CHAPTER 15

ANSWERS

Multiple Choice Questions

1.	(b)	**2.**	(a)	**3.**	(c)	**4.**	(d)
5.	(c)	**6.**	(a)	**7.**	(b)	**8.**	(c)
9.	(a)	**10.**	(a)	**11.**	(c)	**12.**	(d)
13.	(a)	**14.**	(b)	**15.**	(c)	**16.**	(a)
17.	(c)	**18.**	(d)	**19.**	(b)	**20.**	(c)
21.	(d)						

Short Answer Questions

22. Wastes pollute our environment, air, soil and water, and cause harmful effects on all living organisms.

23. Phytoplanktons and aquatic plants → small aquatic animals larvae, insects etc) → fish → bird

24. Cloth bags are

(a) capable of carrying more things
(b) made of biodegradable material
(c) do not pollute our environment
(d) can be reused

25. Crop fields are man made and some biotic and abiotic components are manipulated by humans

26. 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.

27. (a) Environment/biosphere
(b) Trophic level
(c) Abiotic factors
(d) Consumers/heterotrophs

28. 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.

29. (b) Is not a matching pair

Both biotic and abiotic components of environment constitute an ecosystem

30. An aquarium is an artificial and incomplete ecosystem in contrast to a pond/lake which are natural, self-sustaining and complete ecosystems.

Long Answer Questions

31. The flow of energy generally is 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 undirectional. Further, the available energy decreases in the higher trophic levels making it impossible for energy to flow in the reverse direction.

32. 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.

33. **Hints—** (i) Separation of biodegradable and non-biodegradable substances.

(ii) Gardening

(iii) Use of gunny bags/paper bags in place of polythene/plastic bags

(iv) Use of compost and vermicompost in place of fertilisers

(v) Harvesting rain water

34.

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

35. 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.

36. Hints— (a) Control air pollution

(b) The effluent should be treated before discharge into surrounding environment.

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

38. 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.