

CHAPTER 15



Our Environment

Multiple Choice Questions

1. Which one of the following is an artificial ecosystem?
 - (a) Pond
 - (b) Crop field
 - (c) Lake
 - (d) Forest
2. In a food chain, the third trophic level is always occupied by
 - (a) carnivores
 - (b) herbivores
 - (c) decomposers
 - (d) producers
3. An ecosystem includes
 - (a) all living organisms
 - (b) non-living objects
 - (c) both living organisms and non-living objects
 - (d) sometimes living organisms and sometimes non-living objects
4. In the given food chain, suppose the amount of energy at fourth trophic level is 5 kJ, what will be the energy available at the producer level?
Grass → Grasshopper → Frog → Snake → Hawk
 - (a) 5 k J
 - (b) 50 k J
 - (c) 500 k J
 - (d) 5000 k J
5. Accumulation of non-biodegradable pesticides in the food chain in increasing amount at each higher trophic level is known as
 - (a) eutrophication
 - (b) pollution
 - (c) biomagnification
 - (d) accumulation

- 6.** Depletion of ozone is mainly due to
- (a) chlorofluorocarbon compounds
 - (b) carbon monoxide
 - (c) methane
 - (d) pesticides
- 7.** Organisms which synthesise carbohydrates from inorganic compounds using radiant energy are called
- (a) decomposers
 - (b) producers
 - (c) herbivores
 - (d) carnivores
- 8.** In an ecosystem, the 10% of energy available for transfer from one trophic level to the next is in the form of
- (a) heat energy
 - (b) light energy
 - (c) chemical energy
 - (d) mechanical energy
- 9.** Organisms of a higher trophic level which feed on several types of organisms belonging to a lower trophic level constitute the
- (a) food web
 - (b) ecological pyramid
 - (c) ecosystem
 - (d) food chain
- 10.** Flow of energy in an ecosystem is always
- (a) unidirectional
 - (b) bidirectional
 - (c) multi directional
 - (d) no specific direction
- 11.** Excessive exposure of humans to U V-rays results in
- (i) damage to immune system
 - (ii) damage to lungs
 - (iii) skin cancer
 - (iv) peptic ulcers
- (a) (i) and (ii) (b) (ii) and (iv)
(c) (i) and (iii) (d) (iii) and (iv)

- 12.** In the following groups of materials, which group (s) contains only non-biodegradable items?
- (i) Wood, paper, leather
 - (ii) Polythene, detergent, PVC
 - (iii) Plastic, detergent, grass
 - (iv) Plastic, bakelite, DDT
- (a) (iii) (b) (iv)
(c) (i) and (iii) (d) (ii) and (iv)
- 13.** Which of the following limits the number of trophic levels in a food chain?
- (a) Decrease in energy at higher trophic levels
 - (b) Dufficient food supply
 - (c) Polluted air
 - (d) Water
- 14.** Which of the statement is incorrect?
- (a) All green plants and blue green algae are producers
 - (b) Green plants get their food from organic compounds
 - (c) Producers prepare their own food from inorganic compounds
 - (d) Plants convert solar energy into chemical energy
- 15.** Which group of organisms are not constituents of a food chain?
- (i) Grass, lion, rabbit, wolf
 - (ii) Plankton, man, fish, grasshopper
 - (iii) Wolf, grass, snake, tiger
 - (iv) Frog, snake, eagle, grass, grasshopper
- (a) (i) and (iii) (b) (iii) and (iv)
(c) (ii) and (iii) (d) (i) and (iv)
- 16.** The percentage of solar radiation absorbed by all the green plants for the process of photosynthesis is about
- (a) 1 %
 - (b) 5 %
 - (c) 8 %
 - (d) 10 %

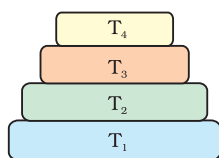


Fig. 15.1

- 17.** In the given Figure 15.1 the various trophic levels are shown in a pyramid. At which trophic level is maximum energy available?
- (a) T_4
 - (b) T_2
 - (c) T_1
 - (d) T_3

18. What will happen if deer is missing in the food chain given below?

Grass → Deer → Tiger

- (a) The population of tiger increases
- (b) The population of grass decreases
- (c) Tiger will start eating grass
- (d) The population of tiger decreases and the population of grass increases

19. The decomposers in an ecosystem

- (a) convert inorganic material, to simpler forms
- (b) convert organic material to inorganic forms
- (c) convert inorganic materials into organic compounds
- (d) do not breakdown organic compounds

20. If a grass hopper is eaten by a frog, then the energy transfer will be from

- (a) producer to decomposer
- (b) producer to primary consumer
- (c) primary consumer to secondary consumer
- (d) secondary consumer to primary consumer

21. Disposable plastic plates should not be used because

- (a) they are made of materials with light weight
- (b) they are made of toxic materials
- (c) they are made of biodegradable materials
- (d) they are made of non-biodegradable materials

Short Answer Questions

22. Why is improper disposal of waste a curse to environment?

23. Write the common food chain of a pond ecosystem.

24. What are the advantages of cloth bags over plastic bags during shopping?

25. Why are crop fields known as artificial ecosystems?

26. Differentiate between biodegradable and non-biodegradable substances. Cite examples.

- 27.** Suggest one word for each of the following statements/ definitions
- (a) The physical and biological world where we live in
 - (b) Each level of food chain where transfer of energy takes place
 - (c) The physical factors like temperature, rainfall, wind and soil of an ecosystem
 - (d) Organisms which depend on the producers either directly or indirectly for food
- 28.** Explain the role of decomposers in the environment?
- 29.** Select the mis-matched pair in the following and correct it.
- (a) Biomagnification — Accumulation of chemicals at the successive trophic levels of a food chain
 - (b) Ecosystem — Biotic components of environment
 - (c) Aquarium — A man-made ecosystem
 - (d) Parasites — Organisms which obtain food from other living organisms
- 30.** We do not clean ponds or lakes, but an aquarium needs to be cleaned. Why?

Long Answer Questions

- 31.** Indicate the flow of energy in an ecosystem. Why is it unidirectional? Justify.
- 32.** What are decomposers? What will be the consequence of their absence in an ecosystem?
- 33.** Suggest any four activities in daily life which are eco-friendly.
- 34.** Give two differences between food chain and food web.
- 35.** Name the wastes which are generated in your house daily. What measures would you take for their disposal?
- 36.** Suggest suitable mechanism (s) for waste management in fertiliser industries.
- 37.** What are the by-products of fertiliser industries? How do they affect the environment?
- 38.** Explain some harmful effects of agricultural practices on the environment.