

Q: Consider the following statement regarding Defence Missile HQ-17A:

1. It is an integrated search radar, guidance radar, air defence radar and command system.
2. The missile is based on the Russian Tor-M1 surface-to-air missile defence system.
3. It is a new surface to surface missile system.

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:

- Recently, China's People's Liberation Army (PLA) tested its new **surface-to-air defence missile HQ-17A** in the high-altitude region ahead of India, US military exercise near the Line of Actual Control (LAC).
- The HQ-17A air defence missile system is an integrated "search radar, guidance radar, air defence radar and command system".
- The missile is based on the Russian Tor-M1 surface-to-air missile defence system. HQ-17 can also data-link with other Chinese systems.

Q: Consider the following statement regarding new campaign "Palaan":

1. It focuses on the development of women empowerment.
2. India has taken rapid strides in reducing child mortality from 45 to 35 per 1000 live births in 2019.

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: b

Explanation:

- Recently, the Union Minister of State for Health Bharati Pravin Pawar virtually launched a new campaign, Paalan 1000 National Campaign and parenting application in Mumbai.
- The mobile application focuses on the development of children in the first two years.
- India has taken rapid strides in reducing child mortality since 2014 from 45 per 1000 live births to 35 per 1000 live births in 2019.

Q: Consider the following statement regarding Manthan platform:

1. It aims to promote collaboration at scale between industry and the scientific research.
2. The platform will facilitate knowledge transfers and interactions through Information Exchange Sessions.

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:

- It aims to promote collaboration at scale between industry and the scientific research and development ecosystem to help meet India's sustainability goals in alignment with the UN defined Sustainable Development Goals (SDG) charter.
- The platform will facilitate knowledge transfers and interactions through Information Exchange Sessions, Exhibitions, and Events to develop a framework for future science, innovation, and technology-led growth.

Q: Consider the following statement regarding International Space Station (ISS):

1. It is a high-flying satellite laboratory and an observation platform for astronomical, environmental and geological research.
2. The ISS is built with the cooperation of NASA, Roscosmos, JAXA, Canadian Space Agency and the European Space Agency.
3. Russia's part in the collaboration is the module responsible for making course corrections to the orbit of the ISS.

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:

- International Space Station (ISS) is a high-flying satellite laboratory for new technologies and an observation platform for astronomical, environmental and geological research.
- The ISS is built with the cooperation of scientists from five international space agencies — NASA of the US, Roscosmos of Russia, JAXA of Japan, Canadian Space Agency and the European Space Agency.
- Russia's part in the collaboration is the module responsible for making course corrections to the orbit of the ISS.

Q: Consider the following statement:

1. Ethanol is an agricultural by-product.
2. Ethanol blending will help bring down our share of oil imports.
3. India's aim is to increase ethanol-blending ratio to 40% originally by 2030.

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:

- Blending ethanol with petrol to burn less fossil fuel while running vehicles is called ethanol blending. Ethanol is an agricultural by-product which is mainly obtained from the processing of sugar from sugarcane, but also from other sources such as rice husk or maize.
- Though India have had an E10 or 10% ethanol as policy for a while, it is only in 2022 that it have achieved that proportion. India's aim is to increase this ratio to 20% originally by 2030 but in 2021, when NITI Aayog put out the ethanol roadmap, that deadline was advanced to 2025.
- Ethanol blending will help bring down our share of oil imports (almost 85%) on which India spend a considerable amount of precious foreign exchange. Secondly, more ethanol output would help increase farmers' incomes.