

Q: Consider the following statement regarding Hypersonic missiles:

1. It moves five times faster than the speed of sound.
2. Higher speed provides higher manoeuvrable.
3. Only United States and Russia have successfully tested hypersonic missiles.

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:

- Hypersonic missiles move at five times the speed of sound or greater and are manoeuvrable, making them difficult for defence systems and radars to target.
- The United States, Russia, China and North Korea are believed to be the only countries to have successfully tested hypersonic missiles, but exact details of the weaponry remain scant.

Q: Consider the following statement regarding Varunastra:

1. It is a surface-to-surface missile.
2. It is developed by NSTL, DRDO and BDL.
3. It can be fired from all Anti-submarine warfare (ASW) ships.

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:

- Varunastra is ship launched, heavy weight, electrically-propelled anti-submarine torpedo capable of targeting quiet submarines, both in deep and shallow waters in an intense counter-measures environment.
- It was designed and developed by Vizag-based Naval Science and Technological Laboratory (NSTL) under the Defence Research and Development Organisation (DRDO) and is manufactured by Bharat Dynamics Ltd (BDL).
- Varunastra can be fired from all Anti-submarine warfare (ASW) ships capable of firing heavy weight torpedoes.

Q: Consider the following statement regarding Defibrillators:

1. It is a device that send an electric pulse or shock to the heart to restore a normal heartbeat.
2. They are used to prevent or correct an arrhythmia.

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:

- Defibrillators are devices that send an electric pulse or shock to the heart to restore a normal heartbeat.
- They are used to prevent or correct an arrhythmia, an uneven heartbeat that is too slow or too fast.
- If the heart suddenly stops, defibrillators can also help it beat again.
- There are three types of defibrillators: AEDs, ICDs, and WCDs.
- Automated External Defibrillators (AED) is a lightweight, battery-operated, portable device that checks the heart's rhythm and sends a shock to the heart to restore normal rhythm.
- The device is used to help people having cardiac arrest.

Q: Consider the following statement regarding Fattah Missile:

1. It is an intermediate range ballistic missile developed by Iran.
2. It can travel at hypersonic speeds.
3. It uses solid propellants.

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:

- Fattah Missile is an intermediate range ballistic missile developed by Iran.
- It can travel at hypersonic speeds of up to 15 times the speed of sound and can penetrate missile defence system.
- It has a range of 1,400 kilometres and uses solid propellants, allowing high manoeuvrability.
- This missile has the capability to utilize various warheads for different missions.

Q: Consider the following statement regarding Gulf of Mannar Marine National Park:

1. Gulf of Mannar is one of the biologically richest coastal regions in all of mainland of India.
2. It is the first Marine Biosphere Reserve in the South and South East Asia.
3. It boasts mangroves aquatic ecosystems only.

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:

- Gulf of Mannar Marine National Park is designated as a Biosphere Reserve, the Gulf of Mannar is one of the biologically richest coastal regions in all of mainland of India.
- It is the first Marine Biosphere Reserve in the South and South East Asia.
- It is located 160 km between Dhanushkodi and Thoothukudi in Tamil Nadu.
- This Marine Biosphere Reserve encompasses a chain of 21 islands (2 islands already submerged) and adjoining coral reefs off the coasts.
- Gulf of Mannar Marine National Park, established in 1980, boasts three surreal aquatic ecosystems – mangroves, seagrass, and coral reef.