

MICROBIOLOGY
PAPER-II

MIC/J/18/18/II

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:

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| 1. | Briefly discuss the antimicrobial resistance and the prevention strategies. | 10 |
| 2. | Non-culture methods for the diagnosis of invasive fungal infections. | 10 |
| 3. | Pathogenesis and laboratory diagnosis of Mucormycosis. | 5+5 |
| 4. | Regarding Carbapenem-Resistant Enterobacteriaceae (CRE): a) Describe mechanism of resistance b) Enumerate the risk factors c) Phenotypic and genotypic methods of detection | 4+2+4 |
| 5. | Enumerate the rapid methods for the diagnosis of tuberculosis. Describe the principle of each test. What is MDR-TB and XDR-TB? | 2+4+4 |
| 6. | Describe the changing epidemiology of Candida infections in the health care setting. Briefly discuss Candida auris. | 5+5 |
| 7. | Regarding acute bacterial meningitis: a) Enumerate the causes b) Briefly discuss the laboratory diagnosis. c) Describe the currently available pneumococcal vaccines. | 2+4+4 |
| 8. | What is Mycotic Mycetoma? Enumerate the causative agents. Describe the pathogenesis and laboratory diagnosis. | 2+2+6 |
| 9. | a) Laboratory diagnosis of congenital syphilis. b) Salient features of program for elimination of congenital syphilis. | 5+5 |
| 10. | Epidemiology of Scrub Typhus in India and its laboratory diagnosis. | 5+5 |
