



### **Daily Current Affairs Prelims Quiz 13-12-2023 (Online Prelims Test)**

1) Consider the following statements with respect to 5G Radio Access Network (RAN) Technology

1. It uses 5G radio frequencies to connect individual devices to other parts of a network through a radio link.
2. It was developed by the Indian Space Research Organisation (ISRO) in collaboration with Defence Research & Development Organisation (DRDO).

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

### **5G Radio Access Network (RAN) Technology**

*The 5G RAN technology developed by two IITs and the R&D arm of MeiT Y was recently handed over to an Indian tech company for advancement and commercial applications.*

- 5G RAN is the latest architecture in wireless communication and uses 5G radio frequencies to provide wireless connectivity to devices.
- A radio access network (RAN) is a major component of a wireless telecommunications system that connects individual devices to other parts of a network through a radio link.
- RAN links user equipment, such as a cellphone, computer or any remotely controlled machine, over a fiber or wireless backhaul connection.
- It relies on a fully coordinated, multi-layer network with low-band, mid-band and high-band to provide wireless connectivity to devices and deliver the best network performance.
- 5G RAN technology is enabling new innovations in gaming, virtual reality, autonomous driving, mobile edge computing and a host of other applications.
- A RAN is made up of 3 essential components that includes:
  1. **Antennas** - To convert electrical signals into radio waves.
  2. **Radios** - To transform digital information into signals that can be sent wirelessly and ensure that transmissions are in the correct frequency bands with the right power levels.
  3. **Baseband units (BBUs)** - To provide a set of signal processing functions that make wireless communication possible.
- **India** - In India it is developed indigenously by a multi-institutional team of researchers.
- The institutes that are involved in the development includes IIT Madras, IIT Kanpur and the Society for Applied Microwave Electronics Engineering and Research (SAMEER).
- SAMEER is an autonomous R&D institution under the Ministry of Electronics and Information Technology (MeiT Y).
- Now the technology has been licensed to Tejas network, a Tata company which will play a vital role in leveraging it for further advancements and commercial applications.

2) Consider the following statements with respect to Organ donations and Transplants

1. Organ donations and transplants in exchange for money are forbidden in India.
2. The Transplantation of Human Organs and Tissues Act, 1994 allows living donations from close relatives such as parents, siblings and children.
3. Altruistic donations from distant relatives and in-laws are prohibited in India.

How many of the statements given above are correct?

- a. Only one
- b. Only two
- c. All Three
- d. None of the above

Answer : b

## Organ donations and Transplants

*The government has recently ordered a probe into the findings of an investigation over the allegations of “kidney scams” have surfaced in recent times.*

- Organ donations and transplants in exchange for money are **forbidden in India** in order to protect poor and vulnerable donors from potential exploitation.
- In India, a transplant can be either from a pool of organs of deceased persons donated by their relatives or from a living person the recipient knows.
- **The Transplantation of Human Organs and Tissues Act (THOTA) 1994** - Regulates the removal, storage, and transplantation of human organs and tissues in India.
- The act also aims to prevent commercial dealings in human organs.
- THOTA allows living donations, in most cases, from close relatives such as parents, siblings, children, spouse, grandparents and grandchildren.
- A living donation is when a living person donates an organ or part of an organ to another person.
- **Donations** - Altruistic donations from distant relatives, in-laws, or long-time friends are **allowed** after additional scrutiny to ensure there is no financial exchange.
- For living donations from **close relatives**, involving Indians or foreigners, documents establishing their identities, family tree, documents and pictures proving the donor-recipient relationship, and documents to show the financial standing of the donor have to be submitted.
- Donors and recipients are interviewed to establish the relationship.
- For donations from **unrelated persons**, the following is mandatory:
  - Documents and photographic evidence showing their long-term association or friendship have to be submitted along with all other documents.
  - Such cases are examined by an external committee to guard against illegal dealings.
- **Punishment** - It is punishable by jail up to 10 years and a fine of up to Rs 1 crore for:
  - Offering to pay for organs or to supply organs for payment, initiating/ negotiating/ advertising for such an arrangement.
  - Looking for a person to supply organs, and abetting in preparing false documents.
- **Kidney** - It is the most targeted organ for the illegal organ donation in India.
- The reasons for illegal trade includes:
  - The demand is very high.
  - It is the cheapest and most accessible.
  - The kidney is the organ that can survive the longest outside the body for 24-36 hours.

