

ECOSYSTEMS QUESTIONS

1. Define: (a) ecosystem (b) biome (c) biosphere.
2. Discuss the role of bacteria in the: (a) carbon cycle (b) nitrogen cycle.
3. In what way does the phosphorus cycle differ from the carbon and nitrogen cycles?
4. Is there any truth in the suggestion that carbon atoms in your body might once have been part of the body of someone else in the past, such as Leonardo da Vinci?
5. What does each of the following take from, and contribute to the rest of the ecosystem: (a) producer (b) consumer?
6. Are the only relationships in an ecosystem those involved in feeding? Explain.
7. What happens to the available energy, originally trapped in compounds in plants by photosynthesis, as it is transferred to first, second and higher order consumers? Why?
8. Which absorbs least light energy - a forest, bare ground or a coral reef?
9. What effect do the ice sheets near the poles have on the amount of light reflected from the earth?
10. It has been said that it is more efficient to feed people on plants than on animals. Do you agree? Explain.
11. Define and give an example of: (a) biological magnification (b) biological control.
12. Name and describe some features of the natural ecosystems that you learnt.
13. What two factors determine types of natural ecosystems?
14. In what ways do agricultural ecosystems differ from natural ecosystems?
15. What causes eutrophication?
16. In industrial and urban systems, solid liquid and gaseous wastes are discarded. Comment on the effects of discarding: (a) CFC's (b) washing detergents containing phosphates (c) plastic shopping bags (d) foods such as hot dogs containing preservatives (e) factory exhaust gases such as sulphur dioxide .
17. Customs regulations forbid the importation of a great variety of living organisms and materials into Australia. Why?

18. On many Australian farms, scattered trees were left in the paddocks after the original forests and woodlands were cleared. It has been noticed that, in recent years at least, these untouched trees have been dying much sooner than other trees of the same age and species in nearby bushland. Suggest a reason for this.
19. In a certain urban system in Australia, the population remained constant while the “standard of living” increased. What effect would this have on the environment?
20. It has been suggested that plankton contribute to global warming. How could this happen?
21. Explain the difference between endangered and extinct species.