

Q: Consider the following statement regarding Sickle Cell disease:

1. It is a group of inherited red blood cell disorders.
2. People with this type of disease have their red blood cells in crescent or “sickle” shaped.
3. It does not block blood flow to the rest of their body.

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:

- Sickle cell disease is a group of inherited red blood cell disorders that affect haemoglobin, the protein that carries oxygen through the body.
- The red blood cells are disc-shaped and flexible enough to move easily through the blood vessels. If people have sickle cell disease, their red blood cells are crescent or “sickle” shaped.
- These cells do not bend or move easily and can block blood flow to the rest of their body leading to serious problems, including stroke, eye problems, infections, and episodes of pain called pain crises.

Q: Consider the following statement regarding the benefit of Nano Urea and choose the incorrect option:

- a) The urea absorption rate by crops is 80 percent in the case of Nano Urea.
- b) It has more carbon footprint.
- c) It is produced by an energy-efficient, environment-friendly production process.
- d) It is also easy to store than urea bags.

Ans: b

Explanation:

- The Nano urea absorption rate by crops is 80 percent in the case of Nano Urea whereas the traditional urea absorption rate is only 30 percent.
- Nano Urea is cost-effective and demonstrated an increase in crop yield.
- It is produced by an energy-efficient, environment-friendly production process with less carbon footprints.
- It is also easy to store than urea bags.

Q: Consider the following statement regarding Laser Interferometer Gravitational Observatory (LIGO):

1. It is an international network of laboratories that detect gravitational waves in space.
2. These ripples were first postulated in Albert Einstein’s.

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:

- Laser Interferometer Gravitational Observatory (LIGO) is an international network of laboratories that detect the ripples (gravitational waves) in space-time produced by the movement of large celestial objects like stars and planets.
- These ripples were first postulated in Albert Einstein’s general theory of relativity, which encapsulates our current understanding of how gravitation works.
- The LIGO detectors are sensitive to distance changes that are several orders of magnitude smaller than the length of a proton.

Q: Consider the following:

1. VARUNA
2. FRINJEX
3. GARUDA

Which among the above exercise is/are conducted between India and France?

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) 1, 2 and 3

Ans: d

Explanation:

- Indian Naval ships INS Rana and INS Sumedha undertook a Maritime Partnership Exercise with French Navy ship FS Surcouf in the Bay of Bengal on 30th June 2023.
- The Partnership Exercise signifies the strong navy-to-navy links, interoperability and strong bonds between Indian Navy and French Navy.
- Other Exercises with France:
 - ❖ VARUNA: Naval exercise
 - ❖ FRINJEX: Military exercise
 - ❖ GARUDA: Air force exercise

Q: Consider the following statement regarding State Disaster Response Fund:

1. It is the primary fund available with State Governments.
2. A State Government may use up to 10 percent of the funds available under the SDRF for providing immediate relief to the victims of natural disasters.
3. The Central Government contributes 75% of SDRF allocation for all states and Union Territories of India.

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 State Disaster Response Fund (SDRF), constituted under Section 48 (1) (a) of the Disaster Management Act, 2005.
- It is the primary fund available with State Governments for responses to notified disasters.
- The Central Government contributes 75% of SDRF allocation for general category States/UTs and 90% for special category States/UTs (NE States, Sikkim, Uttarakhand, Himachal Pradesh, Jammu and Kashmir).
- A State Government may use up to 10 percent of the funds available under the SDRF for providing immediate relief to the victims of natural disasters that they consider to be 'disasters' within the local context in the State and which are not included in the notified list of disasters of the Ministry of Home Affairs.