

MICROBIOLOGY
PAPER-IV

MIC/J/18/18/IV

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.

Write short notes on:

- | | | |
|-----|--|---------|
| 1. | Principle of MALDI-TOF and its application in Diagnostic Microbiology Laboratory. | 5+5 |
| 2. | Discuss the Antibiotic Stewardship Program and its components (ASP). Describe the role of Microbiologist in ASP. | 5+5 |
| 3. | Non-culture methods for diagnosis of sepsis. | 10 |
| 4. | Define Point-of Care tests. Give an example and describe in detail the principle of the test. | 3+(2+5) |
| 5. | Define vaccine. What are the characteristics of conjugate vaccines? Give two examples. | 2+6+2 |
| 6. | Classify the phenotypic and genotypic methods used for determining relatedness of bacteria. Mention the advantages and disadvantages of any three methods. | 4+6 |
| 7. | Define quality assurance and describe in detail quality assurance programme for a diagnostic microbiology laboratory. | 2+8 |
| 8. | What is Real-time Polymerase chain reaction? Give its principle. What are the advantages over the conventional PCR? | 2+5+3 |
| 9. | Enumerate the causes of nosocomial diarrhoea. Write briefly about hospital infection control programme. | 3+7 |
| 10. | a) Principle and applications of microarray in Microbiology.
b) What are edible vaccines and their current status? | 5+5 |
