



Class 12 Biology | Ecosystem

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. The producers in a typical pond food chain are mainly

- A. Small fish
- B. Large fish
- C. Zooplankton
- D. Phytoplankton

2. Gross primary productivity minus plant respiration equals

- A. Total decomposition
- B. Secondary productivity
- C. Standing state
- D. Net primary productivity

3. GPP is 1000 and plant respiration is 400 g m⁻² yr⁻¹. NPP is

- A. 1400 g m⁻² yr⁻¹
- B. 600 g m⁻² yr⁻¹
- C. 400 g m⁻² yr⁻¹
- D. 250 g m⁻² yr⁻¹

4. Which organisms mainly carry out decomposition?

- A. Only herbivorous birds
- B. Only fish
- C. Only green plants
- D. Bacteria and fungi

5. Earthworms physically break detritus into smaller particles by

- A. Photosynthesis
- B. Fragmentation
- C. Leaching
- D. Nitrification only

6. Water dissolving nutrients from detritus and moving them downward causes

- A. Leaching
- B. Humification
- C. Assimilation
- D. Pollination

7. Formation of a dark, resistant organic substance during decomposition is

- A. Mineralisation
- B. Grazing
- C. Nitrogen fixation
- D. Humification

8. Release of inorganic nutrients from organic matter is

- A. Photosynthesis
- B. Humification
- C. Food-chain formation
- D. Mineralisation

9. Decomposition is generally fastest under

- A. Permanent oxygen absence for aerobic decomposers
- B. Cold, dry conditions
- C. Warm, moist, aerobic conditions
- D. Extreme dryness alone

10. A grazing food chain begins with

- A. Decomposer spores only
- B. Dead detritus
- C. Living green producers
- D. Top carnivores

11. A detritus food chain begins with

- A. A carnivore
- B. Only flowering plants
- C. Sunlight as a living organism
- D. Dead organic matter

12. Energy flow through an ecosystem is

- A. Unidirectional
- B. Independent of producers always
- C. From decomposers back to sunlight
- D. Cyclic like mineral nutrients

13. If producers contain 10,000 kJ, about how much reaches secondary consumers at 10% transfer per step?

- A. 1000 kJ
- B. 10 kJ
- C. 100 kJ
- D. 5000 kJ

14. The pyramid of energy is always

- A. Circular
- B. Upright
- C. Inverted
- D. Spindle-shaped

15. An inverted biomass pyramid can occur in a pond because phytoplankton have

- A. No productivity
- B. No consumers
- C. Low standing biomass but rapid turnover
- D. More mass than all consumers always

ANSWER KEY — check after completing all 15 questions

1.D 2.D 3.B 4.D 5.B 6.A 7.D 8.D 9.C 10.C 11.D 12.A 13.C 14.B 15.C