Discuss or explain the following:

1. What are the most important approaches to studying biological indicators?
2. Which biological indicators approach is preferred to be studied? Why?
3. How we can select indicator" organisms?
4. Which types of plants are preferable as biological organisms?
5. Whose listed pollution tolerant algal genera as a biological index?
6. Which organism's groups are easier to deal with it for biological index studies?
7. What are the disadvantages of studying fishes as biological indicators?
8. Compare bacteria and macroinvertebrates as biological indices.
9. What is the environmental stress that macroinvertebrates respond to it?
10. What are the sources of metal pollution?
11. What are the sub-lethal effects of elevated heavy metals on aquatic organisms?
12. How do you explain the effects of arsenic on human health?
13. What is your explanation for synergism or antagonism?
14. How you can deal with oil spills?
15. What are the effects of oil spills on the environment?
16. How does a septic tank affect groundwater pollution?
17. How do landfills affect groundwater pollution?
18. How does hazardous waste affect groundwater pollution?
19. How do chemical and road salts affect groundwater pollution?
20. Pollution from leaking buried gasoline tanks emphasizes some important points about groundwater pollutants, what are they?
21. What is self-purification? Their role in river purification?
22. Explain the role of microorganisms and fauna on self-purification.
23. What is the saprobic system? Their zones and saprobic index calculation?
24. What is thermal pollution?
25. What are the effects of thermal pollution?

26. How do you control thermal pollution?

27. What are the differences between the dry cooling tower and the wet cooling tower for thermal pollution control?

28. What is biodegradation?

29. What is aerobic biodegradation?

30. What is anaerobic biodegradation?

31. What are the types and effects of water pollution?

32. How does the infection agent pollute the water resources?

33. How do the plant nutrients pollute the water resources?

34. How does sediments associated with water pollution?

35. What is eutrophication?

36. What are algal blooms?

37. What is red tide?

38. How do you combat the Symptoms of Eutrophication?

39. What is the role of harvesting aquatic plants in eutrophication control?

40. Advantage of using macroinvertebrates in water quality assessment.

41. Water pollutant causes ecosystem disruption.

Define the following:

Water pollution, Infectious agents, Organic waste demand, Eutrophication,

Algal blooming, Red tide, Thermal Pollution, Thermal enrichment, Thermal Shock, Dry cooling tower, Wet cooling tower, Cogeneration, Biological Indicator, Indicator organisms, Saprobic zones, Polysaprobic zone, Decomposition zone, Heavy metals, Arsenicosis, Palmars list of tolerant algae, Synergism, Antagonism, Mousse, Emulsification, Biodegradation, Aerobic degradation, Anaerobic biodegradation.

Draw the following by sketch:

1. Sources of Groundwater contamination
2. Wet and dry cooling tower

3. Eutrophication process
4. Heavy metals pollution sources
5. Heavy metals human intake by a food chain
6. Self- purification
7. Energy loss in biodegradation
8. Differences intolerance of invertebrate groups to organic pollution
9. Anaerobic biodegradation in the environment
10. Aerobic biodegradation in the environment
11. Control of thermal pollution