being a part of SAGE through the SAGE portal from June 5th 2021 onwards.
- The start-ups will be selected by an **independent screening committee** of experts.
- The start-ups will be selected on the **basis of innovative products and services**, which they should be able to provide across sectors such as health, housing, care centers, apart from technological access linked to finances, food and wealth management, and legal guidance.
- A fund of **upto Rs.1 crore as one-time equity** will be granted to each selected start-up.

#### Need for the initiative

- The **share of elders**, as a percentage of the total population in the country, is expected to increase from around **7.5% in 2001 to almost 12.5% by 2026**, and surpass **19.5% by 2050** according to some surveys.
- There is an urgent need to create a more robust elder care ecosystem in India, especially in the post-COVID phase.

#### 29. Consider the following statements about SATAT initiative:

- 1) The objective of the initiative is to boost production and availability of Compressed BioGas as an alternative and affordable clean fuel for the transportation sector.
- 2) The initiative was launched by the Ministry of Science and technology.

**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**

**Explanation**

- SATAT (**Sustainable Alternative Towards Affordable Transportation**) initiative was launched by the **Ministry of Petroleum and Natural Gas**, Government of India in 2018 for **boosting production and availability of CBG** as an alternative and affordable clean fuel for the transportation sector. **Statement 1 is correct and statement 2 is incorrect.**
- The scheme envisages setting up of **5000 CBG plants by FY 2023-24.**
- SATAT establishes an ecosystem for the production of Compressed BioGas from various waste and biomass sources in the country leading to multiple benefits viz. **reduction of natural gas import, reduction of GHG emission, reduction in burning of agriculture residues, remunerative income to farmers, employment generation, effective waste management** etc.
- The initiative is in line with the goals of Atma Nirbhar Bharat, Swachh Bharat Mission and boosting the MSME sector.

**Why in the news?**

- Union Minister of Petroleum and Natural Gas & Steel Shri Dharmendra Pradhan recently presided over a virtual ceremony in which a number of initiatives were launched to provide a major fillip to the SATAT initiative, and help India leap ahead towards a greener tomorrow.

**30. The Performance Grading Index (PGI), sometimes seen in news in the context of which of the following?**

- a) Primary healthcare
- b) Pollution control
- c) School education system
- d) Renewable energy

**Ans: C**

**Explanation**

- The government has launched a **70 point Performance Grading Index (PGI)** to assess **areas of deficiency in each state's school education system** so that targeted interventions can be made at every level from pedagogy to teacher training.
- The index is **aimed at helping states understand** where they may be lagging behind and **prioritise areas for intervention** to ensure that the school education system is robust at every level.
- The PGI exercise envisages that the index would propel States and UTs towards undertaking multi-pronged interventions that will bring about the much-desired optimal education outcomes.
- The **Ministry** of Education is compiling this schooling index.
- The Index will **assess states on a 1,000 point grading system** with 10-20 points per parameter.
- The 70 indicators will grade state schooling systems on areas like **number of existing teacher vacancies**, number of direct entry recruitments especially at leadership positions, school infrastructure and so on
- The **NITI Aayog** which was earlier developing its own School Education Quality Index, will be **using 33 of the 70 criteria under the PGI** for their own assessment

#### Significance

- The move is in keeping with the **government's overall thrust on quality improvement**, teacher training and learning outputs.

#### Why in the news?

- The Union Education Minister recently approved the release of Performance Grading Index (PGI) 2019-20 for States and Union Territories of India.
- The PGI for States and Union Territories was first published in 2019 with reference year 2017-18. The PGI : States/UTs for 2019-20 is the third publication in this series.

#### Highlights

- Punjab, Chandigarh, Tamil Nadu, Andaman & Nicobar Islands and Kerala occupy the highest grade (Grade A++) for 2019-20.
- Most of the States/UTs have improved their grade in PGI 2019-20 compared to the earlier years.

- Andaman & Nicobar Islands, Arunachal Pradesh, Manipur, Puducherry, Punjab and Tamil Nadu have improved overall PGI score by 10%, i.e., 100 or more points.
- Andaman & Nicobar Islands, Lakshadweep and Punjab have shown improvement by 10% (8 points) or more in the PGI domain: Access.
- As many as thirteen States and UTs have shown improvement by 10% (15 points) or more in the PGI domain: Infrastructure and Facilities. Andaman & Nicobar Islands and Odisha have shown improvement by 20% or more.
- Arunachal Pradesh, Manipur and Odisha have shown more than 10% improvement in the PGI domain: Equity.
- Nineteen States and UTs have shown improvement by 10% (36 points) or more in the PGI domain: Governance Process. Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Manipur, Punjab, Rajasthan and West Bengal have shown improvement by at least 20% (72 points or more).

**31. In which one of the following regions in India, one could find both the tropical evergreen forest and mangrove forest?**

- Southern Saurashtra
- Andaman and Nicobar Islands
- South-West Bengal
- North Coastal Andhra Pradesh

Answer : B

#### **Explanation**

- Andaman and Nicobar Islands is rich in biodiversity. Different types of forests as Tropical **Evergreen forests, Moist Deciduous forests, Mangrove forests**, Littoral forests are found here.
- The soil of Andaman and Nicobar Islands **is favorable for tropical evergreen forest and semi-evergreen forests**; in some regions, the soil and vegetation of Andaman and Nicobar Islands also supports tropical monsoon
- In Andaman group of islands alone, **area under mangroves is 612 sq.km**, while in Nicobar group of island mangroves occupy only 3 sq. km.

- Area wise **Andaman & Nicobar Islands** are **third in the country** after West Bengal and Gujarat.
- At places, this **salt tolerant community is found on rock shores** subjected to tidal action and regular deposits of mud. Luxuriant mangrove can be seen in **Shoal Bay (South Andaman), Yerrata (Middle Andaman)** etc

**32. In the context of 'Swachh Bharat Mission (SBM)', Consider the following statements.**

1. The aim of Swachh Bharat Mission is to achieve a clean and Open Defecation Free (ODF) India by 2nd October, 2019.
2. In the first step ,a gram panchayat declares a village to be ODF.
3. ODF plus status will at any point of the day, not a single person is found defecating and/or urinating in the open, AND all community and public toilets are functional and well maintained.

**Which of the statements given above is/are correct?**

- a. 1 and 2 only
- b. 2 and 3 only
- c. 1 only
- d. 1 ,2 and 3

**Answer:D**

Explanation:

**Statement 1 is correct.**

- Swachh Bharat Mission (SBM) is a nation-wide campaign in India run by the Government of India.
- The mission aims to achieve an "open-defecation free" (ODF) India by 2 October 2019, the 150th anniversary of the birth of Mahatma Gandhi.

**Statement 2 is correct.**

The process of declaring ODF status is as follows,

- Once every household in the village has resolved to end the practice of open defecation and have constructed the necessary infrastructure for the same, a resolution is passed in the gram sabha to declare the village ODF.

- To keep track of the declaration, verification is carried out for the village by the state governments within 90 days of the declaration. At this stage, verification is done for each household in the village.
- ODF sustainability verification, which primarily focuses on toilet usage is also conducted after a period of 270 days.
- SBM ODF Plus protocol focuses on sustaining community/ public toilet usage by ensuring their functionality, cleanliness and maintenance.

### **ODF Definition**

- "ODF is the termination of faecal-oral transmission, defined by
  - a) no visible faeces found in the environment/village; and
  - b) every household as well as public/community institutions using safe technology option for disposal of faeces
- A city / ward can be notified/declared as ODF city/ ODF ward if, at any point of the day, not a single person is found defecating in the open.

### **ODF +**

- A city / ward / work circle<sup>1</sup> can be notified/declared as SBM ODF+ city/ SBM ODF+ ward/SBM ODF+ work circle if, at any point of the day, not a single person is found defecating and/or urinating in the open, and all community and public toilets are functional and well maintained. Hence **Statement 3 is correct.**

### **ODF ++**

- A city / ward / work circle<sup>1</sup> can be notified/ declared as SBM ODF++ city/ SBM ODF++ ward/ SBM ODF++ work circle if, at any point of the day, not a single person is found defecating and/ or urinating in the open, all community and public toilets are functional and well maintained, And faecal sludge/septage and sewage is safely managed and treated, with no discharging and/or dumping of untreated faecal sludge/septage and sewage in drains, water bodies or open areas.

### **Phase II of SBM Rural**

- In 2020, the Union Cabinet approved the Phase II of the Swachh Bharat Mission (Grameen) till **2024-25**

- It will focus on **Open Defecation Free Plus (ODF Plus)**, which includes ODF sustainability and Solid and Liquid Waste Management (SLWM). The program will also work towards ensuring that no one is left behind and everyone uses a toilet.

**Why in the news?**

- Swachh Bharat Mission Grameen - Phase 2, is making steady progress amidst COVID-19 Pandemic with 1249 villages declared ODF Plus.

**33. Consider the following statements about food Safety and Standards Authority of India (FSSAI)**

1. Food Safety and Standards Authority of India (FSSAI) is an autonomous statutory body established under the Food Safety and Standards Act, 2006 (FSS Act).
2. The Ministry of Consumer Affairs, Food and Public Distribution is the administrative Ministry of FSSAI.

**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**

**Explanation:**

- Food Safety and Standards Authority of India (FSSAI) is an autonomous statutory body established under the Food Safety and Standards Act, 2006 (FSS Act).
- The Ministry of Health & Family Welfare, is the administrative Ministry of FSSAI.
- FSSAI has been created for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption.

**Why in the news?**

- World Food Safety Day celebrations were organized by Food Safety and Standards Authority of India (FSSAI) on June 7th 2021.

**34. The Bosphorus strait connects which of the following?**

- a) Persian gulf and Gulf of Oman
- b) Andaman sea and South China Sea
- c) Red Sea and Gulf of Aden
- d) Black Sea and Marmara sea

Answer: D

Explanation:

Option A refers to Strait of Hormuz.



Option B refers to Malacca Strait.



Option C refers to Bab-Al- Mandan strait.

Map of Yemen and the Bab el-Mandeb Strait



Option D refers to Bosphorus strait.



**35. Consider the following statements about ASEAN**

- 1) ASEAN was established in 1967 with the signing of the Bangkok Declaration.
- 2) India is a member of ASEAN.

**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

**Explanation:**



Image: ASEAN

- The Association of Southeast Asian Nations, or ASEAN, is a regional & intergovernmental organisation of 10 countries of southeast Asia.
- ASEAN was established in 1967 in Bangkok, Thailand, with the signing of the **ASEAN Declaration (Bangkok Declaration)**.
- Its members are **Thailand, Malaysia, Laos, Cambodia, Indonesia, Singapore, Myanmar, Philippines, Brunei and Vietnam. (India is not a member)**
- The organisation aims to accelerate the economic growth, social progress and cultural development in the region through joint endeavours in the spirit of equality and partnership. They work towards the progress of the southeast Asia region.

**Why in the news?**

China is hosting foreign ministers from the 10 ASEAN countries this year.

**36. Consider the following statements about Hague Convention on Intercountry Adoption, 1993**

- 1) It is an international convention dealing with international adoption, child laundering, and child trafficking.
- 2) The Convention applies to children under the age 16 years.
- 3) India is yet to become a party to this convention.

**Which of the statements given above is/are correct?**

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

**Answer: A**

**Explanation**

- The **Hague Convention on Protection of Children and Co-operation in Respect of Inter-country Adoption** is an international convention dealing with **international adoption, child laundering, and child trafficking**.
- The Convention was developed by the **Hague Conference on Private International Law**, the preeminent organization in the area of private international law. It is an effort to protect those involved from the corruption, abuses, and exploitation which sometimes accompanies international adoption.
- The Convention has been considered crucial because it provides a **formal international and intergovernmental recognition of intercountry adoption** to ensure that adoptions under the Convention will generally be recognized and given effect in other party countries.
- The Convention applies to children **under the age 16 years**.
- Number of Contracting Parties to this Convention: 103 (including **India**).

**37. Which of the following adaptations of mangroves is/are correctly matched?**

- 1) Prop roots - provide a stable support system in the submerged conditions.
- 2) Pneumatophores- to cope with salt water immersion.

3) Complex filtration system- facilitate the aeration necessary for root respiration.

**Select the correct answer using the codes given below**

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

**Answer: A**

**Explanation:**

**What is a "mangroves"?**

- Mangroves are woody plants that grow at the interface between land and sea in tropical and sub-tropical latitudes where they exist in conditions of high salinity, extreme tides, strong winds, high temperatures and muddy, anaerobic soils.
- Mangroves' root systems trap huge amounts of soft sediments, and in some areas where dense mangrove forests become established, they can be responsible for creating entire islands. Importantly, networks of these sediment-trapping forests buffer the coastline against wave-induced erosion and provide coastal ecosystems and coastal communities a vital line of defense against strong, tropical storms.

**Features of Mangrove Forests:**

- **Salt Tolerance Adaptations** :Adaptations for salt exclusion or salt excretion allows mangroves to live where other terrestrial plants cannot.
- **Hoard fresh water:** Like desert plants, mangroves store fresh water in thick succulent leaves. A waxy coating on the leaves of some mangrove species seals in water and minimizes evaporation.
- **Pneumatophores** are specialized root structures that grow out from the water surface and facilitate the aeration necessary for root respiration in hydrophytic trees such as many mangrove species

**Why in the news?**

- In the wake of back-to-back cyclones, experts highlight the importance of mangrove forests in protecting the coastal regions against the damaging effects of storms.

**38. Consider the following statements about the National Centre for Disease Control (NCDC)**

- 1) It functions as the nodal agency in the country for disease surveillance facilitating prevention and control of communicable diseases.
- 2) The Institute is under administrative control of the Director General of Health Services, Ministry of Health and Family Welfare.

**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**

**Explanation**

- It functions as the **nodal agency** in the country for **disease surveillance** facilitating prevention and control of **communicable diseases**. The Institute is under administrative control of the Director General of Health Services, **Ministry of Health and Family Welfare**.

**Functions of NCDC**

- Undertakes **investigations** of disease outbreaks all over the country.
- Provides referral **diagnostic services** to individuals, community, medical colleges, research institutions and state health directorates.
- Engaged in **generation and dissemination of knowledge** in various areas like Epidemiology, Surveillance, and Laboratories etc.
- Applied integrated **research** in various aspects of communicable as well as some aspects of non-communicable diseases has been one of the prime functions of the Institute.

**39. Consider the following statements about Avian influenza.**

1. H5N1 is one of the most common forms of avian flu.
2. Avian influenza viruses do not normally infect humans.

**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

**Explanation:**

- **Bird flu**, also called **avian influenza**, is a viral infection caused by **Influenza Type A viruses** which spreads from bird to bird. These viruses occur naturally among wild aquatic birds worldwide and can infect domestic poultry and other bird and animal species.
- **Statement 1 is correct:** H5N1 is one of the most common forms of avian flu which continues to spread among poultry in Egypt and in certain parts of Asia. The H5N1 virus can cause severe flu with a high mortality rate.
- **Statement 2 is correct:** Avian influenza viruses **do not normally infect humans**. However, there have been instances of certain highly pathogenic strains causing severe respiratory disease in humans. In most cases, the people infected had been in close contact with infected poultry or with objects contaminated by their faeces.
- The **World Health Organization** had expressed concern that the virus could mutate to become more easily transmissible between humans, raising the possibility of an influenza pandemic.

**Why in the News?**

- China has confirmed the first instance of human infection from H10N3, a rare strain of a virus that normally infects poultry.

**What is H10N3?**

- **H10N3** is a **subtype of the Influenza A virus** which is commonly known as the bird flu virus.

**40. Which among the following is/are components of Pradhan Mantri Awas Yojana (Urban) Programme?**

1. Promotion of Affordable Housing for the weaker section through credit linked subsidy.
2. Affordable Housing in Partnership with Public & Private sectors.
3. Subsidy for beneficiary-led individual house construction /enhancement.
4. Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource.

Select the correct answer using the codes given below

- A. 1, 2 and 3 only
- B. 1, 3 and 4 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

Answer: **D**

**Explanation:**

- The Pradhan Mantri Awas Yojana (Urban) Programme was launched by the **Ministry of Housing and Urban Poverty Alleviation (MoHUPA)** which envisions **Housing for All by 2022**, when the Nation completes 75 years of its Independence.
- It was launched in 2015 to provide central assistance to implementing agencies through States and UTs for providing houses to all eligible families/ beneficiaries.
- PMAY(U) adopts a **demand driven approach** wherein the Housing shortage is decided based on demand assessment by States/Union Territories.
- The Mission seeks to address the housing requirement of urban poor including slum dwellers through following programme verticals:
  - Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource
  - Promotion of Affordable Housing for weaker section through credit linked subsidy
  - Affordable Housing in Partnership with Public & Private sectors
  - Subsidy for beneficiary-led individual house construction /enhancement

"In situ" Slum Redevelopment	Affordable Housing through Credit Linked Subsidy	Affordable Housing in Partnership	Subsidy for beneficiary-led individual house construction or enhancement
<ul style="list-style-type: none"> <li>- Using land as a resource</li> <li>- With private participation</li> <li>- Extra FSI/TDR/FAR if required to make projects financially viable</li> </ul>	<ul style="list-style-type: none"> <li>- Interest subvention subsidy for EWS and LIG for new house or incremental housing</li> <li>- EWS: Annual Household Income up to Rs.3 lakh and house sizes upto 30 sq.m</li> <li>- LIG: Annual Household Income between Rs.3-6 lakhs and house sizes upto 60 sq.m</li> </ul>	<ul style="list-style-type: none"> <li>- with private sector or public sector including Parastatal agencies</li> <li>- Central Assistance per EWS house in affordable housing projects where 35% of constructed houses are for EWS category</li> </ul>	<ul style="list-style-type: none"> <li>- For individuals of EWS category requiring individual house</li> <li>- State to prepare a separate project for such beneficiaries</li> <li>- No isolated/ splintered beneficiary to be covered.</li> </ul>

## Beneficiaries

- Beneficiaries include **economically weaker sections (EWS), low-income groups (LIGs) and Middle Income Groups (MIGs)**.
- The EWS/LIG/MIG categories are defined as follows:
  - EWS households with an annual income upto Rs. 3.00 lakhs.
  - LIG households with an annual income between Rs. 3.00 lakhs to Rs. 6.00 lakhs.
  - MIG households with an annual income between Rs. 6.00 lakhs to Rs. 18.00 lakhs.
- EWS category of beneficiaries is eligible for assistance in all four verticals of the Missions whereas LIG and MIG categories are eligible under only Credit linked subsidy scheme (CLSS) component of the Mission.
- The beneficiary family should not own a pucca house and the beneficiary family should not have availed of central assistance under any housing scheme from Government of India.

## Implementation:

- Mission is implemented as a Centrally **Sponsored Scheme (CSS)** except for the component of credit linked subsidy which will be implemented as a Central Sector Scheme.
- **All statutory towns** as per Census 2011 and towns notified subsequently would be eligible for coverage under the Mission.
- The Mission also promotes **women empowerment** by providing the ownership of houses in the name of female member or in joint names.
- Preference is also given to differently abled persons, senior citizens, SCs, STs, OBCs, Minority, single women, transgender and other weaker & vulnerable sections of the society.

## Why in the news?

- The Government approved 708 proposals for construction of 3.61 lakh houses under Pradhan Mantri Awas Yojana – Urban (PMAY-U) recently.

### 41. Consider the following statements with respect to Code on Wages Act, 2019

- 1) The state governments will fix a floor wage, taking into account the living standards of workers
- 2) The Code will apply to all employees to enforce minimum wage among both formal and informal sector workers.

**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

EXPLANATION:

The Code on Wages Act, 2019 seeks to regulate **wage and bonus payments in all employments** where any industry, trade, business, or manufacture is carried out. The Code **replaces the following four laws:** (i) the Payment of Wages Act, 1936, (ii) the Minimum Wages Act, 1948, (iii) the Payment of Bonus Act, 1965, and (iv) the Equal Remuneration Act, 1976

- **Statement 2 is correct: Coverage:** The Code will **apply to all employees** to enforce **minimum wage among both formal and informal sector** workers and make provision for no gender discrimination in either recruitment or payment of wages. The central government will make wage-related decisions for **employment such as railways, mines, and oil fields**, among others. State governments will make decisions for all other employment.
- **Wages include salary, allowance**, or any other component expressed in monetary terms. This **does not include bonus payable to employees** or any travelling allowance, among others.
- **Statement 1 is incorrect: Floor wage-** According to the Code, the **central government** (not state government) **will fix a floor wage**, taking into account living standards of workers. Further, it may set **different floor wages for different geographical areas**. Before fixing the floor wage, the central government may obtain the advice of the Central Advisory Board and may consult with state governments
- The **minimum wages** decided by the central or state governments **must be higher than the floor wage**. In case the existing minimum wages fixed by the central or state governments are higher than the floor wage, they cannot reduce the minimum wages.
- **Fixing the minimum wage:** The Code **prohibits employers from paying wages less than the minimum wages**. Minimum wages will be notified by the central or state governments.

The minimum wages will be **revised and reviewed** by the central or state governments at **an interval of not more than five years**.

- **Overtime:** The central or state government may **fix the number of hours that constitute a normal working day**. In case employees work in excess of a normal working day, they will be entitled to overtime wage, which must be at least **twice the normal rate of wages**.
- **Determination of bonus:** All employees whose wages do not exceed a specific monthly amount, notified by the central or state government, will be entitled to an annual bonus
- **Gender discrimination:** The Code **prohibits gender discrimination** in matters related to wages and recruitment of employees for the **same work or work of similar nature**. Work of similar nature is defined as work for which the skill, effort, experience, and responsibility required are the same.
- **Advisory boards:** The central and state governments will constitute advisory boards. **One-third of the total members** on both the central and state Boards will be women. The Boards will advise the respective governments on various issues including: (i) **fixation of minimum wages** and (ii) increasing employment opportunities for women.
- **Offences:** The Code specifies **penalties for offences committed by an employer** such as (i) paying less than the due wages or (ii) for **contravening any provision of the Code**.

**42. Consider the following statements about United Nations General Assembly**

- 1) All 193 Member States of the UN are represented in the General Assembly, making it the only UN body with universal representation.
- 2) All the decisions are taken by a simple majority only.

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**

**Explanation**

**About UNGA**

- United Nations General Assembly (UNGA) is the main deliberative, policymaking and representative organ of the UN.
- It is **one of the six principal organs** which make up the UN.
- **Statement 1 is correct** : All 193 Member States of the UN are represented in the General Assembly, making it the **only UN body with universal representation**.
- The annual session is attended by world leaders to discuss and debate the world's most important global issues and how to address them.

### Voting

- **Each country has one vote.**
- Decisions on important questions, such as those on peace and security, admission of new members and budgetary matters, require a **two-thirds majority**. Decisions on other questions are by **simple majority**. **Statement 2 is incorrect.**

### Why in News?

- UN Secretary General Antonio Guterres is all set to be re-elected as chief of the world body after the Security Council adopted by acclamation a resolution recommending his name to the General Assembly for a second five-year term beginning January 1, 2022.
- The 15-nation Council held a closed meeting recently where it adopted the resolution recommending Guterres' name to the 193-member General Assembly for a second term as Secretary General.
- India had expressed its support for re-election of Guterres as UN Chief and welcomed the adoption of the resolution recommending his name.

### Role of Secretary General

- The UN Charter describes the Secretary-General as "**chief administrative officer**" of the Organisation, who shall act in that capacity and perform "such other functions as are entrusted" to him or her by the Security Council, General Assembly, Economic and Social Council and other United Nations organs.
- The Charter also empowers the Secretary-General to "bring to the attention of the Security Council any matter which in his opinion may threaten the maintenance of international peace and security".

## Election Process

- The Secretary-General is **appointed by the General Assembly, on the recommendation of the Security Council**.
- To be selected as Secretary-General, a candidate must receive the votes of at least 9 members of the United Nations Security Council, with no vetoes from permanent members. The Secretary-General is then appointed by a majority vote of the United Nations General Assembly.
- Although there is technically no limit to the number of five-year terms a Secretary-General may serve, none so far has held office for more than two terms.
- **Informal rules** influence the selection process. For example, **nationals of permanent members of the Security Council** - China, France, Russia, the United Kingdom or the United States - **cannot be considered for the post**, because of possible undue influence.

### 43. Consider the following statements

1. Crispr-Cas9 is a gene editing tool that uses natural defence mechanism of bacteria to alter an organism's genetic code.
2. Nobel Prize in Chemistry for 2020 was given for pioneering the use of CRISPR Cas9 system as a gene-editing tool.

