

**MICROBIOLOGY**  
**PAPER-II**

Time: 3 hours  
Max. Marks:100

MICRO/J/20/18/II

**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. What are the major virulence factors of *Streptococcus pyogenes*? Describe their role in pathogenesis. 5+5
2. Define carrier state in typhoid fever. Describe laboratory diagnosis of typhoid carriers. Discuss antimicrobial resistance in typhoid fever. 2+4+4
3. Describe the source of infection and transmission of *Leptospirosis*. Discuss its laboratory diagnosis. 3+7
4. Enumerate bacterial causes of food poisoning. Write briefly about the specimen collection and diagnosis of food poisoning. 3+2+5
5. Define XDR tuberculosis. Discuss the diagnosis of XDR tuberculosis using newer technology. 4+6
6. Non-culture methods for diagnosis of sepsis. 10
7. Pathogenesis, clinical presentation, laboratory diagnosis and treatment of *Histoplasmosis*. 10
8. Describe general character of *Dematiaceous* fungi. Discuss infection caused by any one of these along with its identification methods. 3+3+4
9. Echinocandins and their role in management of *Candida* biofilm. 10
10. What is the significance of non-albicans *Candida*? How are they diagnosed in the laboratory? 5+5

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