



UPSC CURRENT AFFAIRS MCQS 19-11-2023

1. With reference to the food chains in ecosystems, which of the following kinds of organism is/are known as decomposer organisms/organisms?

1. Virus
2. Fungi
3. Bacteria

Select the correct answer using the codes given below:

- (A) 1 only
(B) 2 and 3 only
(C) 1 and 3 only
(D) 1, 2 and 3

Answer: (B)

Explanation: Most viruses need a living host organism—they are more like a parasite. Fungi are the major decomposers of nature; they break down organic matter which would otherwise not be recycled. Bacteria play an important role in decomposition of organic materials, especially in the early stages of decomposition when moisture levels are high. In the later stages of decomposition, fungi tend to dominate. *Bacillus subtilis* and *Pseudomonas fluorescens* are examples of decomposer bacteria. Hence, option (b) is correct.

2. Fruits stored in a cold chamber exhibit longer storage life because:

- (A) exposure to sunlight is prevented
(B) concentration of carbon dioxide in the environment is increased
(C) rate of respiration is decreased
(D) there is an increase in humidity

Answer: (C)

Explanation: Metabolic activity is manifested by respiration. Reduction of temperature is an effective means of reducing the rate of respiration. Fruits and

vegetables continue their metabolic activity even after harvest. Hence, option (c) is correct.

3. With reference to neutrinos, consider the following statements:

1. There are two types of neutrinos, electron neutrons and proton neutrinos.
2. Natural neutrinos are harmful as they generate radiation and can cause diseases.
3. Neutrinos come from the sun (solar neutrinos) and other stars, cosmic rays that come from beyond the solar system, and from the Big Bang.

How many of the above statements is/are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

Answer: (C)

Explanation: Three types or “flavours” of neutrino exist: the electron neutrino, the muon neutrino and the tau neutrino. Neutrino has a very tiny mass. It interacts very weakly with other matter particles and so weak that every second trillions of neutrinos fall on us and pass through our bodies unnoticed. Neutrinos come from the sun (solar neutrinos) and other stars, cosmic rays that come from beyond the solar system, and from the Big Bang. Hence, statement 3 is correct.

4. Consider the following statements, with reference to India’s solar mission Aditya-L1:

1. Aditya L1 is the first satellite to study the magnetic field of the sun’s corona.
2. Aditya L1 will help to study why the photosphere, the deeper layer of the sun, is at much lower temperature than the corona.

Which of the statements given above is/are correct?

- (A) 1 only
- (B) 2 only



(C) Both 1 and 2

(D) Neither 1 nor 2

Answer: (C)

Explanation: Aditya L1 is the first satellite to study the magnetic field of the sun's corona. Aditya L1 will help to study why the photosphere, the deeper layer of the sun, is at much lower temperature than the corona. Hence, both statements are correct.

5. Consider the following statements regarding Cord blood banking:

1. Cord blood banking involves taking the umbilical cord blood, which is a rich source of stem cells, and preserving it for future use.
2. Stem cells in cord blood can be used to strengthen the immune system during cancer treatments.
3. Stem cells from cord blood can be given to more people and are less likely to cause rejection than those in bone marrow.

How many of the above statements is/are correct?

(A) Only one

(B) Only two

(C) All three

(D) None

Answer: (C)

Explanation: Cord blood banking involves taking the umbilical cord blood, which is a rich source of stem cells, and preserving it for future use. Using the stem cells in cord blood to treat a disease has the following benefits compared with using those in bone marrow: Stem cells from cord blood can be given to more people than those from bone marrow. More matches are possible when a cord blood transplant is used than when a bone marrow transplant is used. In addition, the stem cells in cord blood are less likely to cause rejection than those in bone marrow. It is harder to collect bone marrow than it is to collect cord blood. Collecting bone marrow poses some risks and can be painful for the



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donor. Cord blood can be frozen and stored. It is ready for anyone who needs it. Bone marrow must be used soon after it is collected. Stem cells in cord blood can be used to strengthen the immune system during cancer treatments. Bone marrow stem cells do not have this capability.