

MICROBIOLOGY

PAPER - IV

MICRO/D/13/18/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.

1. Enumerate the different types of microscopes used in Microbiology. Briefly discuss their principle and use in Microbiology. 2+(6+2)
2. Define and classify immunity. Briefly write on various mechanisms of innate immunity. (1+2)+7
3. What do you understand by receptors of the immune system? What is their function? Write briefly on preformed receptors. 2+2+6
4. What is Antibody Dependent Cell Mediated Cytotoxicity (ADCC)? Describe the clinical conditions in which ADCC may be involved. 4+6
5. Define autoimmunity. Briefly write on various mechanisms of autoimmunity. 2+8
6. Define and classify hypersensitivity. How would you assess different types of hypersensitivities? 3+7
7. Define mutation. What are different types of mutations? How would you demonstrate mutations? 1+3+6
8. Enumerate the various methods used in characterizing strains involved in an outbreak. Write in brief the principle of each with one example of bacteria for which it can be used. 3+7
9. Enumerate various types of vaccines. Write briefly on advances in vaccine delivery systems, vaccines for adults and modern trends in vaccine development. 2+(3+3+2)
10. Define sterilization and disinfection. What are the different sterilization methods commonly used in various areas of the hospital? How will you monitor the process of autoclaving? 3+5+2
