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Daily MCQs: 11-05-2024

1. Consider the following

- 1) Pulicat Lake
- 2) Rann of Kutch
- 3) Chilika Lake

How many of the above are notable sites where flamingoes can be found in India?

- A) Only one
- A) Only two
- B) All three
- C) None

2. Consider the following statements about cloud seeding

- 1) Cloud seeding is a type of weather modification that aims to change the amount or type of precipitation that falls from clouds by dispersing substances into the air that serve as cloud condensation or ice nuclei.
- 2) Silver iodide is one among the commonly used chemicals for cloud seeding.

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

3. Consider the following statements regarding the International Space Station (ISS)

1. It is a habitable artificial satellite located in the medium earth orbit
2. It serves as a microgravity and space environment research laboratory in which crew members conduct experiments
3. The ISS programme is a joint project between P5 countries.

Which of the statements given above is/are incorrect?

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

4. The term 'Doxycycline' is sometimes seen in the news in the context of

- A. An experimental antiviral developed for use against coronavirus
- B. Hormone drug used to induce labor in pregnant women and prevent post-partum bleeding
- C. Chlorinated hydrocarbon insecticide which acts as a contact poison in a wide variety of insects and mites
- D. Antibiotic synthetically derived from a naturally occurring bacteria to treat various conditions

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5. The founder of Bengal Gazette, the first newspaper ever published in India was?

- A) Raja Ram Mohan Roy
- B) James Augustus Hickey
- C) Lord Cornwallis
- D) Mahatma Gandhi

Solutions:

1. Answer: C

Explanation

- Flamingos are naturally gray or white, and their pink color comes from the **carotenoid pigments in the organisms they consume, such as algae, crustaceans, and small invertebrates**. The carotenoids are broken down in the flamingo's liver and then deposited in their feathers, skin, and beaks, giving them their distinctive pink hue.
- **Pulicat Lake in Andhra Pradesh and Tamil Nadu, the Rann of Kutch in Gujarat, and Chilika Lake in Odisha** are indeed notable sites where flamingos can be found in India. These locations provide the suitable conditions, such as brackish or saline water, for flamingos to feed and breed.
- Flamingos are **filter feeders**, using their unique bills with specialized structures called **lamellae to filter small organisms** such as shrimp, algae, and insects from the water. They often feed in shallow waters by stirring up mud and water with their bills and then using their lamellae to filter out the food.
- In India, flamingos are commonly **found in both freshwater lakes and coastal areas**. Pulicat Lake, for example, is a brackish water lagoon, and flamingos are frequently observed in coastal regions, including estuaries and mudflats.

Other important points about Flamingo

- Flamingos are social birds that live in groups of varying sizes, from a few pairs to sometimes thousands or tens of thousands.
- There are 6 species of Flamingos. Caribbean flamingos, the lesser, greater, James's (or Puna), Chilean and Andean flamingos.
- In order to fly, flamingos need to run a few paces to gather speed.
- Of the six species of flamingos in the world, two are found in India: the tallest of them, the greater flamingo (*Phoenicopterus roseus*) and the smallest one, the lesser flamingo (*Phoeniconaias minor*).
- Both these species of Flamingos are resident species and **breeds in the Little Rann of Kachchh in Gujarat**.

2. Answer: C

Explanation

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- **Statement 1 is correct:** Cloud seeding is a kind of a **weather modification technology to create artificial rainfall**. It works only when there are enough pre-existing clouds in the atmosphere.
- Rain happens when moisture in the air reaches levels at which it can no longer be held, and cloud seeding aims to facilitate and accelerate that process by making available chemical 'nuclei' around which condensation can take place.
- **Statement 2 is correct:** These 'seeds' of rain can be the **iodides of silver or potassium, dry ice (solid carbon dioxide), or liquid propane**.
- The seeds can be delivered by plane or simply by spraying from the ground.

3. Answer: B

Explanation

- **Statement 1 is incorrect:** The International Space Station (ISS) is a space station, or a **habitable artificial satellite, in low Earth orbit (not medium earth orbit)**
 - **Low Earth orbit (LEO)** is a geocentric orbits with altitudes below 2,000 km
 - **Medium Earth orbit (MEO)** is a geocentric orbits ranging in altitude from 2,000 km to just below geosynchronous orbit at 35,786 kilometers (22,236 miles)
- Its first component launched into orbit in 1998 and the ISS is now the largest human-made body in low Earth orbit.
- **Statement 2 is correct:** The ISS serves as a microgravity and space environment research laboratory in which crew members conduct experiments in biology, human biology, physics, astronomy, meteorology, and other fields.
- **Statement 3 is incorrect:** The ISS programme is a joint project between five participating space agencies: NASA (United States), Roscosmos (Russia), JAXA (Japan), ESA (Europe) and CSA (Canada). **(not P5 countries)**
- The ownership and use of the space station is established by intergovernmental treaties and agreements.

4. Answer: D

Explanation

- Doxycycline is an **antibiotic synthetically derived from a naturally occurring Streptomyces species bacteria**.
- Doxycycline has been approved by the Food and Drug Administration (FDA) for the prevention or treatment of specific conditions within each of the following categories: **rickettsial infections** (group of diseases caused by the microorganisms, rickettsiae), **sexually transmitted infections, respiratory tract infections, bacterial infections, Lyme disease** (a tick-borne disease caused by species of Borrelia bacteria), **ophthalmic infections, anthrax, acute intestinal infections, traveler's diarrhea, and severe acne**.

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5. Answer: B

Explanation

- The **first newspaper ever published in India** was Bengal Gazette.
- Its **inaugural edition** went out on **January 29, 1780**.
- **Founder-editor:** Ireland-born **James Augustus Hicky**
- Hicky's paper shed a light on government corruption, civic issues, and at times criticised the British East India Company. It was certainly under the radar of British authorities, and was **sued for libel around two years into its publication, leading to its closure.**