**Select the correct answer using the given codes**

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

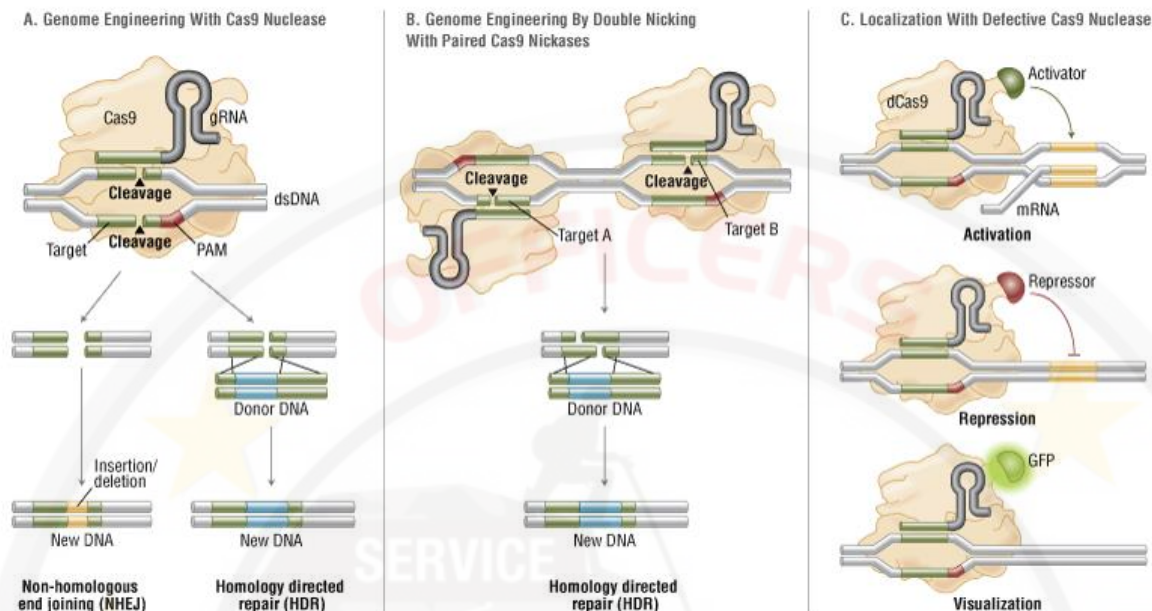
**Answer:C**

**Explanation**

**Why in News:**

- A gene-editing tool that has led to new cancer therapies and a rapid test for COVID-19 is now helping scientists find endangered species of salmon

## About CRISPR Cas-9



- **Statement 1 is correct:** CRISPR-Cas9 was adapted from a naturally occurring genome editing system in **bacteria**.
- The bacteria **capture snippets of DNA from invading viruses** and use them to create DNA segments known as CRISPR arrays.
- **DNA**, or deoxyribonucleic acid, is the **central information storage system** of most animals and plants, and even some viruses.
- The CRISPR arrays allow the bacteria to “remember” the viruses (or closely related ones). If the viruses attack again, the **bacteria produce RNA segments** from the CRISPR arrays to target the viruses’ DNA. The bacteria then use Cas9 or a similar enzyme to cut the DNA apart, which disables the virus.
- Ribonucleic acid (**RNA**) is an important biological macromolecule that is present in all biological cells. It is principally involved in the synthesis of proteins, **carrying the messenger instructions from DNA**, which itself contains the genetic instructions required for the development and maintenance of life. Unlike DNA, **RNA is single-stranded**.
- This also contains Cas (CRISPR-associated) genes that are used to **produce enzymes such as Cas-9**. These enzymes — the Cas-9 being a particularly popular one — can be **used to chop the DNA** of the virus and destroy them.

- The CRISPR-Cas9 system works similarly in the lab. As in bacteria, the modified RNA is used to recognize the DNA sequence, and the Cas9 enzyme cuts the DNA at the targeted location.
- Once the DNA is cut, researchers use the cell's own DNA repair machinery to **add or delete pieces of genetic material**, or to make changes to the DNA by replacing an existing segment with a customized DNA sequence.
- **Statement 2 is correct: Nobel Prize in Chemistry for 2020** was given to two women scientists namely Emmanuelle Charpentier (France) & Jennifer A. Doudna (Germany) for pioneering the use of CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) – Cas9 (CRISPR-associated protein 9) system as a gene-editing tool.

#### How can this be used to edit genomes?

- Using the tool, **researchers can change the DNA** of animals, plants and microorganisms with precision.
- TracrRNA which is a part of bacteria's ancient immune system- CRISPR/Cas **disarms viruses by cleaving their DNA**.
- In their natural form, the scissors recognise DNA from viruses, they could be controlled so that they can cut any DNA molecule at a predetermined site and where the DNA is cut it is then easy to **rewrite the code** of life.

#### Applications

- Deliver **genetic models for fundamental disease research**, drug screening, and therapy development, rapid diagnostics, in-vivo editing and **correction of heritable conditions** like hereditary blindness, Beta thalassemia, Sickle cell disease etc
- **Medical Treatment:** to create potential **genome editing treatments** for diseases such as HIV, cancer.
- **Therapeutic Cloning:** embryonic cells are cloned to obtain biological organs for transplantation.
- Research is already underway for using proteins that are smaller and more efficient than Cas-9, though the system purportedly holds promise for treating more complex diseases, such as cancer, heart diseases, mental illnesses, and the human immunodeficiency virus (HIV) infection.
- **Agriculture:** increase plant yield, quality, disease resistance, herbicide resistance and domestication of wild species, improved agronomic performance and breeding technologies.

### Associated issues

- **Agriculture Genetic Modification:** creation of food that can cause an **allergic reaction**.
- CRISPR-Cas9-edited cells have been **linked to cancer**, according to studies from Sweden's Karolinska Institute and Novartis, a biopharmaceutical corporation.
- In terms of **ethics- Germline Editing**: Germline Editing is the **deliberate alteration of genes** passed down to offspring and future generations, resulting in genetically changed individuals. The majority of ethical debates surrounding genome editing revolve around **human germline editing** as alterations in the germline are passed down to future generations.
  - The **germline** refers to the specialized cell lineage containing and transmitting genetic information from generation to generation.
- **Genetic Inequality**: Through Gene-editing, wealthy people can reprogram their offspring's with upgrades and create genetic discrimination.
- **Illegal Experimentation**

### Associated laws in India

- "Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms/Genetically Engineered Organisms or Cells, 1989" notified **under the Environment Protection Act, 1986** regulate genetically modified organisms.
- **National Ethical Guidelines for Biomedical and Health Research** involving human participants, 2017, by the Indian Council of Medical Research (ICMR), and the **Biomedical and Health Research Regulation Bill** implies regulation of the gene-editing process.

### 44. The Kaladan Multimodal project aims to connect

- A. Kunming to Kyaukpyu port
- B. Enayam to Colombo port
- C. Kolkata to Sittwe port
- D. Kabul to Chabahar port

**Answer: C**

### Explanation:

- The Kaladan Multimodal project envisages connecting **Kolkata to Sittwe port** in Myanmar, and then Mizoram by river and road. India and Myanmar had signed a framework agreement in 2008 for the implementation of this project.
- The Kaladan project starts from West Bengal and charts an over 500-km course through the Bay of Bengal to Myanmar's Sittwe Port, where it channels the Kaladan river — which flows from Myanmar to Mizoram — to connect with the northeast.
- As the name implies, it's multimodal and employs a range of infrastructure from roads and bridges to floating barrages.
- Recently, the External Affairs Minister S. Jaishankar said the Kaladan Multi-Modal Transit Transport Project was in the final stages despite delays due to various challenges.



**45. With reference to the Electronic Vaccine Intelligence Network (eVIN), consider the following statements.**

1. It is an initiative of the World Health Organization that digitizes vaccine stocks and monitors the temperature of the cold chain through a smartphone application.
2. eVIN is being implemented under the National Health Mission (NHM) by the Ministry of Health and Family Welfare.

**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**

**Explanation:**

- **Statement 1 is incorrect:** eVIN (Electronic Vaccine Intelligence Network) is an **indigenously developed technology system in India** that digitizes vaccine stocks and monitors the temperature of the cold chain through a smartphone application.
- It is aimed at strengthening immunization supply chain systems across the country.
- **Statement 2 is correct:** Introduced in 2015, the eVIN is being implemented under the National Health Mission (NHM) by the Ministry of Health and Family Welfare.
- eVIN aims to provide real-time information on vaccine stocks and flows, and storage temperatures across all cold chain points in the country.
- eVIN has reached 32 States and Union Territories (UTs) and will soon be rolled-out in the remaining States and UTs of Andaman & Nicobar Islands, Chandigarh, Ladakh and Sikkim.

**46. Consider the following statements about eSanjeevani**

- 1) It is a herbaceous plant found endemic to Agasthyar hills of Kerala
- 2) It is used by the local 'irula' tribe as a healthy food for getting instant stamina, evergreen health and vitality.

**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: D**

### **Explanation**

**Both the statements are related to Arogyapacha.**

#### **About 'eSanjeevani'**

- Launched in 2009 by the **Ministry of Health & Family Welfare** 'eSanjeevani' is a **web-based comprehensive telemedicine solution**. It aims to provide healthcare services to patients in their homes.
- Besides enhancing the quality of medical services, addressing issues about uneven distribution and shortage of infrastructural as well as human resources, eSanjeevani also aims to make healthcare services equitable by **bridging the digital divide** that exists between the urban vs. rural, rich vs. poor etc.
- eSanjeevani can also be used to provide **medical education** to interns, people across Various Common Service Centers (CSCs), etc.
- The portal was designed & developed by the **Centre for Development of Advanced Computing (C-DAC)**, a premier R&D organization of the Ministry of Electronics and Information Technology (MeitY).

#### **Services provided**

- eSanjeevani platform has enabled two types of telemedicine services viz.
  - Doctor-to-Doctor (eSanjeevani) and
  - Patient-to-Doctor (eSanjeevani OPD) Tele-consultations.

#### **eSanjeevani**

- It is being implemented under the **Ayushman Bharat Health and Wellness Centre (AB-HWC)**. It aims to implement Doctor-to-Doctor teleconsultation in all the 1.5 lakh Health and Wellness Centres in conjunction with identified Medical College hospitals in a 'Hub and Spoke' model.
- States have identified and set up dedicated 'Hubs' in Medical Colleges and District hospitals to provide teleconsultation services to 'Spokes', i.e SHCs, PHCs and HWCs.

#### **eSanjeevani OPD**

- Owing to the ongoing COVID-19 pandemic, the Health Ministry launched the second tele-consultation service enabling patient-to-doctor telemedicine through 'eSanjeevaniOPD'.
- This service is available as an Android mobile application as well. This has made it convenient for the people to avail of the health services without having to travel.
- This e-health service is offered free of cost and has proved a boon in containing the spread of COVID while simultaneously enabling provisions for non-COVID essential healthcare.

#### Why in the news?

- Union Health Ministry's National Telemedicine Service – eSanjeevani has crossed a milestone by completing **6 million (60 lakh) consultations** through more than 375 online OPDs.

#### 47. Which of the following statements about Minimum Support Price (MSP) is incorrect?

- Minimum Support Price (MSP) is a form of market intervention by the Government to insure agricultural producers against any sharp fall in farm prices.
- The Commission for Agricultural Costs and Prices (CACP) recommends MSPs of 23 commodities as of now.
- MSP is calculated based on the A2+FL method.
- None of the above

**Answer: D**

#### Explanation

##### About MSP

- Minimum Support Price (MSP) is a form of **market intervention** by the Government to insure agricultural producers against any sharp fall in farm prices.
- The minimum support prices are announced by the Government at the **beginning of the sowing season** for certain crops on the basis of the recommendations of the **Commission for Agricultural Costs and Prices (CACP)**.

##### About CACP

- The Commission for Agricultural Costs & Prices is an attached office of the **Ministry of Agriculture and Farmers Welfare**. It came into existence in 1965.

- It is mandated to recommend MSPs to incentivize the cultivators to adopt modern technology and raise productivity and overall grain production in line with the emerging demand patterns in the country.
- As of now, CACP recommends MSPs of **23 commodities**, which comprise **7 cereals** (paddy, wheat, maize, sorghum, pearl millet, barley and ragi), **5 pulses** (gram, tur, moong, urad, lentil), **7 oilseeds** (groundnut, rapeseed-mustard, soyabean, seasmum, sunflower, safflower, niger seed), and **4 commercial crops** (copra, sugarcane, cotton and raw jute).
- CACP submits its recommendations to the government. The **Cabinet Committee on Economic Affairs (CCEA)** takes a **final decision** on the level of MSPs and other recommendations made by CACP.

### Why in the News?

- The Central government has hiked the minimum support price for common paddy to ₹1,940 a quintal for the coming kharif season, close to 4% higher than last year's price of ₹1,868. The decision was taken by the Cabinet Committee on Economic Affairs recently.
- **In a bid to encourage crop diversification, there were slightly higher increases in the MSP for pulses, oilseeds and coarse cereals.**
- This year, the MSP for most of the crops were mostly set around **50% above the cost of production.**

### How is the production cost arrived at?

- As per CACP, there are three definitions of production cost which includes **A2, A2+FL and C2.**
  - A2 covers **all paid-out expenses**, including cash and in kind. It includes costs on seeds, chemicals, hired labour, irrigation, fertilisers and fuel.
  - A2+FL covers **actual paid cost and also unpaid family labour.**
  - C2 cost method is more comprehensive and makes the calculation by including a wider range of inputs. It includes **actual paid out costs, imputed value of family labour, interest on the value of owned capital assets, rent paid for leased-in land and the rental value of owned land.**
- Farmers have been demanding that MSP should be 1.5 times of C2. The **National Commission on Farmers (NCF)** headed by MS Swaminathan also recommended the C2 method to calculate MSP.

- However, at present, MSP is calculated based on the A2+FL method.

**48. Which of the following regions is called the '3rd Pole of Earth'?**

- a) Iceland
- b) Central Siberian Plateau
- c) Antarctica
- d) Hindu-Kush Himalayan

**Answer : D**

**Explanation**

- The Hindu-Kush-Himalayan (HKH) region is considered the Third Pole [after the North and South Poles].
- The name Hindu Kush derives from the Arabic for "Mountains of India."
- It is source to 10 major river systems in Asia that provide water, ecosystem services and livelihoods to more than 210 million people.
- The HKH region spans Afghanistan, Bangladesh, Bhutan, China, India, Kyrgyzstan, Mongolia, Myanmar, Nepal, Pakistan, Tajikistan, and Uzbekistan. It traverses about 5 million square kilometres and hosts a large and culturally diverse population. The Third Pole, which contains vast Cryospheric zones are also the world's largest store of snow and ice outside the polar region.
- The region holds and distributes water for more than 1.3 billion people living in downstream river.

**Why in the news?**

According to UNDP (United Nations Development Programme), the Hindu Kush Himalayan (HKH) mountain ranges could lose up to two-third of its ice by 2100.

**49. 'Dehing Patkai Wildlife Sanctuary' is located in which of the following states?**

- a) Jharkhand
- b) Assam
- c) Nagaland
- d) Odisha

**Answer: B**

**Explanation**

- Dehing Patkai Wildlife Sanctuary is **located in the Dibrugarh and Tinsukia Districts of Assam** and covers an area of 111.19 km<sup>2</sup>
- It is part of the **Assam valley tropical wet evergreen forest** and consists of three parts: Jeyapore, upper Dihing River and Dirok rainforest.
- It was **declared a sanctuary on 13 June 2004**. This sanctuary is also a part of Dehing-Patkai Elephant Reserve.
- A part of the forest was declared as a wildlife sanctuary by the Government of Assam, while another part falls under the **Dibru-Deomali Elephant Reserve**.
- The Dehing Patkai forms the **largest stretch of tropical lowland rainforests** in India. The forest is often referred to as "**The Amazon of the east**" owing to its large area and thick forests

**Why in the news?**

Recently, the Assam government notified Dehing Patkai as the 7th National Park of the state.

**50. In which of the following aspects are Biosphere Reserves (BRs) different from wildlife sanctuaries and National Parks?**

1. BRs emphasis is on some specific flagship species rather than overall biodiversity and landscape
2. BRs take into account the overall developmental activities and resolve conflict between development and conservation
3. BRs ensure increased and broad based participation of the local people

**Select the correct answer using the codes given below**

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

**Answer: B**

**Explanation:**

- Biosphere Reserve is an international designation assigned by **UNESCO** for representative parts of **natural and cultural landscapes** extending over large areas of terrestrial or coastal/ marine eco-systems or combination thereof.
- These are intended to **promote conservation of biodiversity and also to promote alternate livelihood for man and preserve cultural values.**
- The Biosphere Reserves are different from wildlife sanctuary and National Parks in the following aspects:
  - Its **emphasis is on overall biodiversity and landscape** rather than some specific flagship species.
  - It lays **importance on research activities.**
  - It takes into account the **overall developmental activities and resolves conflict between development and conservation.**
  - It ensures **increased and broad based participation of the local people** by special attention given on different components of Biosphere Reserves like landscape, habitats, species and land races.
- The Biosphere Reserves are **not a substitute or alternative to, but re-enforcement of the existing protected areas.**
- The **Ministry of Environment, Forest and Climate Change** launched the **Biosphere Reserve programme in 1986** with these aspects in mind.

#### **Zones of BR**

- In order to undertake activities relating to biodiversity conservation and development of sustainable management aspects, Biosphere Reserves are demarcated into **three zones**, namely **core, buffer and transition zones.**

These three functions are pursued through the Biosphere Reserves' three main zones



- The core zone is **absolutely undisturbed and secures legal protection and management and research activities**. In this zone, management and research activities that do not affect natural processes and wildlife are allowed. The core zone is to be kept free from all human pressures external to the system.
- The buffer zone adjoins the core zone. In this zone, **only those activities which protect the core zone are allowed**. The activities allowed include limited recreation, tourism, fishing, grazing which are permitted to reduce its effect on the core zone. Research and educational activities are to be encouraged.
- The transition zone is the outermost part of BR. This is a **zone of collaboration** where conservation knowledge and management skills are applied primarily to foster alternate livelihood and reduce dependence on consumptive use of the forest.

**51. With reference to the Aspirational Districts Programme (ADP), consider the following statements.**

1. It is Niti Aayog's flagship initiative to improve health, nutrition, education, and economic outcomes in all the districts of the country.
2. The Ministry of Home Affairs has been tasked with the monitoring of Aspirational districts programme in 35 Left Wing Extremism (LWE) affected districts.

**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**

**Explanation:**

- Launched in January 2018, the Aspirational Districts Programme (ADP) is one of the largest experiments on **outcomes-focused governance** in the world.
- **Statement 1 is incorrect:** Spread across **115 of India's socio-economically challenged districts**, the ADP is **Niti Aayog's** flagship initiative to improve health, nutrition, education, and economic outcomes. (not all districts)

**Core Strategy**

- The broad contours of the programme are **Convergence** (of Central & State Schemes), **Collaboration** (of Central, State level 'Prabhari' Officers & District Collectors), and **Competition** among districts driven by a spirit of mass Movement.
- With States as the main drivers, this program will focus on the strength of each district, identify low-hanging fruits for immediate improvement, measure progress, and rank districts.

**Selection of districts**

- **115 districts** were identified under the programme using a composite index of key data sets that included deprivation enumerated under the Socio-Economic Caste Census, key health and education sector performance and state of basic infrastructure.

**Institutional framework**

- **NITI Aayog** anchors the programme with support from Central Ministries and the State Governments.
- **Statement 2 is correct:** While NITI Aayog is steering the initiative in 30 districts, various central ministries oversee 50 districts besides the **Ministry of Home Affairs**, which focuses on 35 Left Wing Extremism (LWE) affected districts.
- Officers at the level of Joint Secretary / Additional Secretary have been nominated to become the '**Central Prabhari Officers**' of each district.
- States have appointed state-nodal and Prabhari officers.
- An Empowered Committee under the Convenorship of the CEO, NITI Aayog will help in the convergence of various government schemes and streamlining of efforts.

#### **Focus Areas**

- To enable optimum utilization of their potential, this program focuses closely on improving people's ability to participate fully in the vibrant economy.
- Health & Nutrition, Education, Agriculture & Water Resources, Financial Inclusion & Skill Development, and Basic Infrastructure are this programme's core areas of focus.

#### **Baseline Ranking**

- The objective of the program is to monitor the real-time progress of aspirational districts based on 49 indicators (81 data-points) from the 5 identified thematic areas.
- Districts are aspiring to first catch-up with the best district within their State, and subsequently aspire to become one of the best in the country, by competing with, and learning from others in the spirit of competitive & cooperative federalism.

#### **Why in the news?**

- The United Nations Development Programme (UNDP) has lauded the Aspirational Districts Programme (ADP) as 'a very successful model of local area development that 'should serve as a best practice for several other countries where regional disparities in development status persist for many reasons'.

**52. Consider the following statements about Trade-Related Aspects of Intellectual Property Rights (TRIPS)**

- 1) The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is an international legal agreement between all the member nations of the United Nations.
- 2) The agreement came into effect recently in 2020.

**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: D**

**Explanation**

**About TRIPS**

- The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is an international legal agreement between all the member nations of the **World Trade Organization (WTO)**.
- The Agreement, which came into effect on 1 January 1995, is a comprehensive multilateral agreement on intellectual property.
- The TRIPS Agreement is often described as **one of the three “pillars” of the WTO**, the other two being trade in goods and trade in services.
- To facilitate the implementation of the TRIPS Agreement, the Council for TRIPS concluded with WIPO an **agreement on cooperation between WIPO and the WTO**, which came into force on 1 January 1996.

**Why in the News?**

- According to top government officials, the proposal of India and South Africa on providing temporary patent waiver at the WTO to deal with the pandemic has achieved ‘tremendous’ progress as the member-countries have agreed to start text-based negotiations.
- The TRIPS Council of the WTO has agreed to start the negotiations on a proposal submitted by India and South Africa seeking patent waivers.

**What was the earlier proposal from India and South Africa?**

- In October 2020, India and South Africa had asked the WTO to waive certain conditions of the TRIPS Agreement that could impede timely access to affordable medical products to combat Covid-19.

- The countries had asked the TRIPS Council to recommend, as early as possible, a waiver on the implementation, application and enforcement of four sections in the second part of the agreement.
- These sections — 1, 4, 5, and 7 — pertain to **copyright and related rights, industrial designs, patents, and the protection of undisclosed information**.

### What are patents and IP rights?

- A patent represents a powerful intellectual property right, and is an **exclusive monopoly** granted by a government to an inventor for a limited, pre-specified time. It provides an enforceable legal right to prevent others from copying the invention. Patents can be either **process patents or product patents**.
- A product patent ensures that the rights to the final product is protected, and anyone other than the patent holder can be restrained from manufacturing it during a specified period, even if they were to use a different process. A process patent enables any person other than the patent holder to manufacture the patented product by modifying certain processes in the manufacturing exercise.
- **India moved from product patenting to process patenting** in the 1970s, which enabled India to become a **significant producer of generic drugs** at global scale, and allowed companies like Cipla to provide Africa with anti-HIV drugs in the 1990s. But due to obligations arising out of the TRIPS Agreement, India had to **amend the Patents Act in 2005**, and switch to a **product patents** regime across the pharma, chemicals, and biotech sectors.

### What is the argument in favour of relaxing TRIPS rules?

- The broader context for emergency action **aimed at rapidly increasing vaccine availability** across the world is the sharp surge in COVID-19 cases in India and Brazil.
- Global concern also stems from the risk that the **Indian variant**, believed to be driving a second wave of devastating intensity in the country, could potentially fuel second or third waves across the world, causing a setback to the progress made in controlling transmission across the U.S. and EU.
- Additionally, the Brazil and South African variants still pose a threat in some pockets. Across many affected nations, vaccine availability has emerged as a bottleneck impeding progress.

- In this context, a fierce debate has been underway, pitting global-vaccine-access advocates against vaccine developers and pharmaceutical firms that rely on patented technology, usually of a highly specialised nature, to produce vaccines.

**Besides patents, what are the other roadblocks to scaling up production?**

- The International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) has pointed to other “real challenges” in scaling up production and distribution of Covid-19 vaccines. These include **trade barriers, bottlenecks in supply chains, scarcity of raw materials and ingredients in the supply chain, and the unwillingness of rich countries to share doses with poorer nations.**
- The scarcity of raw materials has been a growing issue for ramping up production; several manufacturers have been relying on specific suppliers, and alternatives are limited. Also, countries like the US had blocked exports of critical raw materials used in the production of some Covid-19 vaccines using regulations like the American Defence Production Act.
- This led to a delay in the production of Covid vaccines by some companies in India.
- Also, there may be **serious issues associated with manufacturing vaccines**, for example, with those based on messenger RNA (mRNA) technology, if there is just an easing of the associated intellectual property rights rules but **no further support to generic pharmaceutical firms** in countries such as India and South Africa. This is because a “**tech transfer**” is also needed for the latter to actually commence production, especially for mRNA vaccines, including the ones produced by Moderna and Pfizer along with BioNTech. To illustrate, Pfizer has pointed out that its vaccine requires the use of 280 components from 86 suppliers and highly specialised manufacturing equipment.
- There is also a strong likelihood that it will take a **considerable amount of time**, even several years, for generic producers’ plants to become operational at optimal capacity. This raises the question of whether today’s vaccines would even be relevant at that point in time, especially if new variants prove resistant to vaccine formulations currently available.
- Finally, there is the classic counter-argument to calls for patent relaxations, that such policies could **discourage pharmaceutical companies from investing in producing next-generation vaccines.** Though many, including Mr. Biden, have argued that humanitarian need trumps the profit motive during a pandemic, the decision to waive all TRIPS rules

should be preceded by a rigorous analysis of the effects such a policy would have on the biotechnology sector and global supply chains for its products.

