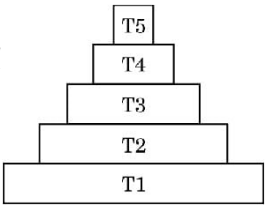
13. Our Environment - Board Exam Questions (1 Mark)

Practice these questions online at pschool.in/science/ncert/g10/chap-13

1 Mark Questions (MCQ)

1) *Which of the following group is not 'biodegradable'?*
(a) Vegetable peels, dead leaves, paper
(b) Cow dung, leather bag, water
(c) Polythene bag, rubber band, ball pen
(d) Paper, fruits, bones

2) *In the given figure, identify the trophic level having maximum concentration of harmful chemicals.*



(a) T1 (b) T5 (c) T4 (d) T3

3) *Which of the following limits the number of trophic levels in a food chain?*
(a) Availability of water (b) Deficient food supply
(c) Decrease in energy at higher levels (d) Pollution in air

4) *Organisms of a higher trophic level which feed on several types of organisms belonging to a lower trophic level form the:*
(a) Food web (b) Ecosystem (c) Ecological pyramid (d) Food chain

5) *In accumulation of toxic substances at higher trophic levels of an ecosystem through the food chain, which of the following organisms is affected the most?*
(a) Small aquatic plants (b) Human beings
(c) Small fish (d) Large fish

6) *Given below are some of the statements regarding our environment:*
(i) Change in our life-styles have resulted in greater amounts of waste material generation.
(ii) Changes in attitude have resulted in use of more disposable things.
(iii) Changes in packaging has resulted in much of our waste becoming non-biodegradable.
(iv) Organic farming.
Which amongst these is not leading to any damage of environment?
(a) (i), (ii), (iii) (b) (iv) (c) (i) and (iii) (d) (ii) and (iv)

7) *Which of the following is a non-biodegradable pollutant?*
(a) Paper (b) DDT (c) Wood (d) Vegetable peel

8) *In an ecosystem, the decomposers perform an important role. Select the option indicating the role of decomposers.*
(a) Convert inorganic materials to simpler forms
(b) Break down complex organic substances to simple inorganic substances
(c) Break down inorganic substances into organic substances
(d) Do not act on organic compounds

9) *A fish living in a pond ecosystem feeds on small aquatic insects (larvae). These insect larvae, in turn, feed on green algae and small photosynthetic bacteria. In this specific food chain, what is the trophic level classification of fish?*
(a) Producer (b) Primary Consumer (c) Secondary Consumer (d) Tertiary Consumer

10) *Which of the following groups do not constitute a food chain?*
(i) Wolf, rabbit, grass, lion
(ii) Plankton, man, grasshopper, fish
(iii) Hawk, grass, snake, grasshopper, frog
(iv) Grass, snake, wolf, tiger

(a) (i) and (iv) (b) (i) and (iii) (c) (ii) and (iii) (d) (ii) and (iv)

11) *The percentage of solar energy which is not converted into food energy by the leaves of green plants in a terrestrial ecosystem is about:*
(a) 1% (b) 10% (c) 90% (d) 99%

12) *Identify from the following a group containing all non-biodegradable substances.*
(a) Leather, Glass, Plastic (b) Cotton, Wood, Nylon
(c) DDT, Polyester, Glass (d) Leather, Silk, Wool

13) *Other than the abiotic components, which of the given biotic components are not required to make an aquarium with small herbivorous fishes a self-sustaining system?*
(i) Aquatic plants and aquatic animals
(ii) Terrestrial plants and terrestrial animals
(iii) Decomposers as bacteria and fungi
(iv) Consumers as clown fishes and sea urchins
(a) (i) and (iv) (b) (ii) and (iii) (c) (i) and (iii) (d) (ii) and (iv)

14) *In the food chains given below. Select the most efficient food chain in terms of energy:*
(a) Grass → Grasshopper → Frog → Snake
(b) Plants → Deer → Lion
(c) Plants → Man
(d) Phytoplankton → Zooplankton → Small Fish → Big Fish

