

Q: Consider the following statement regarding of Section 295-A:

1. The accused must insult or attempt to insult the religion or religious beliefs of any class of citizens of India.
2. It is a cognisable, non-bailable, and non-compoundable offence.
3. The said insult must be only in spoken or written.

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:

- The accused must insult or attempt to insult the religion or religious beliefs of any class of citizens of India.
- The said insult must be made with a deliberate and malicious intention of outraging the religious feelings of the said class of citizens.
- The said insult must be by words, either spoken or written, by signs, by visible representation, or otherwise.
- Section 295A IPC is a cognisable, non-bailable, and non-compoundable offence, and police can register an FIR anywhere in the country at the instance of purportedly aggrieved complainants.

Q: Consider the following statement regarding Aralam Wildlife Sanctuary:

1. It is located on the eastern slopes of the Eastern Ghats.
2. The highest peak in this sanctuary is Katti Betta.
3. Forest coast tropical evergreen and west coast semievergreen forests are predominant here.

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:

- Aralam Wildlife Sanctuary is located on the western slopes of the Western Ghats.
- It is the northernmost wildlife sanctuary in Kerala and was established in 1984.
- It is contiguous with Wayanad-Brahmagiri, Wayanad's northern slopes, and the Protected Areas of Karnataka State, namely the Brahmagiri Wildlife Sanctuary and also the forests of Coorg.
- The highest peak in this sanctuary is Katti Betta.
- It is the only protected area of the West Coast Tropical Evergreen Forest of Dipterocarpus-Mesua- Palaquium type.
- The river Cheenkani flows through this wildlife sanctuary.
- Forest coast tropical evergreen and west coast semievergreen forests are predominant here.

Q: Consider the following statement regarding Aerogels:

1. Aerogels are composed mostly of air.
2. They, also known as 'solid air' or 'frozen smoke'.

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:

- Aerogels are composed mostly of air and can be used to remove contaminants.
- They, also known as 'solid air' or 'frozen smoke', are excellent adsorbents (a solid substance used to remove contaminants) and are incredibly lightweight solids composed mostly of air.
- In addition, they offer advantages like adjustable surface chemistry, low density, and a highly porous structure.

Q: Consider the following statement regarding Crab-plover:

1. It is a long-legged, black and white bird of Indian Ocean coasts.
2. They are residents of the coasts and islands of the Indian Ocean.
3. Conservation Status by IUCN is Least Concern.

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: d

Explanation:

- Crab-plover is a long-legged, black and white bird of Indian Ocean coasts, related to plovers and allied species of shorebirds.
- This is the only shorebird that lays white eggs, and chicks remain inside the burrows until the fledging stage.
- They are residents of the coasts and islands of the Indian Ocean.
- They breed around the Arabian Sea of Pakistan, the Gulf of Oman and the Persian Gulf, Red Sea, Somalia, the Andaman Islands, Sri Lanka, Tanzania, and Madagascar.
- Conservation Status by IUCN is Least Concern.
- It is one of the species to which the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) applies.

Q: Consider the following statement regarding Haemoglobin (Hb):

1. It is an iron-containing protein found in the red blood cells.
2. It is made up of four protein molecules (globulin chains) that are connected together.
3. Hemoglobin forms stable, irreversible bond with oxygen.

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:

- Haemoglobin (Hb) is an iron-containing protein found in the red blood cells that carries oxygen from the lungs to the body's tissues and returns carbon dioxide from the tissues back to the lungs.
- It is made up of four protein molecules (globulin chains) that are connected together.
- Haemoglobin forms an unstable, reversible bond with oxygen. In the oxygenated state, it is called oxyhemoglobin and is bright red; in the reduced state, it is purplish blue.
- It also plays an important role in maintaining the shape of the RBCs. In their natural shape, RBCs are round with narrow centers resembling a donut without a hole in the middle. Abnormal haemoglobin structure can, therefore, disrupt the shape of RBCs and impede their function and flow through blood vessels.
- Haemoglobin levels vary from person to person. Men usually have higher levels than women.