

Q: Consider the following statement:

1. One in four men in the age group 15-54 years in India were anaemic.
2. The causes of anaemia are deficiency in folate, vitamin B12, or vitamin A.
3. Women are considered to have anaemia if haemoglobin concentration is less than 13.0 g/dL.

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:

- While anaemia among adolescent girls and boys, and women, particularly those of reproductive age has been studied extensively, anaemia in men has been largely ignored.
- In 2019, a paper highlighted that nearly one in four men (23.2%) in the age group 15-54 years in India were anaemic (mild, moderate, or severe).
- Men are considered to have anaemia if haemoglobin concentration is less than 13.0 g/dL.
- While iron deficiency is the main cause of anaemia, particularly in women, other causes of anaemia are deficiency in folate, vitamin B12, or vitamin A.

Q: Consider the following statement regarding Great Hornbill:

1. It is found in the Himalayan foothills of Northeast India only.
2. It is the state bird of Arunachal Pradesh and Kerala.
3. Oriental pied hornbill is spotted in the Rajaji National Park, Uttarakhand.

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:

- The Great Hornbill is found in the Himalayan foothills, the Northeast and the Western Ghats.
- It is the state bird of Arunachal Pradesh and Kerala.
- With a wingspan of five feet, it presents an awesome (and noisy) spectacle while landing on a perch. The wreathed hornbill, the brown hornbill and the rufous-necked hornbill are slightly smaller, and only found in Northeast India.
- A great place to spot the oriental pied hornbill is the Rajaji National Park, Uttarakhand.

Q: Consider the following statement:

1. The Badri cow is the first registered cattle breed of Uttarakhand.
2. Multiple Ovulation Embryo Transfer (MOET) is the most common procedure used in advanced cattle breeding.

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 Badri cow is the first registered cattle breed of Uttarakhand which has been certified by the National Bureau of Animal Genetic Resources (NBAGR).

- To make the farmers of Uttarakhand breed Badri and not to shift to other high milk-producing alternative breeds like Jersey cows, they have decided to opt for **Multiple Ovulation Embryo Transfer (MOET)**, a conventional embryo flush, which is the most common procedure used in advanced cattle breeding.

Q: Consider the following statement:

1. Lecanemab belongs to a class of drugs called monoclonal antibodies.
2. Lecanemab target beta amyloid.
3. Beta-amyloid is the protein deposition seen in the patients with Alzheimer's disease.

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:

- Lecanemab belongs to a class of drugs called monoclonal antibodies.
- These antibody-mediated drugs target beta amyloid, the protein deposition that is seen in patients with Alzheimer's disease, and disrupts cells function.
- The clinical trial, conducted over 18-months, a multi-centre, double blind, phase 3 trial, involved persons 50 to 90 years of age with early Alzheimer's disease (mild cognitive impairment or mild dementia due to Alzheimer's disease) with evidence of amyloid deposition.

Q: Consider the following statement:

1. Hornbills prefer tall trees for their nests.
2. Hornbills play a vital role in dispersing the seeds of about 80 rainforest trees.
3. The helmeted hornbill of Sumatra and Borneo is a Vulnerable species.

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:

- Hornbills prefer tall trees for their nests (breast height being 1.5 metres or more). There is a mutualism between these birds and the trees where they nest.
- As large fruit-eating birds, hornbills play a vital role in dispersing the seeds of about 80 rainforest trees. Some trees, such as the cup-calyx white cedar suffer a 90% decline in seed dispersal beyond the parent tree when hornbill populations decline, negatively impacting the biodiversity of forests.
- The helmeted hornbill of Sumatra and Borneo is critically endangered because its helmet-like casque (a horny outgrowth over the skull), called red ivory, is highly prized.