

**Q: Consider the following statement regarding Red Tide:**

1. It is due to overgrowth of algae that cause the colour of the water to turn red.
2. It is a common term used for a harmful algal bloom.
3. Some of the algae that cause a red tide produce less toxins

Choose the correct option from the codes given below:

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

Ans: a

Explanation:

- Red Tide is a common term used for a harmful algal bloom.
- Harmful algal blooms, or HABs, occur when colonies of algae—plant-like organisms that live in the sea and freshwater—grow out of control.
- The name “red tide” comes from the fact that overgrowth of algae can cause the colour of the water to turn red.
- Chemicals from farming, factories, sewage treatment plants, and other sources can become dissolved in water on the land.
- This water, called runoff, eventually flows into the ocean and can cause algae to grow faster, leading to red tides.
- Some of the algae that cause a red tide produce powerful toxins, which are harmful chemicals that can kill fish, shellfish, mammals and birds.

**Q: Consider the following statement regarding Ennore Creek:**

1. It is a backwater located in Kerala.
2. It is an arm of the Kosathalaiyar River.
3. It nurtures a healthy aquatic ecosystem which was once famous for its rich biodiversity.

Choose the correct option from the codes given below:

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

Ans: b

Explanation:

- Ennore Creek is a backwater located in Thiruvallur District, Tamil Nadu.
- It is an arm of the Kosathalaiyar River.
- The Creek meets the Bay of Bengal at Mugathwara Kuppam, while the northern channel of the creek connects to the Pulicat Lake, the second largest brackish water lake in the country.
- For decades, this creek sustained the livelihoods of the residents in the surrounding villages and has been demarcated as CRZ IV (Water Body) in the coastal zone management plan by the Tamil Nadu State Coastal Zone Management Authority.
- The Ennore Creek, along with the Buckingham Canal and the rest of the Pulicat water system has vast importance for the local fisher folk.
- It nurtures a healthy aquatic ecosystem which was once famous for its rich biodiversity.
- This ecologically sensitive ecosystem was home to large swamps of mangroves that not only ensured a sustainable regeneration of fish resources, but also helped mitigate flooding in times of strong rainfall, high tides and cyclones.

**Q: Consider the following statement regarding Winter Solstice:**

1. It marks the shortest day of the year.
2. It happens when one of the Earth's poles is far away from the Sun.

Choose the correct option from the codes given below:

- a) 1 Only
- b) 2 Only
- c) 1 and 2
- d) None of the above

Ans: c

Explanation:

- The winter solstice marks the shortest day of the year.
- The Earth is tilted 23.4 degrees on its axis, so if the Earth's pole is pointing towards or away from the Sun during the day, the arc the Sun travels through will rise and fall during the year.
- Winter Solstice happens when one of the Earth's poles is far away from the Sun.
- It falls on December 21 or 22 in the Northern Hemisphere and June 20 or 21 in the Southern Hemisphere.
- The word solstice is derived from the Latin word solstitium, where 'sol' means Sun and 'stitium' means to stop.

**Q: Consider the following statement:**

- 1. Arboreal
- 2. Nocturnal flying
- 3. Critically Endangered

Which of the above following is the features of Namdapha flying squirrel

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

Ans: d

Explanation:

- Namdapha flying squirrel is an arboreal, nocturnal flying squirrel endemic to Arunachal Pradesh.
- It was named the Namdapha Flying Squirrel after the location it was discovered in an area which falls under the Namdapha National Park.
- These squirrels are not capable of flight like birds or bats; instead, they glide between trees.
- They inhabit tall Mesua ferrea jungles, often on hill slopes in the catchment area of the Dihing River (particularly on the western slope of the Patkai range) in northeastern India.
- They are herbivores (frugivores, granivores). They eat various fruits, nuts, seeds, fungi, flowers, and tree sap.
- Conservation status by IUCN Red List is Critically Endangered.

**Q: Consider the following statement regarding Blue Sea Dragon:**

- 1. It is also known as the blue angel and blue sea slug.
- 2. It is a unique underwater creature that has the ability to camouflage.
- 3. Its venom is lethal.

Choose the correct option from the codes given below:

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

Ans: a

Explanation:

- Blue Sea Dragon is also known as the blue angel and blue sea slug, is a unique underwater creature that has the ability to camouflage.

- It is a sea slug, a class of marine organisms that are shell-less molluscs with a wide range of colours and shapes.
- Mostly found throughout the Atlantic, Pacific, and Indian Oceans in tropical and subtropical waters.
- Often spotted in deep oceans, Blue Sea Dragons would go in groups, which gave them the name 'Blue Fleets'.
- It would store venom that it consumes from other creatures to inject venom on the foreign bodies they come into contact. But the venom isn't lethal.