

**MICROBIOLOGY**

PAPER - III

MICRO/D/13/18/III

Time : 3 hours

Max. Marks : 100

**Important instructions:**

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

1. Enumerate the methods used for routine bacteriological examination of water. Write briefly on presumptive coliform count. 4+6
2. What is an Infection Control Committee? Who are the members of this committee and what is its role? 1+(4+5)
3. What are the different types of vancomycin resistance in enterococci? Elaborate the detection methods of vancomycin resistance according to CLSI guidelines. 2+8
4. Enumerate the causes of chronic meningitis in India. Briefly outline the laboratory diagnosis with special reference to recent advances. 2+(6+2)
5. Define MIC. What do you understand by MIC<sub>50</sub> and MIC<sub>90</sub>? Briefly outline methods of MIC determination along with their advantages and disadvantages. 1+2+7
6. Enumerate the various molecular methods in diagnostic Microbiology. Briefly describe each with their clinical applications. 2+8
7. Define emerging and re-emerging infections. Enumerate their infections in India. List the factors contributing to emerging infections and methods to detect them. 2+2+(3+3)
8. Enumerate various methods of gene transfer in bacteria. Briefly discuss implication of conjugation in Clinical Microbiology. 2+8
9. Enumerate various antigen antibody reactions. Define agglutination and briefly describe various types of agglutination reaction with suitable examples. 2+(2+6)
10. What do you understand by laboratory accreditation and how is it done? What are the advantages of this? (2+4)+4