

CURRENT AFFAIRS



MCQ PRACTICE

ENVIRONMENT & GEOGRAPHY



Week 102

THE TUTORS ACADEMY

QUESTION 1

With reference to the equinox, consider the following statements:

1. On this day, the sun appears directly above the Equator at noon.
2. It occurs once a year.
3. It reflects the time of the year when the day is longer and the night is shorter.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

QUESTION 2

With reference to the caracal, consider the following statements:

1. It is a primarily nocturnal cat species known for its distinct and pointy ears.
2. They are now only found in parts of Rajasthan and Gujarat.

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

QUESTION 3

With reference to the riverine dolphins in India, consider the following statements:

1. The highest number of Gangetic dolphins was found in Assam, while the lowest was in Rajasthan.
2. River dolphins live in crystal clear and transparent water.
3. The Gangetic dolphins and Indus dolphins are classified as endangered.

Which of the statements given above is/are correct?

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

QUESTION 4

Consider the following pairs with reference to the Ramsar sites and the associated states:

1. Udhwa Lake – Odisha
2. Sakkarakottai – Kerala
3. Khecheopalri – Arunachal Pradesh

How many of the pairs given above are correctly marked?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

QUESTION 5

Which of the following are the sources of ammonia?

1. runoff from farmlands
2. discharge of effluents from industries
3. decomposition of organic matter such as blue-green algae

Select the correct answer using the codes given below:

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

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Week 102

Answers and Explanations

QUESTION 1

With reference to the equinox, consider the following statements:

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How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

1.Explanation

- ✓ With the advent of the vernal equinox on March 20, the Northern Hemisphere begins its spring season and the Southern Hemisphere begins its autumn season.
- ✓ On this day, the sun appears directly above the Equator at noon. Hence, statement 1 is correct.
- ✓ Equinoxes occur twice a year, in March and September, and are the only times when both poles get sunlight at the same time. Hence, statement 2 is not correct.
- ✓ In the Northern Hemisphere, the vernal or spring equinox falls between March 19 and 21, whereas the autumnal or autumn equinox falls between September 21 and 24. The names have been reversed for the Southern Hemisphere, therefore the fall equinox will occur on March 20, 2025.
- ✓ Equinoxes mark the time of year when the day and night are of equal length. Hence, statement 3 is not correct.

