

1. How does the atmosphere regulate earth's temperature? (5 Marks)
2. Write about non consumptive use values of water. (5 Marks)
3. Which side of Western Ghats has rich biodiversity? Why? (5 Marks)
4. Explain the factors that influence the soil formations. (5 Marks)
5. Give an account of the structural and functional aspects of ecosystem. (5 Marks)
6. What is the significance of detritus food chain in an ecosystem? (5 Marks)
7. What are the roles of material cycles in maintaining ecosystem equilibrium? (5 Marks)
8. How does wind affects the climatic conditions of a region? (5 Marks)
9. Explain the processes behind the ecological succession. (5 Marks)
10. What is invasive species? How it threaten the biodiversity? (5 Marks)
11. Discuss the layers of the atmosphere in terms of temperature and elevation above sea level. (5 Marks)
12. Compare geologic time to the time frame of human history. (5 Marks)
13. Explain the effects of EI Niño on weather systems around the Pacific Ocean. (5 Marks)
14. Discuss atleast four methods used to determine the climate on Earth prior to written temperature records. (5 Marks)
15. What is a biorefinery? How does it compare to a petroleum refinery? How can the widespread application of biorefineries aid sustainability? (5 Marks)

16. Describe both a direct and an indirect method of generating electricity from solar energy. What is the difference between donor and acceptor layers in photovoltaic cells? (5 Marks)
17. What are some of the greater implications of the use of biomass for energy? How might such widespread use affect greenhouse warming? How might it affect agricultural production of food? (5 Marks)
18. What is biomass gasification? Explain its mechanism. (5 Marks)
19. 'Secondary air pollutants are harmful'. Substantiate the statement. (5 Marks)
20. Illustrate the role of meteorological factors on the formation of photochemical smog. (5 Marks)
21. Discuss the impact of acid rain on water ecosystems. (5 Marks)
22. Soil weathering is a culmination of physical, chemical and biological processes. Explain. (5 Marks)
23. Explain the factors affecting the long range transport of pollutants. (5 Marks)
24. Discuss the fate of pollutants in an aquatic ecosystem. (5 Marks)
25. Duration of exposure and potency of contaminant will determine the toxicological impact. Explain. (5 Marks)
26. Explain the significance of Occupational Health and Safety Management Systems to reduce the health impacts. (5 Marks)
27. How can genetically engineered microorganisms use for bioremediation of oil-contamination? (5 Marks)
28. How can soil microorganism help in nitrogen fixation? (5 Marks)

29. What is sustainable management practices for municipal solid waste in urban city? (5 Marks)
30. How can produce biofertilizer and it can make more popular in society. (5 Marks)
31. What is global warming and how it can be mitigate? (5 Marks)
32. Why bio-indicator of environmental pollutions is important for biodiversity conservation? (5 Marks)
33. What is difference between PM_{2.5} and PM₁₀ and why it effects on human health? (5 Marks)
34. Does EIA (Environmental Impact Assessment) play an important role in socio-economic and cultural benefits. (5 Marks)
35. What is the major parameter to be taken for EIA (Environmental Impact Assessment) of Indian industry? (5 Marks)
36. Write about EMP (Environmental Management Plan) of India. (5 Marks)
37. Explain the role of the Intergovernmental Panel on Climate Change (IPCC) in global climate governance. Discuss its assessment reports and their impact on international climate policies. (5 Marks)
38. Explain the objectives of the Convention on Biological Diversity (CBD). Discuss its key protocols and their significance in global biodiversity conservation. (5 Marks)
39. Discuss the key provisions of the Environment (Protection) Act, 1986. How does it empower the Central Government in environmental protection? (5 Marks)
40. Explain the objectives and key provisions of the Coastal Regulation Zone (CRZ) Notification, 1991. How has it contributed to coastal conservation and management in India? (5 Marks)