

MICROBIOLOGY

PAPER-II

MICRO/D/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:

1. Epidemiology, pathogenesis and laboratory diagnosis of Leptospirosis. 3+3+4
2. Rhinosporidiosis 3+3+4
 - a) Current nomenclature.
 - b) Pathogenesis.
 - c) Laboratory diagnosis.
3. Enumerate various methods of diagnosis of infections due to *Mycobacterium tuberculosis* and describe the principle and working of "GeneXpert". 3+(2+5)
4. Discuss the changing trend of infections due to *Vibrio cholerae* in India with respect to its biotypes and antimicrobial resistance. 10
5. Enumerate antifungal agents, their mechanism of action and current status of drug resistance. 3+3+4
6. Define pyrexia of unknown origin, enumerate bacterial causes and discuss laboratory diagnosis of Brucellosis. 2+3+5
7. Oculomycosis: 2+3+5
 - a) Fungal etiological agents.
 - b) Sample collection.
 - c) Laboratory diagnosis.
8. Non-albicans *Candida*: 5+5
 - a) Emerging species and their clinical implications.
 - b) Role of chromogenic methods for laboratory diagnosis.
9. Non-gonococcal urethritis: 4+6
 - a) Enumerate causative agents.
 - b) Laboratory diagnosis.
10. Antibiotic resistance in bacteria: 5+5
 - a) Enumerate various mechanisms of resistance.
 - b) Methods of detection and identification of MRSA.
