



UPSC CURRENT AFFAIRS MCQS 10-12-2023

1. With reference to ‘ecosystem productivity’, consider the following statements:

1. Gross primary productivity of an ecosystem is the rate of production of organic matter during photosynthesis.
2. Primary productivity depends on the plant species inhabiting a particular area.
3. Secondary productivity is defined as the rate of formation of new organic matter by consumers.

Which of the statements given above is/are correct?

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

Answer: (C)

Explanation: The components of the ecosystem are seen to function as a unit when you consider the following aspects: (i) Productivity; (ii) Decomposition; (iii) Energy flow; and (iv) Nutrient cycling.

A constant input of solar energy is the basic requirement for any ecosystem to function and sustain. Primary production is defined as the amount of biomass or organic matter produced per unit area over a time period by plants during photosynthesis.

Gross primary productivity of an ecosystem is the rate of production of organic matter during photosynthesis. A considerable amount of GPP is utilised by plants in respiration.

Net primary productivity is the available biomass for the consumption to heterotrophs (herbivores and decomposers). Secondary productivity is defined as the rate of formation of new organic matter by consumers. Primary productivity depends on the plant species inhabiting a particular area. It also depends on a variety of environmental factors, availability of nutrients and photosynthetic capacity of plants. Therefore, it varies in different types of ecosystems. Hence, all statements are correct.



2. Consider the following statements:

1. Mutualism is an interaction between species in which both benefit.
2. Commensalism is a type of relationship among organisms in which one organism benefits while the other organism is neither benefited nor harmed.

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: Mutualism is an interaction between species in which both benefit. Commensalism is a type of relationship among organisms in which one organism benefits while the other organism is neither benefited nor harmed. Hence, both the statements are correct.

3. Consider the following statements:

1. Pyramid of energy is always inverted, can never be upright.
2. When energy flows from a particular trophic level to the next trophic level, some energy is always lost as heat at each step.

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: (B)

Explanation: Pyramid of energy is always upright, can never be inverted, because when energy flows from a particular trophic level to the next trophic level, some energy is always lost as heat at each step. Each bar in the energy pyramid indicates the amount of energy present at each trophic level in a given time or annually per unit area. Hence, statement 1 is incorrect and statement 2 is correct.

4. Which of the following are sources of carbon dioxide in the atmosphere?

1. Respiration and decomposition
2. Photosynthesis
3. Combustion of fossil fuels
4. Land use changes
5. Volcanic eruptions

Select the correct answer using the code given below:

- (A) 1, 3 and 4 only
(B) 3, 4 and 5 only
(C) 1 and 2 only
(D) 1, 3, 4 and 5

Answer: (D)

Explanation: Land use changes are a substantial source of carbon dioxide emissions globally, accounting for 9% of human carbon dioxide emissions. A minor amount of carbon dioxide is created by volcanic eruptions, which accounts for 0.03% of natural emissions. Photosynthesis is not the source of carbon dioxide in the atmosphere.

5. Consider the following statements regarding Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):

1. CITES is an international agreement to regulate worldwide commercial trade in wild animal and plant species.
2. Its aim is to ensure that international trade does not threaten the survival of the species in the wild.
3. CITES is not legally binding on state parties to the convention

Which of the statements given above is/are correct?

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



Answer: (B)

Explanation: CITES is international agreement to regulate worldwide commercial trade in wild animal and plant species. Its aim is to ensure that international trade does not threaten the survival of the species in the wild. Hence, statements 1 and 2 are correct.

It was drafted as a result of a resolution adopted in 1963 at a meeting of members of the International Union for Conservation of Nature (IUCN). It entered into force in July 1975. CITES is legally binding on state parties to the convention, which are obliged to adopt their own domestic legislation to implement its goals. Hence, statement 3 is incorrect.