



Pre-Mix

Environment

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Plant, Animal and Marine Biodiversity

Q1. Consider the following marine organisms:

1. **Plankton** - Microscopic drifter plants and animals.
2. **Nekton** - Animals which can swim.
3. **Neuston** - Organisms which are found at the bottom of the water body.
4. **Benthos** - Floating organisms inhabiting the surface layer

Which of the above-mentioned pair is/are correct?

- A. 1 and 2 only
- B. 2, 3 and 4 only
- C. 1, 2 and 4 only
- D. 1, 2, 3 and 4

Answer: A

Explanation

Classification of aquatic organisms (flora and fauna):

- **Neustons:**
 - The term neuston refers to the assemblage of organisms associated with the surface of lakes, oceans, and slow-moving portions of streams.
 - **Hyponeuston-** It generally includes species living just underneath the water surface
 - **Epineuston-** individuals that are above but immersed in the water

- **Periphytons:** Periphyton is a complex mixture of algae, cyanobacteria, heterotrophic microbes, and detritus that is attached to submerged surfaces in most aquatic ecosystems.
- **Planktons:** These are free floating species of flora and fauna with limited powers of locomotion.
 - This group includes microscopic plants like algae (phytoplankton) and animals like crustaceans and protozoans (zooplankton).
- **Nektons:** This group includes animals which are swimmers. The animals range in size from the swimming insects to the largest animals, blue whale.
- **Benthos:** It is the community of organisms that live on, in, or near the bottom of a sea, river, lake, or stream, also known as the benthic zone.
 - This community lives in or near marine or freshwater sedimentary environments, from tidal pools along the foreshore, out to the continental shelf, and then down to the abyssal depths.

Q 2. Which of the following statements is/are correct in the context of Sundarban Delta?

1. **Bengal Tiger, Gangetic Dolphin and Olive Ridley Turtles are found here.**
2. **It is spread across coastal area of West Bengal (India) and Bangladesh.**
3. **The Sundarbans are vulnerable as per IUCN's Red List of Ecosystems framework.**

Select the correct answer from the given options below.

- A. Only 1
- B. Only 2
- C. 1 and 2 only
- D. 1, 2 and 3

Answer: C

Explanation

Sundarban Delta

- Sundarbans is a mangrove area in the delta formed by the confluence of the Ganges, Brahmaputra and Meghna (Bangladesh) Rivers in the Bay of Bengal.
- Four protected areas in the Sundarbans are enlisted as UNESCO World Heritage Sites, are
 - Sundarbans National Park,
 - Sundarbans West,
 - Sundarbans South and
 - Sundarbans East Wildlife Sanctuaries.
- It houses Bengal Tiger, Rhesus Macaque, Gangetic Dolphin and Olive Ridley Turtles and many other fauna species.
- Indian Sundarbans were considered endangered in a 2020 assessment under the IUCN Red List of Ecosystems framework.
- IUCN maintains two lists:
 - Red list of Threatened Species
 - Red list of Ecosystems
- The IUCN Red List of Ecosystems (RLE)

- It is a global framework for monitoring and documenting the status of ecosystems. It was developed for biodiversity risk assessment. Its main objectives are to support conservation, resource use, and management decisions by evaluating all the world's ecosystems by 2025.

Q 3. Golden Tiger named Kazi 106F was in news recently. Which one of the following statements is incorrect about the Kazi 106F?

- A. The Golden color of the Skin is due to the variation of expression of genes called 'Agouti Gene' and Tabby genes
- B. There is only 1 such individual Tiger found in India
- C. The IUCN Red list status for the Tiger is Critically Endangered.
- D. None of the above

Answer: C

Explanation

- Kazi 106F (also known as Tabby Tiger or Strawberry Tiger)
 - It is India's only Golden Tiger.
 - It is found in Kaziranga National Park of Assam.
 - The colour variation of the tiger is caused by the expression of a recessive gene.
 - The colour of the tiger skin is controlled by two genes:
 - Agouti Gene- Yellow Colour
 - Tabby gene- Black Strips

- IUCN Status: There is no separate IUCN Red list status Golden Tiger. Tigers are put under the 'Endangered' category in the IUCN Red list.
- Tigers are protected under Schedule I of the Wildlife (Protection) Act 1972. The protection under Sch I prohibits killing, poaching, hunting, trading of Tigers.
- The Sundarban National Park (West Bengal) and Kaziranga National Park both are tiger reserves.



Q 4. Which of the following statements is/are incorrect in the context of Red Panda?

1. There is no species of Red Panda found in India
2. Red Panda is Critically Endangered Species as per the IUCN Red List.

Select the correct option from the given codes below:

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Explanation

- Red Panda:
 - These mammals are found in mountain forests of Nepal, India, Bhutan, China and Myanmar

- In India it is found in States of Sikkim, Arunachal Pradesh, West Bengal (in Darjeeling District), Meghalaya.
- There are two species of Red Panda i.e., Himalayan Red Panda and Chinese Red Panda are found in India. (As per Zoological Survey of India)
- The Siang River in Arunachal Pradesh splits these two sub-species.
- IUCN Status of Red Panda is Endangered
- It is protected under Schedule I of the Wildlife (Protection) Act, 1972.



Q 5. Consider the following pairs:

State :: State Bird

1. Arunachal Pradesh :: Great India Hornbill
2. Kerala :: Great Indian Bustard
3. Sikkim :: Blood Pheasant

Which of the pairs mentioned above is/are correct?

- A. 1 and 2 only
- B. 1, 2 and 3
- C. Only 3
- D. 1 and 3 only

Answer: D

Explanation

State	Birds	State	Birds
Andhra Pradesh	Rose Ringed parakeet	Mizoram	Hume's Pheasant
Arunchal Pradesh	Great Hornbill	Nagaland	Blyth's Tragopan
Assam	White Winged Wood Duck	Odisha	Indian Roller
Bihar	House Sparrow	Punjab	Northern Goshawk
Chhatisgarh	Bastar Hill Myna	Rajasthan	Great Indian Bustard
Goa	Greater Flamingo	Sikkim	Blood Pheasant
Haryana	Black Francolin	Tamil Nadu	Emerald Dove
Himachal Pradesh	Western Tragopan	Telangana	Indian Roller
Jharkhand	Asian Koel	Tripura	Green Imperial Pigeon
Kerala	Great Indian Hornbill	Uttar Pradesh	Sarus Crane
Madhya Pradesh	Indian Paradise Flycatcher	Uttarakhand	Himalayan Monal
Maharashtra	Yellow Footed Green Pigeon	West Bengal	White Breasted Kingfisher
Manipur	Hume's Pheasant		
Meghalaya	Hill Myna		