

Chapter – 12 | Ecosystem

QUIZ PART-02

1. Except in deep-sea hydrothermal ecosystems, the principal source of energy for ecosystems is:
- A. Soil minerals
 - B. Decomposers
 - C. The Sun
 - D. Geothermal heat
- (C)

Explanation : The Sun is the principal source of energy for almost all ecosystems, except deep-sea hydrothermal ecosystems.

2. Plants capture approximately what percentage of Photosynthetically Active Radiation?
- A. 2–10%
 - B. 20–30%
 - C. 40–50%
 - D. 60–70%
- (A)

Explanation : Plants capture only about 2–10% of Photosynthetically Active Radiation, yet this energy sustains the living world.

3. The direction of energy flow in an ecosystem is:
- A. From consumers to producers
 - B. Cyclic between all trophic levels
 - C. From decomposers to the Sun
 - D. Unidirectional from producers to consumers
- (D)

Explanation : Energy flows in one direction—from the Sun to producers and then through successive consumer levels.

4. Organisms that obtain their food directly from plants are generally called:
- A. Tertiary consumers
 - B. Primary consumers
 - C. Secondary consumers
 - D. Decomposers
- (B)

Explanation : Primary consumers feed directly on producers and are generally herbivores.

5. A detritus food chain begins with:
- A. Green plants
 - B. Herbivorous animals
 - C. Dead organic matter
 - D. Top carnivores
- (C)

Explanation : The detritus food chain begins with dead plant and animal matter used by fungi, bacteria and other decomposers.

6. The natural interconnection of several food chains is called a:
- A. Food web
 - B. Trophic level
 - C. Standing crop
 - D. Nutrient pyramid
- (A)

Explanation : Several interconnected food chains together form a food web.

7. A trophic level represents:
- A. A single species only
 - B. The age of an organism
 - C. The size of an organism
 - D. A functional feeding level
- (D)

Explanation : A trophic level is a functional level based on the source of nutrition and does not represent a particular species.

8. According to the 10% law, how much energy is transferred to the next trophic level?
- A. 1%
 - B. 10%
 - C. 50%
 - D. 90%
- (B)

Explanation : Only about 10% of the energy available at one trophic level is transferred to the next trophic level.

9. The amount of living material present at a trophic level at a particular time is known as:
- A. Primary production
 - B. Detritus
 - C. Standing crop
 - D. Humus
- (C)

Explanation : Standing crop is the quantity of living material present at a trophic level at a given time.

10. Which ecological pyramid is always upright?
- A. Pyramid of energy
 - B. Pyramid of biomass
 - C. Pyramid of numbers
 - D. Pyramid of organisms
- (A)

Explanation : The pyramid of energy is always upright because energy continuously decreases at successive trophic levels.