15) *Which one of the following gets biomagnified at different levels in a food chain?*
(a) Carbon monoxide (b) CFC's (c) DDT (d) Manure

16) *The examples of natural and manmade (artificial) ecosystems are respectively*
(a) Forests and ponds (b) Crop fields and lakes

(c) Lakes and gardens (d) Crop fields and forests

17) *Human activities that are affecting the environment are:*
(a) minimising the use of chloroflurocarbons
(b) excessive use of disposable cups and plates
(c) maximising the use of reusable utensils for eating food and drinking fluids
(d) segregating the wastes into biodegradable and non-biodegradable before disposal

18) *Consider the following food chain: Grass → Grasshopper → Frog → Snake → Eagle. If the amount of energy available at third trophic level is 50 kJ, the available energy at the producer level was:*
(a) 0.5 kJ (b) 5 kJ (c) 500 kJ (d) 5000 kJ

19) *The incorrect statement about ozone is*
(a) It is a deadly poisonous gas
(b) It shields the surface of the earth from UV radiation from sun
(c) It is used as a refrigerant and in fire-extinguishers
(d) It is formed by combining oxygen molecule with free oxygen atom

20) *Which are the correct statements related to ozone?*
(i) Ozone layer helps in increasing the UV radiations reaching earth.
(ii) Ozone is a deadly poison.
(iii) Ozone layer shields the earth from UV radiations.
(iv) Ozone layer prevents UV rays which cause skin cancer.
(v) Ozone is formed with the help of Chloroflurocarbons.
(a) (i), (ii), (iii) (b) (ii), (iii), (iv) (c) (iii), (iv), (v) (d) (i), (iv), (v)

21) *Which of the following human activities has resulted in an increase of non-biodegradable substances?*
(a) Organic farming (b) Increase in tree plantation
(c) Use of plastic as packaging material (d) Composting of kitchen waste

22) *Identify the food chain in which the organisms of the second trophic level are missing:*
(a) Grass, goat, lion
(b) Zooplankton, Phytoplankton, small fish, large fish
(c) Tiger, grass, snake, frog
(d) Grasshopper, grass, snake, frog, eagle

23) *A food chain will be more advantageous in terms of energy if it has*
(a) 2 trophic levels (b) 3 trophic levels (c) 4 trophic levels (d) 5 trophic levels

24) *Consider the following statements about ozone:*
(a) Ozone is poisonous gas.
(b) Ozone shields the earth's surface from the infrared radiation from the sun.
(c) Ozone is a product of UV radiations acting on oxygen molecule.
(d) At the lower level of the earth's atmosphere, ozone performs most essential function.
The correct statements are
(a) (a) and (b) (b) (a) and (c) (c) (b) and (c) (d) (b) and (d)

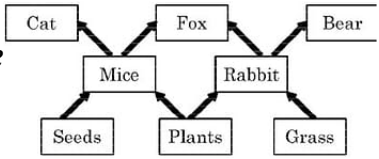
25) *Some wastes are given below: (i) Garden waste (ii) Ball point pen refills (iii) Empty medicine bottles made of glass (iv) Peels of fruits and vegetables (v) Old cotton shirt*
The non-biodegradable wastes among these are:
(a) (i) and (ii) (b) (ii) and (iii)
(c) (i), (iv) and (v) (d) (i), (iii) and (iv)

26) *Which one of the following is not a natural ecosystem?*
(a) Pond ecosystem (b) Grassland ecosystem
(c) Forest ecosystem (d) Cropland ecosystem

27) *Identify the incorrect statement*
'The energy available to the producers is maximum' because:
(a) It is the first trophic level which absorbs 1% of light energy directly from the source
(b) It utilizes the most of the chemical energy for its own respiration, growth, reproduction, movement etc
(c) It utilizes 10% of light energy and transfers the rest to the next trophic level
(d) It transfers only 10% of light energy to the next trophic level

