

- Q1.** Why is improper disposal of waste a curse to environment?
- Q2.** Write the common food chain of a pond ecosystem.
- Q3.** What are the advantages of cloth bags over plastic bags during shopping?
- Q4.** Why are crop fields known as artificial ecosystems?
- Q5.** Differentiate between biodegradable and non-biodegradable substances. Cite examples.
- Q6.** 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.
- Q7.** Explain the role of decomposers in the environment?
- Q8.** 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.
- Q9.** We do not clean ponds or lakes, but an aquarium needs to be cleaned. Why?
- Q10.** Indicate the flow of energy in an ecosystem. Why is it unidirectional? Justify.
- Q11.** What are decomposers? What will be the consequence of their absence in an ecosystem?
- Q12.** Suggest any four activities in daily life which are eco-friendly.
- Q13.** Give two differences between food chain and food web.
- Q14.** Name the wastes which are generated in your house daily. What measures would you take for their disposal?
- Q15.** Suggest suitable mechanism(s) for waste management in fertiliser industries.
- Q16.** What are the by-products of fertiliser industries? How do they affect the environment?
- Q17.** Explain some harmful effects of agricultural practices on the environment.

- S1.** Wastes pollute our environment, air, soil and water, and cause harmful effects on all living organisms.
- S2.** Phytoplanktons and aquatic plants → small aquatic animals larvae, insects etc. → Fish → bird.
- S3.** Cloth bags are:
- (a) capable of carrying more things (b) made of biodegradable material
(c) do not pollute our environment (d) can be reused.
- S4.** Crop fields are man made and some biotic and abiotic components are manipulated by humans.
- S5.** Substances that are broken down into simpler substances by biological processes are said to be biodegradable. Examples, wood, paper.
Substances that cannot be broken down into simpler ones by biological processes are said to be non-biodegradable. Examples, plastic, DDT.
- S6.** (a) Environment/biosphere (b) Trophic level
(c) Abiotic factors (d) Consumers/heterotrophs
- S7.** Decomposers break down the dead and decaying organic matter and return the nutrients to the soil. Thus, they play a very important role in the nutrient re-cycling in the environment.
- S8.** (b) Is not a matching pair.
Both biotic and abiotic components of environment constitute an ecosystem.
- S9.** An aquarium is an artificial and incomplete ecosystem in contrast to a pond/lake which are natural, self-sustaining and complete ecosystems.
- S10.** The flow of energy generally in Sun → producer → herbivore → carnivore. Since the flow is progressively from one trophic level to another and does not revert back, it is said to be unidirectional. Further, the available energy decreases in the higher trophic levels making it impossible for energy to flow in the reverse direction.
- S11.** Decomposers break down the complex organic substances of garbage, dead animals and plants into simpler inorganic substances that go into the soil and are used up again by the plants in the absence of decomposers recycling of material in the biosphere will not take place.
- S12. Hints:** (a) Separation of biodegradable and non-biodegradable substances.
(b) Gardening.
(c) Use of gunny bags/paper bags in place of polythene/plastic bags.
(d) Use of compost and vermicompost in place of fertilisers.
(e) Harvesting rain water.

S13.

Food chain	Food web
(a) Food chain is a series of organisms feeding on one another	(a) Food web consists of a number of interlinked food chains.
(b) Members of higher trophic level feed upon a single type of organism of the lower trophic level.	(b) Members of higher trophic level can feed upon organisms of the lower trophic levels of other food chain.

- S14. Hints:** (a) Kitchen wastes. (b) Paper wastes like newspapers, bags, envelopes.
(c) Plastic bags. (d) Vegetable/fruit peels/rind.

Measures for disposal

- (a) Segregation of biodegradable and non-biodegradable wastes.
(b) Safe disposal of plastic bags.
(c) Vegetable/fruit peels can be placed near trees/plants, which on decomposition will enrich the soil with nutrients.
(d) Give paper wastes for recycling.
(e) Prepare a compost pit for kitchen wastes.

- S15. Hints:** (a) Control air pollution.
(b) The effluent should be treated before discharge into surrounding environment.

S16. The harmful by products are gases such as SO_2 and NO . They cause extensive air pollution and are responsible for acid rain.

- S17. Hints:** (a) Excessive use of fertilisers changes the chemistry of soil and kills useful microbes.
(b) Excessive use of non-biodegradable chemical pesticides leads to biological magnification.
(c) Extensive cropping causes loss of soil fertility.
(d) Excess use of ground water for agriculture lowers the water table.
(e) Damage to natural ecosystem/habitat.

SMARTACHIEVERS LEARNING Pvt. Ltd.
www.smartachievers.in