

## Answers

1) D

Dengue & Platelet Count decrease

- When an infected mosquito bites a human, the dengue virus enters the bloodstream, it binds to platelets and replicates leading to multiplication of infectious virus.
- The infected platelet cells tend to destroy normal platelets, which is one of the major causes for the drop in the platelet count in dengue fever.
- Meanwhile, disease fighting cells is our body's natural defense system against dengue virus.
- Antibodies produced during this time destroy normal platelets thinking that they are foreign bodies.
- Also, bone marrow suppression by dengue virus results in reduced platelet count since bone marrow is the center for the production of all blood cells including platelets.

2) D

Goals of COP-26 of UNFCCC

- Secure global net zero by mid-century and keep 1.5 degrees within reach
- Adapt to protect communities and natural habitats
- Mobilise finance
- Work together to deliver

3) B

**Giloy Herb**

- Ministry of Ayush said that the Giloy or Guduchi herb (*Tinospora cordifolia*) is safe to use but similar looking plants in circulation such as *T. crispa* can be harmful.
- Giloy is a climbing shrub and an essential herb in Ayurvedic medicine.
- People have long used it to treat a wide range of issues, including fever, infections, diarrhoea and diabetes.
- Guduchi has well established hepato-protective properties.

**Hepatoprotection**

- (Antihepatotoxicity - opposite to hepatotoxicity) is the ability of a chemical substance to prevent damage to the liver.

- Hepatoprotection offered by the plant extracts was primarily attributed to its anti-hepatotoxic and antioxidant properties.
- The Ministry had a well-established system of Pharmacovigilance (for reporting of suspected adverse drug reactions from Ayush medication), with its network spreading across all over India.

**4) B**

**Nihang**

- It is an order of Sikh warriors, characterised by blue robes, antiquated arms such as swords and spears, and decorated turbans surmounted by steel quoits.
- The word Nihang, he adds, also occurs in a hymn in the Guru Granth Sahib, where it alludes to a fearless and unrestrained person.
- As per an account by the East India Company's Colonel James Skinner (1778-1841), Khalsa Sikhs were divided into two groups:
- Those who put on blue attire which Guru Gobind Singh used to wear at the time of battle and those who do not follow any restrictions on the colour of their dress.
- Nihangs observe the Khalsa code of conduct in its strictest sense.
- They do not profess any allegiance to an earthly master.
- Instead of saffron they hoist a blue Nishan Sahib (flag) atop their shrines.
- Nihangs had a major role in defending the Sikh panth after the fall of the first Sikh rule (1710-15) when Mughal governors were killing Sikhs, and during the onslaught of Afghan invader Ahmed Shah Durrani (1748-65).
- Their clout came to an end after the fall of Sikh Empire in 1849 when the British authorities of Punjab appointed a manager (sarbrah) for the administration of the Golden Temple in 1859.

**5) D**

- The Ministry of Home Affairs (MHA), through a notification recently, enhanced the "arrest, search and seize" powers of the Border Security Force (BSF) up to 50 km from the international boundary within Assam, West Bengal and Punjab.
- In Gujarat, the limit was reduced from the existing 80 km to 50 km. In Rajasthan, the 50-km limit remains unchanged.
- The recent notification also specifically mentions the two newly created Union Territories-J&K and Ladakh.

- The two Opposition ruled border States- Punjab and West Bengal, have termed the MHA's move an attack on federalism.

## **Background**

- India is a Union of States and under One Border One Force policy, the BSF is deployed along the Pakistan and Bangladesh borders.
- It is also deployed in areas affected by Left Wing Extremism (LWE) and is routinely deployed for election and other law and order duties on the request of State governments.
- BSF Act, 1968, which also empowered the BSF to conduct counter-insurgency operations in the States of Manipur, Mizoram, Tripura, Nagaland, Meghalaya, Jammu and Kashmir and Ladakh.

## **Border Security Force (BSF)**

- BSF is a Central Armed Police Force (CAPF) that functions under the Ministry of Home Affairs.
- It was raised in 1965 in the aftermath of the India-Pakistan war.
- The BSF Act was passed by Parliament in 1968 and the rules governing the Act were framed in 1969.
- The violations against which the BSF carries out search and seizure include smuggling of narcotics, prohibited items, illegal entry of foreigners and offences punishable under any other Central Act.
- The BSF does not have police powers; after apprehending a suspect it can only conduct "preliminary questioning" and has to hand over a seized consignment or the suspect to the local police within 24 hours.
- It does not have powers to prosecute crime suspects. Police is a State subject under the Constitution.

## **6) D**

### **Seaweeds**

- They have long been sourced by the food industry for its stabilising properties.
- When processed, it loses its pungency, and seaweed products such as agar gel can withstand high temperatures.
- Agar gel can be used as a stabiliser and thickener in pie fillings, icings and meringues.

- As it is tasteless, it does not interfere with the flavour of the food, and in ice creams it is used to inhibit the crystallisation of ice.
- Agar-agar, the main ingredient in falooda and jigarthanda, is a seaweed-based product.
- Kappaphycus alvarezii is a species of seaweed that yields carrageenan.
- Carrageenan is an additive used to thicken, emulsify, and preserve food and drinks and it is a commercially viable venture.
- Alginate, another extract, is used in restructured and reformed food products such as chicken nuggets.
- As a binder and emulsifier, it helps meat retain its shape.