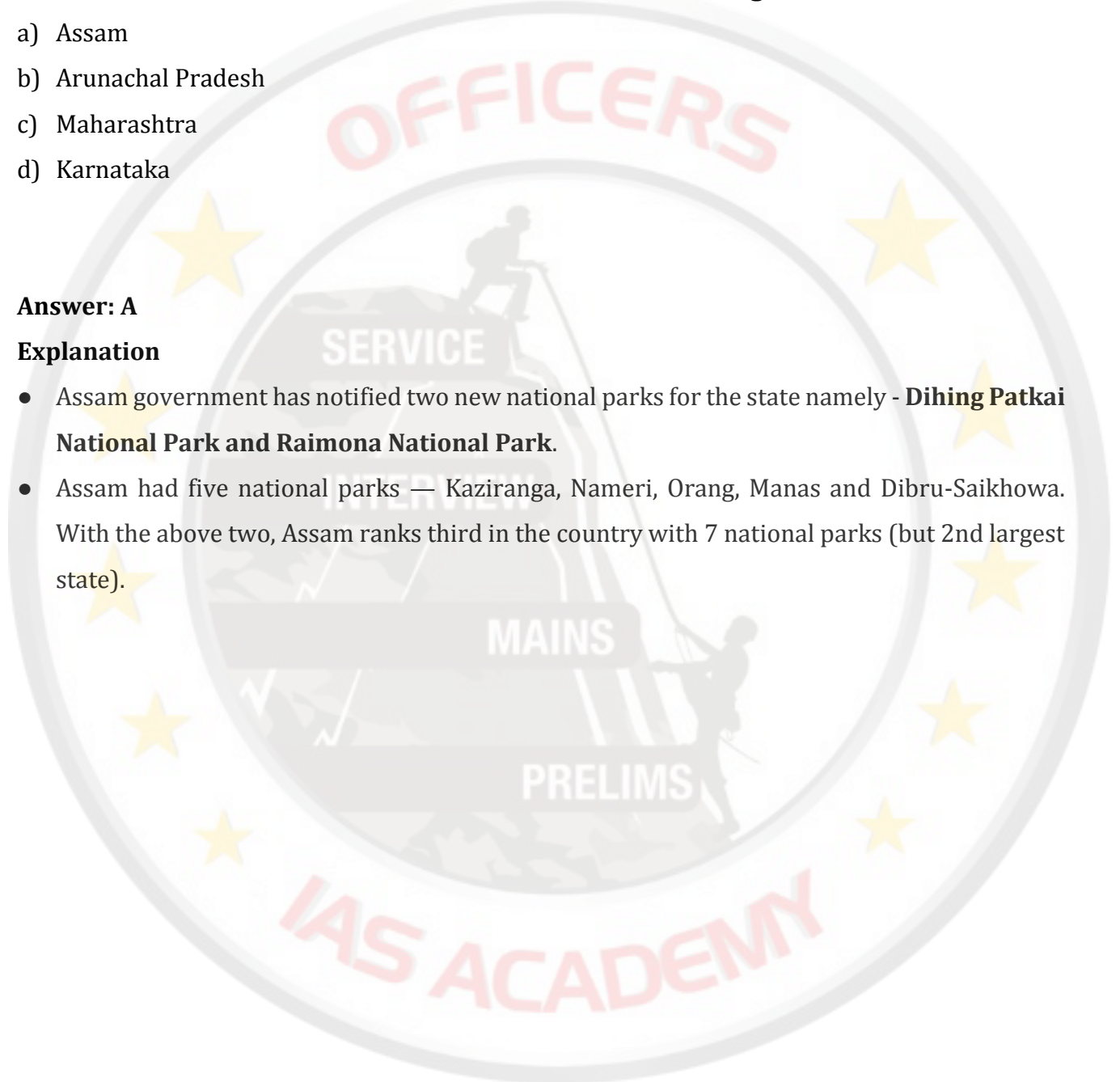
**53. Raimona National Park is situated in which of the following states?**

- a) Assam
- b) Arunachal Pradesh
- c) Maharashtra
- d) Karnataka

**Answer: A**

**Explanation**

- Assam government has notified two new national parks for the state namely - **Dihing Patkai National Park and Raimona National Park**.
- Assam had five national parks — Kaziranga, Nameri, Orang, Manas and Dibru-Saikhowa. With the above two, Assam ranks third in the country with 7 national parks (but 2nd largest state).



# Map of Assam



- Madhya Pradesh has 12 national parks (highest in the country), followed by Andaman and Nicobar Islands (UT), which has 9 National Parks.

## Dihing Patkai National Park

- It encompasses the erstwhile Dehing Patkai Wildlife Sanctuary, the Jeypore Reserve Forest and the western block of the Upper Dihing Reserve Forest.
- Dihing Patkai Between eastern Assam's Dibrugarh and Tinsukia districts.
- It is a **major elephant habitat** and has 310 species of butterflies.
- **Dirak and Burhi Dihing** rivers flow through this park.
- The park has 47 species each of reptiles and mammals, including the tiger and clouded leopard.
- This area was vulnerable to illegal coal mining and poaching.

## Raimona National Park

- This National adjoins the Buxa Tiger Reserve in West Bengal to its west, Phipsoo Wildlife Sanctuary in Bhutan to its north and Manas National Park to the east.
- It is home to 11 types of forest vegetation.
- It is within Bodoland Territorial Region. (A tribal region of Assam).

- Raimona is home to the **golden langur**, elephant, tiger, clouded leopard and Indian gaur besides sustaining several species of orchids, more than 150 species of butterflies, 170 species of birds and 380 species of plants.
- **Sankosh and Saralbhanga Rivers** flow through this park.

**54. Consider the following statements with respect to UNAIDS**

1. It is leading the global effort to end AIDS as a public health threat by 2030 as part of the Sustainable Development Goals
2. It is the only United Nations entity with civil society represented on its governing body

**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**

**Explanation**

**Both the statements are correct:**

- **UNAIDS is leading the global effort to end AIDS** as a public health threat **by 2030** as part of the Sustainable Development Goals
- UNAIDS is a model for United Nations reform and is the **only cosponsored Joint Programme** in the United Nations system
- It draws on the experience and **expertise of 11 United Nations system Cosponsors** and is the **only United Nations entity with civil society represented** on its governing body
- It places people living with HIV and **people affected by the virus at the decision-making table** and at the centre of designing, delivering and monitoring the AIDS response
- It provides a platform for the countries to get on the Fast-Track to ending AIDS and is a bold advocate for **addressing the legal and policy barriers** to the AIDS response

**55. Which of the following countries in Central America does not border both the Atlantic and Pacific Ocean?**

- a) Belize and El Salvador
- b) Guatemala and Honduras
- c) Nicaragua and Costa Rica
- d) Panama and Honduras

Answer: A

**Explanation:**

Belize has coastline only with Atlantic Ocean and El Salvador have coastline only with Pacific Ocean.



**Why in the news?**

- El Salvador, a small coastal country in Central America has become the first in the world to adopt Bitcoin, as legal tender.

**56. 'Samagra Shiksha' is an overarching programme for the school education sector extending from pre-school to class 12 prepared with the broader goal of improving school effectiveness. This programme has subsumed which of the following schemes?**

1. Sarva Shiksha Abhiyan (SSA)
2. Rashtriya Uchchatar Shiksha Abhiyan (RUSA)
3. Teacher Education (TE)

#### 4. Mid-day Meal Scheme

Select the correct answer using the codes given below

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

**Answer: B**

**Explanation**

##### About the scheme

- Samagra Shiksha is an overarching programme for the school education sector extending from **pre-school to class 12**. The scheme has been prepared with the broader goal of improving school effectiveness measured in terms of equal opportunities for schooling and equitable learning outcomes.
- It subsumes the three Schemes of **Sarva Shiksha Abhiyan (SSA)**, **Rashtriya Madhyamik Shiksha Abhiyan (RMSA)** and **Teacher Education (TE)**.
- The Integrated Scheme **envisages the 'school' as a continuum** from pre-school, primary, upper primary, secondary to senior secondary levels.
- It was introduced in the Union Budget, 2018-19.

##### Objectives

- The major objectives of the Scheme are
  - Provision of quality education and enhancing learning outcomes of students;
  - Bridging Social and Gender Gaps in School Education;
  - Ensuring equity and inclusion at all levels of school education;
  - Ensuring minimum standards in schooling provisions;
  - Promoting Vocationalisation of education and
  - Support States in implementation of Right of Children to Free and Compulsory Education (RTE) Act, 2009;

##### Why in the News?

- An amount of 7,622 crore rupees has been released to States and Union Territories under the Samagra Shiksha scheme for the continuity of various educational initiatives.

- The money will also be utilized for teachers' salary, training, vocational education and digital initiatives.

**57. 'PENCIL Portal' sometimes mentioned in news is related to**

- a) An electronic platform that aims to achieve the target of child labour free society.
- b) An online complaint management system to report sexual harassment at workplace.
- c) An initiative to encourage energy efficiency technologies in light of Global Warming.
- d) Government e-commerce portal for buying and selling dairy products.

**Answer: A**

**Explanation**

**PENCIL Portal**

- **The Platform for Effective Enforcement for No Child Labour (PENCIL) Portal on Child Labour** organised by the Ministry of Labour and Employment, Government of India is an **electronic platform** that aims at involving Centre, State, District, Governments, civil society and the general public in **achieving the target of child labour free society**.

**Related information**

**The Child Labour (Prohibition & Regulation) Amendment Act, 2016**

- The Child Labour (Prohibition & Regulation) Amendment Act, 2016 **completely prohibits the employment of children below 14 years.( not 18 years)**.
- The amendment also **prohibits the employment of adolescents in the age group of 14 to 18 years in hazardous occupations and processes** and regulates their working conditions where they are not prohibited.
- The amendment also **provides stricter punishment for employers for violation of the Act** and **makes the offence** of employing any child or adolescent in contravention of the Act by an employer **as cognizable offence (without warrant)**.

**International Labour Organisation (ILO)**

- **International Labour Organisation is a U.N. agency** that was established in 1919.
- ILO brings together **governments, employers and workers representatives of 187 member States**, to set labour standards, develop policies and devise programmes promoting decent work for all women and men

- The principal means of action in the ILO is setting up the **International Labour Standards** in the **form of Conventions and Recommendations**
- **Conventions** are international treaties and instruments, which create **legally binding obligations** on the countries that ratify them.
- **Recommendations are non-binding** and set out guidelines orienting national policies and actions
- There are eight Core Conventions of the ILO (also called fundamental/human rights conventions) which are as follows
  - Forced Labour Convention (No. 29)
  - Abolition of Forced Labour Convention (No.105)
  - Equal Remuneration Convention (No.100)
  - Discrimination (Employment Occupation) Convention (No.111)
  - Freedom of Association and Protection of Right to Organised Convention (No.87)
  - Right to Organise and Collective Bargaining Convention (No.98)
  - **Minimum Age Convention (No.138)**
  - **Worst forms of Child Labour Convention (No.182)**
- **The two Core Conventions directly related to child labour are that of ILO Convention 138 and 182. India has ratified both the Core Conventions of the International Labour Organization (ILO).**

#### **Why in the news?**

Union Minister of Women and Child Development and Textiles, Smt. Smriti Zubin Irani has Appealed to Citizens to report the instances of Child Labour on PENCIL Portal or by calling on Childline-1098.

#### **58. '90-90-90 target' indicates which of the following?**

- a) Eradication of 90 percent of AIDS by 2020
- b) Reducing desertification by 90 percent
- c) 90 percent of Indian states acquiring open defecation free (ODF) status
- d) Achieving 90 percent enrollment ratio in higher education.

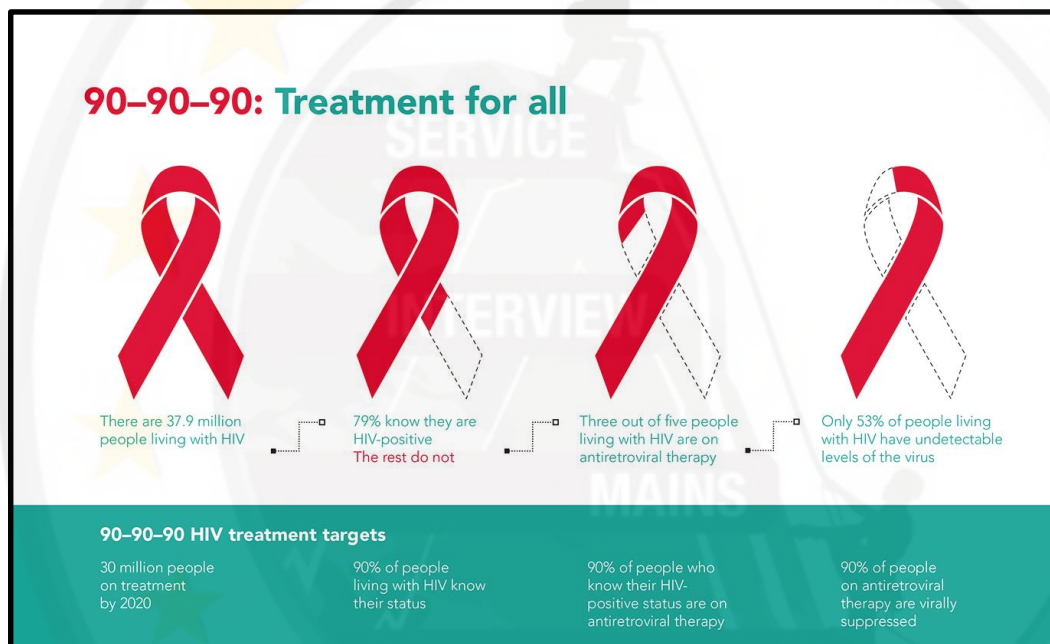
**Answer: A**

**Explanation:**

**'90-90-90 target' is an ambitious treatment target of UNAIDS to help end the AIDS Epidemic.**

**The target is as follows,**

- By 2020, 90% of all people living with HIV will know their HIV status.
- By 2020, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy.
- By 2020, 90% of all people receiving antiretroviral therapy will have viral suppression.



**59.A foreigner is considered to be an illegal immigrant under which of the following circumstances?**

- 1) If they come into India without valid travel documents.
- 2) If they came legally and stayed beyond the time period permitted to them under their travel documents.

**Select the correct answer using the code below.**

- a) 1 only
- b) 2 Only

- c) Both 1 and 2  
d) Neither 1 nor 2

**Solution: C**

**Both the Statements are Correct**

A foreigner is considered to be an illegal immigrant under two circumstances. One, if they come into India **without valid travel documents**, or two, having come in legally, they **stay beyond the time period permitted to them under their travel documents**. Illegal migrants may be imprisoned or deported.

**About Rohingyas:**

- Rohingyas are an ethnic group, largely comprising Muslims, who predominantly live in the **Western Myanmar province of Rakhine**. They speak a **dialect of Bengali**, as opposed to the commonly spoken Burmese language.
- Though they have been living in the country for generations, Myanmar considers them as persons who migrated to their land during the Colonial rule. So, it has not granted Rohingyas full citizenship.
- Since they are not citizens, their movements are restricted within the Rakhine state.
- According to the Ministry of Home Affairs, there are approximately 40,000 Rohingyas living in India. They have reached India from Bangladesh through the land route over the years.

**Why in the news?**

- Anti-junta protesters flooded Myanmar's social media with pictures of themselves wearing black Sunday in a show of solidarity for the Rohingya, a minority group that is among the most persecuted in the country.

**60. Consider the following statements about United Nations Convention to Combat Desertification (UNCCD)**

- 1) It is the sole legally binding international agreement linking environment and development to sustainable land management.
- 2) It has a special/particular focus on South Asia and North Africa regions, and its Secretariat facilitates the allocation of major portions of financial resources to these regions.
- 3) It is committed to a bottom-up approach, encouraging the participation of local people in combating the desertification.

Select the correct answer using the code given below.

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

**Answer: C**

**Explanation:**

- UNCCD was **established in 1994** and it is the **sole legally binding international agreement linking environment and development to sustainable land management. Hence statement 1 is correct.**
- The Convention addresses specifically the **arid, semi-arid and dry sub-humid areas**, known as the drylands, where some of the most vulnerable ecosystems and peoples can be found.
- The **Convention's 197 parties work together** to improve the living conditions for people in drylands, to maintain and restore land and soil productivity, and to mitigate the effects of drought.
- It has **no special/particular focus on South Asia and North Africa regions**, and its **Secretariat does not facilitates the allocation of major portion of financial resources to these regions. Hence, statement 2 is incorrect.**
- The UNCCD is particularly **committed to a bottom-up approach, encouraging the participation of local people in combating desertification** and land degradation. Hence **statement 3 is correct.**
- The **permanent secretariat** of the Convention was established in Article 23 of the UNCCD. It has been located in **Bonn, Germany** since January 1999.
- The new UNCCD 2018-2030 Strategic Framework is the most comprehensive global commitment to achieve **Land Degradation Neutrality (LDN)** in order to restore the productivity of vast expanses of degraded land, improve the livelihoods of more than 1.3 billion people, and reduce the impacts of drought on vulnerable populations.

**61. Consider the following statements about Innovations for Defence Excellence (iDEX)**

- 1) iDEX framework is aimed at promoting innovation and indigenisation in the aerospace and defence sector.
- 2) iDEX will be funded and managed by the Defence Research and Development Organisation.

**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**

**Explanation**

**What is iDEX?**

- The iDEX framework and establishment of the DIO by the **Department of Defence Production (DDP)** is **aimed at promoting innovation and indigenisation in the aerospace and defence sector.**
- It is aimed at **providing financial support** to start-ups, Micro, Small and Medium Enterprises (MSME), individual innovators and partner incubators under the DIO framework.
- It aims at **empowering a culture of technology co-creation and co-innovation** in the sector and **boosts innovation** among the start-ups and encourages them to be a part of the ecosystem.
- iDEX will be **funded and managed by Defence Innovation Organisation (DIO)**

**How the plan works**

- Setting up and managing the iDEX network in the form of Partner Incubators (PI), communicating with innovators, start-ups, technology centres of MSMEs through the PIs, hackathons to shortlist potential technologies and entities and evaluating technologies and products developed by innovators, start-ups in terms of their utility and impact on the defence and aerospace setup.

**The need for indigenisation**

- India is expected to spend around USD 220 Billion in the coming decade to **modernize** its armed forces.

- According to the Stockholm International Peace Research Institute (**SIPRI**), India was the world's second largest importer of major arms (After Saudi Arabia) in 2014-18 and accounted for 9.5% of the global total.
- **Reducing Fiscal Deficit**
- Indigenisation in defence is critical to **national security**
- **Employment** generation
- Can become a **global power**

#### **Schemes related to modernisation and indigenisation of defence**

- In recent years, the government of India has initiated various schemes like **Make In India**, **Startup India**, **Atal Innovation Mission (AIM)**, etc. to encourage innovation and entrepreneurship in the Indian commercial ecosystem.
- **Strategic Partnership (SP) Model**- It lists a few Indian private enterprises that will seek knowledge transfers from global Original Equipment Manufacturers (OEMs) in order to establish domestic manufacturing facilities and supply networks.
- **Artificial Intelligence in Defence- N Chandrasekharan Task Force** set up in 2018
- **Defence Artificial Intelligence Project Agency (DAIPA)** - to give a thrust on Artificial Intelligence (AI) in Defence, formulation of an AI roadmap for each Defence PSU and Ordnance Factory Board to develop AI-enabled products.
- Addition of **"Buy (Indian-IDDM)"** i.e Indigenously Designed, Developed and Manufactured defence goods category in Defence Procurement Procedure

#### **Related information**

##### **DIO**

- DIO is a **'not for profit' company** registered under Section 8 of the Companies Act 2013.
- The company is being formed by defence electronics major Bharat Electronics Limited (BEL) and defence aviation major Hindustan Aeronautics Limited (HAL).

#### **Why in News:**

- The Defence Minister has approved the budgetary support of ₹498.8 crore to Innovations for Defence Excellence (**iDEX**) challenge under the Defence Innovation Organisation (**DIO**) for the next five years.

**62.Which of the following countries are members of North Atlantic Treaty Organisation(NATO)?**

- a) Albania, Belgium, Bulgaria and Canada
- b) France, Germany, Japan and United Kingdom
- c) United states, United Kingdom, India and China
- d) Albania, Denmark, Chile and Japan

**Answer: A**

**Explanation**

**About NATO**

- Formed in 1949 with the signing of the **Washington Treaty**, NATO is a **security alliance of 30 countries from North America and Europe**.
- Established in the Cold War as a bulwark against Soviet aggression, NATO's fundamental goal is to safeguard the Allies' freedom and security by political and military means.
- **Article 5 of the Washington Treaty** states that an attack against one Ally is an attack against all — is at the core of the Alliance, a promise of collective defense.
- **Article 4** of the treaty ensures consultations among Allies on security matters of common interest, which have expanded from a narrowly defined Soviet threat to the critical mission in Afghanistan, as well as new threats to security such as cyber attacks, and global threats such as terrorism and piracy that affect the Alliance and its global network of partners.
- In addition to its traditional role in the territorial defense of Allied nations, NATO leads the UN-mandated International Security Assistance Force (ISAF) in Afghanistan and has ongoing missions in the Balkans and the Mediterranean; it also conducts extensive training exercises and offers security support to partners around the globe, including the European Union in particular but also the United Nations and the African Union.

**The member states of NATO are:** Albania, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Turkey, United Kingdom, United States.

**Why in the news?**

U.S. President Joe Biden told at the NATO summit in Brussels to the fellow NATO leaders that the defence of Europe, Turkey and Canada was a “sacred obligation” for the United States.

**63. With reference to the 'One Nation, One Ration Card' system, consider the following statements.**

1. Under the system, the beneficiary will be able to buy subsidised foodgrains from any Fair Price Shop (FPS) across the country.
2. Ration card portability is aimed at providing intra-state as well as inter-state portability of ration cards.

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

**Explanation:**

- Before the 'One Nation, One Ration Card' system, a ration cardholder can buy food grains only from an FPS that has been assigned to her in the locality in which she lives.
- **Statement 1 is correct:** However, under the 'One Nation, One Ration Card' system, the beneficiary will be able to buy subsidised foodgrains from **any Fair Price Shop (FPS) across the country.**
- The biggest beneficiaries will be **migrant workers** who move to other states to seek better job opportunities.

**How will the system of ration card portability work?**

- **Statement 2 is correct:** Ration card portability is aimed at providing **intra-state as well as inter-state portability** of ration cards.
- The new system, based on a technological solution, will identify a beneficiary through **biometric authentication** on electronic Point of Sale (ePoS) devices installed at the FPSs, and enable that person to purchase the quantity of foodgrains to which she is entitled under the NFSA.
- While the **Integrated Management of Public Distribution System (IM-PDS) portal** (<http://www.impds.nic.in/>) provides the technological platform for the inter-state portability of ration cards, enabling a migrant worker to buy foodgrains from any FPS across

the country, the other portal (**annavitran.nic.in**) hosts the data of distribution of foodgrains through E-PoS devices within a state.

- Once the 'one nation one ration card' system takes effect in a given state, the beneficiary family **can purchase food grains from different locations**. For example, a migrant worker staying in a different state can buy his or her share of the subsidized food grains from any FPS in the state where they work while the remaining family members will be able to buy their quota of the supplies back at home.

#### **Since when has the One Nation, One Ration Card System been in the works?**

- Work on this ambitious project started about two years back when the government launched a scheme called Integrated Management of Public Distribution System (IM-PDS) in April 2018 to reform the public distribution system in the country.
- The PDS system was marred with inefficiency leading to leakages in the system. To plug the leakages and make the system better, the government started the reform process.
- For this purpose, it used a technological solution involving the **use of Aadhaar to identify beneficiaries**. Under the scheme, the **seeding of ration cards with Aadhaar** is being done.
- Simultaneously, **PoS machines** are being installed at all FPSs across the country. Once 100 per cent of Aadhaar seeding and 100 per cent installation of PoS devices is achieved, the national portability of ration cards will become a reality.

#### **Why in the news?**

Despite the multitude of COVID-19 related challenges in the past year, a total of 32 States/UTs covering around 69 crore NFSA beneficiaries, i.e. 86% NFSA population in the country, were swiftly brought under the ONORC plan by December 2020.

#### **64. Which one of the following best describes the “Principle of non-refoulement” sometimes seen in news?**

- a) It is a legal doctrine which states that once a right is recognised and given to the public, it cannot be taken back by the State at a later date.
- b) It forbids a country receiving asylum seekers from returning them to a country in which they would be in likely danger of persecution.

- c) It is a criterion used by countries to prevent undue exploitation of benefits of a preferential system.
- d) It prohibits discrimination between imported and domestically produced goods with respect to internal taxation or other Government regulation.

**Answer: B**

**Explanation:**

- Under international human rights law, the principle of non-refoulement guarantees that no one should be returned to a country where they would face torture, cruel, inhuman or degrading treatment or punishment and other irreparable harm. This principle applies to all migrants at all times, irrespective of migration status.
- Option A is related to the “Doctrine of Progressive Realisation of Rights”
- Option C is related to the “Rule of Origin”
- Option D is related to the “National treatment” clause of the WTO

**65. Bonn challenge sometimes seen in the news is related to**

- a) international agreement that aims to conserve migratory species
- b) global effort to restore 150 million hectares of the world's degraded and deforested lands by 2020.
- c) international treaty designed to protect human health from anthropogenic emissions and releases of mercury
- d) aims to eliminate or restrict the production and use of persistent organic pollutants

**Answer: B**

**Explanation:**

**Bonn Challenge:**

- The Bonn Challenge is a **global effort to bring 150 million hectares of degraded and deforested land into restoration by 2020 and 350 million by 2030.**
- The 2020 target was launched at a high level event in Bonn in 2011 organised by the Government of Germany and IUCN, and was later endorsed and **extended to 2030 by the New York declaration on forests of the 2014 UN Climate Summit.**
- To date, 56 governments, private associations and companies have pledged over 168 million hectares to the Challenge.

