Q. P. Code: 33978

2 ½ Hours

Total Marks: 75

1. Attempt **all** questions.
2. **All questions** carry **equal** marks.
3. Draw **neat labeled diagrams** wherever necessary.
4. Use of **log tables** and **non-programmable calculator** is **allowed**.
5. For **Q.2, Q.3 and Q.4** attempt A and B **OR** C and D.

Q.1 Do as directed (Any fifteen) **15**

1. What are surfactants?
2. _____ or rubbish is the most visible form of pollution.
3. Give any one example of particulate matter.
4. Soil sediments refer to the deposition of trace elements or metals such as _____.
   i)Hg ii) As iii) Cd iv) All of the above
5. Give full form of MPN.
6. Mist or liquid particles are formed by condensation of vapour having a size of less than _____ microns.
7. Give any one minor source of stratospheric chlorine.
8. _____ is used as a substitute for Chlorofluorocarbons.
9. Define Global warming.
10. ODP stands for _____.
11. Give any one example of Greenhouse gas
12. Global temperatures expected to rise by the end of 21st century by _____ ^{o}C.
13. Suggest any one control measure for Acid rain.
14. SRB stands for _____.
15. What is Bioaugmentation?
16. Immobilization of cells can be carried out using _____.
    I) Alginate ii) Sucrose iii) Starch iv) None of the above
17. Mention Use of Thermal Enhancements.
18. Define Phytostabilization.
19. Role of Bioscrubbers.
20. _____involves the injection of air into the saturated zone of a contaminated soil.

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Q. 2 A	Give an account of types of air pollution.	**08**
Q. 2 B	How can the assessment of water quality be carried out?	**07**
	OR	
Q. 2 C	Discuss the various causes of water pollution?	**08**
Q. 2 D	Elaborate the impact of solid waste on health.	**07**
Q. 3 A	What is 'Greenhouse effect'? Describe factors responsible for Greenhouse effect.	**08**
Q. 3 B	Explain the role of Chlorofluorocarbons in Ozone depletion.	**07**
	OR	
Q. 3 C	Define Acid rain. Explain the formation of acid rain.	**08**
Q. 3 D	Add a note on effects of UV-B light on health and environment.	**07**
Q. 4 A	Define Bioremediation. Add a note on the process of hazardous site remediation.	**08**
Q. 4 B	With respect to microorganisms, Explain: i) Designed organisms and consortia ii) In-vivo and in-vitro Design strategies	**07**
	OR	
Q. 4 C	Discuss In-situ physical treatment approach for monitoring efficacy of Bioremediation.	**08**
Q. 4 D	Explain: Phytoremediation & Mycoremediation.	**07**

Q. 5 Write Short notes on **any three** of the following **15**

a. Causes of Soil erosion.

b. Control of Eutrophication.

c. Antarctic conditions.

d. Kyoto protocol.

e. Degradation of pollutants by bacteria.
