

Chapter 14

ECOSYSTEM

ONE MARK QUESTIONS:

1. Define ecosystem. (K)
2. Biosphere is regarded as global ecosystem by ecologists. Give reason. (U)
3. Define stratification. (K)
4. Define productivity. (K)
5. What is primary productivity? (K)
6. What is secondary productivity? (K)
7. What is gross primary productivity? (K)
8. What is net primary productivity? (K)
9. Define decomposition. (K)
10. Define detritus. (K)
11. Earthworms are called 'farmer's friends'. Why? (A)
12. What are detritivores? (K)
13. Define humification. (K)
14. What is mineralization with reference to decomposition? (K)
15. Define food chain. (K)
16. Define trophic level. (K)
17. In which food chain, organic matter occupies the base? (K)
18. In terrestrial ecosystem, through which food chain greater fraction of energy flows? (K)
19. In aquatic ecosystem, through which food chain greater fraction of energy flows? (K)
20. Define food web. (K)
21. What is standing crop? (K)
22. State 10% law. (K)
23. What are ecological pyramids? (K)
24. Why is the pyramid of biomass in sea generally inverted? (A)
25. Pyramid of energy is always upright and can never be inverted. Why? (A)
26. Give an example for inverted ecological pyramid. (K)
27. 'Ecological pyramids have limitations'. Justify with a reason. (A)
28. What is ecological succession? (K)
29. What are pioneer species? (K)
30. What is climax community? (K)
31. Define sere(s). (K)
32. What are seral stages or seral communities? (K)
33. What is primary succession? (K)
34. What is secondary succession? (K)
35. What is hydrarch succession? (K)
36. What is xerarch succession? (K)
37. Why is primary succession a very slow process? (A)
38. Why is secondary succession much faster than primary succession? (A)
39. Define standing state. (K)
40. Define biogeochemical cycle. (K)

41. Why is carbon cycle considered as a gaseous cycle? (A)
42. Why is phosphorous cycle considered as a sedimentary cycle? (A)
43. Human activities have influenced carbon cycle. Justify with a reason. (A)
44. What are ecosystem services? (K)

TWO MARK QUESTIONS:

1. List two basic or fundamental categories of ecosystems on earth with an example for each. (K)
2. Mention the four primary functions of an ecosystem. (K)
3. Define productivity and mention its types. (K)
4. Distinguish between primary productivity and secondary productivity. (U)
5. Distinguish between gross primary productivity and net primary productivity. (U)
6. Mention two conditions which increase the rate of decomposition in ecosystem. (K)
7. Mention two conditions which decrease the rate of decomposition in ecosystem. (K)
8. Show schematic representation of grazing food chain (GFC). (S)
9. Distinguish between food chain and food web. (U)
10. 'Ecological pyramids have limitations'. Justify with two reasons. (A)
11. Distinguish between primary and secondary ecological successions. (U)
12. What are pioneer species? Give an example. (K)
13. Differentiate between pioneer species and climax community. (U)
14. Differentiate standing crop and standing state. (U)
15. Compare gaseous and sedimentary cycles. (U)
16. List two differences between carbon cycle and phosphorous cycle. (U)

THREE MARKS QUESTIONS:

1. Describe the components of an aquatic ecosystem taking pond as an example. (U)
2. Explain the factors that regulate decomposition. (U)
3. Define food chain. Mention the types of food chain. (K)
4. Show diagrammatic representation of different trophic levels in an ecosystem. (S)
5. What are ecological pyramids? Mention any two types. (K)
6. Write the diagrammatic representation of pyramid of number in a grassland ecosystem with appropriate units. (S)
7. Write diagrammatic representation of an erect pyramid of biomass with appropriate units. (S)
8. Write the diagrammatic representation of pyramid of energy with appropriate units. (S)
9. 'Ecological pyramids have limitations'. Justify with three reasons. (A)
10. Define ecological succession. Differentiate primary and secondary ecological successions. (U)
11. Define ecological succession. Mention the two types of succession in plants based on the nature of habitat. (K)
12. With reference to ecological succession, define the following: (a) Sere (b) Pioneer species (c) Climax community. (K)
13. Explain primary succession on bare rocks. (U)
14. Explain primary succession in water. (U)
15. What is biogeochemical cycle? Mention the types of biogeochemical cycles with an example for each. (K)
16. Compare gaseous and sedimentary cycles with an example for each. (U)
17. List three differences between carbon cycle and phosphorous cycle. (U)

18. Write the schematic representation of phosphorous cycle. (S)
19. "Ecosystem services should carry a hefty price tag". Justify with six of reasons. (U)

FIVE MARKS QUESTIONS:

1. What is productivity? Mention the types of primary productivity. Compare primary productivity and secondary productivity in an ecosystem. (K)
2. Describe the various steps involved in the process of decomposition. (U)
3. What are ecological pyramids? Write the diagrammatic representation of pyramid of energy with appropriate units. Why is pyramid of energy always upright and can never be inverted? (U)
4. What are ecological pyramids? Write the diagrammatic representation of an erect pyramid of biomass. Why pyramid of biomass in sea generally inverted? (U)
5. 'Ecological pyramids have limitations'. Justify with four reasons. (A)
6. Define ecological succession. Differentiate primary and secondary ecological successions. Why the rate of primary succession is slower but that of secondary succession is faster? (U)
7. Describe ecological succession on bare rock and in water. (U)
8. Write the simplified model of carbon cycle in the biosphere. (S)
9. Explain carbon cycle in the biosphere. (U)
10. Explain phosphorous cycle with a schematic representation. (S)