28) *Which of the following is not a role of decomposers in the ecosystem?*
(a) Natural replenishment of soil (b) Enrichment of oxygen in atmosphere
(c) Waste decomposition (d) Break-down of dead remains

29) *Study the given figure of a Food web and identify the primary consumer in the food web:*



(a) Mice and Bear (b) Rabbit and Cat
(c) Rabbit and Fox (d) Mice and Rabbit

30) *In 1987, an agreement was formulated by the United Nations Environment Programme (UNEP) to freeze the production of "X" to prevent depletion of "Y". "X" and "Y" respectively referred here are:*
(a) Ozone; CFCs (b) CFCs; rays UV
(c) CFCs; Ozone (d) UV rays; Diatomic oxygen

31) *Which of the following features relates to biodegradable substances?*
(a) Broken down by biological processes (b) Remain inert
(c) Persist in environment for long time (d) May harm the ecosystem

Assertion and Reason

1) *Assertion (A): There are generally a greater number of individuals at the lower trophic levels of an ecosystem.*
Reason (R): The greatest number is of the producers.

2) *Assertion (A): Natural replenishment of soil will not take place in absence of microbes.*
Reason (R): Microbes, comprising of bacteria and fungi, break down dead remains and waste products of organisms, and they go into the soil.

3) *Assertion (A): Highest percentage of pesticides is found in tertiary consumers in a food chain.*
Reason (R): Chemicals / pesticides get accumulated progressively at each trophic level.

4) *Assertion (A): In an ecosystem, 1% of energy is available for transfer from one trophic level to the next.*
Reason (R): An average of 10% of the food eaten by organisms is available for flow in the form of chemical energy.

5) *Assertion (A): The amount of ozone in the atmosphere began to drop sharply in the 1980s.*
Reason (R): The oxygen atoms combine with molecular oxygen to form ozone.

6) *Assertion (A): Use of jute bags for shopping reduces pollution.*
Reason (R): Jute is biodegradable and its bag may be reused as and when needed.

7) *Assertion (A): All organisms can make organic compounds like sugar and starch from inorganic substances using radiant energy of the sun.*
Reason (R): The organisms which can produce food by photosynthesis are called producers.

8) *Assertion (A): Food web is a network of several food chains operating in an ecosystem.*
Reason (R): Food web decreases the stability of an ecosystem.

9) *Assertion (A): Vulture will always have the least amount of pesticides in a food chain.*
Reason (R): Vulture occupies the last trophic level and it gets only 10% of energy of the previous trophic level.

10) *Assertion (A): Accumulation of harmful chemicals is maximum in the organisms at the highest trophic level of a food chain.*
Reason (R): Harmful chemicals are sprayed on the crops to protect them from diseases and pests.

11) *Assertion (A): The waste we generate daily may be biodegradable or non-biodegradable.*
Reason (R): The waste generated, if not disposed off properly may cause serious environmental problems.

12) *Assertion (A): Oxygen is essential for all aerobic forms of life.*
Reason (R): Free oxygen atoms combine with molecular oxygen to form ozone.

13) *Assertion (A): Ozone layer protects the surface of the Earth from harmful UV radiations.*
Reason (R): Chlorofluorocarbons (CFCs) are responsible for depletion of ozone layer.

14) *Assertion (A): If the lions are removed from a food chain it will not affect the food chain, however if the plants are removed from a food chain it will disturb the ecosystem.*
Reason (R): Plants are producers who can make food using sunlight, while lions are consumers.

15) *Assertion (A): The energy which passes to the herbivores does not come back to autotrophs.*
Reason (R): The flow of energy in a food chain is unidirectional.

16) *Assertion (A): Biodegradable substances result in the formation of compost and natural replenishment.*
Reason (R): It is due to breakdown of complex inorganic substances into simple organic substances.