

## **CLASS 10 BIOLOGY PREVIOUS YEAR QUESTIONS**

### **OUR ENVIRONMENT**

**Question 1.** Why is the maximum concentration of pesticides found in human beings?

**Question 2.** Give one method which could be applied to reduce our intake of pesticides through food to some extent.

**Question 3.** Various steps in a food chain represent:

- (a) food web                      (b) trophic level                      (c) ecosystem                      (d) biomagnification.

**Question 4.** With regard to various food chains operating in an ecosystem, man is a:

- (a) Consumer                      (b) Producer                      (c) Producer and consumer                      (d) Producer and decomposer.  
(2020)

**Question 5.** Food web is constituted by

- (a) relationship between the organisms and the environment  
(b) relationship between plants and animals  
(c) various interlinked food chains in an ecosystem  
(d) relationship between animals and environment. (2020)

**Question 6.** What is an ecosystem? (Delhi 2017)

**Question 7.** Why is a lake considered to be a natural ecosystem? (Delhi 2017)

**Question 8.** In the following food chain, plants provide 500 J of energy to rats. How much energy will be available to hawks from snakes?

Plants → Rats → Snakes → Hawks (AI 2017)

**Question 9.** In the following food chain, 100 J of energy is available to the lion. How much energy was available to the producers?

Plants → Deer → Lion (AI 2017)

**Question 10.** List two biotic components of a biosphere. (Delhi 2016)

**Question 11.** Why are green plants called producers? (Delhi 2016)

**Question 12.** In a food chain of frog, grass, insect and snake, assign trophic level to frog. (AI 2016)

**Question 13.** Why do producers always occupy the first trophic level in every food chain? (Foreign 2016)

**Question 14.** We often use the word environment. What does it mean? (Foreign 2016)

**Question 15.** Which of the following are always at the second trophic level of food chains? Carnivores, Autotrophs, Herbivores (AI 2015)

**Question 16.** 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 (Foreign 2015)

**Question 17.** List two examples of natural ecosystem. (Foreign 2015)

**Question 18.** What is meant by the term 'Biomass'? (Board Term I, 2014)

**Question 19.** Bacteria and fungi are called decomposers. Why? (Delhi 2012, Foreign 2011)

**Question 20.** In a food chain, if 10,000 joules of energy is available to the producer, how much energy will be available to the secondary consumer to transfer it to the tertiary consumer? (AI 2012)

**Question 21.** Consider the following food chain which occurs in a forest:

Grass → Deer → Lion

If 10000 J of solar energy is available to the grass, how much energy would be available to the deer to transfer it to the lion? (Foreign 2012)

**Question 22.** What is meant by biological magnification? (AI 2011)

**Question 23.** Give an example to illustrate that indiscriminate use of pesticides may result in the degradation of the environment. (AI 2011)

**Question 24.** What are decomposers? List two important roles they play in the environment. (AI 2014)

**Question 25.** List two reasons to show that the existence of decomposers is essential in an ecosystem. (AI 2014)

**Question 26.** State with reason any two possible consequences of elimination of decomposers from the earth. (AI 2014)

**Question 27.** What does a trophic level represent in a food chain? State the position of autotrophs and herbivores in a food chain. (Delhi 2013C)

**Question 28.** (a) From the following group of organisms create a food chain which is most advantageous for human beings in terms of energy.

Hawk, Rat, Cereal plant, Goat, Snake, Human being

(b) State the possible disadvantage if the cereal plant is growing in soil rich in pesticides.

(c) Construct a food web using the organisms mentioned above. (2020)

**Question 29.** (a) Create a food chain of the following organisms.

Insect, Hawk, Grass, Snake, Frog

(b) Name the organism at the third trophic level of the created food chain.

(c) Which organism of this food chain will have the highest concentration of non- biodegradable chemicals?

(d) Name the phenomenon associated with it.

(e) If 10,000 Joules of energy is available to frogs, how much energy will be available to snakes in this food chain? (2020)

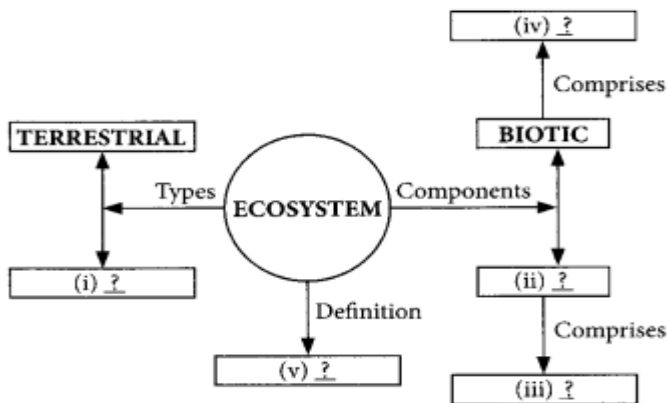
**Question 30.** (a) What is an ecosystem?

(b) List any two natural ecosystems.

(c) We do not clean ponds or lakes but an aquarium needs to be cleaned regularly. Why? (2020)

**Question 31.** What is meant by trophic level in a food chain? Construct a terrestrial food chain with trophic levels. The energy flow in a food chain is always unidirectional. Why? (2020)

**Question 32.** Complete the following flow chart based on ecosystem and its components.



**Question 33.** (a) Construct a terrestrial food chain comprising four trophic levels.

(b) What will happen if we kill all organisms in one trophic level?

