

Chapter – (Our Environment)

Topic - 1 (Ecosystem And Food Chain)

Very Short Answer Type Questions

- Q.1. Define ecosystem.
- Q.2. What is meant by biological magnification?
- Q.3. List two man – made ecosystems.
- Q.4. List two main components of our environment.
- Q.5. List two natural ecosystems.
- Q.6. List two biotic components of a biosphere.
- Q.7. We often use the word environment. What does it mean?
- Q.8. Name two decomposers operating in our ecosystem
- Q.9. Write one negative effect, on the environment, of affluent life style of few persons of a society.
- Q.10. Name the two abiotic components of ecosystem.
- Q.11. What are the various steps in a food chain called?
- Q.12. Why do producers always occupy the first trophic level on every food chain?
- Q.13. Why are green plants called producers?
- Q.14. In a food chain of frog, grass, insect and snake assign trophic level to frog.
- Q.15. The first trophic level in a food chain is always a green plant. Why?
- Q.16. Mention the role of micro – organisms like bacteria and fungi.
- Q.17. Mention the role of decomposers in our ecosystem.
- Q.18. Name the organism (s) belonging to fourth trophic level in the food chain comprising of:
Snakes, Insects, Frogs, Plants, Hawks.
- Q.19. In the following food chain, grass provides 4000 J of energy to the grasshopper.
Grass, Grasshopper, Frogs, Snakes
How much energy will be available to snakes and frogs?
- Q.20. Consider a food chain of the following:
Fish, crab, plankton, shark.
Arrange the above chain in proper order of trophic level.
- Q.21. What will happen if we kill all the organisms in one trophic level.

Q.22. Consider a food chain consisting of:

Wheat, Rat, Snakes, Peacock.

What will happen if all the snakes are killed?

Q.23. Which of the following are always at the second trophic level of food chain?

Carnivores, Autotroph, Herbivores.

Q.24. Choose one consumer each that belongs to the second and third trophic levels from the organisms: Eagle, Frog, Tiger, Rabbit, Fox.

Q.25. Pesticides added to a field is seen in increased amount in the crop and in the birds that feed on them. What is this phenomenon called?

Q.26. What will be the amount of energy available to the organisms of the 2nd trophic level of a food chain, if the energy available at the first trophic level is 10,000 joules?

Short Answer Type Questions – I

Q.1. What are decomposers? List two important roles they play in the environment.

Q.2. Differentiate between the food habits of organisms belonging to first and second trophic levels.

Q.3. Write any two differences between food chain and food web.

Q.4. What are top carnivores? Give two examples.

Q.5. Discuss the feeding patterns in a food web.

Q.6. Write any four examples of abiotic factors.

Q.7. Why are only 4 or 5 trophic levels present in each food chain?

Q.8. List two reasons to show that the existence of decomposers is essential in an ecosystem.

OR

Explain the role of decomposers in the environment.

Q.9. State with reason any two possible consequences of elimination of decomposers from the earth.

Q.10. Accumulation of harmful chemicals in our bodies can be avoided. Explain how this can be achieved?

Q.11. Draw a labelled diagram to illustrate energy flow in an ecosystem.

Q.12. In a food chain comprising Tiger, plants and goat, which will:

(i) Transfer the maximum amount of energy.

(ii) Receive minimum amount of energy.

Q.13. Write the appropriate names of the trophic levels Z and X in the figure given below:

Q.14. In the food chain:

Grass → deer → lion

Operating in a forest, what will happen if all the:

(i) Lions are removed? (ii) Deers are removed?

Short Answer Type Questions – II

Q.1. What is an ecosystem? List its two main components. We do not clean natural ponds or lakes but an aquarium needs to be cleaned regularly. Why is it so? Explain.

Q.2. What is meant by food chain? “The number of trophic levels in a food chain is limited.” Give reason to justify this statement.

Q.3. (i) We do not clean ponds or lakes, but an aquarium needs to be cleaned. Why?

(ii) What are the harmful by products of fertilizers industries? How do they affect the environment?

(iii) Why are crop fields known as artificial ecosystem?

Q.4. What are biotic factors? Give any two examples.

Q.5. What are consumers? Name the four categories into which the consumers are further grouped.

Q.6. Explain the phenomenon of ‘Biological Magnification’. How does it affect organisms belonging to different trophic levels particularly the tertiary consumers?

Q.7. What are trophic levels? Give an example of a food chain and state the different trophic levels in it.

Q.8. Define Ecosystem. Briefly describe the two types of ecosystem.

Q.9. Mention any three significance of a food chain.

Q.10. Why there is a progressive decline in the amount of energy at each trophic level?

Q.11. Give reason to justify the following:

(i) The existence of decomposers is essential in a biosphere.

(ii) Flow of energy in a food chain is unidirectional.

Q.12. “Energy flow in food chains is always unidirectional”. Justify this statement. Explain how the pesticides enter a food chain and subsequently get into our body.

Q.13. “Our food grains such as wheat and rice, the vegetables and fruits and even meat are found to contain varying amounts of pesticide residues.” State the reason to explain how and why it happens?

Q.14. Why is only 10% of energy made available to the next trophic level when green plants are eaten by herbivores?

Q.15. Calculate the amount of energy available to lion in the following food chain if plants have 20,000 J of energy available from the sun.

Long Answer Type Question:

Q.1. Define the following:

- (i) Food chain, (ii) Trophic Level (iii) Producers (iv) Parasites (v) Non-biodegradable substances.

Q.2. Name the following:

- (i) Organisms feeding on animal and plant food.
(ii) Organisms breaking down wastes of living beings.
(iii) The organisms occupying the first trophic level of any food chain.
(iv) A complex network of many interconnected food chains and feeding relationships.
(v) The cumulative increase in the concentrations of a persistent substance in successively higher levels of the food chain.

