

Q: Consider the following statement regarding Paintbrush Swift Butterfly:

1. It is a butterfly species of the Hesperidae family.
2. The species' larvae feed on bamboo and some other grass species.
3. This species is protected by IUCN as critically endangered.

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:

- Paintbrush Swift Butterfly is a butterfly species of the Hesperidae family.
- The species has never been photographed in Himachal Pradesh since its discovery in 1878.
- The species' larvae feed on bamboo and some other grass species.
- Its habitat is distributed in northeast, central and south India, and rare in Uttarakhand.
- Habitat loss and scarcity of larval host plants are major causes of the decline in the butterfly population. An increase in pesticide use, deforestation, and climate change.
- This species is legally protected in India under Schedule IV of the Wildlife (Protection) Act, 1972.

Q: Consider the following statement regarding Graphite:

1. It consists of a ring of eight carbon atoms closely bonded together.
2. It is an opaque, non-metallic carbon polymorph.
3. It is formed by the metamorphosis of sediments containing carbonaceous material.

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:

- Graphite is an opaque, non-metallic carbon polymorph that is blackish silver in colour and metallic to dull in sheen.
- Since it resembles metal lead, it is also known colloquially as black lead or plumbago.
- It is formed by the metamorphosis of sediments containing carbonaceous material.
- It is a naturally occurring form of crystalline carbon.
- It is extremely soft, cleaves with very light pressure, and has a very low specific gravity.
- In contrast, it is extremely resistant to heat and nearly inert in contact with almost any other material.
- These extreme properties give it a wide range of uses in metallurgy and manufacturing.
- It consists of a ring of six carbon atoms closely bonded together hexagonally in widely spaced layers.

Q: Consider the following statement regarding Edakkal Caves:

1. These caves is located in the majestic Ambukuthi Hills.
2. These feature Neolithic-era pictorial writings believed to date to at least 6,000 BCE.

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:

- Edakkal Caves are located 3,900 feet above sea level in the majestic Ambukuthi Hills.
- The name Edakkal itself means “a stone in between”.
- The unique, intricate stone carvings date back to the Neolithic and Mesolithic ages.
- The caves are two natural formations that are believed to have been formed by a large split in a huge rock.
- These feature Neolithic-era pictorial writings believed to date to at least 6,000 BCE.

Q: Consider the following statement regarding Guillain-Barre syndrome:

1. This could be a bacterial or viral infection.
2. It is a rare autoimmune disorder where the body's immune system mistakenly attacks the peripheral nerves
3. It is more common in adults and males, but it can affect people of all ages.

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:

Explanation:

- Guillain-Barre syndrome is a rare autoimmune disorder where the body's immune system mistakenly attacks the peripheral nerves.
- It is more common in adults and males, but it can affect people of all ages.
- The first symptoms of this syndrome include weakness or tingling sensations. They usually start in the legs, and can spread to the arms and face.
- For some people, these symptoms can lead to paralysis of the legs, arms, or muscles in the face.
- It is often preceded by an infection.
- This could be a bacterial or viral infection.

Q: Consider the following statement regarding Pobitora Wildlife Sanctuary:

1. It is located on the southern bank of the river Brahmaputra.
2. It is dominated by alluvial lowlands and marshland.
3. It is home to the highest population density of the Asiatic Lion.

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:

- Pobitora Wildlife Sanctuary is located on the southern bank of the river Brahmaputra in Morigaon district, adjacent to Guwahati in Assam.
- It was declared a reserve forest in 1971 and a wildlife sanctuary in 1987.
- It is home to the highest population density of the Indian One-Horned Rhinoceros species (around 102 rhinos in an area of 38.8 sq. km).
- It is dominated by alluvial lowlands and marshland.
- The Brahmaputra River offers a natural boundary to the premises of the Pobitora Wildlife Sanctuary on the north, while the Garanga Beel offers a natural boundary to its south.