(c) Calculate the amount of energy available to the organisms at the fourth trophic level. If the energy available to the organisms at the second trophic level is 2000 J. (2020)

**Question 34.** Define an ecosystem. Draw a block diagram to show the flow of energy in an ecosystem. (Delhi 2019)

**Question 35.** What is a food chain? Why is the flow of energy in an ecosystem unidirectional? Explain briefly. (AI 2019)

**Question 36.** “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. (Foreign 2015, AI 2014)

**Question 37.** “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. (Delhi 2014)

**Question 38.** What is meant by food chain? “The number of trophic levels in a food chain is limited.” Give reason to justify this statement. (Foreign 2014)

**Question 39.** (a) What is an ecosystem? List its two main components.

(b) We do not clean ponds or lakes, but an aquarium needs to be cleaned regularly. Explain. (Delhi 2013)

**Question 40.** Choose the incorrect statement from the following:

- (a) Ozone is a molecule formed by three atoms of oxygen.
- (b) Ozone shields the surface of the earth from ultraviolet radiations.
- (c) Ozone is deadly poisonous.
- (d) Ozone gets decomposed by UV radiations. (2020)

**Question 41.** State two methods of effective plastic waste collection in your school.

**Question 42.** Name any two uses of ‘single use plastic’ in daily life.

**Question 43.** If we discontinue the use of plastic, how can an environment-friendly substitute be provided?

**Question 44.** Do you think microbes will work similarly in landfill sites as they work in the laboratory? Justify your Answer. (2020)

**Question 45.** The depletion of ozone layer is a cause of concern. Why? (AI 2016)

**Question 46.** Write one negative effect on the environment, of affluent life style of few persons of a society. (AI 2016, 2014)

**Question 47.** Why is excessive use of CFCs a cause of concern? (Foreign 2016)

**Question 48.** What is the function of ozone in the upper atmosphere? (Delhi 2015, Foreign 2012)

**Question 49.** Why should biodegradable and non- biodegradable wastes be discarded in two separate dustbins? (Delhi 2015, 2013)

**Question 50.** Write the full name of the group of compounds mainly responsible for the depletion of ozone layer. (Foreign 2015, Delhi 2013C)

**Question 51.** Which class of chemical is linked to the decrease in the amount of ozone in the upper atmosphere of the Earth? (Delhi 2012)

**Question 52.** What happens when higher energy ultraviolet radiations act on the oxygen at the higher level of the atmosphere? (AI 2012)

**Question 53.** Why did United Nations act to control the production of chlorofluorocarbons (CFCs) used in refrigerators? (Delhi 2011)

**Question 54.** Why is decrease of ozone in our ozone layer a cause for our worry? (Foreign 2011)

**Answer:** Refer to **Answer 45.**

**Question 55.** "Industrialisation has adversely deteriorated the environment." Give four reasons in support of this statement. (Foreign 2016)

**Question 56.** Why is Government of India imposing a ban on the use of polythene bags? Suggest two alternatives to these bags and explain how this ban is likely to improve the environment. (Delhi 2014)

**Question 57.** 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. (Delhi 2014)

**Question 58.** "Affluent life style has a negative effect on the environment." Justify this statement with the help of an example. (Delhi 2014)

**Question 59.** Give one example each from your daily life where the domestic waste can be effectively reused and recycled. (AI 2014)

**Question 60.** "To discard the household waste we should have two separate dust-bins, one for the biodegradable waste and the other for the non-biodegradable waste." Justify this statement suggesting the proper way of disposal of these wastes. (Foreign 2014)

**Question 61.** We often observe domestic waste decomposing in the bylanes of residential colonies. Suggest ways to make the residents realise that the improper disposal of their waste is harmful to the environment. (Foreign 2014, Delhi 2013)

**Question 62.** Suppose you find a heap of domestic waste, in a nearby park, which is decomposing. What would you do to make the people of the surrounding area realise that such type of disposal of domestic waste is harmful to the environment? (Foreign 2014)

**Question 63.** (a) Write two harmful effects of using plastic bags on the environment. Suggest

alternatives to the usage of plastic bags.

(b) List any two practices that can be followed to dispose off the waste produced in our homes. (2020)

**Question 64.** (a) Complete the following table :

	Oxygen	Ozone
<b>Formula</b>	(i) .....	(ii) .....
<b>Benefits to biotic component</b>	(iii) .....	(iv) .....

(b) How is ozone formed at the higher level of atmosphere? (2020)

**Question 65.** You have been selected to talk on “Ozone layer and its protection” in the school assembly on ‘Environment Day’.

(a) Why should ozone layer be protected to save the environment?

(b) List any two ways that you would stress in your talk to bring in awareness amongst your fellow friends that would also help in protection of ozone layer as well as the environment. (Delhi 2017)

**Question 66.** After the examinations Rakesh with his friends went on a picnic to a nearby park. All friends carried cooked food packed in plastic bags or plastic cans. After eating the food some friends collected the leftover food and plastic bags etc., and planned to dispose them off by burning. Rakesh immediately checked them and suggested to segregate the leftover food and peels of fruits from the plastic materials and respectively dispose them off separately in the green and red dustbins placed in the corner of the park.

(a) In your opinion, is burning plastic an eco-friendly method of waste disposal? Why? State the advantage of method suggested by Rakesh.

(b) How can we contribute in maintaining the parks and roads neat and clean? (Delhi 2015)

**Question 67.** 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. (A I2015, Delhi 2013C)

**Question 68.** What is ozone ? How and where is it formed in the atmosphere ? Explain how does it affect an ecosystem. (Foreign 2015)

**Question 69. Decomposers are not included in a specific level of a food chain. Why?**