## **Fertilizer of Future**

- Sagarika - Seeing the nutrient value of this sea vegetable and encouraged by the Indian Farmers Fertiliser Cooperative, AquAgri manufactures a product called Sagarika.
- It was derived from the sap of red and brown algae, which acts as a bioenhancer and stimulates the internal growth of plants.
- Researchers say that an extract from seaweed also helps in the faster germination of seeds, and this was successfully tested on cotton seeds.
- As organic farming becomes the buzzword, seaweed is becoming the fertiliser of the future.

## **7) D**

### **Ground water in India**

- India is the biggest user of groundwater.
- According to a report India extracts more groundwater than China and the US the next two biggest pullers of groundwater combined.
- Half of total clean water needed in our country is met from groundwater.
- About 89 percent of groundwater extracted in India is used for irrigation making it the highest category user in the country.
- Household use comes second with 9 percent share of the extracted groundwater followed by industry that uses only 2 percent of it.

Similarly, the Central Ground Water Board (CGWB) has stated in Lok Sabha that 50 percent of urban water requirement and 85 percent of rural domestic water needs are fulfilled by groundwater.

8) C

9) D

10) D

#### **IMF Tranche**

- A reserve tranche is a portion of the required quota of currency each member country must provide to the International Monetary Fund (IMF) that can be utilized for its own purposes.
- The reserve tranche is basically an emergency account that IMF members can access at any time without agreeing to conditions or paying a service fee.
- The reserve tranches that countries hold with the IMF are considered their facilities of first resort, meaning they will tap into the reserve tranche before seeking a formal credit tranche.
- In theory, members can borrow over 100% of their quota.
- However, if the amount being sought by the member nation exceeds its reserve tranche position (RTP), then it becomes a credit tranche that must be repaid in three years with interest.

11) C

12) B

#### **Lucy Mission of NASA**

- It aims to look back into the origins of the solar system through Trojans.
- Jupiter Trojan asteroids are large group of asteroids that share the Jupiter's orbit around the Sun.
- The United States National Aeronautics and Space Administration (NASA) launched Lucy, the spacecraft, October 16, 2021, on a 12-year cruise to the swarms of these Trojans.
- Lucy will fly by eight asteroids—seven Trojans and one main-belt asteroid — over the next 12 years. It is the agency's first single spacecraft mission in history to explore so many different asteroids.
- Lucy's Trojan destinations are trapped near Jupiter's Lagrange (L) points, which are gravitationally stable locations — it is where the gravity from the Sun and from Jupiter cancels each other out.

13) C

#### **CSIR Phytopharmaceutical Mission**

- The Mission is envisaged to bring transformative change in the medicinal plants sector through captive cultivation of selected medicinal plants, including rare, engendered and threatened species, production of quality planting material and development of region specific agro technologies; technology packages for production of GMP grade medicinal plant extracts; and phytopharmaceutical development from important medicinal plants.
- This mission aims to improve the availability (through captive cultivation) of such medicinal plants which are in high demand by global and domestic phytopharmaceutical drug industry involved in the preparation of medicines of Indian traditional systems.
- It will also help in the conservation of endangered and threatened medicinal plants and discovery of new botanical drugs for unmet medical needs.

**14) B**

### **Genetically Modified Crops in India**

- Genetically modified crops (GM crops) are plants used in agriculture, the DNA of which has been modified using genetic engineering techniques. More than 10% of the world's croplands are planted with GM crops.
- The aim is to introduce a new trait to the plant which does not occur naturally in the species like resistance to certain pests, diseases, environmental conditions, herbicides etc.
- Genetic Modification is also done to increase nutritional value, bioremediation and for other purposes like production of pharmaceutical agents, bio fuels etc.
- India does not export genetically modified (GM) rice as there is no commercial variety of such crop in the country and its cultivation is also banned here.
- Cotton is the only crop cultivated in India using this method.

### **Genetic Engineering Appraisal Committee (GEAC)**

- The Committee shall function as a Statutory Body under the Ministry of Environment & Forests.
- The Committee shall also be responsible for approval of proposal relating to release of genetically engineered organisms and products into the environment.
- One third members of the GEAC will constitute the quorum for convening the meeting.
- The members of the GEAC will be required to sign a 'Statement of Declaration of Independence' and 'Statement of Confidentiality'.
- The Committee shall function for a period of three year from the date of issue of this notification.

**15) B**

## African Elephants

- African elephants are the largest land animals on Earth.
- They are slightly larger than Asian Elephants and can be identified by their larger ears (Asian elephants have smaller, rounded ears.)
- Elephants in general are matriarchal, suggesting they live in female-led groups.
- African elephants are keystone species meaning they play a critical role in their ecosystem. They are also known as “ecosystem engineers” as they shape their habitat in many ways.
- There are two subspecies of African elephants - African Savannah (or bush) elephant and African Forest Elephants.
- International Union for Conservation of Nature (IUCN) has enlisted the African forest elephants as ‘critically endangered’ and Savannah elephants as ‘endangered’.
- Previously IUCN listed both African elephants as “vulnerable”. But now it has opted to list them separately. It is after genetic evidence proved that both are different species.

