

M.Sc. DEGREE I SEMESTER EXAMINATION IN
ENVIRONMENTAL TECHNOLOGY
APRIL 2001

ENVIRONMENTAL MICROBIOLOGY

Time: 3 Hours

Maximum Marks: 50

I. Answer any twenty of the following:-

(20 x 1 = 20)

1. What is filter sterilization?
2. Explain resolution power of an electron microscope.
3. What is dry sterilization?
4. What is a procaryot cell?
5. Autotrophic food good production in water.
6. What are asymptomatic virus carriers?
7. What is the importance of chlamydo spores in fungal reproduction?
8. List virus inactivation methods.
9. List effect of virus infection on a cell.
10. Virus is an obligatory parasite - Explain.
11. What is a bacterial biofilm?
12. List virus replication phases in cell culture.

(Turn over)

13. What is an attenuated vaccine?
14. Describe plasma membrane of a cell.
15. What is a virus plaque assay?
16. What are deuteromycets?
17. What are probiotic bacteria in nature?
18. What is meant by generation time of bacteria?
19. What is electrophoretic mobility of proteins?
20. What is autoradiography?
21. What is PCR?
22. What is resolution of a microscope?
23. Explain mode of action of penicillin on bacteria.
24. What is a cell line?
25. What is an interferon?

II. Answer any ten of the following:

(10 x 2 = 20)

1. Ion exchange chromatography.
2. SDS - PAGE
3. Cell lines and their importance in animal virology.

4. Microbial migration.
5. Koch's postulate.
6. Animal virus carriers.
7. Structure of bacterial endospore.
8. Primers used in PCR.
9. Whitespot virus of penaeid shrimp.
10. Gradient ultracentrifugation.
11. Growth stages of an eucaryotic cell.
12. Features of microsporidians.
13. Cell wall of gram negative bacteria.
14. Difference between fluorescence and phosphorescence.

III. answer any two of the following:

(2 x 5 = 10)

1. Mode of action of antibiotics on bacteria.
2. DNA sequencing by chain termination method.
3. Methods for determination of microbial production in water.
4. Phase contrast microscopy in contrast to dark field microscopy.
