

• Our Environment



1. How is ozone formed in the higher levels of the atmosphere? "Damage to the ozone layer is a cause of concern". Justify this statement. (CBSE 2015, 2017, 2020, 2023)
2. We do not clean ponds or lakes, but an aquarium needs to be cleaned regularly. Explain. (CBSE 2023, 2017)
3. Why are green plants called the producers ? (CBSE 2019, 2015)
4. (a) How can we help in reducing the problem of waste disposal? Suggest any three methods.
(b) Distinguish between biodegradable and non-biodegradable wastes. (CBSE 2013, 2015, 2019)
5. Define an ecosystem. Draw a block diagram to show the flow of energy on an ecosystem. (CBSE 2015, 2017, 2019)

Solutions

1. When UV rays interact with oxygen molecules, they release a free oxygen atom, which then joins with another oxygen molecule to generate ozone. $O + O_2 \rightarrow O_3$ (Ozone) Because ozone absorbs and shields us from the Sun's harmful UV rays, its decrease is a reason for concern.
 2. Ponds and lakes being natural ecosystems have natural decomposers and cleaners embedded as an integral part of the ecosystem, hence we do not have to clean them. Aquariums are artificially built ecosystems which generally do not contain every aspect of a natural ecosystem.
 3. Because they rely only on simple inorganic compounds like carbon and water to manufacture their own food, green plants are considered producers because they not only sustain all other species but also produce their own food.
- 4. By encouraging the use of recycled materials and reducing the use of throwaway things, we can lessen the issue of garbage disposal.
 - Separating garbage that is biodegradable from that that is not before disposing of it.

- Recycling the garbage that isn't biodegradable.

	Biodegradable pollutants	Non-biodegradable pollutants
(i)	These are the pollutants which can be easily degraded by micro-organisms	These are the pollutants which can not be degraded into harmless materials
(ii)	These can be used to produce energy (through biogas), compost, manure, etc.	These are difficult to manage as natural method of degradation is baset
(iii)	These usually do not enter biogeochemical cycles	These become a part of rapid turnover in biogeochemical cycles
(iv)	Ex.: DDT, BHC, plastics, polyethylene, glass, etc.	Ex.: Sewage, garbage, animal waste, etc.

5. Ecosystem can be defined as a system composed of biotic and abiotic components and the interactions between them
 The energy flow in an ecosystem is always from producers to consumers moving in the upward direction, that is from