3) Demarchoestia Alanensis, sometimes seen in the news, is related to which of the following?

- a. A meteor shower that occurs every year in the month of December.

- b. A term associated with Palestine in the context of Israel destroying the cities of Palestine.
- c. A new species of marine amphipod that was discovered in Chilika Lake, Odisha.
- d. The peptides produced from a rare frog that can combat enzymes of disease causing pathogens.

Answer : c

### **Demaorchestia Alanensis**

*Researchers have recently discovered a new species of marine amphipod in Chillika Lake, Odisha and named it as Demaorchestia Alanensis.*

- Demaorchestia Alanensis is a marine amphipod that was found in Chillika Lake, Odisha.
- Amphipods are a significant group in the marine ecosystem and play a vital role in the marine food chain.
- This is the 6th species that is to be added to the genus Demaorchestia.
- It is white in colour with less than 15 millimetres in length.
- It has 13 pairs of legs.
- While 3 pairs are used for swimming in the water, 8 pairs are used for walking on land. The other 2 pairs are used for capturing prey and feeding.
- The species can be distinguished from the other members of the genus by two to three strong, hair-like structures or setae on the anterior margin of the propodus of the gnathopod.

4) Consider the following statements with respect to Saiga

1. It is a medium-sized hoofed mammal endemic to north east region of India.
2. The IUCN status of Saiga was recently updated to Near threatened from Critically endangered.
3. Saiga Conservation Alliance (SCA) is an initiative of UN Environment Programme (UNEP) to protect Saigas.

How many of the statements given above are correct?

- a. Only one
- b. Only two
- c. All Three
- d. None of the above

Answer : a

### **Saiga**

*Recently the IUCN have updated the status of Saiga by placing them in near threatened category from Critically Endangered.*

- Saiga, (*Saiga tatarica*) is a medium-sized hoofed mammal of the family Bovidae (order Artiodactyla) that lives in herds in treeless steppe country.
- Hoofed mammals are animals with a hard, nail-like case called a hoof covering each toe on their feet.
- Saiga is an odd-faced antelope that have roamed the earth since the last Ice Age, can hope to continue gambolling across the vast Eurasian Steppe.
- It was once found throughout the Eurasian Steppe, the great band of grassland that stretches from Hungary in Europe to Manchuria in Asia.
- **At present the animal is found in fragmented populations within Kazakhstan, Mongolia, the Russian Federation and Uzbekistan.**
- The Saiga has 2 sub-species that includes:

1. Saiga tatarica tatarica (found in most of the range)
  2. Saiga tatarica mongolica (found only in Mongolia)
- Saiga tatarica tatarica is the largest and most endangered of the two subspecies.
  - **Saiga Conservation Alliance (SCA)** – is a network of **researchers and conservationists working** to protect the Saiga.
  - The IUCN status of saiga is **Near Threatened**.
  - Saiga populations in Kazakhstan have recovered from a perilously low estimate of just 48,000 in 2005 to now over 1.9 million.



5) The Global Expert Review on Debt, Nature and Climate, often seen in the news recently, is an initiative by which of the following countries?

1. Kenya
2. Colombia
3. France
4. India
5. Brazil

Choose the correct codes

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

Answer : a



### **The Global Expert Review on Debt, Nature and Climate**

*The Global Expert Review on Debt, Nature and Climate is a new Initiative to tackle debt & climate change that was recently launched at COP 28.*

- The Global Expert Review on Debt, Nature and Climate is an initiative of **Kenya, Colombia and France** to tackle debt & climate change.
- It is an expert group established at the 2023 United Nations Climate Change Conference (COP28).
- The aim of the effort is to make structural economic transformation for low carbon economic growth.
- It aids to comprehensively assess how sovereign debt impacts the ability of low- and middle-income countries to address climate change, conserve nature and decarbonize their economies.
- The review will assess how sovereign debt affects the ability of developing countries to:
  - Conserve nature
  - Adapt to climate change
  - Decarbonize their economies
  - Become more sustainable