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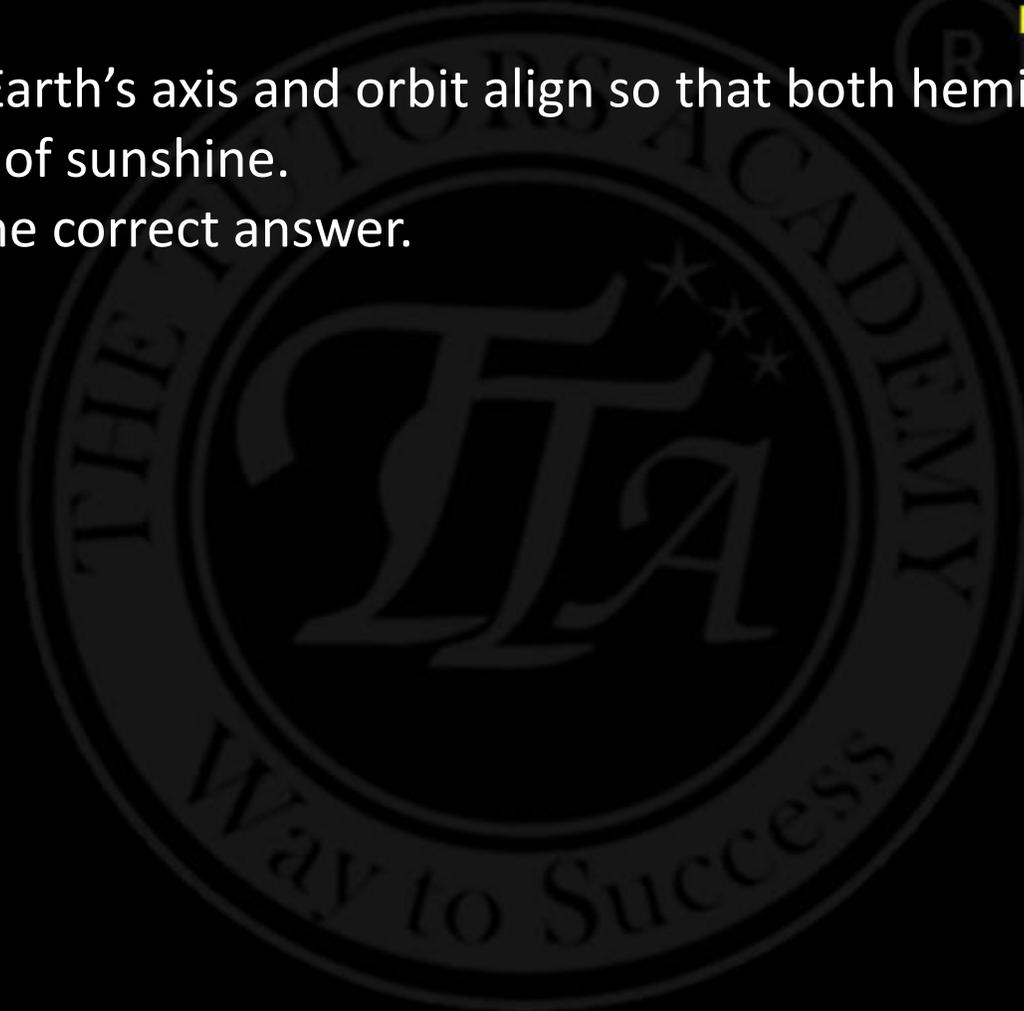
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- ✓ During the equinox, the Earth's axis and orbit align so that both hemispheres receive an equal amount of sunshine.
- ✓ Therefore, option (a) is the correct answer.



QUESTION 2

With reference to the caracal, consider the following statements:

1. It is a primarily nocturnal cat species known for its distinct and pointy ears.
2. They are now only found in parts of Rajasthan and Gujarat.

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

2.Explanation

- ✓ Sanjay Sharma, Rajasthan's Forest Minister, posted a photo on social media to commemorate the "first photographic record" of a caracal in Mukundra Hills Tiger Reserve.
- ✓ The Caracal is a nocturnal cat species native to dozens of nations in Africa, the Middle East, Central Asia, and South Asia. It is named from its prominent and pointy ears. Caracal is derived from the Turkish word 'karakulak', which means 'black ears'. Hence, statement 1 is correct.
- ✓ These cats were valued for their ability to catch birds in flight and were hunting animals in mediaeval India, as described in works such as Khamsa-e-Nizami, Shahnameh, and Tutinama.
- ✓ In recent years, the wild cat population has declined dramatically in Asia, with an estimated 50 remaining in India, where they may now only be found in portions of Rajasthan and Gujarat. Hence, statement 2 is correct.
- ✓ In 2021, the National Board for Wildlife and the Union Ministry of Environment, Forest, and Climate Change added it to the list of critically endangered animals.
- ✓ Therefore, option (c) is the correct answer.

QUESTION 3

With reference to the riverine dolphins in India, consider the following statements:

1. The highest number of Gangetic dolphins was found in Assam, while the lowest was in Rajasthan.
2. River dolphins live in crystal clear and transparent water.
3. The Gangetic dolphins and Indus dolphins are classified as endangered.

Which of the statements given above is/are correct?

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

3.Explanation

- ✓ Prime Minister Narendra Modi released the results of the first-ever comprehensive population estimation of riverine dolphins – Gangetic and Indus dolphins – done in India.
- ✓ The survey was conducted across the Ganga and Brahmaputra river basins between 2021 and 2023. It estimated an average of 6,324 Gangetic dolphins, ranging from 5,977 to 6,688.
- ✓ The first-of-its-kind exercise provides current estimates of endangered aquatic mammals, which face risks such as pollution, riverbed mining, low water depth, habitat destruction, prey decline, and climate change. Gangetic and Indus dolphins are categorised as endangered and get the highest level of protection under the Wildlife Protection Act of 1972. Hence, statement 3 is correct.
- ✓ Uttar Pradesh has the highest number of Gangetic dolphins (2,397). This was followed by 2,220 in Bihar, 815 in West Bengal, 162 in Jharkhand, 95 in Rajasthan and Madhya Pradesh, and three in Punjab. Hence, statement 1 is not correct.
- ✓ River dolphins live in muddy, opaque waters and only appear momentarily on the surface, making population estimates difficult. Hence, statement 2 is not correct.



