



MICROBIOLOGY

PAPER – I

MICRO/D/14/18/I

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. Define disinfection. Classify various disinfectants and write in brief on their mode of action. Describe the various tests used for determining efficacy of disinfectants. 2+4+4
2. Briefly describe various methods by which bacteria can acquire new genes. Write in short about transposable genetic elements. 5+5
3. Define pathogenicity and virulence. Write briefly on the factors predisposing to microbial pathogenicity and determinants of virulence. 4+6
4. What are Toll like receptors? Describe in brief about their role in immunity. 3+7
5. Define nosocomial infections. Enlist the organisms causing them. Write briefly on the prevention of these infections. Describe the factors predisposing to such infections. 1+3+4+2
6. Describe briefly the various methods used for assessment of bacterial contamination of milk. 10
7. What are natural killer cells? Describe in short their role in immunity. 3+7
8. Name and describe various antigens. Describe in brief immunotherapy of cancer. 5+5
9. What is autoimmunity? Describe various mechanisms involved in autoimmunity giving suitable examples. 3+7
10. Describe the principle, types and clinical applications of ELISA techniques. 2+3+5
