**Chapter 15**

**Our Environment**

(Deleted topics- Ecosystem, Environmental problems, Ozone depletion, Waste production and their solutions, Biodegradable and non-biodegradable substance)

1. What are decomposers? List two important roles they play in environment?
2. We hardly ever clean ponds or lakes, but an aquarium needs to be cleaned regularly, why?
3. Why do producers always occupy the first trophic level in grazing food chain?
4. What is meant by food chain?”The number of trophic levels in food chain is limited” Give reason to justify this statement.
5. Write common food chain of pond ecosystem.
6. “A given species may occupy more than one trophic level in same ecosystem at the same time” Explain with an example.
7. In the given food chain, plants provide 500 J of energy to rats. How much energy will be available to hawks from snakes?

Plants ---🡪 Rats--🡪 Snakes--🡪 Hawks

1. What is meant by the term ‘Biomass’?
2. In the given food chain, suppose the amount of energy at the fourth trophic level is 5 KJ. What will be the energy available at the producer level?

Grass--🡪 Grasshopper---🡪 Frog ----🡪 Snake---🡪 Hawk

1. The accumulation of non-biodegradable pesticides in the food chain in increasing amount at each higher trophic level is known as \_\_\_\_\_\_\_\_\_\_\_.
2. Why is the flow of energy in an ecosystem unidirectional? Explain briefly.
3. Explain some harmful effects of agricultural practices on the environment.
4. Why is government of India imposing a ban on the use of polythene bags? Suggest two alternatives to these bags and explain how the ban is likely to improve the environment?
5. What are the advantages of cloth bags over plastic bags during shopping?
6. Why is improper disposal of waste curse to the environment?
7. What are the by-products of fertiliser industries? How do they affect the environment?
8. Read the given passage and answer the questions based on it.

In natural conditions food chains never operates as an isolated sequence but are interconnected with each other. In other words when different types of organisms at different trophic levels, instead of forming linear chain, remain interconnected with each other, it forms a complex pathway rather than a simple chain.

1. What is the term used for network of food chain?
2. Draw any food chain operating in grassland.
3. Define the trophic level of rat that feeds on potato tuber.
4. What is the dominant second trophic level in the lake ecosystem?
5. Define omnivore.
6. Acid rain generally occurs above the areas where factories bare expelling SO2in air why?
7. Distinguish between production and decomposition.
8. Organism at higher trophic level has less energy available. Comment.
9. How can fish eating birds have DDT concentration of 25ppm even though the water contains only .003ppb?
10. What are Eltonian pyramids? Write its 3 type based on ecological parameters.
11. Enumerate some harmful effects of biological magnification in animals, plants and human beings.
12. ‘Affluent lifestyle has a negative effect on the environment’ justify this statement with help of examples.
13. Multiple choice questions
14. Which of them is not a water pollutant?
15. Fine sand b) Industrial waste c) Fertilisers d) CFC’s
16. Decomposers are the \_\_\_\_\_\_ that break down dead plants animal and waste.
17. Autotrophs b) scavengers c) producers d) saprophytes
18. What will happen if snake is missing in the given food chain?

Grains----🡪 Rats---🡪 Snake --🡪Eagle

1. Total quantity of grains increase b) Population of eagles increase c) Eagle start to eat grain d) Population of rat may increase
2. According to Charles Elton, which is not correct?
3. Carnivores at the top of pyramid b) Producers at the top of pyramid c)energy trapping is high at top of pyramid. d)b and c
4. Minamata disease is due to
5. MIC gas b) methyl mercury c) lead nitrate d) cobalt chloride
6. Assertion and Reasons
7. If both assertion and reasons are true and reason is correct explanation of the assertion.
8. If both assertion and reasons are true but reason is not the correct explanation of the assertion.
9. If assertion is true but the reason is false.
10. If assertion is false but the reason is true.
11. Assertion: Auto trophs are also called transducers.

Reason: Auto trophs change one form of energy to other.

1. Assertion: Decomposers are microconsumers

Reason: Decomposers bring mineralisation of decomposed matter.

1. Assertion: Pyramid of biomass may be upright or inverted.

Reason: Pyramid of energy is always upright.

1. Assertion: Compost is manure.

Reason: Compost is made from young green crop plants by ploughing them back into soil.

