6. How is biodiversity important for ecosystem functioning?
Ans: Biodiversity is important for ecosystem functioning because,
(1) It contributes to productivity.
(2) It cause more efficient recycling of energy and matter.
(3) It has many alternative pathways for survival under diverse conditions.
(4) Rich biodiversity provides alternatives available at each trophic level. All organisms are linked in food chains and interact with their abiotic environment in such a way so as to keep the natural cycles going and make the ecosystems self - sustaining units. Disappearance of any link in a food chain will not affect the ecosystem as other alternatives are there.

7. What are sacred groves? What is their role in conservation?
Ans: Sacred groves are forest patches around places of working. These are held in high esteem by tribal communities/state or central government. Tribals do not allow to cut even a single branch of trees in these sacred groves. Preserved over the course of many generations, sacred groves represent native vegetation in a natural or near natural state & thus are rich in biodiversity & harbour many rare species of plants & animals. This is the reason why many endemic species flourish in these regions.

8. Among the ecosystem services are control of floods and soil erosion. How is this achieved by the biotic components of the ecosystem?
Ans: Ecosystem services are products or benefits given by ecosystem processes to the environment for its purification, beauty, biodiversity, protection of natural resources, habitat to wild life and tribals, protection of soils,CO_2 - O_2 balance, retention of water against floods, drought and pollution.Plants play a vital role in the control of floods and soil erosion. Their roots bind the soil 10. particles firmly and in this way they do not allow the top soil to be drifted away by winds or moving water. Roots of plants also make the soil porous and allow water to go into the soil.

9. The species diversity of plants (22 per cent) is much less than that of animals (72 per cent).What could be the explanations to how animals achieved greater diversification?
Ans: Species diversity refers to the variety of species within a region which is less in plants as compared to animals. It is due to greater dispersal/more number of surviving individuals.Most animals possess simple or complex nervous system to control and coordinate various activities. They possess receptors to receive against them. Most of their responses are adaptive and ensure their survival in changing environmental conditions. They, therefore, have evolved to reveal much higher species diversity than plants who do not possess nervous system and respond differently against environment stimuli.

10. Can you think of a situation where we deliberately want to make a species extinct? How would you justify it?
Ans: Humans can cause extinction of species through various means. We are trying to eradicate disease causing organisms (e.g., poliovirus) from this world to make this world disease free. Since, such micro-organisms are harmful to the human society, such

attempt is justified. Further, such micro-organisms are not essential components (producers or decomposers) of any ecosystem and losing one or few such organisms would not affect the functioning of ecosystem.

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