- The Bonn Challenge is an **implementation vehicle** for national priorities such as **water and food security and rural development while simultaneously helping countries contribute to the achievement of international climate change, biodiversity and land degradation Commitments.**
- For example, multi-country programmes such as **The Restoration Initiative (TRI), supported by the Global Environment Facility and led by IUCN in partnership with UNEP and FAO,** are also catalysing implementation and providing models for collaboration.
- **Option A refers to Bonn Convention**
- **Option C refers to Minamata Convention**
- **Option D refers to Stockholm Convention**

66. Consider the following statements about the Generalized System of Preferences (GSP).

1. Under GSP, the donor country offers preferential treatment such as zero or low duties on imports to products originating in beneficiary countries.
2. At present, GSP is offered only by the U.S.

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

**Explanation:**

- **Statement 1 is correct:** The Generalised System of Preferences (GSP) is one of the oldest trade preference programmes in the world, under which developed countries offer **preferential treatment** (such as zero or low duties on imports) to products originating in developing countries.
- **Statement 2 is incorrect:** GSP is presently extended by 29 developed countries.
- India, as a developing country, enjoyed special trade benefits from the **GSP programme of U.S** which allowed duty-free entry of Indian goods worth \$5.6 billion into the U.S.

- In June 2019, the U.S. decided to terminate India's eligibility for the GSP based on complaints from US' dairy and medical device industries alleging that India has implemented a wide array of trade barriers that are affecting the US exports in those sectors.

**67. Which of the following languages were added through amendments to the eighth schedule?**

- 1) Sindhi
- 2) Sanskrit
- 3) Tulu
- 4) Maithili

**Select the correct answer using the codes given below**

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

**Answer: C**

**Explanation:**

- The **Eighth Schedule to the Constitution consists of the following 22 languages:-**  
(1) Assamese, (2) Bengali, (3) Gujarati, (4) Hindi, (5) Kannada, (6) Kashmiri, (7) Konkani, (8) Malayalam, (9) Manipuri, (10) Marathi, (11) Nepali, (12) Oriya, (13) Punjabi, (14) Sanskrit, (15) Sindhi, (16) Tamil, (17) Telugu, (18) Urdu (19) Bodo, (20) Santhali, (21) Maithili and (22) Dogri.
- Of these languages, **14 were initially included in the Constitution.**
- **Sindhi** language was added by the 21st Amendment Act of 1967.
- **Konkani, Manipuri, and Nepali** were included by the 71st Amendment Act of 1992.
- **Bodo, Dogri, Maithili, and Santhali** were added by the 92nd Amendment Act of 2003.

The Constitutional provisions related to the **Eighth Schedule** are:

- **Article 344:** Article 344(1) provides for the constitution of a Commission by the President on expiration of five years from the commencement of the Constitution.
- **Article 351:** It provides for the spread of the Hindi language to develop it so that it may serve as a medium of expression for all the elements of the composite culture of India.

### Why in the news?

- The Tulu speakers, mainly in Karnataka and Kerala, have been requesting the governments to give it official language status and include it in the eighth schedule to the Constitution.

### About Tulu language

- Tulu is a Dravidian language spoken mainly in two coastal districts Dakshina Kannada and Udupi of Karnataka and Kasaragod district of Kerala.
- As per the 2011 Census report, there are 18,46,427 Tulu-speaking people in India.

### 68. Consider the following statements about cryptocurrency

- 1) A cryptocurrency is a digital asset designed to work as a medium of exchange that uses strong cryptography to secure financial transactions.
- 2) El Salvador became the first country in the world to adopt bitcoin as legal tender.

### 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**

### Explanation

- A **cryptocurrency** is a **digital asset designed to work as a medium of exchange** that uses strong cryptography to **secure financial transactions**, control the creation of additional units and verify the transfer of assets.
- It is a **digital representation of value** that can be digitally traded and functions as a medium of exchange but, unlike fiat currency like the rupee, **it is not legal tender** and does **not have the backing of a government**.
- Blockchain technology **enables the existence of cryptocurrencies** (among other things). This technology has been **exploited by the crypto currencies such as Bitcoin, Ripple, Litecoin** etc as blockchain data is secured using cryptography.

### Why in the news?

- El Salvador became the first country in the world to adopt bitcoin as legal tender.

**What is legal tender?**

- Legal tender is anything recognized by law as a means to settle a public or private debt or meet a financial obligation, including tax payments, contracts, and legal fines or damages.

**69. Which of the following countries constitutes the Horn of Africa?**

- 1) Eritrea
- 2) Ethiopia
- 3) Somalia
- 4) Uganda
- 5) Djibouti
- 6) Sudan

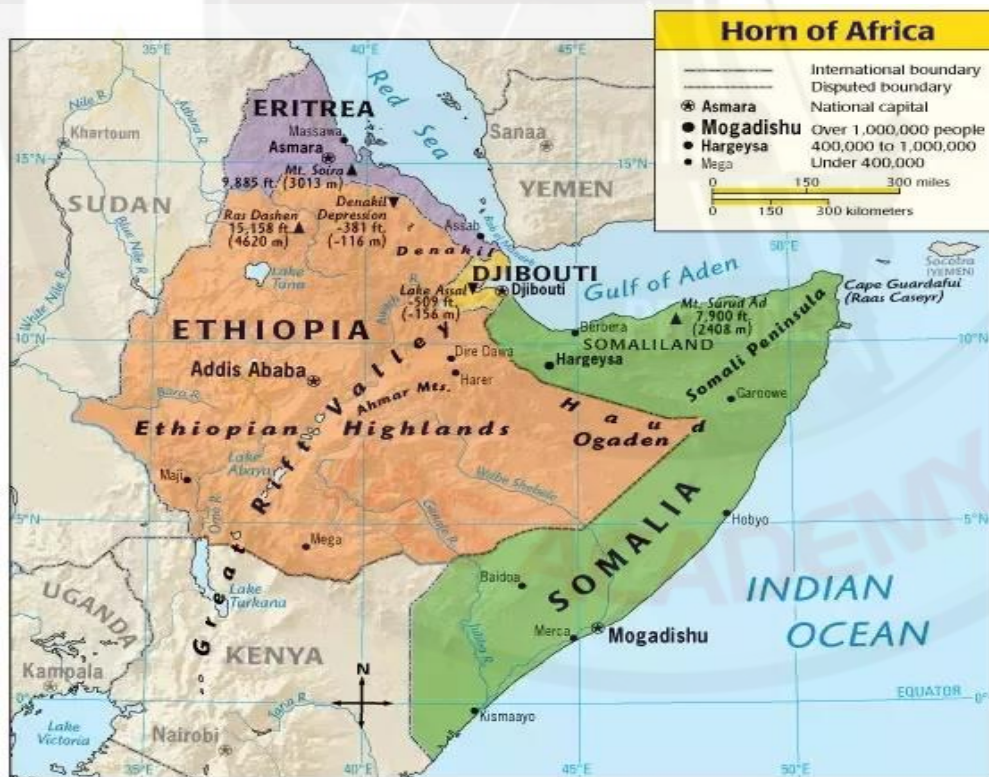
**Select the correct answer using the codes given below**

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

Answer: C

**Explanation**

- The Horn of Africa is a **peninsula in Africa**. It extends hundreds of kilometers into the Arabian Sea and lies along the southern side of the Gulf of Aden. The area is the **easternmost projection of the African continent**. The Horn of Africa denotes the region containing the countries of **Djibouti, Eritrea, Ethiopia, and Somalia**.



### Why in the news?

Hundreds of thousands in Tigray are facing famine, and millions more are at risk according to UN agencies, however the Ethiopian government has rejected the accusations, and claimed that the food shortages were not severe.

### 70. Consider the following statements about Sub-Mission on Agricultural Mechanization (SMAM)

- 1) It is a sub mission under the umbrella scheme of 'Green Revolution– Krishonnati Yojana'.
- 2) To promote 'Custom Hiring Centres' and 'Hi-tech Hubs of High-Value Machines' is one of its objectives.

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**

**Explanation:**

It is a sub mission under the umbrella scheme of '**Green Revolution– Krishonnati Yojana**'.

- The Ministry of Agriculture and Farmers Welfare has launched a Sub-Mission on Agricultural Mechanization (SMAM) in 2014-15.
- Under the scheme, subsidy is provided for purchase of various types of Agricultural implements and machinery used for tillage, sowing, planting, harvesting, reaping, threshing, plant protection, inter cultivation and residue management.

**Aim**

- To **increase the reach of farm mechanization** to small and marginal farmers and to the regions & difficult areas where farm power availability is low.

**Objectives**

- To **promote 'Custom Hiring Centres' and 'Hi-tech Hubs of High-Value Machines'** to offset the adverse economies of scale arising due to small and fragmented landholding and high cost of individual ownership;

- **Creating awareness among stakeholders** through demonstration and capacity building activities.
- **Ensuring performance testing and certification** of agricultural machines at designated testing centres located all over the country.

### **Significance of farm mechanisation**

- To boost up mechanization in the agriculture sector, improved agricultural implements and machinery are essential inputs for modern agriculture that will **enhance the productivity** of crops besides **reducing human drudgery and cost of cultivation**.
- Mechanization also helps in **improving the utilization efficiency of other inputs** therefore considered to be one of the most important segments of the agriculture sector to **boost the income of farmers and growth of the agricultural economy**.
- The impact evaluation studies highlight the overall positive impact of mechanisation on farming as it was reported that mechanisation helped in overall increase of **17.9% in productivity** and 14.1% in seed germination.
- Mechanisation also helped in saving nearly 1/3rd of the time of operations, **30% reduction in labour requirements**, 11% reduction in seed rate, 26.6% reduction in weed instances, 22.4% reduction in diesel consumption and 12.7% reduction in fertiliser requirements.

### **About Green Revolution– Krishonnati Yojana**

- **Green Revolution– Krishonnati Yojana is an Umbrella Scheme** comprising both Central Sector as well as Centrally Sponsored Schemes/Missions.
- These schemes look to **develop the agriculture and allied sector in a holistic and scientific manner** to increase the income of farmers by enhancing production, productivity and better returns on produce.
- This Umbrella Scheme has the following 12 Schemes/Missions:
  - Mission for Integrated Development of Horticulture (MIDH)
  - National Mission on Oilseeds and Oil Palm (NMOOP)
  - National Food Security Mission (NFSM)
  - National Mission for Sustainable Agriculture (NMSA)
  - Sub-Mission on Agriculture Extension (SMAE)
  - Sub-Mission on Seeds & Planting Material (SMSP)
  - Sub-Mission on Agricultural Mechanization (SMAM)

- Sub-Mission on Plant Protection and Plant Quarantine (SMPPQ)
- Integrated Scheme on Agricultural Census, Economics and Statistics
- Integrated Scheme on Agricultural Cooperation
- Integrated Scheme on Agricultural Marketing (ISAM)
- National e-Governance Plan in Agriculture (NeGP-A).

### **Why in the news?**

To empower the farmers through the Sub-Mission on Agricultural Mechanization (SMAM) scheme, Government of India has released funds for various activities of Farm Mechanization like Establishment of Custom Hiring Centres, Farm Machinery Bank, High-tech Hubs and distribution of various agricultural machinery etc to different states.

### **71. Consider the following statements about Ethanol Blending Programme**

- 1) The National Biofuel Policy 2018 envisages an indicative target of 90% blending of ethanol in petrol by 2030.
- 2) It would improve the environment and the ecosystem and result in savings on the Oil Import Bill.

### **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**

### **Explanation.**

- The **National Biofuel Policy 2018** envisages an indicative target of **20% blending of ethanol in petrol and 5% blending of biodiesel in diesel by 2030.**
- However, as the existing ethanol distillation capacity in the country is not sufficient to produce ethanol to achieve blending targets, the Government is encouraging sugar mills,

distilleries and entrepreneurs to set up new distilleries and to expand their existing distillation capacities.

### **Ethanol interest subvention scheme**

- Under the Ethanol interest subvention scheme, to promote setting up of molasses-based distilleries, the government is extending financial assistance by way of **interest subvention for 5 years**, including a **one-year moratorium** against the loan availed by project proponents from banks, at **6% per annum or 50% of the rate of interest** charged by banks whichever is lower.
- Interest subvention is available to only those distilleries that supply at least **75% of ethanol produced from the added distillation capacity to oil marketing companies (OMCs)** for blending with petrol.

### **Why in News?**

- The Union Government announced that it is expecting that ethanol distillation capacities would be doubled by 2025 and the country would be able to achieve a 20 per cent blending target.
- To ensure enough supply of ethanol, the government said it is encouraging ethanol production from grains as well and has allocated 78,000 tonnes of rice from the state-run Food Corporation of India (FCI) at a subsidised rate of Rs 20/kg to distilleries for the current marketing year ending November.
- Recently, Prime Minister Narendra Modi presented a road map advancing the target date for achieving 20% blending of ethanol in petrol by five years to 2025. The last two years have seen blending levels of around 5%, which is likely to jump to 8.5% in the current year.

### **Significance**

- The target would **enhance production of ethanol** from various feedstocks. It would promote ethanol as a fuel which is **indigenous, non-polluting and virtually inexhaustible**.
- It would **improve the environment and the eco-system** and result in **savings on the Oil Import Bill**. It will also ensure timely payment of dues to farmers.

## **72. Consider the following statements about generations of biofuels**

1. First Generation (1G) - food crop feedstock

2. Second Generation (2G)- Non food plants  
3. Third Generation (3G) - Microorganisms  
4. Fourth Generation (4G)- Genetically modified organisms

**Which of the pairs given above is/are correctly matched?**

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

**Answer : D**

### **Biofuels**

- Biofuels are liquid or gaseous fuels produced from biomass that are generally high in sugar (such as sugarcane, sugarbeet, sweet sorghum), starch (such as corn and cassava) or oils (such as soybeans, rapeseed, coconut, sunflowers, and palms). The two most commonly used biofuels are ethanol and biodiesel.
- **Pradhan Mantri JI-VAN Yojana:** It provides Viability Gap Funding (VGF) to **Second Generation ethanol manufacturing projects** to increase availability of ethanol for ethanol blending programme.
- **Categories of Biofuels:**
  1. **First generation Biofuels** are mainly produced from **food crop feedstock**, such as oil, sugar and starch crops, thus competing for agricultural areas used for food production.
  2. **Second generation Biofuels** differ in feedstock which, in this case, comes from **non-food plants** such as agricultural crops, residues and wood (so-called lignocellulosic biomass).
  3. **Third generation Biofuels** are produced from **micro-organisms** like algae. Its production is supposed to be low cost and high-yielding – giving up to nearly 30 times the energy per unit area as can be realized from current, conventional ‘first-generation’ biofuel feedstocks.
  4. **Fourth generation Biofuels** use **genetically modified (GM) algae** to enhance biofuel production. Key to the process is the capture and sequestration of CO<sub>2</sub>, a process that renders fourth-generation biofuels a **carbon negative source of fuel**.

**How ethanol production helps the sugar industry?**

- There has been **surplus production of sugar** in the country since sugar season 2010-11 (except reduction due to drought in sugar season 2016-17); & sugar production is likely to

remain surplus in the country in coming years due to introduction of improved varieties of sugarcane.

- This surplus sugar puts pressure on domestic ex-mill prices of sugar. The excess stocks which remain unsold also block funds of sugar mills to the tune of about Rs. 19,000 crore thereby affecting liquidity positions of sugar mills resulting in accumulation of cane price arrears of farmers.
- **Diversion of excess sugarcane & sugar to ethanol** is a correct way forward to deal with surplus stocks. Diversion of excess sugar would help in **stabilizing the domestic ex-mill sugar** prices and will also help sugar mills to **get relieved from storage problems**. It will **improve their cash flows** and facilitate them in clearance of cane price dues of farmers; and will facilitate mills to function in the coming years.

### 73. Consider the following statements about Deep Ocean Mission

- 1) The Deep Ocean Mission is an initiative of the Ministry of Earth Sciences..
- 2) The focus of the mission will be on deep-sea mining, ocean climate change advisory services, underwater vehicles and underwater robotics related technologies.

**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**

**Explanation**

**Deep ocean mission**

- The Deep Ocean Mission is an initiative of the Ministry of Earth Sciences..
- Deep Ocean Mission aims to boost **India's Sea Exploration Capabilities**.
- The focus of the mission will be on deep-sea mining, ocean climate change advisory services, underwater vehicles and underwater robotics related technologies.

- Two key projects planned in the Mission include a desalination plant powered by tidal energy and a submersible vehicle that can explore depths of at least 6,000 metres.

#### **Significance of the Mission:**

- The 'Deep Ocean Mission' plan will enable India to develop capabilities to exploit resources in the **Central Indian Ocean Basin (CIOB)**.
- India has been allotted 75,000 square kilometres in the CIOB by the UN **International SeaBed Authority** for exploration of poly-metallic nodules. CIOB reserves contain deposits of metals like iron, manganese, nickel and cobalt. It is envisaged that 10 % of recovery of that large reserve can meet the energy requirement of India for the next 100 years.
- **Polymetallic nodules** are potato-shaped, largely porous nodules found in abundance carpeting the sea floor of world oceans in deep sea. These are also known as manganese nodules.

#### **UN International SeaBed Authority**

- International Seabed Authority (ISA) is an international organization established in 1994 to regulate mining and related activities in the international seabed beyond national jurisdiction, an area that includes most of the world's oceans.
- The ISA came into existence upon the entry into force of the **1982 United Nations Convention on the Law of the Sea (UNCLOS)**, which codified international law regarding territorial waters, sea-lanes, and ocean resources.
- It has more than 150 member states including **India**.

#### **Why in the news?**

The Cabinet Committee on Economic Affairs chaired by Prime Minister Shri Narendra Modi, has approved the proposal of Ministry of Earth Sciences (MoES) on "Deep Ocean Mission", with a view to explore the deep ocean for resources and develop deep sea technologies for sustainable use of ocean resources.

#### **74. Which of the following definitions best describes 'patent'?**

- Right granted to an inventor by the government that permits the inventor to exclude others from making, selling or using the invention for a period of time.

- B. Word, phrase, symbol, and/or design that identifies and distinguishes the source of the goods/services of one party from those of others.
- C. Intellectual property right which protects original works of authorship and artistic works.
- D. Sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin

Answer: A

Sol:

- A **trademark** is a word, phrase, symbol, and/or design that identifies and distinguishes the source of the goods/services of one party from those of others. Some examples include brand names, slogans, and logos.
- A **patent** is a right granted to an inventor by the government that permits the inventor to exclude others from making, selling or using the invention for a period of time. Patentable materials include machines, manufactured articles, industrial processes, and chemical compositions. The primary goal of the patent is to encourage innovation and commercialization of technological advances.
- A **copyright** protects original works of authorship including literary, dramatic, musical, and artistic works, such as poetry, novels, movies, songs, computer software, and architecture.
- A **geographical indication** (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. In order to function as a GI, a sign must identify a product as originating in a given place.

**75. The National Maritime Heritage Complex is situated in which of the following states?**

- a) Gujarat
- b) Andhrapradesh
- c) Kerala
- d) Odisha

Answer: A

**Explanation**

**What's in the news?**

- A memorandum of understanding (MOU) has been signed between the Ministry of Ports, Shipping and Waterways and Ministry of Culture and Tourism for Cooperation in

Development of **National Maritime Heritage Complex (NMHC) at Lothal in Gujarat**. This complex would be developed as an international tourist destination.

- Culture and Tourism Minister Prahlad Singh Patel has said that the museum will play a big role in highlighting the cultural heritage of the country.

#### **About the complex**

- The heritage complex will be dedicated to the country's 5,000-year maritime history. NMHC would be developed as an international tourist destination where the maritime heritage of India -- from ancient to modern times -- would be showcased and an edutainment approach using the latest technology would be adopted to spread awareness about the country's maritime heritage.
- NMHC would be developed in an area of about 400 acres with various unique structures such as the National Maritime Heritage Museum, lighthouse museum, heritage theme park, museum-themed hotels, maritime-themed eco-resorts and maritime institute among others which would be developed in a phased manner.
- The unique feature of NMHC is the recreation of ancient Lothal city, which was one of the **prominent cities of the Indus valley civilization**.

**76. ADI PRASHIKSHAN portal recently seen in the news is associated with which of the following?**

- a) Facilitating organic farmers to sell their organic produce
- b) To promote effective delivery of public services and implementation of schemes of Ministry of Labour and Employment
- c) A web portal by Ministry of Coal for initiating the e-auction process of coal blocks
- d) None of the above

**Answer: D**

#### **Explanation:**

- Tribal Affairs Minister Arjun Munda has launched the ADI PRASHIKSHAN portal recently.
- Its aim is to provide comprehensive information on training programmes conducted by Tribal Research Institutes (TRIs), different divisions of Tribal Ministry, National Society for Education of Tribal Students (NESTS), Centre of Excellences funded by Ministry of Tribal Affairs and National Tribal Research Institute.

- It is an initiative to reach the remotest area using information technology so that tribal communities are able to have access to their rights and benefits. It is an effort to bring Training Institutions, Organizations, Experts and Trainers together.
- The Ministry has developed the portal **in collaboration with the United Nations Development Programme.**
- **Option A refers to Jaivik Kheti Portal.**
- **Option B refers to Santusht Portal.**

**77. Consider the following statements about Khadi & Village Industries Commission**

- 1) The Khadi & Village Industries Commission is a statutory organization established under the Khadi and Village Industries Commission Act, 1956.
- 2) It is engaged in promoting and developing khadi and village industries for providing employment opportunities in rural areas, thereby strengthening the rural economy.
- 3) It functions under the Ministry of textiles.

**Which of the statements given above is/are correct?**

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

**Answer: A**

**Explanation**

**About KVIC**

- The Khadi & Village Industries Commission is a **statutory organization** established under the Khadi and Village Industries Commission Act, 1956. **Statement 1 is correct.**
- It is engaged in promoting and developing khadi and village industries for providing employment opportunities in rural areas, thereby strengthening the rural economy. **Statement 2 is correct.**

- It functions under the **Ministry of Micro Small & Medium Enterprises**. **Statement 3 is incorrect.**

### **Objectives of the KVIC**

- Primary Objective – To build up an **active rural community**
- Social Objective – To provide **employment** in rural areas
- Economic Objective – To produce a saleable product
- Wider Objective – To create **self-reliance** among the economically weaker section

### **Functions of KVIC**

- To build a **strategic reserve of raw materials** and implements for supply to producers.
- To create **common service facilities** for processing of raw materials as semi-finished goods and provisions of facilities for marketing of KVI products.
- To **enhance the sale and marketing** of Khadi and other products of village industries or handicrafts.
- To be responsible for encouraging and promoting research in the production techniques and equipment employed in the Khadi and Village Industries sector.
- To provide **financial assistance** to institutions and individuals for developing and guiding Khadi and Village industries through the supply of designs, prototype and other technical information.
- To assure genuineness of the products and to **set standards** for the quality of products from the Khadi and Village Industries.

### **Why in the news?**

- Khadi and Village Industries Commission (KVIC) has recorded its highest-ever turnover in the year 2020-21 registering an increase of 7.71% compared to 2019-2020.

### **78. Consider the following statements about Ordnance Factory Board**

- 1) It is an umbrella body for the ordnance factories and related institutions, and is currently a subordinate office of the Ministry of Defence (MoD).
- 2) The first Indian ordnance factory was set up in the year 1712 by the Dutch Company as a GunPowder Factory, West Bengal.

### **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**

### **Explanation**

#### **Ordnance Factory Board**

- It is an **umbrella body** for the ordnance factories and related institutions, and is currently a subordinate office of the **Ministry of Defence (MoD)**. **Statement 1 is correct.**
- The first Indian ordnance factory was set up in the year 1712 by the Dutch Company as a GunPowder Factory, West Bengal. **Statement 2 is correct.**
- Weapon, ammunition and supplies for **armed forces, paramilitary and police forces** comes from the OFB-run factories.
- OFB focuses on production of civilian and military-grade arms and ammunition, explosives, propellants and chemicals for missile systems, military vehicles, armoured vehicles, optical devices, parachutes, support equipment, troop clothing and general store items.

#### **Why in News:**

- The Union Cabinet approved a plan to corporatize the Ordnance Factory Board into fully government owned corporate entities on the lines of Defence Public Sector Undertakings (DPSU).
- Corporatization refers to the restructuring or transformation of a state-owned asset or organization into a corporation.

#### **Why will corporatization help?**

- This move would allow these companies **autonomy** and help improve **accountability** and **efficiency**
- The restructuring can transform the ordnance factories into **productive and profitable assets**, deepening **specialisation** in the product range, **enhancing competitiveness**, improving **quality** and achieving **cost efficiency**.
- The above structure would also help in **overcoming various shortcomings** in the existing system of the OFB by **eliminating inefficient supply chains** and provide these companies incentive to become **competitive** and explore new opportunities in the market, including **exports**.

