

**KALOJI NARAYANA RAO UNIVERSITY OF HEALTH SCIENCES
WARANGAL, TELANGANA STATE – 506 002**

M.D/ M.S DEGREE EXAMINATIONS: OCTOBER 2025

MICROBIOLOGY

PAPER – I

Time: 3 Hours

Max Marks: 100

Note: Answer all questions

Give Diagrammatic representation wherever necessary

Write an essay on the following:

10 X 10 = 100

1. Classify Disinfectants and discuss the levels of disinfection. Discuss the common disinfectants used in the hospital and their advantages and disadvantages.
2. Discuss the mechanism of transfer of genetic material between bacteria. Write a note on transposable genetic elements
3. List the antibiotics inhibiting cell-wall synthesis. Write in detail the mechanism of resistance and laboratory methods of resistance detection.
4. Classify methods of Sterilisation. Discuss in detail about Autoclave and its application. