Our Environment

CHAPTER 15

TRY YOURSELF ANSWERS

1. An ecosystem is defined as a structural and functional unit of the biosphere comprising living organisms and their non-living environment that interact by means of food chains and chemical cycles resulting in energy flow, biotic diversity and material cycling to form a stable, self-supporting system.
2. Ecosystem, that is created and maintained by humans is called artificial or man-made ecosystem. Example, aquarium.
3. Herbivores are called the first order consumers or primary consumers. These obtain their food directly from plants *e.g.* deer, goat, etc.
4. Organisms that feed on dead remains of plants or animals are called scavengers.
5. Biotic components : (i) Producers (ii) Consumers (iii) Decomposers

   Abiotic components : (i) Inorganic substances (ii) Organic compounds (iii) Climatic factors
6. Decomposers are the important components of an ecosystem as they break down the complex organic compounds present in dead plants and animals into simpler forms, so that producers can reuse these resources.
7. Omnivores eat both plant and animal matter, so these are called double consumers, *e.g.*, bear, crow.
8. Various characteristics of food chain are :

   (i) A food chain consists of series of organisms which are related by eating and being eaten.

   (ii) A food chain is generally straight, so unidirectional flow of energy occurs.

   (iii) The number of trophic level is 3-6.

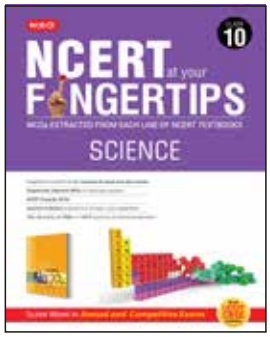
   (iv) There is progressive reduction in the available food, energy and number of individuals with the rise in trophic levels.

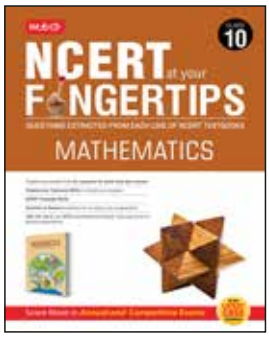
   (v) A major part of energy made available at each trophic level is lost as heat.

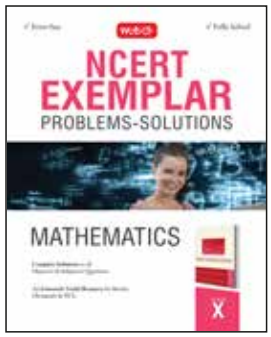
   (vi) Some organisms like omnivores occupy more than one trophic level.
9. Parasitic food chain is also called auxillary food chain. It begins with host and usually ends in parasite.
10. Characteristics of food web are : (i) Unlike food chains, food webs are never straight. Instead, each food web is formed by interlinking of various food chains.

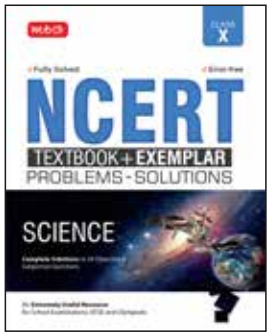
    (ii) A food web provides alternative pathways of food availability.
11. A food web makes ecosystem more stable because it provides more number of alternative pathways of food availability.
12. Lindeman in 1942 proposed ten percent (10%) law.
13. Lindeman proposed 10 percent law in 1942. This law states that in nature only 10% of the energy is transferred to each trophic level from the lower trophic level. Nearly 90% of energy is lost when it moves from one trophic level to the next.
14. Biodegradable wastes are decomposed naturally by the action of microbes which degrade them to their simple constituents enabling their nutrients to recycle among the biotic and abiotic components of ecosystem. However, non-biodegradable wastes cannot be disposed off naturally since they cannot be decomposed by microbes. Such wastes are either recycled, incinerated or put in landfills, etc. As the disposal methods of the two types of wastes are different, it is advisable to discard the two types of waste in two separate dustbins.
15. (a) Dumping is a conventional, inexpensive and widely used method of solid waste disposal in which wastes are dumped into low lying areas to level the uneven surface of land. This is also known as land filling and such landfills can be used to develop parks.
    (b) Composting :Conversion of biodegradable solid wastes like animal excreta, spoiled or left over food, vegetable and fruit peels, garden litter, etc. into manure is known as composting.
16. Montreal protocol was signed in 1987.
17. Ozone shield is the region of stratosphere, where ozone is present in high concentration. It is important because it protects the living beings from harmful effects of ultraviolet radiations.
18. Ozone depletion is a threat to mankind as it leads to thinning of ozone layer which results in the harmful UV radiations reaching the earth which can lead to:
    (a) global warming
    (b) damaged skin cells and skin cancer.
    (c) inflammation of cornea and cataract
    (d) photosynthesis inhibition.

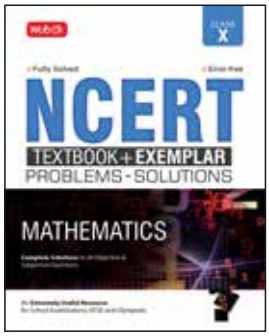
BEST SELLING BOOKS FOR CLASS 10

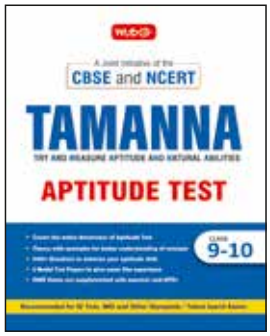


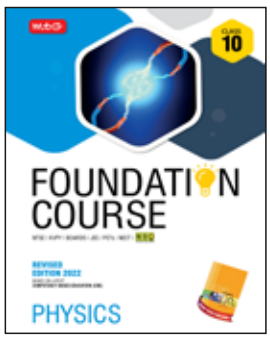


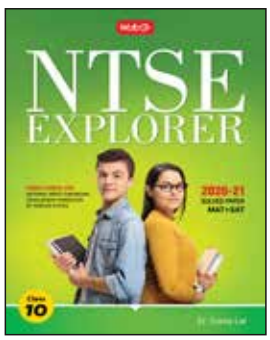


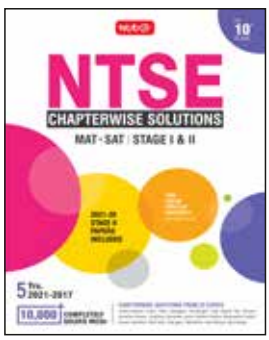


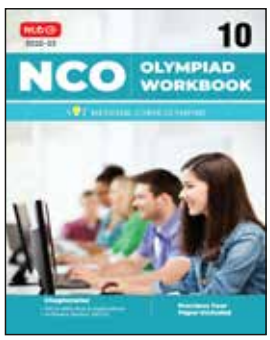


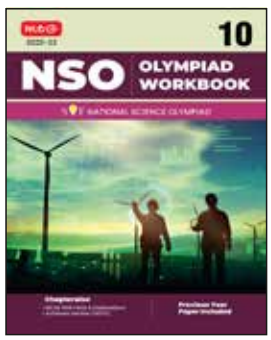


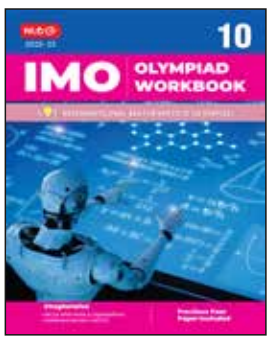


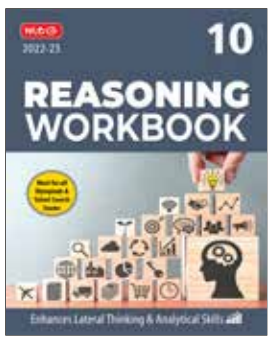












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