- The Atmanirbhar Bharat initiative, also calls for the Corporatisation of OFB for: 'improving autonomy, accountability and efficiency in ordnance suppliers.

#### **Comptroller and Auditor General (CAG) report on the OFB's**

- **Overhead expenses constitute 33%** of the overall allotted budget.
- **High supervision costs** and **indirect labour** costs.
- **Delayed and incomplete production**- OFB's achieve production targets for only 49% of the items.
- **High inventory cost**- More than half the inventory (52%) was store-in-hand, procured for manufacture but not used within the year by the factories.

#### **79. Consider the following statements about the Asian Development Bank (ADB).**

1. Voting power of ADB is distributed equally among all member countries.
2. China is the largest shareholder of ADB.

#### **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: D**

#### **Explanation:**

- Founded in 1966, the Asian Development Bank's (ADB) headquarters are in Manila, Philippines. The Asian Development Bank's primary mission is to foster growth and cooperation among countries in the Asia-Pacific Region.
- At present, ADB comprises 68 members (including **India**)- of which 49 are from within Asia and the Pacific and **19 outside**.
- **Statement 1 is incorrect:** The ADB was modeled closely on the World Bank, and has a similar weighted voting system where votes are distributed in proportion with members' capital subscriptions.
- **Statement 2 is incorrect:** The two largest shareholders of the ADB are **the US and Japan**.
- ADB is an official United Nations Observer.

**Why in the news?**

- Recently, the Asian Development Bank (ADB) and the Government of India signed a USD 484 million loan to improve transport connectivity and facilitate industrial development in the Chennai - Kanyakumari Industrial Corridor (CKIC) in the state of Tamil Nadu.

**80. Consider the following statements.**

1. In India, 'extended producer responsibility' was introduced as an important feature in the e-Waste (Management and Handling) Rules, 2011.
2. According to the E-Waste (Management) Amendment Rules, 2018, the phase-wise collection targets for e-waste in weight shall be 100% of the quantity of waste generation from 2023.

**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: B**

**Explanation:**

**What is E-waste?**

- Electronic waste (e-waste) is generated when electronic and electrical equipment become unfit for their originally intended use or have crossed the expiry date.
- Computer monitors, motherboards, mobile phones and chargers, compact discs, headphones, television sets, air conditioners and refrigerators are some examples of e-waste (when unfit for use).

**e-Waste (Management and Handling) Rules, 2011**

- The e-Waste (Management and Handling) Rules, 2011 were brought into force to enable recovery and/or reuse of useful material from e-waste, thereby reducing the hazardous wastes destined for disposal, to ensure the environmentally sound management of all types of e-waste and to address the safe and environment friendly handling, transporting, storing, and recycling of e-waste.

- **Statement 1 is correct:** For the first time, the concept of **Extended Producer Responsibility (EPR)** was introduced which made manufacturers liable for safe disposal of electronic goods.

#### **E-Waste Management Rules, 2016**

- E-Waste (Management) Rules, 2016 was enacted on October 1, 2017. It superseded the e-waste (Management & Handling) Rules, 2011.
- The rules extended its purview to components or consumables or parts or spares of **Electrical and Electronic Equipment (EEE)**, along with their products.
- The EWM Rules, 2016 strengthened the **Extended Producer Responsibility (EPR)**, which is the global best practice to ensure the take-back of end-of-life products.
- The EPR requires producers to set up e-waste exchange facilities to facilitate collection and recycling, and assigning specific responsibility to bulk consumers of electronic products for safe disposal.
- A new arrangement called **Producer Responsibility Organisation (PRO)** was introduced to strengthen EPR further. PRO, a professional organisation, would be authorised or financed collectively or individually by producers, to share the responsibility for collection and channelisation of e-waste generated from the 'end-of-life' products to ensure environmentally sound management of such e-waste.
- The **urban local bodies** have been assigned the responsibility of collecting back the e-waste arising from the orphan products and channelizing it to authorized dismantlers or recyclers.

#### **E-Waste (Management) Amendment Rules, 2018**

- The E-Waste (Management) Amendment Rules, 2018 of the Ministry of Environment, Forest and Climate Change amended the E-Waste Management Rules, 2016.
- **Statement 2 is incorrect:** It revised the collection targets under the provision of EPR. According to the 2018 Amendment Rules, the **phase-wise collection targets** for e-waste in weight shall be **10% of the quantity of waste generation during 2017-18, with a 10% increase every year until 2023. After 2023 onwards, the target has been made 70% of the quantity of waste generated.**
- The rules also say that the responsibility of producers is not confined to waste collection, but also to ensure that the waste reaches the authorised recycler/dismantler.

- Under the amended Rules, **PROs are required to apply to the Central Pollution Control Board (CPCB)** for registration to undertake their activities.

#### **Why in the news?**

- The World Health Organization (WHO) in its recent report “**Children and Digital Dumpsites**” has underlined the risk that children working in informal processing are facing due to discarded **electronic devices or e-waste**.

**81. With reference to India's biodiversity, Nilgai, Chinkara, Blackbuck are**

- a) Birds
- b) Primates
- c) Antelopes
- d) Lions

**Answer: C**

#### **Explanation**

**Nilgai, Chinkara, Blackbuck are all types of antelopes in India.**

**Nilgai:**



- IUCN status: **Least Concern**

- The nilgai is the largest **Asian** antelope species and is indigenous to the Indian subcontinent.
- Most of their population is found in northwest India on lowlands located in the foothills of the Himalayas, but their range extends southward into central India.

#### **Chinkara - Indian Gazelle**



- IUCN status: **Least Concern**
- They are primarily found in the northwestern region of India in the state of Rajasthan (about 70%). They are protected by the Bishnoi Community in Rajasthan. Apart from it, it is also found in Central India.
- Indian gazelles eat fruits such as pumpkins and melons and thus act as seed dispersers.
- Indian gazelles have nocturnal feeding habits and are most active just prior to sunset and throughout the night.

### Four-horned Antelope



- IUCN status: **Vulnerable**
- It is found only in India and Nepal. Only males grow horns.
- These animals are sedentary and inhabit the same region throughout their lives. They are very shy animals and avoid human contact.

### Blackbuck



- IUCN status: **Least Concern**

- Blackbuck can form massive social aggregations up to several hundred, although most herds consist of 5 to 50 individuals
- Declared regionally extinct in Pakistan and Bangladesh, Blackbuck now mainly occur in India with a small population in Nepal.
- They like open habitats such as grassy plains and thinly forested areas, which allow them to spot predators from long distances as well as providing grazing forage.
- Due to co-evolution with cheetahs as their main predator, Blackbucks are very fast and rely on speed to escape from their main predators.

#### Why in the news?

- Bidar district, which is northernmost district in Karnataka has recently reported two herds of Nilgai in the district. With this, Bidar district has become home for the first time to all the four major types of antelopes found in the country.
- In other news, Odisha's Blackbuck population has doubled in the last 6 years.

#### 82. Which of the following statements about Wholesale Price Index and Consumer Price Index is incorrect?

- While the Wholesale Price Index keeps track of the wholesale price of goods, the CPI measures the average price that households pay for a basket of different goods and services.
- The central bank currently uses the Consumer Price Index as a key measure of inflation to set the monetary and credit policy.
- Under the flexible inflation targeting (FIT) framework, RBI aims to contain CPI based inflation within 4 percent with a band of (+/-) 2 percent.
- The WPI basket consists of services like housing, education, medical care, recreation etc. which are not part of CPI basket.

**Answer: D**

#### Explanation:

##### About CPI

- It is an index which measures the weighted average of prices of a basket of **consumer goods and services** such as transportation, food and medical care.
- It is calculated by measuring price changes for each item in the **predetermined basket of goods and services** and averaging them.

- It is released by the **National Statistical Office (NSO)** under the Ministry of Statistics and Programme Implementation.
- The base year used to calculate CPI in India is **2011-2012**.

#### WPI Vs CPI

- While the Wholesale Price Index keeps track of the wholesale price of goods, the CPI measures the average price that households pay for a basket of different goods and services. Hence **Option A is correct**.
- The CPI basket consists of **services like housing, education, medical care, recreation etc. which are not part of WPI basket**. Hence **Option D is incorrect**.
- A significant proportion of WPI item basket represents **manufacturing inputs and intermediate goods** like minerals, basic metals, machinery etc. whose prices are influenced by global factors but these are not directly consumed by the households and are **not part of the CPI item basket**.
- Even as the WPI is used as a key measure of inflation in some economies, the RBI **no longer uses it for policy purposes**.
- The central bank currently uses the **Consumer Price Index** as a key measure of inflation to set the monetary and credit policy. Hence **Option B is correct**.
- Under the flexible inflation targeting (FIT) framework, RBI aims to contain CPI based inflation **within 4 percent with a band of (+/-) 2 percent**. Hence **Option C is correct**.

#### Why in News?

- Retail inflation measured by the Consumer Price Index hit a six-month high of 6.3% in May, due to a persistent rise in fuel and edible oil prices.
- The RBI had recently revised its inflation estimate for 2021-22 to 5.4%, while moderating growth hopes for 2021 to 9.5%.

#### 83. Consider the following statements about floating agriculture

- 1) Floating agriculture can be used in areas where agricultural land is submerged for long periods
- 2) The practice is entirely different from hydroponic agriculture where plants are grown even without water.

**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**

**Explanation**

- Floating agriculture is a way of **utilising** areas which are **waterlogged** for long periods of time in the **production of food**. The technology is mainly aimed at adapting to more regular or prolonged flooding.
- The approach **employs beds of rotting vegetation**, which act as compost for crop growth. These beds are **able to float on the surface of the water**, thus creating areas of land suitable for agriculture within waterlogged regions. Scientifically, floating agriculture may be referred to as **hydroponics**.
- Floating raft farming had been taken up as a measure of **improving adaptability** and **resilience** in the background of **climate change**

**Where can it be used?**

- Floating agriculture can be used in **areas where agricultural land is submerged** for long periods. Hence **statement 1 is correct**.
- The practice is **similar to hydroponic agriculture** whereby plants can be grown on the water on a bio land or **floating bed of water hyacinth**, algae or other plant residues. **Statement 2 is incorrect**.
- A typical **example** of floating agriculture involves a **floating layer of water hyacinth, straw or rice stubble** to which is added upper layers of small and quick-rotting waterworts (water plants) which make for good manure.
- India has many **brackish water bodies** which are conducive for such agriculture.
- **Brackish water** is a broad term used to describe water that is more saline than freshwater but less saline than true marine environments. Often these are transitional areas between fresh and marine waters. An estuary, which is the part of a river that meets the sea, is the best known example of brackish water.

## Advantages

- **Food Security:** Mitigate land loss through flooding, by allowing cultivation of these areas to continue. In this way, the total cultivable area can be increased and communities can become more self-sufficient.
- **Increase in productivity:** In addition to this, the area under floating cultivation is up to 10 times more productive than traditionally farmed land and no additional chemical fertilisers or manure is required.
- **Organic manure:** When the crops have been harvested and floating rafts are no longer required, they can be used as organic fertilisers in the fields or incorporated into the following years floating beds as a fertiliser.
- **Turning a curse to boon:** The approach uses water hyacinth, a highly invasive weed with prolific growth rates, in a highly beneficial way.
- **Elimination of harmful insects:** By harvesting water hyacinth, areas covered by the weed are cleared, with the beneficial side-effect of reducing breeding grounds for mosquitoes and improving conditions for open-water fishing
- **Pisciculture:** By cultivating crops in water, it is also possible to simultaneously harvest fish populations which reside in the beds
- **Additional income:** The practice of floating agriculture also helps supplement the income of local communities and contributes to alleviation of poverty .
- **Helps Landless farmers:** It also provides greater food security by increasing the land output and supporting capacity for poor and landless people .
- **Employment opportunities:** The capacity to provide employment opportunities within communities and as both men and women can carry out the floating agriculture practices, it can also lead to improvements in gender equity.

## Why in News:

- Floating raft agriculture experiments in the Alappuzha-Cherthala Canal in Kerala with amaranthus has shown success.

**84. Which of the following is/are categorised as rare earth elements?**

- 1) Yttrium
- 2) Cerium
- 3) Thulium
- 4) Helium
- 5) Magnesium

**Select the correct answer using the codes given below**

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

**Answer: B**

**Explanation**

**What are rare earth elements?**

- The rare earth elements (REE) are a set of seventeen metallic elements. They are called 'rare earth' because earlier it was difficult to extract them from their oxides forms technologically.
- They are an essential part of many high-tech devices. The 17 Rare Earths are cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium (Tm), ytterbium (Yb), and yttrium (Y).

**Why are they important?**

- Rare earth minerals are **crucial to the manufacture of magnets** used in industries of the future, such as wind turbines and electric cars.
- And they are already being used in consumer goods such as smartphones, computer screens and telescopic lenses.
- REEs are needed in high-temperature superconductivity, safe storage and transport of hydrogen for a post-hydrocarbon economy, reduce sulphur oxide emissions and hence it has abundant value.

**Who is the top producer?**

- **China** accounts for more than **90 percent** of world production.
- In 2019, the U.S. imported 80% of its rare earth minerals from China

- The EU gets 98% of its supply from China

#### What is India's position?

- **India** has the **world's fifth-largest reserves** of rare earth elements, nearly twice as much as Australia, **but** it **imports** most of its rare earth needs in finished form **from China**.

#### Why in the News?

- China threatened to stop exporting Rare Earth materials to the US amid the ongoing trade war between the countries.

#### 85. Consider the following statements about Small Finance Banks

- 1) The small finance banks are subject to all prudential norms and regulations of RBI as applicable to existing commercial banks.
- 2) The small finance banks will be required to extend 75 per cent of its Adjusted Net Bank Credit to the sectors eligible for classification as priority sector lending by the Reserve Bank.
- 3) They are eligible to provide both credit card and debit card facilities

#### Which of the statements given above is/are correct?

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

**Answer: D**

#### Explanation

##### About Small Finance Banks:

- The small finance bank (SFB) primarily undertakes basic banking activities of acceptance of deposits and lending to **unserved and underserved sections** including small business units, small and marginal farmers, micro and small industries and unorganised sector entities.
- There are **no restrictions in the area of operations** of small finance banks.
- The small finance banks are **subject to all prudential norms and regulations of RBI** as applicable to existing commercial banks including requirement of maintenance of Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR). Hence **statement 1 is correct**.

- The small finance banks will be required to extend **75 per cent of its Adjusted Net Bank Credit (ANBC)** to the sectors eligible for classification as priority sector lending (PSL) by the Reserve Bank. Hence **Statement 2 is correct.**
- At least 50 per cent of its loan portfolio should constitute loans and advances of upto Rs. 25 lakh.
- They are eligible to provide **credit** card and **debit** card facilities and associational services. Hence **statement 3 is correct.**

#### Why in the News?

- The RBI has decided to grant in-principle approval to Centrum Financial Services Limited to set up a Small Finance Bank.

#### 86. Consider the following statements.

1. Bt cotton is India's first genetically modified crop, to be approved for commercialization.
2. India has the world's 2nd largest GM crop acreage after the USA.

#### Which of the above statements is/ are INCORRECT?

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

**Answer: B**

**Explanation:**

#### What is GM crop?

- A genetically modified organism (**GMO**) or living modified organism (LMO), is any organism **whose genetic material has been modified** using laboratory-based transfer of genetic material from another organism.
- Development of **GM crops** starts with the **identification of genes** of interest and isolating it from the host organism. The **gene is incorporated into the DNA of crop plants** using laboratory based gene gun or agrobacterium approaches.
- GM technology **involves direct manipulation of DNA** instead of using controlled pollination to alter the desired characteristics. Genetic modification is one the approaches to

crop improvement, all of which aim at adding desirable genes and removing undesirable ones to produce better varieties.

- Conventional crop improvement involves selection and cross breeding using control pollination of better types available naturally or produced through breeding.
- Of the GM food crops in India, **brinjal, mustard etc is awaiting permission** for large-scale field trials and seed production. **Bt brinjal** is the **first food crop** to get **GEAC approval**.
- But, **Bt cotton** is the **only other GM crop permitted** for commercial cultivation in the country. **Statement 1 is correct.**
- GEAC approval does not mean commercial cultivation, the final decision to allow commercial cultivation is taken by the Government of India, Ministry of Environment and Forests and Climate Change (**MoEFCC**).
- India has the world's 5th largest GM crop acreage after the USA, Brazil, Argentina, and Canada. Hence **statement 2 is incorrect.**

#### **Benefits of GM crops**

- Better Pest and Disease Resistance.
- Greater tolerance of stress, e.g. drought, low temperatures, salinity etc.
- High yield and faster growth, so that harvesting can be done with shorter growing seasons.
- Can be made more nutritious
- Can be made resistant to specific herbicides

#### **Drawbacks with GM crops?**

- Unpredictable side effects.
- May cause ecological damage.
- Poor farmers may not be able buy them
- Intellectual property rights.
- Overuse of herbicides.

#### **Why in News?**

- The illegal cultivation of herbicide tolerant (HT) Bt cotton has seen a huge jump this year

#### **What is Bt cotton**

- Bt cotton is the only transgenic crop(A transgenic crop is a genetically modified organism (GMO)) that has been approved by the Centre for commercial cultivation in India. Now it's being grown by Indian farmers on some **11 million hectares**.

- It has been **genetically modified** to **produce an insecticide** to combat the **cotton bollworm**, a common pest.
- In the case of cotton, the **first two generations of Bt** have seen the introduction of 'Cry1Ab' and 'Cry2Bc' genes **from the soil bacterium, Bacillus thuringiensis (Bt)**, into the cotton seed. This **makes the crop resistant** to the attack of pink bollworm.

**How is HtBt different from Bt cotton?**

- The **third generation**, i.e. **herbicide tolerant Bt (HtBt)** cotton variety saw the addition of 'Cp4-Epsps' gene from another soil bacterium, Agrobacterium tumefaciens, which produces a modified protein that **allows the plant to withstand herbicide glyphosate**. The HTBt cotton variant adds another layer of modification, making the plant resistant to the herbicide glyphosate, but has **not been approved by regulators**.

**87. Consider the following statements about National Common Mobility Card (NCMC)**

- 1) It is an initiative of the Ministry of Road transport and highways.
- 2) This is India's First Indigenously Developed Payment Ecosystem for transport which consists of NCMC Card, SWEETAR and SWAGAT which is based on NCMC Standards.

**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**

**Explanation**

**What is NCMC?**

- National Common Mobility Card (NCMC) - One Nation, One Card for transport mobility is an initiative of the **Ministry of Housing and Urban Affairs** to enable seamless travel by different metros and other transport systems across the country besides retail shopping and purchases.
- The **Indigenous Automatic Fare Collection** System based on One Nation One Card Model is the first of its kind in India.

- This is **India's First Indigenously Developed Payment Eco-system for transport** and consists of **NCMC Card**, **SWEEKAR** (Swachalit Kiraya: Automatic Fare Collection System) and **SWAGAT** (Swachalit Gate- a gate and card-reader system) which is based on NCMC Standards.
- The customer may use this single card for payments across **all segments** including metro, bus, suburban railways, toll, parking, smart city and retail.

#### **Advantages of NCMC/ Contactless Ticketing/**

- **Ticket in Your Pocket** :There is no need to get a ticket before traveling which is great for first time users and breaks down one of the main barriers to accessing public transport.
- **Reduce Costs**: Contactless EMV follows Bring Your Own Ticket (BYOT) philosophy meaning agencies **no longer need** to issue **paper or plastic tickets, saving money**, also becoming **environmentally friendly**
- Just (Tap and) Ride: Simply tapping and riding makes using public transport much more **convenient** and enables a **seamless experience** without needing to know the exact route or worrying about overspending
- This has heralded a better way to move around urban areas by freeing passengers from needing to purchase a ticket before traveling.
- Help in **higher digital payments penetration, savings on closed loop card lifecycle** management cost and **reduced operating cost**.
- **Banks will get** access to **segments** which are highly driven by cash but stickiness in nature.
- This will further **help** the **government in digitization** of low value payments and reduced cost for the entire ecosystem.
- **Reduces physical interaction** and thereby **diminishing** the chances of **spread of germs**.

#### **Why in News?**

- The Delhi-Ghaziabad-Meerut Regional Rapid Transit System (RRTS) will have contactless ticketing to ensure seamless, easy, comfortable and quick entry and exit from its stations.

#### **88. Consider the following statements about Nutrient Based Subsidy scheme**

- 1) Under the scheme, a fixed amount of subsidy decided on an annual basis is provided on each grade of subsidized Phosphatic and Potassic (P&K) fertilizers based on its nutrient content.
- 2) The scheme is being implemented by the Ministry of agriculture and farmers welfare.

**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**

**Explanation**

**About:**

- Nutrient Based Subsidy (NBS) programme for fertilizer was initiated in the year 2010. Under the scheme, a **fixed amount of subsidy decided on an annual basis** is provided on each grade of subsidized Phosphatic and Potassic (P&K) fertilizers based on its nutrient content.

**Statement 1 is correct.**

- The scheme aims at ensuring that sufficient quantity of P&K is at the farmer's disposal at statutory controlled prices, so that the agricultural growth can be sustained and **balanced nutrient application to the soil can be ensured.**
- It aims at improving the agricultural productivity, promoting the **growth of the indigenous fertilizers industry** and also reducing the burden of Subsidy.
- The scheme is being implemented by the **Department of Fertilizers** under the **Ministry of Chemicals and Fertilizers** (not under the Ministry of agriculture and farmers welfare).

**Statement 2 is incorrect.**

**Significance:**

- In a country like India, where around **65 per cent of the population depends on agriculture** for their livelihood, the **Government has a major role in ensuring** the availability of agri-inputs including **fertilisers at affordable prices**. At the same time, **balanced fertilisation** is necessary to enhance farm productivity
- Government is making available Urea and 22 grades of P&K fertilizers to farmers at subsidized prices through fertilizer manufacturers/importers. The subsidy on P&K fertilizers is being governed by the NBS Scheme.

### Why in the news?

- The Cabinet Committee on Economic Affairs, chaired by Prime Minister Shri Narendra Modi has approved the proposal of the Department of Fertilizers for fixation of Nutrient Based Subsidy Rates for P&K Fertilizers for the year 2021-22(till the present season).

### 89. In which one of the following groups are all the four countries members of G20 ?

- a) Argentina, Mexico, South Africa and Turkey
- b) Australia, Canada, Malaysia and New Zealand
- c) Brazil, Saudi Arabia and Vietnam
- d) Indonesia, Japan, Singapore and South Korea

**Answer: A**

#### Explanation:

- Founded in 1999, the Group of Twenty (G20) is the premier forum for its members' international economic cooperation and decision-making.
- The G20 comprises **Argentina**, Australia, Brazil, Canada, China, European Union, France, Germany, **India**, Indonesia, Italy, Japan, **Mexico**, Russia, Saudi Arabia, **South Africa**, South Korea, **Turkey**, UK and USA.

G20 members



Note: The European Union is also a member

BBC

- The G-20's member-countries represent around 85% of the world's economic output, three-quarters of international trade and two thirds of the world's population.
- The objectives of the G20 are:
  - Policy coordination between its members in order to achieve global economic stability, sustainable growth;
  - To promote financial regulations that reduce risks and prevent future financial crises; and

- To create a new international financial architecture.

### Why in News?

- Minister of State for Education, Sanjay Dhotre is set to represent India in the G20 Education Ministers meet on the 22nd of this month.

### 90. 'NISHTHA' is an initiative related to which of the following?

- a) Improving Quality of School Education through Integrated Teacher Training
- b) Pension scheme for unorganised workers
- c) Network to nurture women entrepreneurship
- d) Integrated Online Junction for School Education

Answer: A

### Explanation

- **'National Initiative for School Heads and Teachers Holistic Advancement (NISHTHA)'** is a national mission to **improve learning outcomes** at the elementary level. NISHTHA is the **largest teacher's training programme** of its kind in the world
- **Objective:** To motivate and **equip teachers to encourage and foster critical thinking** in students
- Teachers will get awareness and **develop their skills on various aspects** related to
  - Learning Outcomes
  - **Competency-Based learning** and Testing
  - **Personal-social qualities**
  - Inclusive Education
  - ICT in teaching-learning including **Artificial Intelligence**
  - Initiatives in School Education including library, **eco-club, youth club**, kitchen garden
- **The prominent features** of this integrated programme are activity based modules including educational games and quizzes, **Social-emotional learning**, motivational interactions, **team building**, preparation for school based assessment, **in-built continuous feedback mechanism**, online monitoring and support system, training need and impact analysis (Pre and Post training)
- It aims to build the **capacities of around 42 lakh participants**

- **Covering all teachers** and heads of schools at the **elementary level** in all **Government schools**
- Faculty members of State Councils of Educational Research and Training (**SCERTs**) and **District Institutes of Education and Training (DIETs)**
- Block Resource Coordinators and Cluster Resource Coordinators in all States and UTs
- **Training** will be conducted directly by 33120 **Key Resource Persons (KRPs)** and **State Resource Persons (SRP)** identified by the State and UTs, who will in turn be trained by **120 National Resource Persons** identified from National Council of Educational Research and Training (NCERT), National Institute of Educational Planning and Administration (NIEPA), Kendriya Vidyalaya Sangathan (KVS), Navodaya Vidyalaya Samiti (NVS), Central Board of Secondary Education (CBSE) and Non-Government Organisations
- This mega capacity building programme has been **integrated with technology** to ensure smooth facilitation, availability of digital content and **technology enabled teaching methods** to support the teachers
- **Option B is related to Pradhan Mantri Shram Yogi Maan-dhan (PM- SYM) scheme:** The scheme is meant for **old age protection and social security of Unorganised Workers (UW)** who are mostly engaged as rickshaw pullers, street vendors, rag pickers, domestic workers, construction workers etc..
- **Option C is related to UDYAM SAKHI portal:** An initiative of the Ministry of Micro, Small & Medium Enterprises initiative is a **network for nurturing social entrepreneurship** creating business models revolving around low-cost products and services to resolve social inequities
- **Option D is related to School Education Shagun:** It is an **overarching initiative to improve the school education system** by creating a **junction for all online portals and websites** relating to various activities of the Department of School Education and Literacy in the Government of India and all States and Union Territories.

#### **Why in the news?**

- To fulfill the long-standing vision of Ministry of Tribal Affairs (MoTA) to achieve academic excellence in Eklavya Model Residential Schools (EMRSs), 120 EMRS teachers and principals from 3 states completed a 40 days' NISHTHA-National initiative for School Heads' and Teachers' Holistic Advancement Program recently.

**91. Consider the following statements related to International Atomic Energy Agency**

- 1) The IAEA is an autonomous international organization within the United Nations system.
- 2) All the members of the United Nations are all members of IAEA.

**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**

**Explanation**

- The International Atomic Energy Agency is the world's central intergovernmental forum for scientific and technical co-operation in the nuclear field.
- It works for the safe, secure and peaceful uses of nuclear science and technology, contributing to international peace and security and the United Nations' Sustainable Development Goals.
- The IAEA is an **autonomous international organization within the United Nations system**. It partners with more than a dozen UN organizations, thereby helping extend the reach of its services.
- **IAEA reports annually to the UN General Assembly.**
- Created in 1957, the IAEA Secretariat is headquartered in Vienna, Austria.
- Total Membership: 171 (including **India**).
- The main functions of the IAEA are to:
  - encourage and assist research, development and practical application of atomic energy for peaceful uses throughout the world;
  - establish and administer safeguards designed to ensure that such activity assisted by the Agency is not used to further any military purpose;

- apply safeguards to relevant activities at the request of Member States;
- apply, under the **Nuclear Non-Proliferation Treaty (NPT)** and other international treaties, mandatory comprehensive safeguards in non-nuclear weapon States (NNWS) Parties to such treaties.

**92. With reference to the Joint Comprehensive Plan of Action (JCPOA), more commonly known as the Iran nuclear deal, consider the following statements.**

1. It was reached between Iran and G 7 countries in 2015.
2. According to the deal, Iran was mandated to redesign, convert, and reduce its nuclear facilities in order to lift all nuclear-related economic sanctions.

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**

**Explanation:**

- **Statement 1 is incorrect:** The Joint Comprehensive Plan of Action (JCPOA), more commonly known as the Iran nuclear deal, was reached between Iran and six world powers known as the **P5+1** (China, France, Germany, Russia, the United Kingdom, and the United States) in July 2015.

**What did Iran have to do to meet the requirements of the deal?**

- **Statement 2 is correct:** According to this framework, Iran would **redesign, convert, and reduce its nuclear facilities** in order to lift all nuclear-related economic sanctions.
- The deal also allowed for the tracking of nuclear activities with robust transparency and inspections by the **International Atomic Energy Agency (IAEA)**.

**U.S. withdrawal from JCPOA**

- Former US President Donald Trump unilaterally withdrew from the Iran nuclear deal in 2018, claiming it did not address Iran's ballistic missile programme or its roles in Middle Eastern conflicts.
- The US also re-imposed tough economic sanctions against Iran.

- Reacting to the US' withdrawal, Iran announced that it will breach its limits set on its nuclear activity by the 2015 deal.

### **Why in the News?**

- Western officials warned Iran that negotiations to revive its nuclear deal could not continue indefinitely, after the sides announced a break following the election of a new hard-line president in Iran.
- Negotiations have been ongoing in Vienna since April to work out how Iran and the US can both return to compliance with the nuclear pact, which Washington abandoned in 2018 under then-President Donald Trump, and Iran subsequently violated.
- The latest pause in the talks came after Ebrahim Raisi, a hard-liner and fierce critic of the West, won Iran's presidential election with 62% of the vote amid a historically low voter turnout.
- Raisi will take office in early August, replacing Hassan Rouhani, under whom Tehran struck the deal agreeing to curb its nuclear program in return for the lifting of international sanctions.

**93. India and Bangladesh are both members of which of the following multilateral forums?**

- 1) South Asian Association for Regional Cooperation (**SAARC**)
- 2) Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (**BIMSTEC**)
- 3) Indian Ocean Rim Association (**IORA**)

**Select the correct answer using the codes given below**

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

**Answer: D**

### **Explanation**

**India and Bangladesh are both members of**

- South Asian Association for Regional Cooperation (**SAARC**) and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (**BIMSTEC**)

- Indian Ocean Rim Association (**IORA**)

### SAARC

- The South Asian Association for Regional Cooperation (SAARC) is a **regional intergovernmental organization and geopolitical union** consists of **8 member states-- Afghanistan, Bangladesh, Bhutan, Nepal, India, Pakistan, Sri Lanka and Maldives.**

### BIMSTEC

- The **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)** is a **regional organization comprising seven Member States** lying in the **littoral and adjacent areas of the Bay of Bengal constituting a contiguous regional unity.**
- This sub-regional organization came into being on 6 June 1997 through the Bangkok Declaration.
- It constitutes seven Member States: five deriving from South Asia, including **Bangladesh, Bhutan, India, Nepal, Sri Lanka**, and two from Southeast Asia, including Myanmar and Thailand.

### IORA

- The Indian Ocean Rim Association (IORA) is an inter-governmental organisation formed in **1997** to foster regional economic cooperation. IORA has evolved into the peak regional group spanning the Indian Ocean.
- From its inception with **14 member states**, the membership has **expanded to 22 countries**: Australia, **Bangladesh**, the Comoros, **India**, Indonesia, Iran, Kenya, Madagascar, Malaysia, Maldives, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, the United Arab Emirates and Yemen. IORA has ten dialogue partners: China, Egypt, France, Germany, Italy, Japan, Turkey, the Republic of Korea, the United Kingdom and the United States of America.

### 94. The World Investment Report is released by which of the following organisations?

- a) World Economic Forum
- b) International Monetary Fund

- c) World bank
- d) United Nations Conference on Trade and Development

**Answer: D**

**Explanation**

**What's in the news?**

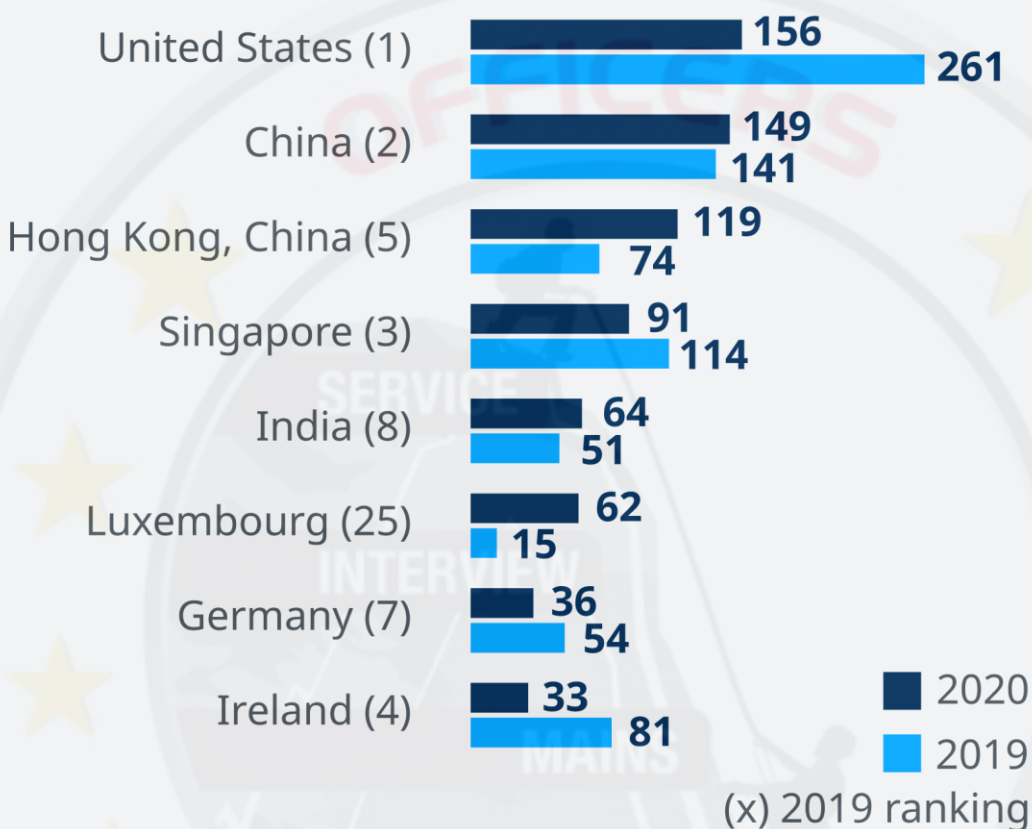
- The UN Conference on Trade and Development has released its World Investment Report 2021.
- The Report supports policymakers by monitoring global and regional investment trends and national and international policy developments. This year's report reviews investment in the Sustainable Development Goals (SDGs) and shows the influence of investment policies on public health and economic recovery from the pandemic.

**Highlights of the Report**

- India received USD 64 billion in Foreign Direct Investment in 2020, the **fifth largest recipient of inflows in the world**.
- The report said, in India, **Foreign Direct Investment increased 27 per cent**, to USD 64 billion in 2020, from USD 51 billion in 2019, pushed up by acquisitions in the information and communication technology (ICT) industry.
- The pandemic boosted demand for digital infrastructure and services globally. This led to higher values of greenfield FDI project announcements targeting the ICT industry, rising by more than 22 per cent to \$81 billion.

## FDI inflows, top 8 host economies

In billion dollars



Source: UNCTAD

- **Global Foreign Direct Investment** flows have been severely hit by the pandemic and they **plunged 35 per cent in 2020**, to USD 1 trillion from USD 1.5 trillion the previous year.
- While some of the largest economies in developing Asia such as China and India recorded FDI growth in 2020, the rest recorded a contraction.
- FDI outflows from South Asia fell 12 per cent to \$12 billion, driven by a drop in investment from India. **India ranked 18 out of the world's top 20 economies for FDI outflows**, with 12 billion dollars of outflows recorded from the country in 2020 as compared to 13 billion dollars in 2019.

- The report noted that the second wave of the COVID-19 outbreak in India weighs heavily on the country's overall economic activities but its strong fundamentals provide "optimism" for the medium term.

**95. Consider the following statements regarding the Summer Solstice.**

1. The places beyond the Arctic Circle experience continuous daylight for about six months.
2. It is summer in the southern hemisphere with longer days and shorter nights.

**Which of the above given statements is/are incorrect?**

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

Answer : B

**Explanation**

- **Statement 1 is correct :** It is **during the Summer Solstice, the places beyond the Arctic Circle experience continuous daylight for about six months.**
- **Statement 2 is incorrect:** As the sun's rays fall vertically at the Tropic of Capricorn ( $23\frac{1}{2}^{\circ}$  S), a larger portion of the Southern Hemisphere gets light. Therefore, **it is summer in the Southern Hemisphere with longer days and shorter nights.** The reverse happens in the Northern Hemisphere. This position of the earth is called the **Winter Solstice.**
- **21st June is the longest day in the Northern Hemisphere, technically this day is referred to as Summer solstice.**

**96. Consider the following statements regarding the Delimitation Commission**

1. The orders of the commission are laid before the Lok Sabha in which no modifications are permitted
2. The orders of the commission has the force of law and they cannot be challenged before any court
3. It has been constituted for the first time recently in 2020.

**Which of the statements given above is/are incorrect?**

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

Ans: C

### Explanation

- Delimitation literally means the **process of fixing limits or boundaries of territorial constituencies** in a state that has a legislative body.
- Delimitation is undertaken by a highly powerful commission. They are formally known as **Delimitation Commission or Boundary Commission**.
- These bodies are so powerful that its orders have the force of law and **they cannot be challenged before any court**.
- Such commissions have been **constituted at least four times in India** — in 1952 under the Delimitation Commission Act, 1952; in 1963 under Delimitation Commission Act, 1962; in 1973 under Delimitation Act, 1972 and **last in 2002 under Delimitation Act, 2002**.
- The commissions' orders are enforced as per the date specified by the President of India. **Copies of these orders are laid before the Lok Sabha** or the concerned Legislative Assembly. **No modifications are permitted.**
- According to the Delimitation Commission Act, 2002, the Delimitation Commission appointed by the Centre has to have **three members: a serving or retired judge of the Supreme Court** as the **chairperson**, and the Chief Election Commissioner or Election Commissioner nominated by the CEC and the State Election Commissioner as ex-officio members.

### Why in the news?

Recently, the delimitation exercise has started in Jammu and Kashmir (J&K).

### 97. Consider the following statements about Quality Council of India

- 1) QCI was set up jointly by the Government of India and the Indian Industry.
- 2) The Chairman of QCI is appointed by the Prime Minister on the recommendations of the industry to the Government.

3) Its mandate is to establish and operate a national accreditation structure and promote quality through the National Quality Campaign.

**Which of the above given statements is/are correct?**

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

**Answer: D**

**Explanation**

**About QCI:**

- QCI was set up in 1997 jointly by the **Government of India and the Indian Industry**.
- Its mandate is to establish and operate a national accreditation structure and promote quality through the National Quality Campaign.
- The **Ministry of Commerce & Industry** is the nodal ministry for QCI.
- The Chairman of QCI is appointed by the **Prime Minister** on the recommendations of the industry to the Government.

**Why in the news?**

- Quality Council of India (QCI) has recently launched Indian Certification of Medical Devices (ICMED) Plus Scheme.

**News in detail**

- ICMED was first launched in 2016.
- The ICMED 13485 PLUS, has been christened as the new scheme and it will undertake **verification of the quality, safety and efficacy of medical devices**.
- ICMED 13485 Plus has been designed to integrate the Quality Management System components and product related quality validation processes through witness testing of products with reference to the defined product standards and specifications.
- This is the first scheme around the world in which **quality management systems along with product certification standards** are integrated with regulatory requirements.
- This scheme will be an **end to end quality assurance scheme for the medical devices sector** in India.

- This scheme provides the much-needed institutional mechanism for assuring the product quality and safety.
- It will go a long way in assisting the procurement agencies to tackle the challenges relating to the menace of counterfeit products and fake certification.
- This will also help in **eliminating the circulation and use of sub-standard medical products** or devices of doubtful origin that could prove to be serious health hazards.

**98. Consider the following statements**

- 1) Fortification is the practice of deliberately increasing the content of an essential micronutrient, i.e. vitamins and minerals in a food, so as to improve the nutritional quality of the food supply.
- 2) According to the FSSAI, fortified oil can help a person fulfil 90-95% of the recommended dietary intake for vitamins A and D.

**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**

**Explanation**

**About Fortification**

- Fortification is the practice of deliberately increasing the content of an **essential micronutrient**, i.e. vitamins and minerals (including trace elements) in a food, so as to improve the nutritional quality of the food supply and provide a public health benefit with minimal risk to health.

**Why in the news?**

- Government of India's NAFED launches Fortified Rice Bran Oil to Boost Healthy Living.

**News in detail:**

- Rice Bran oil from NAFED will be fortified and it will be ensured that it will contain additional nutrients and vitamins

- NAFED Fortified Rice Bran Oil will be available at all Nafed Stores and also on various online platforms.

### **Significance of the initiative**

- This initiative by NAFED will significantly reduce the country's consumption dependence on imported edible oil in future.
- This will provide opportunities for Indian edible oil manufacturers further, and also will give an impetus to the Prime Minister's Atma Nirbhar Bharat initiative.

### **Importance of Rice Bran Oil**

- Rice Bran oil has multiple health benefits.
- It helps in **lowering cholesterol level** due to its low trans-fat content and high monounsaturated and polyunsaturated fat contents.
- It also acts as a booster and **reduces the risk of cancer** due to the high amount of Vitamin E it contains.
- This oil is recommended by The American Heart Association and the World Health Organization (WHO) as one of the **best substitutes for other edible oils**.
- According to the FSSAI, fortified oil can help a person **fulfil 25-30% of the recommended dietary intake for vitamins A and D**.

### **About NAFED:**

- National Agriculture Cooperative Marketing Federation of India (NAFED) was established in 1958 under the **Ministry of Agriculture & Farmers Welfare**.
- Its objective is to promote Cooperative marketing of agricultural produce to benefit the farmers.
- It is registered under the **Multi State Co-operative Societies Act**.

### **99. Which of the following is/are components of the Integrated Power Development Scheme (IPDS) ?**

- 1) Strengthening of sub-transmission and distribution networks in the urban areas.
- 2) Metering of distribution transformers / feeders / consumers in the urban areas.
- 3) IT enablement of the distribution sector and strengthening of the distribution network.
- 4) Underground cabling to include additional demand of States and smart metering solution for performing UDAY States

Select the correct answer using the codes given below

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

**Answer: D**

**Explanation**

- **Integrated Power Development Scheme (IPDS)** was launched in the year 2014 by the **Ministry of Power**, Government of India.
- It has following components:
  - **Strengthening of sub-transmission and distribution networks** in the urban areas.
  - **Metering** of distribution transformers / feeders / consumers in the urban areas.
  - **IT enablement of the distribution sector** and strengthening of the distribution network.
  - Schemes for **Enterprise Resource Planning (ERP)** and IT enablement of balance urban towns are also included under IPDS. Scope of IT enablement has been extended to all 4041 towns as per Census 2011.
  - **Underground cabling** to include additional demand of States and **smart metering** solution for performing UDAY States and Solar panels on Govt. buildings with net-metering are also permissible under the scheme.
- **Eligible Utilities:** All Discoms will be eligible for financial assistance under the scheme.
- **Broad Objective of the Scheme**
  - 24x7 Power supplies for consumers.
  - Reduction of AT&C losses as per trajectory finalized by MoP in consultation with States.
  - Providing access to power to all households.
- **Nodal Agency**
  - **Power Finance Corporation (PFC)** is the Nodal Agency for operationalization and implementation of the scheme under the overall guidance of MoP.

**Why in the news?**

- A 50 kWp Solar roof top was inaugurated in Solan, Himachal Pradesh under the Integrated power development scheme of Ministry of Power ,Government of India.

**100. Consider the following statements about the Chief of Defence Staff (CDS)**

- 1) CDS acts as the principal military adviser to the defence minister on all tri-service matters.
- 2) The CDS is a four star general who also heads the department of military affairs.
- 3) CDS exercises military command over all the three service chiefs.

**Which of the statements given above is/are correct?**

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

**Answer: A**

**Explanation**

**About CDS:**

- The Chief of Defence Staff (CDS) acts as a single-point military adviser to the government as suggested by the **Kargil Review Committee in 1999**.
- CDS acts as the **principal military adviser to the defence minister** on all tri-service matters. But the three Chiefs continue to advise the defence minister on matters exclusively concerning their respective services.
- The CDS is a **four star general** who also heads the department of military affairs.
- In addition to heading the newly created Department of Military Affairs (DMA), the CDS is also the **permanent chairman of the Chiefs of Staff Committee**. The three service chiefs will be members of the Chiefs of Staff Committee.
- However, CDS **doesn't exercise any military command** including over three service chiefs.
- His salary is equivalent to that of service chiefs.

**Functions of CDS**

The **duties and functions** of the Chief of Defence Staff (CDS) include the following:

- To **head the Department of Military Affairs** in the Ministry of Defence and function as its Secretary.
- To **act as the Principal Military Advisor** to Hon'ble Raksha Mantri on all Tri-Service matters.
- To function as the Permanent Chairman of the Chiefs of Staff Committee
- To administer the Tri-Service organizations/agencies/commands.

- To be a **member of Defence Acquisition Council** chaired by Hon'ble Raksha Mantri.
- To function as the **Military Advisor to the Nuclear Command Authority**.
- To bring about jointness in operation, logistics, transport, training, support services, communications, repairs and maintenance, etc of the three Services.
- To ensure optimal utilisation of infrastructure and rationalise it through jointness among the Services.
- To **implement Five-Year Defence Capital Acquisition Plan** and Two-Year roll-on Annual Acquisition Plans, as a follow up of Integrated Capability Development Plan.
- To assign inter-services prioritisation to capital acquisition proposals based on the anticipated budget.
- To bring about **reforms in the functioning of three Services** with the aim to augment combat capabilities of the Armed Forces by reducing wasteful expenditure.

#### Why in the news?

- Chief of Defence Staff (CDS) Gen. Bipin Rawat chaired a meeting recently with the Vice-Chiefs of the three services, the Chief of Integrated Defence Staff and the representatives from the Ministries of Defence, Home and Finance.

**101. World's first genetically modified rubber plant has been planted in which of the following states?**

- Kerala
- Assam
- Arunachal Pradesh
- Tamilnadu

**Answer: B**

#### Explanation

#### What's in the news?

- World's first genetically modified rubber plant has been planted **in Assam**, to overcome the challenges faced by rubber plants in the Northeastern region.
- This plant has been inoculated with the MnSOD gene which protects the plant against col temperatures. The rubber plants in the North-eastern region remain suspended during the winter as it is a warm humid region plant. This usually is associated with the dryness of the

soil.

- The MnSOD gene has the **ability to protect plants from the adverse effects** of severe environmental stresses such as cold and drought.
- The plant was developed at the **Kerala-based Rubber Research Institute of India (RRII)**.
- The officials said that planting had been done at an experimental level following all mandatory biosafety measures applicable to field trials involving GM crops and there was no risk of genes flowing from the GM rubber into any other native species.

### **What is genetic modification?**

- Genetic modification is the process of **altering the genetic makeup of an organism**.
- This has been done indirectly for thousands of years by controlled, or selective, breeding of plants and animals.
- Modern biotechnology has made it easier and faster to target a specific gene for more-precise alteration of the organism through genetic engineering.
- Today the technology involves inserting DNA (genetic material) into the genome of an organism. To produce a GM plant, new DNA is transferred into plant cells.
- Usually, the cells are then grown in tissue culture where they develop into plants. The seeds produced by these plants will inherit the new DNA.

### **Rubber plant**

- Rubber is a coherent elastic solid obtained from latex of a number of tropical trees of which **Hevea brasiliensis** is the most important.
- Natural rubber is a native of warm humid Amazon forests.
- Rubber tree (*Hevea brasiliensis*) is a quick growing tall tree acquiring 20-30 metre height. It begins to yield latex in 5-7 years after planting. It requires hot and humid climate with temperature of 25°-35°C and annual rainfall of over 200 cm. The rainfall should be well distributed throughout the year.
- Dry spells and low temperatures are harmful. Daily rainfall followed by strong sun is very useful. Deep well drained loamy soils on the hill slopes at elevation ranging from 300 to 450 metres above sea level provide best conditions for its growth.
- The yields decline at higher elevations and no rubber plantations are found above 700 m elevation
- India produces around 6 to 7 lakh tonnes of Natural rubber every year.

- **Kerala** is the largest producing state after which northeastern states combined are largest producers.

### **MnSOD**

- **Manganese superoxide dismutase** (MnSOD), an enzyme located in mitochondria (a part of the cell), is the key enzyme (a substance produced by a living organism which acts as a catalyst to bring about a specific biochemical reaction) that protects the energy-generating mitochondria from oxidative damage.

102. **With reference to the Pradhan Mantri Kaushal Vikas Yojana, consider the following statements.**

1. It is the flagship scheme of the Ministry of Labour and Employment.
2. It aims to align the competencies of the unregulated workforce of the country to the National Skill Qualification Framework.
3. Under this Scheme, Training and Assessment fees are completely paid by the Government.

**Which of the statements given above is/are correct?**

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

Answer: C

### **Explanation:**

- **Statement 1 is incorrect:** Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the Ministry of Skill Development & Entrepreneurship (MSDE). The scheme was launched in 2015.
- The objective of this Skill Certification Scheme is to enable a large number of Indian youth to take up industry-relevant skill training that will help them in securing a better livelihood.
- Individuals with prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL).
- **Statement 3 is correct:** Under this Scheme, Training and Assessment fees are completely paid by the Government.

- **Statement 2 is correct:** It aims to align the competencies of the unregulated workforce of the country to the National Skills Qualification Framework (NSQF).

**103. The 'Mineral Accretion Technology', sometimes seen in news in the context of which of the following?**

- a) Deep sea mining
- b) Purity of drinking water
- c) Soil vulnerability mapping
- d) Coral Reef Restoration

**Answer: D**

**Explanation:**

**About Mineral Accretion Technology:**

- Biorock Technology, or **mineral accretion technology** is a method that applies **safe, low voltage electrical currents** through seawater, causing dissolved minerals to crystallize on structures, growing into a white limestone similar to that which naturally makes up coral reefs and tropical white sand beaches.
- This material has a strength similar to concrete. It can be used **to make robust artificial reefs on which corals grow at very rapid rates.**
- The change in the environment produced by electrical currents accelerates formation and growth of both chemical limestone rock and the skeletons of corals and other shell-bearing organisms.
- Biorock methods speed up coral growth in damaged areas and restore authentic coral reef habitat and species.
- If the current is maintained, coral reefs can often be restored even in areas where water quality would prevent their recovery by any other method.

**Why in the news?**

- Recently, the UNESCO World Heritage Committee has recommended that the Australia's Great Barrier Reef should be added to a list of "in danger" World Heritage Sites.

**104. With reference to the Human Rights Council, consider the following statements.**

- 1) It is an inter-governmental body within the United Nations system responsible for the promotion and protection of all human rights around the globe.
- 2) The Council's Membership is based on equitable geographical distribution.

**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**

**Explanation:**

- **Statement 1 is correct:** The United Nations Human Rights Council is an inter-governmental body within the United Nations system.
- The Council's mandate is to promote "universal respect for the protection of all human rights and fundamental freedoms for all" and "address situations of violations of human rights, including gross and systematic violations, and make recommendations thereon."
- It has the ability to discuss all thematic human rights issues and situations that require its attention throughout the year.
- The Council was created by the United Nations General Assembly in 2006. It replaced the former United Nations Commission on Human Rights.
- The headquarters of UNHRC is in Geneva, Switzerland.

**Membership**

- The Council is made of 47 Member States, which are elected by the majority of members of the General Assembly of the United Nations through direct and secret ballot.
- **Statement 2 is correct:** The Council's Membership is based on equitable geographical distribution.
- Members of the Council serve for a period of three years and are not eligible for immediate re-election after serving two consecutive terms.

**Why in the news?**

- Expressing grave concerns over the "Uighurs genocide" in China's Xinjiang province, Canada delivered a joint statement on behalf of 42 countries at the UN Human Rights Council recently, urging China to allow immediate, meaningful and unfettered access to Xinjiang for independent observers.
- The statement was backed by major countries Germany, France, Italy, Japan, Australia, Britain, Spain and the United States, among others.
- The remarks highlighted reports of torture or cruel, inhuman and degrading treatment or punishment, forced sterilization, sexual and gender-based violence, and forced separation of children from their parents by authorities.

### About Uighur issue

- The **Xinjiang province** in China's far west has had a long history of discord between the authorities and the indigenous ethnic Uighur population.
- Most Uighurs are **Muslim**, their language is related to **Turkish**, and they regard themselves as culturally and ethnically close to Central Asian nations.



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- Some Uighurs living there refer to the region as **East Turkestan** and argue that it ought to be independent from China. There have been open calls for **separation of Xinjiang from China** since the 1990s. Since then, China suppressed any dissent from Uyghur and began placing restrictions on them.

- Ethnic tensions caused by economic and cultural factors are considered the root cause of the recent violence. There are complaints of severe restrictions on Islam, with fewer mosques and strict control over religious schools.

### Recent developments

- Rights activists have said the Xinjiang region is home to a vast network of extrajudicial internment camps that have imprisoned at least one million people, which China has defended as vocational training centres to counter extremism.
- Most of the people who have been arbitrarily detained are Uighur. Human rights organizations, UN officials, and many foreign governments are urging China to stop the crackdown.
- But Chinese officials maintain that what they call vocational training centers do not infringe on Uighurs' human rights. They have refused to share information about the detention centers, and prevented journalists and foreign investigators from examining them.

**105. Which of the following statements is not correct about the Ebola virus disease (EVD)?**

- a) It can be prevented through vaccination.
- b) There is as yet no proven treatment available for EVD.
- c) Fruit bats of the Pteropodidae family are natural Ebola virus hosts.
- d) Ebola is spread from human to human through mosquitoes as a vector.

**Answer: D**

### Explanation

#### What is Ebola?

- **Ebola virus disease (EVD)**, formerly known as Ebola haemorrhagic fever, is a **rare** but severe, often **fatal illness** in humans.
- The average EVD case **fatality rate is around 50%**.
- The 2014–2016 outbreak in West Africa was the largest Ebola outbreak since the virus was first discovered in 1976. The outbreak started in Guinea and then moved across land borders to Sierra Leone and Liberia.

#### Transmission:

- It is thought that **fruit bats** of the **Pteropodidae family** are natural Ebola virus hosts. Hence, Statement (c) is correct.
- Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of **infected animals** such as fruit bats, chimpanzees, gorillas, monkeys, forest antelope or porcupines found ill or dead or in the rainforest.
- Ebola then spreads through **human-to-human transmission** via direct contact (through broken skin or mucous membranes) with:
  - Blood or body fluids of a person who is sick with or has died from Ebola
  - Objects that have been contaminated with body fluids (like blood, feces, vomit) from a person sick with Ebola or the body of a person who died from Ebola

### Treatment

- Supportive care - rehydration with oral or intravenous fluids - and treatment of specific symptoms improves survival.
- There is as yet no proven treatment available for EVD. Hence, **Statement (b) is correct.**
- However, a range of potential treatments including blood products, immune therapies and drug therapies are being evaluated.

### Vaccine

- The U.S. Food and Drug Administration announced the approval of **Ervebo**, the first FDA-approved vaccine for the prevention of Ebola virus disease (EVD). **Statement (a) is correct.**
- **Statement d) is incorrect:** There is no evidence that mosquitoes or other insects can transmit Ebola virus.

### Why in the news?

- Recently, the World Health Organisation (WHO) has declared that the Ebola outbreak, that started in February 2021 in Guinea, is over now.

### 106. Consider the following statements about Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

- 1) AMRUT scheme seeks to lay a foundation to enable all Indian cities and towns to eventually grow into smart cities.
- 2) It was launched by Ministry of Housing & Urban 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: B**

**Explanation;**

- To recast the urban landscape of the country, to make urban areas more livable and inclusive besides driving the economic growth, the **Ministry of Housing & Urban Affairs** has launched two **centrally sponsored schemes** namely the **Smart Cities Mission and the Atal Mission for Rejuvenation and Urban Transformation (AMRUT)**.

**About AMRUT:**

- AMRUT seeks to lay a foundation to **enable cities and towns to eventually grow into smart cities**.
- AMRUT adopts a **project approach to ensure basic infrastructure services** relating to water supply, sewerage, septage management, storm water drains, transport and development of green spaces and parks with special provision for meeting the needs of children.

**Coverage:**

- This Mission will be **implemented in 500 cities and towns** each with a population of one lakh and above, some cities situated on stems of main rivers, a few capital cities and important cities located in hilly areas, islands and tourist areas.(not in all Indian cities) Hence statement 1 is incorrect.

**Approach:**

- Implementation of this Mission will be **linked to promotion of urban reforms** such as
  - e-governance,
  - constitution of professional municipal cadre,
  - devolving funds and functions to urban local bodies,
  - review of Building bye-laws,
  - improvement in assessment and collection of municipal taxes,
  - credit rating of urban local bodies,

- energy and water audit and
- citizen-centric urban planning.

#### **Funding:**

- Central assistance will be to the **extent of 50 percent of project cost** for cities and towns with a population of up to 10 lakh and one-third of the project cost for those with a population of above 10 lakh.
- Central assistance will be released in **three instalments in the ratio of 20:40:40** based on achievement of milestones indicated in State Annual Action Plans.

#### **Why in the news?**

- Recently, the Ministry of Housing and Urban Affairs (MoHUA) organised an online event to commemorate six years of the three transformative Urban Missions viz. Smart Cities Mission (SCM), Atal Mission for Urban Rejuvenation and Urban Transformation (AMRUT) and Pradhan Mantri Awas Yojana-Urban (PMAY-U).

#### **107. Consider the following statements about National Anti-Profiteering Authority**

- 1) It is a statutory body constituted under the Central Goods and Services Tax Act, 2017
- 2) The Authority's core function is to ensure that the benefits of the reduction in GST rates on goods or services made by the GST Council is passed on to the ultimate consumers.

#### **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**

#### **Explanation**

#### **About the National Anti-Profiteering Authority (NAA)**

- Soon after the GST was rolled out from 1 July 2017, the government had approved setting up of the NAA for two years.
- NAA is a **statutory body** constituted under the Central Goods and Services Tax Act, 2017 to **check the unfair profit-making activities by the trading community.**

- The Authority's core function is to **ensure that the benefits of the reduction in GST rates on goods or services made by the GST Council is passed on to the ultimate consumers** by way of a reduction in prices by traders.
- NAA examines and checks such profiteering activities and recommends punitive actions including cancellation of Registration.
- In 2019, the GST Council has extended the tenure of the NAA by two years.

#### **Why in News ?**

- The National Anti-Profiteering Authority has directed GST officials across the country to ensure that the tax rate cuts notified on some COVID-19-related essentials are passed on to consumers.
- At its last meeting on June 12, the GST Council had waived the indirect tax levied on two critical drugs, Tocilizumab and Amphotericin B, and reset the tax rate to 5% on 14 COVID-19 essentials. On June 14, the Finance Ministry had notified the revised rates, which are applicable till September 30.

#### **108. Consider the following statements about Black Sea:**

- 1) The Black Sea drains into the Mediterranean Sea.
- 2) It is navigable to the Atlantic Ocean.
- 3) The Strait of the Dardanelles connects it to the Sea of Marmara.

#### **Which of the statements given above is/are correct?**

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1, 2 and 3
- d) None of the above

**Answer: A**

#### **Explanation:**

- The Black Sea drains into the Mediterranean Sea, via the Aegean Sea and various straits, and is navigable to the Atlantic Ocean.
- The Bosphorus Strait connects it to the Sea of Marmara, and the Strait of the Dardanelles connects that sea to the Aegean Sea region of the Mediterranean.
- The Black Sea is also connected, to the north, to the Sea of Azov by the Strait of Kerch.

### Why in the news?

- Russia has issued a stern warning to Britain asking it to respect its territorial waters in the Black Sea and refrain from breaching it.

### 109. Consider the following statements with respect to the Financial Action Task Force (FATF)

1. It is an inter-governmental body established by the Group of Seven (G7)
2. Countries that are considered safe haven for supporting terror funding and money laundering are categorized under the FATF Grey list.

### 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**

### Explanation

- FATF is **an inter-governmental body established in 1989 on the initiative of the G7**
- It is a **“policy-making body”** which works to **generate the necessary political will** to bring about national legislative and regulatory reforms in various areas
- The **FATF Secretariat is housed at the OECD headquarters in Paris**

### Roles and functions

- Initially it was established to examine and develop measures **to combat money laundering.**
- In October 2001, the FATF expanded its mandate to incorporate efforts to **combat terrorist financing**, in addition to money laundering.
- In April 2012, it added efforts to **counter the financing of proliferation of weapons of mass destruction**

### Composition

- The FATF currently **comprises 37 member jurisdictions** and 2 regional organisations, representing most major financial centers in all parts of the globe. It also has observers and associate members

## Blacklist and Grey list

- **Black List:** Countries known as **Non-Cooperative Countries or Territories (NCCTs)** are put in the blacklist. These countries support terror funding and money laundering activities. The FATF **revises the blacklist regularly**, adding or deleting entries
- **Grey List:** Countries that are **considered safe haven for supporting terror funding** and money laundering are put in the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist

## Why in the news?

The Financial Action Task Force (FATF) decided to retain Pakistan on the grey list.

## 110. The Sagarmala Project is related to

- A. Making all national highways free of various railway crossings.
- B. Improving road connectivity particularly on economic corridors, border areas and far flung areas.
- C. To promote, develop and harness the potential of tourism in India.
- D. To promote port-led direct and indirect development and to provide infrastructure to transport goods to and from ports quickly, efficiently and cost-effectively.

Answer: D

## Explanation:

- The Sagarmala project seeks to **develop a string of ports around India's coast**. The objective of this initiative is to promote "Port-led development" along India's 7500 km long coastline.
- It aims to develop access to new development regions and enhance connectivity with main economic centres and beyond through expansion of rail, inland water, coastal and road services.
- The **Union Ministry of Shipping** has been appointed as the nodal ministry for this initiative.
- To assist in implementation of the Sagarmala Programme, the **Sagarmala Development Company Limited** was incorporated in 2016 under the Companies Act, 2013 by the Ministry of Shipping with authorized capital of INR 1000 crore and subscribed capital of INR 90 crore.

## Significance

- India is located along key international trade routes in the Indian Ocean and has a long coastline of over 7,000 km. Approximately **95% of India's merchandise trade (by volume) passes through sea ports.**
- Yet, **capacity constraints and lack of modern facilities** at Indian ports tremendously elongates the time taken to ship goods in and out of the country and has **held back India's share in world trade.** For example, Turnaround time (TAT) at major ports was approximately 2.5 days in 2018-19, whereas the global average benchmark is 1-2 days.
- In addition to this, **last mile connectivity to the ports** is one of the major constraints in smooth movement of cargo to/from the hinterland. Around 87% of Indian freight uses either road or rail for transportation of goods. A significant share of this cargo experiences "idle time" during its transit to the ports due to capacity constraints on highways and railway lines connecting ports to production and consumption centers. Although water-borne transport is much safer, cheaper and cleaner, compared to other modes of transportation, it accounts for less than 6% of India's modal split.
- By comparison, coastal and inland water transportation contribute to 47% of China's freight modal mix, while in Japan and US, this share is 34% and 12.4% respectively. Significant savings can be achieved by shifting movement of industrial commodities like coal, iron ore, cement and steel to coastal and inland waterways.

### **Vision of the Sagarmala Programme**

- The vision of the programme is to reduce logistics cost for EXIM and domestic trade with minimal infrastructure investment. This includes:
  - Reducing cost of transporting domestic cargo through optimizing modal mix
  - Lowering logistics cost of bulk commodities by locating future industrial capacities near the coast
  - Improving export competitiveness by developing port proximate discrete manufacturing clusters
  - Optimizing time/cost of EXIM container movement

### **Components**

- Components of Sagarmala Programme are:

- **Port Modernization & New Port Development:** De-bottlenecking and capacity expansion of existing ports and development of new greenfield ports;
- **Port Connectivity Enhancement:** Enhancing the connectivity of the ports to the hinterland, optimizing cost and time of cargo movement through multi-modal logistics solutions including domestic waterways (inland water transport and coastal shipping);
- **Port-linked Industrialization:** Developing port-proximate industrial clusters and Coastal Economic Zones to reduce logistics cost and time of EXIM and domestic cargo;
- **Coastal Community Development:** Promoting sustainable development of coastal communities through skill development & livelihood generation activities, fisheries development, coastal tourism etc.
- **Coastal Shipping & Inland Waterways Transport:** Impetus to move cargo through the sustainable and environment-friendly coastal and inland waterways mode.

**111. Consider the following statements about Competition Commission of India (CCI)**

- 1) The Competition Commission of India (CCI) is a statutory body established under the Competition Act, 2002.
- 2) The Chairperson and the Members of CCI are appointed by the Chief Justice of India after consultation with the central government.
- 3) To prevent practices having adverse effects on competition is one of its objectives.

**Which of the statements given above is/are correct?**

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

**Answer: C**

**Explanation**

### About CCI

- The Competition Commission of India (CCI) is a **statutory body** established under the **Competition Act, 2002** for the administration, implementation and enforcement of the Act. **Statement 1 is correct.**
- CCI consists of a **Chairperson and 6 Members** appointed by the Central Government. **Statement 2 is incorrect.**
- The following are the objectives of the Commission.
  - To prevent practices having adverse effects on competition. **Statement 3 is correct.**
  - To promote and sustain competition in markets
  - To protect the interests of consumers and
  - To ensure freedom of trade
- The Commission is also required to give opinion on competition issues on a reference received from a statutory authority established under any law and to undertake competition advocacy, create public awareness and impart training on competition issues.

### Why in the News?

- The Competition Commission of India has ordered a detailed probe against Google for alleged unfair business practices in the smart television operating systems market in India.

### About Competition Act, 2002

- The Competition Act, 2002, as amended by the Competition (Amendment) Act, 2007, prohibits anti-competitive agreements, abuse of dominant position by enterprises and regulates combinations (acquisition, acquiring of control and Mergers and acquisitions), which causes or likely to cause an appreciable adverse effect on competition within India.
- The objectives of the Act are sought to be achieved through the **Competition Commission of India**, which has been established by the Central Government in 2003.

### 112. Consider the following statements about Border Roads Organisation (BRO)

- 1) BRO develops and maintains road networks in India's border areas and friendly neighboring countries.
- 2) It works under the administrative control of the Ministry of Road Transports and Highways.

**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**

**Explanation**

**Why in News:**

- Renaming of Arunachal's Kinam as Bilgarh in Assam by BRO has sparked anger.

**About BRO**

- The Border Roads Organisation (BRO) is a **road construction executive force** in India that provides support to and is a **part of the Indian Armed Forces**. BRO develops and maintains road networks in India's border areas and friendly neighboring countries. **Statement 1 is correct.**
- It was **conceived** in 1960 by Jawaharlal Nehru for coordinating the speedy development of a network of roads in the **North and the North Eastern border regions** of the country.
- It works under the **administrative control of the Ministry of Defence**. **Statement 2 is incorrect.**
- Now it has diversified into a large spectrum of construction and development works comprising airfields, building projects, defence works and tunnelling
- One of the biggest infrastructural achievements of BRO is the construction of the **Atal Tunnel in Himachal Pradesh** (It is the longest highway tunnel above 10000 ft in the world)

**Significance**

- **Maintenance of security** and in the **development of border areas**. **Socio economic development** in the most inaccessible nooks and corners of our country are a result of the infrastructural work undertaken by the BRO.
- Maintaining **friendly and diplomatic relations** with other countries. e.g. of the **Zaranj-Delaram Highway in Afghanistan** in 2008. The **Farkhor and Ayni air bases of Tajikistan** were restored and repaired by the BRO.
- **Working with the Indian Army** in cases of **natural disasters**. e.g. in TamilNadu during Tsunami (2004), the 2010 Ladakh flash floods, 2014 Jammu and Kashmir Floods.

**113. Consider the following statements regarding the Enforcement Directorate**

1. It is mandated with the task of enforcing the provisions of Prevention of Money Laundering Act, 2002 (PMLA).

2. The administrative control of the Directorate is under the Ministry of Home 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

Ans: A

### **Explanation**

- It is a **Multi Disciplinary Organization** mandated with the task of **enforcing the provisions of two special fiscal laws – Foreign Exchange Management Act, 1999 (FEMA) and Prevention of Money Laundering Act, 2002 (PMLA)**
- The origin of this Directorate goes back to 1st May, 1956, when an **‘Enforcement Unit’ was formed, in Department of Economic Affairs**, for handling Exchange Control Laws violations under Foreign Exchange Regulation Act, 1947
- The administrative control of the Directorate was transferred from Department of Economic Affairs to **Department of Revenue, Ministry of Finance** (not Home ministry) in 1960

### **Functions**

- Processing cases of fugitives from India **under Fugitive Economic Offenders Act, 2018.**
- Sponsor cases of preventive detention under Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974(**COFEPOSA**) **in regard to contraventions of FEMA**

### **The Directorate enforces two laws**

- **FEMA, a Civil Law having quasi judicial powers**, for investigating suspected contraventions of the Exchange Control Laws and Regulations with the **powers to impose penalties** on those adjudged guilty
- **PMLA, a Criminal Law** whereby the Officers are **empowered to conduct enquiries to locate, provisionally attach/confiscate assets** derived from acts of Schedules Offences besides arresting and prosecuting the Money Launderers.

**114. Mission Karmayogi was launched with the main objective of**

- A. Ministry of Women and Child Development initiative to motivate children to keep their homes, schools, and surroundings clean.
- B. To eradicate illiteracy in the country by imparting functional literacy to non-literates.
- C. Conservation of heritage, urban planning and in increasing the economic growth of the heritage cities.
- D. Nationwide programme to lay the foundation for capacity building of civil servants.

**Answer: D**

**Explanation:**

- Mission Karmayogi is a nationwide programme to lay the **foundation for capacity building of civil servants**. It will help the officers to learn about the best practices across the world.
- Officially called the "**National Programme for Civil Services Capacity Building (NPCSCB)**", the mission plans to **transform human resource management in the country**.
- Mission Karmayogi aims to prepare the Indian civil servant for the future by making him more creative, constructive, imaginative, innovative, proactive, professional, progressive, energetic, enabling, transparent and technology-enabled.
- The fundamental focus of the reform is the creation of a '**citizen centric civil service**' capable of creating and delivering services conducive to economic growth and public welfare.
- It shifts the focus from "Rule based training to **Role based training**". Greater thrust has been laid on behavioural change.

**Unfolding of Mission Karmayogi**

- Mission Karmayogi programme will be delivered by setting up a digital platform called **iGOTKarmayogi**.
- The platform will act as a launchpad for the National Programme for Civil Services Capacity Building, which will enable a comprehensive reform of the capacity building apparatus at the individual, institutional and process levels.
- **NPCSCB** will be **governed by the Prime Minister's Human Resource Council**, which will also include state Chief Ministers, Union Cabinet ministers and experts. This council will approve and review civil service capacity building programmes.

- Besides this, there will be a **Cabinet Secretary Coordination Unit** comprising select secretaries and cadre controlling authorities.
- Also, there will be a **Capacity Building Commission**, which will include experts in related fields and global professionals. This commission will prepare and monitor annual capacity building plans and audit human resources available in the government.
- There will be a wholly-owned **Special Purpose Vehicle (SPV), which will govern the iGOT-Karmayogi platform.**
- The SPV will be a “not-for-profit” company which will create and operationalise the content, market place and manage key business services of iGOT-Karmayogi platform.
- To cover around 46 lakh central employees, a sum of Rs 510.86 crore will be spent over a period of 5 years from 2020-21 to 2024-25. The expenditure is partly funded by multilateral assistance to the tune of \$50 million.

#### **Why in the news?**

- Recently, a three-member task force has been formed to help the government in bringing major bureaucratic reforms through its ambitious “Mission Karmayogi”.

**115. With reference to the Fugitive Economic Offenders (FEO) Act, 2018, consider the following statements.**

1. A FEO is an individual who defaulted in meeting his repayment obligations to the lender despite having the capacity to do so.
2. The Act empowers authorities to attach and confiscate properties and assets of FEOs and their benamis.
3. Courts and tribunals across the country have the power to disentitle anyone declared as a FEO from filing or defending any civil and criminal case.

**Which of the statements given above is/are correct?**

- A. 1 and 2 only
- B. 2 only
- C. 2 and 3 only

D. 1, 2 and 3

**Answer: B**

**Explanation:**

- **Statement 1 is incorrect:** According to the **Fugitive Economic Offenders Act, 2018**, a fugitive economic offender is an individual who has committed specified economic offences involving an amount of **Rs 100 crore** or more and has absconded from India or refused to come back to India to avoid criminal prosecution.
- Statement 1 is related to the definition of a **wilful defaulter**.
- The Act is basically aimed at acting as a deterrent for those who commit economic offences and flee, thereby, defying the Rule of Law in India and evading jurisdiction of Indian justice system.
- **Statement 2 is correct:** Under the Act, upon declaration as FEO, the properties and assets may be confiscated and vested by the Centre. This includes not just the properties directly owned by the FEO and affiliated organisations but also any and all benami properties owned by the offender.
- **Statement 3 is incorrect:** Courts and tribunals across the country have the power to disentitle anyone declared as a FEO from filing or defending any civil case – even if that case has nothing to do with their alleged economic offence. **(they can file/defend criminal cases)**

**Why in the news?**

- The Enforcement Directorate has transferred assets worth Rs. 8,441.50 crore to public sector banks that suffered losses to the tune of Rs. 22,585.83 crore due to frauds committed allegedly by Vijay Mallya, Nirav Modi and Mehul Choksi.

All the three have been declared 'Fugitive Economic Offenders' by PMLA (Prevention of Money Laundering Act) Court in Mumbai.

**116. Which of the following is/ are the applications of (LiDAR) Light Detection and Ranging technology?**

- 1) Forest canopy measurement
- 2) Hazard assessment
- 3) Geologic mapping

- 4) River Survey
- 5) Modelling Pollution

**Select the correct answer using the codes given below**

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

**Answer: D**

**Explanation**

**What is LiDAR?**

- Lidar, which stands for **Light Detection and Ranging**, is a **remote sensing** method which uses **light in the form of a pulsed laser** to measure ranges (variable distances) to the Earth.
- These light pulses—combined with other data recorded by the airborne system— generate **precise, three-dimensional information about the shape of the Earth** and its surface characteristics.
- A lidar instrument principally consists of a laser, a scanner, and a specialized GPS receiver.
- Airplanes and helicopters are the most commonly used platforms for acquiring lidar data over broad areas.
- Two types of lidar are **topographic and bathymetric**.
  - Topographic lidar typically uses a near-infrared laser to map the land, while bathymetric lidar uses water-penetrating green light to also measure seafloor and riverbed elevations.

**Applications**

- Lidar systems allow scientists and mapping professionals to examine both natural and manmade environments with **accuracy, precision, and flexibility**.
- It is commonly used by geologists and surveyors to make high-resolution maps.
- Some of its applications include
  - **Forest canopy measurement**
  - **Hazard assessment**
  - **Geologic mapping**
  - Agriculture
  - **River Survey**

- Modelling Pollution
- Archeology and Building Construction
- Management of Coastline
- Urban Planning
- Oil and Gas Exploration

#### **Why in the news?**

- The Minister for Environment, Forest and Climate Change, Shri Prakash Javadekar in a virtual event released the **Detailed Project Reports (DPRs) of LiDAR based survey of forest areas** in ten states namely Assam, Bihar, Chhattisgarh, Goa, Jharkhand, Madhya Pradesh, Maharashtra, Manipur, Nagaland, and Tripura.