- ✓ According to the population estimation report, dolphins surface for only 1.26 seconds before diving for 107 seconds. This creates the risk of observer error, which prevents observers from seeing all surfacing dolphins, as well as availability error, which occurs when not all dolphins appear during the counting period.
- ✓ A mix of visual and acoustic surveys are used. Multiple underwater microphones or hydrophones are used in the acoustic survey to catch 'dolphin clicks.' Dolphins, which are essentially blind, navigate by creating clicking sounds that move across water and ricochet back after hitting objects. This method is known as echolocation. Hydrophones capture underwater dolphin clicks to counteract observer error and correctly triangulate dolphin sightings. Because many hydrophones are utilised, they can detect clicking noises produced by various individuals.
- ✓ Therefore, option (c) is the correct answer.

QUESTION 4

Consider the following pairs with reference to the Ramsar sites and the associated states:

1. Udhwa Lake – Odisha
2. Sakkarakottai – Kerala
3. Khecheopalri – Arunachal Pradesh

How many of the pairs given above are correctly marked?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

4.Explanation

- ✓ February 2 is annually marked as World Wetlands Day to spread awareness about conserving one of the most critical ecosystems on the planet. This year, the theme was “Protecting Wetlands for Our Common Future”.
- ✓ India has designated four new Ramsar sites under the global Ramsar Convention on Wetlands: Udhwa Lake in Jharkhand, Theerthangal and Sakkarakottai in Tamil Nadu, and Khecheopalri in Sikkim.
- ✓ Wetlands are areas covered in water, either permanently or seasonally, such as marshes and lakes. They serve as crucial biodiversity reservoirs, contribute to water conservation, and provide habitat for a diverse range of migratory birds, aquatic creatures, and plant life. They also contribute to groundwater recharge, flood management, and the support of fisheries and local communities.
- ✓ In terms of climate change mitigation, wetlands are key carbon sinks, which means they collect more carbon from the atmosphere than they release.



- ✓ India has 89 Ramsar sites. The agreement uses a variety of criteria to designate wetlands. Like the following: “A wetland should be considered internationally important if it supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.” It also assesses the locations’ ability to support fish and waterbirds.
- ✓ Tamil Nadu has the most Ramsar sites, at 20. Punjab features six significant wetlands, including the largest in north India, the Harike wetlands or Harike Pattan, which covers 86 square kilometres. It was designated a Ramsar Site in 1990 and is home to migratory birds such as Siberian cranes, bar-headed geese, and a variety of waterfowl.
- ✓ Therefore, option (d) is the correct answer.

QUESTION 5

Which of the following are the sources of ammonia?

1. runoff from farmlands
2. discharge of effluents from industries
3. decomposition of organic matter such as blue-green algae

Select the correct answer using the codes given below:

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

5.Explanation

- ✓ Ammonia, a colourless, gaseous chemical with a pungent odour that dissolves easily in water, is frequently utilised in industrial processes.
- ✓ According to the World Health Organisation (WHO), it is also used as a fertiliser, cooling, cleaning agent, food additive, and in animal feed production, as well as plastic and paper making.
- ✓ Ammonia pollution is mostly caused by runoff from farmlands, the direct discharge of effluents from ammonia-using enterprises, and untreated sewage. The chemical is also naturally released into water during the decomposition of organic matter, such as blue-green algae.
- ✓ According to the US Department of Health and Human Services, ammonia's corrosive characteristics can cause harm to internal organs over time.
- ✓ Therefore, option (d) is the correct answer.