1. Assertion: Food web consists of several food chains.

Reason: Food web decreases the stability of the ecosystem

**Chapter 16**

**Sustainable Management of Natural Resources**

(Learners are assigned to read this part of the unit. They can be encouraged to prepare a brief write up on any one of the concept of this unit in their portfolio. This may be assessed for the internal assessment and credit may be given vide periodic assessment / portfolio. This is not to be assessed year end exam. Topics: Conservation and judicious use of natural resources. Forest and wild life, coal and Petroleum conservation. Examples of people’s participation for conservation of natural resources, Big dams: advantages and limitations; alternatives if any water harvesting. Sustainability of the natural resources.

1. How do advantages of exploiting natural resources with short term gains differ from the advantages of managing our resources for long-term perspective?
2. Why is an equitable distribution of resources essential in a society? List 2 forces which are against such distribution.
3. How can we help in reducing the problem of waste disposal? Suggest any 3 methods.
4. What are objectives of sustainable development? Suggest any 3 methods.
5. A) Why should National park be allowed to remain in their pristine form?

B) Why is reuse of materials better than recycling?

1. What is water harvesting? List 2 main advantages associated with water harvesting at community level. Write two causes for the failure of sustained availability of ground water.
2. What is dam? Why do we seek to build large dams? While building large dams which three problems should be particularly addressed to maintain peace among local people.
3. Despite of good rains, we are not able to meet the demand of water for all the people. Why?
4. What is biogas? Write its significance.
5. What basic practices can help to conserve natural resources?
6. Write any 3 R’s that are helpful in saving natural resources.
7. Forests are ‘biodiversity hotspots’. Justify
8. How did ‘Chipko Andolan’ ultimately benefit the local people? Explain briefly.
9. Define conservation. What are the aims of conservation?
10. Write productive, protective and regulatory functions of forests.
11. What necessary measures are taken by Indian Board of wildlife for biodiversity conservation?
12. What is watershed management system? List two benefits derived by the communities that participate in this system.
13. List some measures that will help in improving water quality of River Ganga.
14. What are the different factors responsible for decrease in availability of underground water?
15. a) What are components of coal?

b)Describe peat and anthracite.

c) Write important uses of coal.

1. Fossil fuels are important source of energy, but we must search for new alternative source of energy, why?
2. How do local people living inside or near the forest area depend on forest produce?
3. What measures should be practiced for controlling carbon dioxide level in the atmosphere?
4. Multiple choice questions
5. Which of the following is not ancient water harvesting structure?
6. Kattas b) Sargam c) Kuhls d) Surangam
7. Which of the following is not the cause of deforestation?
8. Firewood collection b) Timber harvesting c) Environment pollution d) Cattle ranching
9. The salinity of sea water is
10. 2.5% b) 3.5% c) 4.5% d) 5.5%
11. Gir lion project was launched in India in which year?
12. 1973 b) 1970 c) 1985 d) 1990
13. Given below are few statements related to biodiversity. Pick those that correctly describe the concept of biodiversity.
14. Biodiversity refers to different species of flora and fauna present in area.
15. Biodiversity refers to only the flora of a given area.
16. Biodiversity is greater in forest.
17. Biodiversity refers to total number of individuals of a particular species living in an area.
18. A and B b) B and D c) A and C d) B and C
19. Assertion and Reason
20. If both assertion and reason are true and reason is correct explanation of the assertion.
21. If both assertion and reason are true but the reason is not the correct explanation of the assertion.
22. If assertion is true but reason is false
23. If assertion is false but reason is true
24. Assertion: Wildlife and forests are renewable resources.

Reason: Urbanisation and industrialisation have made several plants and animals to extinct.

1. Assertion: Coal and Petroleum provide energy.

Reason: Fossil fuels are important source of energy.

1. Assertion: Biosphere has three sub divisions

Reason: All subdivisions of biosphere are independent.

1. Assertion: Rainwater can be captured from any roof top.

Reason: Rain water harvesting reduces power consumption.

1. Assertion: Threatened species are those species which have been greatly reduced in their number and are liable to become extinct if the causative factors continue.

Reason: IUCN is an international organisation which maintains the IUCN red list of threatened species to assess the conservation status of different species.