#### **117. Consider the following statements about NashaMukt Bharat Abhiyaan**

- 1) It was launched by the Ministry of Health and Family Welfare.
- 2) Under the scheme, youth volunteers from 272 focus districts of the country will be trained as community mobilisers against drug abuse.

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: D**

#### **Explanation**

##### **About**

- The '**Nasha Mukta Bharat Abhiyaan**' or a '**Drugs-Free India Campaign**' was flagged off on 15th August 2020 by the **Ministry of Social Justice and Empowerment**
- Nasha Mukta Bharat Annual Action Plan for 2020-21 would focus on **272 most affected districts** by training youth volunteers as community mobilisers against drug abuse.
- launch a three-pronged attack combining efforts of the Narcotics Bureau, Outreach/Awareness by Social Justice and Treatment through the Health Department.

### **Components of the action plan**

- Awareness generation programmes;
- Focus on Higher Educational institutions, University Campuses and Schools;
- Community outreach and identification of dependent population;
- Focus on Treatment facilities in Hospital settings; and
- Capacity Building Programmes for Service Providers.

### **Need of the programme**

- The Ministry has conducted the first National Survey on Extent and Pattern of Substance Use in India through the National Drug Dependence Treatment Centre (NDDTC) of the All India Institute of Medical Sciences (AIIMS), New Delhi during 2018.
- As per the report, Alcohol is the most common psychoactive substance used by Indians followed by Cannabis and Opioids.
- About 16 Crore persons consume alcohol in the country; more than 5.7 Crore individuals are affected by harmful or dependent alcohol use and need help for their alcohol use problems
- 3.1 Crore individuals use cannabis products; about 25 lakh suffer from cannabis dependence.
- 2.26 Crore use opioids; approximately 77 lakh individuals are required help for their opioid use problems.

### **Role of the Ministry of Social Justice and Empowerment**

- The Ministry of Social Justice and Empowerment has been mandated to **reduce drug demand**.
- It coordinates and **oversees all aspects of drug abuse prevention** including assessment of the extent of the problem, preventive action, treatment and rehabilitation of addicts, dissemination of information, and public awareness and is mandated to run de-addiction centers.
- The Ministry of Social Justice and Empowerment would undertake intervention programmes in vulnerable districts across the country with an aim to:
  - Reach out to Children and Youth for **awareness** about ill effect of drug use;
  - Increase **community participation** and public cooperation;
  - Supporting Government Hospitals for **opening up De- addiction Centers** in addition to existing Ministry Supported De-addiction Centers (IRCAs); and
  - Conducting **Training programme** for participants.

### Why in the news?

- The Minister for Social Justice & Empowerment has launched the **website for the Nasha Mukta Bharat Abhiyaan(NMBA)** on the occasion of International Day Against Drug Abuse and Illicit Trafficking on June 26th 2021.
- The Day is observed worldwide to strengthen action and cooperation in achieving the goal of a **sustainable world free of substance abuse**.

### 118. Which among the following represents non-debt liabilities?

1. Foreign Direct Investment
2. Foreign Institutional Investors' investment
3. Non-Resident Indian (NRI) deposits
4. External Commercial Borrowings

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, 3 and 4

Answer: A

#### Explanation:

- Under the Capital Account of Balance of Payments (BOP), capital inflows can be classified by instrument (debt or equity) and maturity (short or long-term). The main components of the capital account include foreign investment, loans and banking capital.
- Foreign investment, comprising **Foreign Direct Investment (FDI)** and Portfolio Investment consisting of **Foreign Institutional Investors (FIIs) investment**, American Depository Receipts/Global Depository Receipts (ADRs/GDRs) represents non-debt liabilities, while loans (external assistance, **external commercial borrowings** and trade credit) and banking capital, including **non-resident Indian (NRI) deposits** are debt liabilities.

**119. Bosphorus strait connects which of the following**

- a) Gulf of Oman and the Persian Gulf
- b) Black Sea and Sea of Marmara
- c) Mediterranean Sea and Persian Gulf
- d) Mediterranean Sea and Red Sea

**Answer: B**

**Explanation**

Bosphorus is a natural strait connecting the Black Sea to the Sea of Marmara.



**120. 'POCSO e-box' initiative sometimes seen in news is related to**

- a) initiative aimed at bringing India's artisans, weavers, and handicrafts producers onto e-commerce.
- b) Initiative that helps farmers improve their incomes through better market access and collective bargaining power.
- c) online complaint box for reporting child sexual abuse.
- d) Initiative that showcases the cultural diversity of a country and reinforces the principle of 'Tourism for All'.

**Answer: C**

### Explanation

- **Option A is related to Samarth.** 'Samarth' was launched by e-commerce portal, Flipkart – an initiative aimed at **bringing India's artisans, weavers, and handicrafts producers onto e-commerce**. This move will open up **national market access for these underserved communities**, giving them access to a constantly growing **pan-India customer base** of more than 150 million and empowering them to leverage the benefits of the e-commerce model
- **Option B is related to Farmer Producer Organisations (FPOs):** It is an organised **group of small and marginal farmers** which will help farmers improve their incomes through better market access and collective bargaining power.
- **Option C is related to Protection of Children from Sexual Offences (POCSO) e-Box:** It is an online complaint box for **reporting child sexual abuse**. It is an National Commission for Protection of Child Rights (NCPCR) initiative to help children report such crimes directly to the Commission.
- **Option D is related to 'Paryatan Parv':** It is an initiative by the Ministry of Tourism which aims to showcase the **cultural diversity of the country** and reinforce the principle of 'Tourism for All'

**121. Consider the following statements about Mahatma Gandhi National Rural Employment Guarantee Act**

- 1) The act makes it obligatory for the State to give rural households work on demand.
- 2) The Ministry of Labour and employment is monitoring the entire implementation of this scheme in association with state governments.

**Which of the statements given above is/are correct?**

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

**Answer: A**

### Explanation

- The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme is the largest social security scheme in the world — guaranteeing **100 days of work** each financial year to **any rural household** willing to do public work-related unskilled manual work at the statutory minimum wage.
- The act makes it **obligatory** for the State to give rural households work on demand. In case such employment is not provided within 15 days of registration, the applicant becomes eligible for an **unemployment allowance**.
- The **Ministry of Rural Development (MRD)** is monitoring the entire implementation of this scheme in association with state governments.

### Key Features

- **One-third** of the stipulated workforce must be women.
- **Work site facilities** such as creche, drinking water and shade have to be provided.
- The employment will be provided **within a radius of 5 km**: if it is above 5 km extra wage will be paid.
- The wages are revised according to the **Consumer Price Index-Agricultural Labourers (CPI-AL)**.
- A **60:40 wage and material ratio** has to be maintained.
- Permissible works predominantly include water and soil conservation, afforestation and land development works.
- **Work site facilities** such as crèche, drinking water, shade have to be provided.
- **Gram sabhas** must recommend the works that are to be undertaken and at least 50% of the works must be executed by them.
- **Social Audit** has to be done by the Gram Sabha.

### Why in News?

- More than 2 lakh rural households have already completed their guaranteed 100 days of employment under the MGNREGA scheme within the first three months of the financial year. This is higher than seen at the same time last year, indicating even higher demand for work than 2020-21's unprecedented levels.
- Given the high rates of rural job loss due to the COVID-19 pandemic, activists belonging to the NREGA Sangharsh Morcha wrote to Prime Minister Narendra Modi, asking for an

additional 50 days of work to be provided under the scheme, with funding allocated from the disaster management budget.

- The MGNREGA scheme proved a lifeline for migrant workers and families hit by the COVID-19 lockdown last summer. In acknowledgement of the disaster, the Centre increased MGNREGA funding by ₹40,000 crore for 2020-21. However, funding is back to pre-COVID-19 levels this year, with the Centre arguing that there has been no nationwide lockdown, and there have been lower levels of reverse migration.
- However, the MGNREGA database shows that this year's demand may be even higher than last year's. Throughout 2020-21, an unprecedented 72 lakh households completed 100 days of work. If the trend of the first quarter continues, this year will see an even higher number of families who run out of work under the scheme.

**122. Consider the following statements about Great Barrier Reef**

- 1) It is the world's largest coral reef system stretching for over 23000 kilometres.
- 2) It has been on UNESCO's World Heritage Site List since 1981.

**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**

**Explanation**



- The Great Barrier Reef is the **world's largest coral reef system** composed of over 2,900 individual reefs and 900 islands stretching for over 2,300 kilometres over an area of approximately 3.4 lakh square kilometres.
- It is found in the northeastern coast of Queensland state, Australia.
- It has a geological history going back an estimated 23 million years to the Miocene epoch, and has survived many challenges.
- It has been on UNESCO's World Heritage Site List since 1981.

A World Heritage Site is a landmark or area with legal protection by an international convention administered by the United Nations Educational, Scientific and Cultural Organization (UNESCO). World Heritage Sites are designated by UNESCO for having cultural, historical, scientific or other forms of significance. There are two types of Heritage Sites : **Natural and Cultural.**

### 123. Consider the following statements about corals

- 1) Hard corals extract calcium carbonate ( $\text{CaCO}_3$ ) from seawater to create a hard, durable exoskeleton that protects their soft, sac-like bodies.
- 2) The majority of reef building corals are found within tropical and subtropical waters.

**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**

### **Explanation**

#### **Coral reefs**

- Coral reefs are large underwater structures composed of the skeletons of colonial **marine invertebrates called coral**.
- The coral species that build reefs are known as **hermatypic, or "hard," corals** because they extract **calcium carbonate (CaCO<sub>3</sub>)** from seawater to create a hard, durable exoskeleton that protects their soft, sac-like bodies.
- Other species of corals that are not involved in reef building are known as “soft” corals. These types of corals are flexible organisms often resembling plants and trees and include species such as sea fans and sea whips.

#### **Symbiotic relationship**

- Most reef-building corals contain photosynthetic algae, called **zooxanthellae**, that live in their tissues. The corals and algae have a **symbiotic relationship**.
- The coral provides the algae with a protected environment and compounds they need for photosynthesis. In return, the algae produce oxygen and help the coral to remove wastes. The presence of the zooxanthellae also provides colored pigments to help protect the coral's white skeleton from sunlight.

#### **Significance of Coral reefs**

- Coral reefs only occupy 0.1% of the area of the ocean but they support 25% of all marine species on the planet.
- Because of the diversity of life found in the habitats created by corals, reefs are often called the **"rainforests of the sea."**

#### **Geographical distribution**

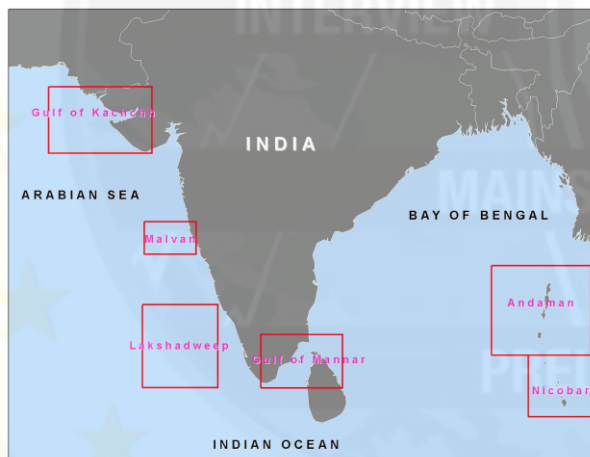
- The reef-building corals prefer to grow at
  - **depths shallower than 30 m (100 ft), or**

- where the **temperature range is between 16-32°C**, and
- **light levels are high**
- The majority of reef building corals are found within tropical and subtropical waters. These typically occur between **30°N and 30°S of the equator**.
- The largest of these coral reef systems, the **Great Barrier Reef** in Australia, is more than 1,500 miles long (2,400 kilometers).



### Coral reefs in India

- Coral reefs are present in the areas of **Gulf of Kutch, Gulf of Mannar, Andaman & Nicobar, Lakshadweep Islands and Malvan coast of Maharashtra.**



### Main threats to coral reefs

- **Climate change:** Warmer water temperatures can result in **coral bleaching**. When water is too warm, corals expel the algae (zooxanthellae) living in their tissues causing the coral to turn completely white. This is called **coral bleaching**. When a coral bleaches, it is not dead. Corals can survive a bleaching event, but they are under more stress and are subject to mortality.
- **Ocean acidification:** Ocean acidification is caused by rising levels of CO<sub>2</sub> in the atmosphere. Oceans absorb some of the CO<sub>2</sub>. As CO<sub>2</sub> enters the ocean, it reacts with water increasing

hydrogen ion concentration (thus decreasing ocean pH) and decreasing the carbonate ion concentration. A reduction in carbonate ions affects the **Calcification process** of Corals.

- *Calcification is the process by which corals form their skeletons by combining calcium ions and carbonate ions to create calcium carbonate.*
- **Pollution:** Urban and industrial waste, plastics, sewage, agrochemicals, and oil pollution are poisoning reefs. Some pollutants, such as sewage and runoff from farming, increase the level of nitrogen in seawater, causing an overgrowth of algae.
- **Sedimentation:** Erosion caused by construction, mining, logging, and farming is leading to increased sediment in rivers. This ends up in the ocean, where it can smother corals by depriving them of the light needed to survive.
- **Destructive fishing practices:** These include cyanide fishing, blast or dynamite fishing, bottom trawling, and muro-ami (banging on the reef with sticks). **Bottom-trawling** is one of the greatest threats to cold-water coral reefs.

#### **Why in the news?**

- The Great Barrier Reef (GBR) is constantly facing threats and depreciating rapidly.
- The World Heritage Committee has drawn up a resolution to inscribe the reef on the '**List of World Heritage in Danger**' based on the 2019 Outlook Report of the Great Barrier Reef Marine Park Authority.

124. **With reference to the New disinvestment policy announced in the latest budget, consider the following statements.**

1. In non-strategic sectors, Central Public Sector Enterprises (CPSEs) will be privatised, otherwise shall be closed.
2. In strategic sectors, there will be bare minimum presence of the public sector enterprises and remaining to be privatised or merged or subsidiarized with other CPSEs or closed.

**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**

## Explanation

- In the latest Budget, the government budgeted a **disinvestment target of ₹1.75 lakh crore** for the next fiscal year beginning April 1.
- The amount is lower than the record ₹2.10 lakh crore which was budgeted to be raised from CPSE disinvestment in the current fiscal year. However, the COVID-19 pandemic impacted the government's CPSE stake sale programme, and the target has been lowered to ₹32,000 crore in the Revised Estimates.
- For fiscal year 2021-22, out of the total ₹1.75 lakh crore, ₹1 lakh crore is to come from selling government stake in public sector banks and financial institutions, including 2 PSU banks and one insurance company. About ₹75,000 crore would come as CPSE disinvestment receipts.
- The Finance Minister Nirmala Sitaraman said **four sectors** — Atomic energy, Space and Defence; Transport and Telecommunications; Power, Petroleum, Coal and other minerals; and Banking, Insurance and financial services — would be **strategic sectors**.
- **Statement 2 is correct:** In strategic sectors, there will be **bare minimum presence of the public sector enterprises**. The remaining Central Public Sector Enterprises (CPSEs) in the strategic sectors will be privatised or merged or subsidiarised with other CPSEs or closed.
- **Statement 1 is correct:** In non-strategic sectors, CPSEs will be privatised, otherwise shall be closed.
- Strategic disinvestment of BPCL, Air India, Shipping Corporation of India, Container Corporation of India, IDBI Bank, BEML, Pawan Hans, Neelachal Ispat Nigam Ltd, among others would be completed in 2021-22.
- Also the legislative amendments required for launching the **Initial Public Offering (IPO) of the Life Insurance Corporation of India (LIC)** would be brought in the ongoing session of Parliament.
- To fast-track the disinvestment policy, **NITI Aayog** would work out on the next list of central public sector companies that would be taken up for strategic disinvestment.
- To monetise lands owned by CPSEs, a **special purpose vehicle (SPV)** would be developed.
- Besides, to ensure timely completion of closure of sick or loss making CPSEs, a **revised mechanism** would be brought in.

## Why in News?

- Chief economic advisor Krishnamurthy Subramanian said that the target of mopping up ₹1.75 lakh crore from disinvestments is on track and groundwork is being prepared for the goal.
- The disinvestment plan for this fiscal year includes strategic sale of IDBI Bank, BPCL, Shipping Corp, Container Corporation, Neelachal Ispat Nigam Ltd, among others.

**125. Which of the following acts as the nodal agency for strategic disinvestments?**

- A. Department of Economic Affairs
- B. Department of Investment and Public Asset Management
- C. Department of Revenue
- D. NITI Aayog

**Answer: B**

**Explanation:**

- Strategic disinvestment implies the sale of a substantial portion of the Government shareholding of a central public sector enterprises (CPSE) of **up to 50%, or such higher percentage** as the competent authority may determine, along with **transfer of management control**.
- The **Department of Investment and Public Asset Management (DIPAM)** under the Ministry of Finance is the nodal department for the strategic disinvestment.
- **DIPAM and NITI Aayog** jointly identify PSUs for strategic disinvestment.

**126. Anandmath, a semi-historical novel by Bankim Chandra Chattopadhyay explains about the women's role in early resistance against the British. The novel relates to which among the following events?**

- a) Paika Rebellion
- b) The Santhal Rebellion
- c) Ahom revolt
- d) Sanyasi Revolt

**Answer: D**

**Explanation:**

Anandmath, a semi-historical novel by Bankim Chandra Chattopadhyay explains about the women's role in early resistance against the British. **Devi Chaudhurani's participation shows the valour of women in early resistances.**

**The novel was based on the Sanyasi revolt(1763-1800) explaining about Devi Chaudhurani's role and contribution.**

**Why in the news?**

The Prime Minister, Shri Narendra Modi has paid homage to Rishi Bankim Chandra Chattopadhyay on his Jayanti recently.

**127. Consider the following statements about Indian Regional Navigation Satellite System (IRNSS).**

- 1) It was jointly launched by space organisations of India and Russia.
- 2) IRNSS is designed to provide accurate position information service to users in India as well as the region extending up to 1500 km from its boundary.
- 3) All the satellites in IRNSS are located in geostationary orbit.

**Which of the statements given above is/are correct?**

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

**Answer: B**

**Explanation**

- **Statement 1 is incorrect:** IRNSS is an independent regional navigation satellite system developed by the Indian Space Research Organization (ISRO).
- In April 2016, with the last launch of the constellation's satellite, IRNSS was renamed Navigation Indian Constellation (NAVIC).

**Range of NavIC**

- **Statement 2 is correct:** It is designed to provide accurate position information service to users in India as well as the region extending up to 1500 km from its boundary, which is its primary service area.
- Beyond that lies an Extended Service Area, that can extend up to the edges of the area enclosed by the rectangle imagined by latitudes 30 degrees South and 50 degrees North, and longitudes 30 degrees East and 130 degrees East.
- IRNSS will provide two types of services, namely, Standard Positioning Service (SPS) which is provided to all the users and Restricted Service (RS), which is an encrypted service provided only to the authorised users.
- The IRNSS System is expected to provide a position accuracy of better than 20 m in the primary service area.
- **Statement 3 is incorrect:** The space segment consists of the IRNSS constellation of eight satellites (with one being a replacement). Three satellites are located in the geostationary orbit and the remaining four are located in geosynchronous orbits.

**Applications of IRNSS include:**

- Terrestrial, Aerial and Marine Navigation
- Disaster Management
- Vehicle tracking and fleet management
- Integration with mobile phones
- Precise Timing
- Mapping and Geodetic data capture
- Terrestrial navigation aid for hikers and travellers
- Visual and voice navigation for drivers

**128. With reference to the Smart Cities Mission, consider the following statements.**

- 1) It is an urban renewal and retrofitting program with the mission to develop 100 cities across the country making them citizen friendly and sustainable.
- 2) The implementation of the Mission at the City level will be done by the respective local governance institutions.

**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**

**Explanation:**

- **Statement 1 is correct:** Smart Cities Mission is an urban renewal and retrofitting program launched by the Government of India in 2015 with the mission to develop 100 cities across the country making them citizen friendly and sustainable.
- The Smart Cities Mission is meant to set examples that can be replicated both within and outside the Smart City, catalysing the creation of similar Smart Cities in various regions and parts of the country.
- The strategic components of area-based development in the Smart Cities Mission are city improvement (retrofitting), city renewal (redevelopment) and city extension (greenfield development) plus a Pan-city initiative in which Smart Solutions are applied covering larger parts of the city.

**Implementation**

- **Statement 2 is incorrect:** The implementation of the Mission at the City level will be done by a Special Purpose Vehicle (SPV) created for the purpose.
- The SPV will plan, appraise, approve, release funds, implement, manage, operate, monitor and evaluate the Smart City development projects.
- Each smart city will have a SPV which will be headed by a full time CEO and have nominees of Central Government, State Government and ULB on its Board.

**129. Which of the following pollutants are monitored under both National air quality monitoring program and National air quality index?**

- 1) Particulate Matter 2.5
- 2) Particulate Matter 10
- 3) Sulphur Dioxide
- 4) Carbon monoxide

Select the correct answer using the codes given below

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

**Answer: C**

**Explanation:**

#### **National Air quality monitoring program**

**Central Pollution Control Board** along with State Pollution Control Boards has been operating

National Air Monitoring Program (NAMP). The objectives of the N.A.M.P. are

- To determine status and trends of ambient air quality;
- To ascertain whether the prescribed ambient air quality standards are violated,
- To Identify Non-attainment Cities
- To obtain the knowledge and understanding necessary for developing preventive and corrective measures;
- To understand the natural cleansing process undergoing in the environment through pollution dilution, dispersion, wind based movement, dry deposition, precipitation and chemical transformation of pollutants generated.

**The National Air Monitoring Program (NAMP) will consider four air-pollutants viz.,**

Sulphur dioxide (SO<sub>x</sub>) ,

Nitrogen dioxide (NO<sub>x</sub>) ,

Suspended Particulate Material (SPM) and

Respirable Suspended Particulate Matter (RSPM)

#### **The National Air Quality Index**

National Air Quality Index (AQI) transforms complex air quality data of eight pollutants into a single number (index value), nomenclature and colour. In simple terms it is '**One Number-One Colour-One Description**' for the common man to judge the air quality within his vicinity. The formulation of the index was an initiative under Swachh Bharat Mission

ere are **six AQI categories**, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe. The AQI will consider **eight pollutants** .

Particulate Matter (size less than 10  $\mu\text{m}$ ) or ( $\text{PM}_{10}$ ),  
 Particulate Matter (size less than 2.5  $\mu\text{m}$ ) or ( $\text{PM}_{2.5}$ ),  
 Nitrogen Dioxide ( $\text{NO}_2$ ),  
 Sulphur Dioxide ( $\text{SO}_2$ ),  
 Carbon Monoxide ( $\text{CO}$ ),  
 Ozone ( $\text{O}_3$ ),  
 Ammonia ( $\text{NH}_3$ ), and  
 Lead ( $\text{Pb}$ )

### AQI CATEGORY, POLLUTANTS AND HEALTH BREAKPOINTS

AQI Category (Range)	$\text{PM}_{10}$ (24hr)	$\text{PM}_{2.5}$ (24hr)	$\text{NO}_2$ (24hr)	$\text{O}_3$ (8hr)	$\text{CO}$ (8hr)	$\text{SO}_2$ (24hr)	$\text{NH}_3$ (24hr)	$\text{Pb}$ (24hr)
Good (0–50)	0–50	0–30	0–40	0–50	0–1.0	0–40	0–200	0–0.5
Satisfactory (51–100)	51–100	31–60	41–80	51–100	1.1–2.0	41–80	201–400	0.5–1.0
Moderately polluted (101–200)	101–250	61–90	81–180	101–168	2.1–10	81–380	401–800	1.1–2.0
Poor (201–300)	251–350	91–120	181–280	169–208	10–17	381–800	801–1200	2.1–3.0
Very poor (301–400)	351–430	121–250	281–400	209–748	17–24	801–1600	1200–1800	3.1–3.5
Severe (401–500)	430+	250+	400+	748+	34+	1600+	1800+	3.5+

### 130. Consider the following statements about Defence Acquisition Council

1. It is the highest decision-making body in the Defence Ministry for deciding on new policies and capital acquisitions for the three services and the Indian Coast Guard.
2. The Minister of Defence is the Chairman of the Council.

**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**

**Explanation:**

**Both the statements are correct**

- The Defence Acquisition Council is the **highest decision-making body in the Defence Ministry for deciding on new policies and capital acquisitions for the three services (Army, Navy and Air Force) and the Indian Coast Guard.**
- The **Minister of Defence is the Chairman of the Council.**
- The **DAC is responsible to give policy guidelines to acquisitions**, based on long-term procurement plans.
- **It also clears all acquisitions, which includes both imported and those produced indigenously or under a foreign license.**
- The objective of the Defence Acquisition Council is to ensure expeditious procurement of the approved requirements of the Armed Forces in terms of capabilities sought, and time frame prescribed, by optimally utilizing the allocated budgetary resources.