Q.3. Give any two examples of each:

- (i) Organisms occupying the first trophic level,
(ii) Carnivores
(iii) Biodegradable wastes of humans
(iv) Ecosystem
(v) Abiotic factors of an ecosystem

Q.4. (i) What is the full form of: (a) UNEP (b) CFCs.

- (ii) On what basis are organisms grouped as producers, consumers and decomposers?
(iii) Write two problems that would arise if there were no decomposers in an ecosystem.

Topic - 2 (Biodegradable And Non-Biodegradable Substances And Global Warming)

Very Short Answer Type Questions

- Q.1. What is Ozone?
- Q.2. Why are some substance non – biodegradable?
- Q.3. Why is ozone layer getting depleted at the higher levels of the atmosphere?
- Q.4. Name the chemical compound which depletes ozone layer.
- Q.5. The depletion of ozone layer is a cause of concern. Why?
- Q.6. Name the gas which is produced due to incomplete combustion of fossil fuel.
- Q.7. What is the function of ozone in the upper atmosphere?
- Q.8. Why should biodegradable and non – biodegradable wastes be discarded in two separate dustbins?
- Q.9. Which chemical is used in fire extinguishers? How it is harmful?
- Q.10. What happens during the first step of ozone formation in the atmosphere?
- Q.11. How is ozone formed in the upper part of the atmosphere of the earth?
- Q.12. Select the item which is made up of biodegradable material – Plastic bag, leather bag, nylon rope, kettle.
- Q.13. Why is excessive use of CFCs a cause of concern?
- Q.14. The following organisms form a food chain. Which of these will have the highest concentration of non – biodegradable chemicals? Name the phenomenon associated with it: Insects, Hawk, Grass, Snake, Frog.
- Q.15. Write the full name of the group of compounds mainly responsible for the depletion of ozone layer.
- Q.16. Mention one negative effect of our affluent life style on the environment.
- Q.17. State a way to prevent accumulation of harmful chemicals in our bodies.
- Q.18. List two non – biodegradable wastes generated daily in kitchen which can be recycled.
- Q.19. Which disease is caused in human beings due to depletion of ozone layer in the atmosphere?

Short Answer Type Questions – I

- Q.1. What is ozone? How does it protect the organisms on the earth? What is ozone and how does it affect any ecosystem?
- Q.2. Write any four effects of ozone depletion on our health.
- Q.3. Industrialization is the one of the main cause of deteriorate of environment.” List any four reasons in favour of this statement.
- Q.4. It is said, there is a need to put a blanket ban on the products containing aerosols. What are aerosols? Why is there a demand to put a ban on them?
- Q.5. Why do enzymes which break down carbohydrates in foods does not break down coal?

Q.6. Give any two ways in which biodegradable substances would affect the environment.

Q.7. “The maximum concentration of harmful chemicals accumulates in human beings.” State the phenomenon involved and justify this statement.

Q.8. Write the harmful effects of using plastic bags, on the environment. Suggest alternatives to plastic bags.

Q.9. ‘Traditional use of forest areas is not useful in maintaining biodiversity. Do you agree with this statement? Explain with the help of an example.

Q.10. List two environment friendly practices or habits which need to be followed by every member of a family / community. Explain how these practices will support the “Save the Environment” mission.

Q.11. In some states of our country there is a ban on the use of polythene bags for shopping. Why? List three advantages of using jute or cloth bags over polythene bags.

Q.12. Why is Government of India imposing a ban on the use of polythene bags? Suggest two alternatives to use these bags and explain how this ban is likely to improve the environment.

Q.13. We often observe domestic waste decomposing in the bylanes of residential colonies. Suggest ways to make people realize that improper disposal of waste is harmful to the environment.

Short Answer Type Questions – II

Q.1. What is ozone? Show the reactions of formation of ozone from oxygen in the atmosphere.

Q.2. What is ozone? How and where is it formed in the atmosphere? Explain how does it affect an ecosystem.

Q.3. Explain the role of UV radiation in formation of ozone with the help of a chemical reaction. Name the pollutant and write its role in depletion of ozone layer.

Q.4. Damage to the ozone layer is a cause for concern. Justify this statement. Suggest any two steps to limit this damage.

OR

Why is damage to the ozone layer a cause for concern? What steps are being taken to limit this damage?

Q.5. Explain how carbon dioxide and ozone layer of the atmosphere are important to life.

Q.6. When did the amount of Ozone in the atmosphere begin to drop sharply? Why did this happen? How was this problem taken care of by UNEP?

Q.7. Differentiate between biodegradable and non – biodegradable substances with the help of one example each. List two changes in habit that people must adopt to dispose non-biodegradable waste, for saving the environment.

Q.8. What are the problems caused by the non-biodegradable wastes that we generate?

Q.9. Explain why the use of plastic bags are banned in many places? What could be more environment – friendly alternative?

Q.10. How can you help in reducing the problem of waste disposal? Give any two methods.

Q.11. Give reasons:

(i) Kulhads have been banned for serving tea on platform.

(ii) Decomposers are not included in any food chain

(iii) Producers are transducers of energy.

Long Answer Type Question:

Q.1. What are chlorofluorocarbon? How are they responsible for causing ozone hole in atmosphere? What will be the consequences of ozone hole?

Q.2. A non – biodegradable toxic chemical has entered into the food chain. Which type of food habit will you suggest to a man, vegetarian or non – vegetarian. Explain with the help of a food chain. The food chain which you would suggest, is advantageous in another aspect. How?