

**Q.1)** Consider the following statements:

1. Catabolism is the breakdown of waste into smaller particles by detritivores.
2. Humification is an oxidation process leading to the accumulation of a humus in the soil.
3. The release of inorganic nutrients by degradation of humus by microbes is called mineralisation.

Which of the statements given above is/are correct?

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

**Q.2)** Consider the following statements:

1. Photosynthetically active radiation (PAR) is the portion of the light spectrum utilised by plants for photosynthesis.
2. Plants are able to capture only 2-10 per cent of the photosynthetically active radiation (PAR).

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

**Q.3)** Consider the following statements:

1. Xerarch succession takes place in dry areas.
2. Algae, fungi and bacteria are the Pioneer species that invade and colonize a newly created habitat.

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

**Q.4)** Which of the following statements is **incorrect** regarding the Carbon and the Phosphorus Nutrient cycle?

- a) Carbon cycles are a type of gaseous cycling while phosphorus cycles are a type of sedimentary cycling.
- b) Rocks are the reservoirs of phosphorus cycles while the ocean, fossil fuels and

atmosphere are the reservoirs of the carbon cycle.

- c) Phosphorous cycle is a rapid process while carbon cycle is continuous and slow process.
- d) Both the cycles interact with animals and other nature-related living things in the ecosystem.

**Q.5)** Which of the following adds/add nitrogen to the soil?

1. Excretion of urea by animals
2. Burning of coal by man
3. Death of vegetation

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

**Q.6)** Which one of the following statements correctly describe the reason for the aquatic ecosystem having inverted biomass pyramids?

- a) The biomass in an aquatic ecosystem includes the mass of all living and dead organic matter.
- b) The lifespan of phytoplanktons is longer as compared to zooplankton.
- c) In aquatic ecosystem, consumer biomass exceeds producer biomass.
- d) The biomass of zooplankton is lower than that of phytoplanktons in aquatic ecosystem.

**Q.7)** Consider the following statements regarding interbreeding among the organisms:

1. Organisms in the same order can produce fertile offspring but organisms in same class cannot.
2. Speciation cannot occur without geographical separation between the members of a species.

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