

Q: Consider the following statement regarding AGM-88 HARM missile:

1. It is a tactical weapon fired from fighter aircraft.
2. It is a high-speed anti-radiation missile.
3. It is an air-to-air missile.

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 acronym 'HARM' in the AGM-88 HARM air-to-surface missile stands for High-Speed Anti-Radiation Missile.
- It is a tactical weapon fired from fighter aircraft, and has the capability to detect and home into radiation emitted by hostile radar stations that have surface-to-air detection capabilities.
- It also has an anti-radar homing seeker broadband RF antenna and receiver, and a solid state digital processor. The missile has a range of more than 100 km.

Q: Consider the following statement regarding Langya Virus:

1. Few of the African countries confirmed the first human infection of this virus.
2. The disease may have been transmitted from shrews, small insectivorous mammals.
3. Nipah and Hendra virus also belong to the same genus.

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:

- Recently, China confirmed 35 human infections with the zoonotic Langya virus (LayV).
- The cases were discovered in the provinces of Shandong and Henan on the Chinese mainland, according to information from the Taiwan Center for Disease Control (TCDC).
- No human deaths have been reported due to LayV, which has a distinct genome. Infectious diseases transmitted between animals and humans are called zoonotic diseases.
- The disease may have been transmitted from shrews, small insectivorous mammals resembling a mouse. Shrews are the natural habitat of the virus.
- Nipah and Hendra virus also belong to the same genus, henipavirus, from the Paramyxoviridae family. Paramyxoviridae is a family of single-stranded Ribonucleic acid (RNA) viruses that cause different types of viral infections.

Q: Consider the following statement:

1. There is a loss of mangrove cover on Katchal Island.
2. Katchal Island are part of India's Nicobar archipelago.

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 United States National Aeronautics and Space Administration (NASA) recently highlighted the loss of mangrove cover on Katchal island, a part of India's Nicobar archipelago.
- It did so while citing a study that showed the extent to which mangroves had been lost globally over the past two decades.

Q: Consider the following statement regarding Sinkhole:

1. It is a depression in the ground that has no external surface drainage.
2. It is more likely to appear in areas that have soluble rocks.
3. A huge sinkhole developed in a stream located in south Kashmir in 2022.

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:

- As per the United States Geological Survey (USGS), a sinkhole is a depression in the ground that has no external surface drainage. Basically, when it rains, all of the water gets collected in the sinkhole which typically drains into the subsurface layer of the Earth.
- The sinkholes are more likely to appear in areas that have soluble rocks like salt beds and domes, gypsum, limestone below the land's surface. These rocks can naturally dissolve into the groundwater that circulates through these holes.
- In February 2022, a huge sinkhole developed in a stream located in south Kashmir. The hole disrupted the entire flow of the stream as water from it was draining into the sinkhole.

Q: Consider the following statement regarding threat to Tidal Wetland:

1. Nearly 27 per cent of the losses and gains were directly caused by human activity.
2. Sea level rise, shoreline erosion, storms, altered sediment flow and subsidence are some other cause of Tidal Wetland.
3. Tidal wetlands in Australia had the highest ratio of loss to gain.

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:

- Some 27 per cent of the losses and gains were directly caused by human activity. Humans can alter wetlands through development, water diversion projects, or by converting the land to agriculture or aquaculture. But they can also expand wetlands through restoration projects.
- Other causes of wetland change were sea level rise, shoreline erosion, storms, altered sediment flow and subsidence. These can be either indirectly caused by humans or the result of natural coastal processes.
- The study also found that outside of Asia, tidal wetlands in Africa had the highest ratio of loss to gain. The loss was most severe in in Nigeria, Mozambique and Guinea-Bissau.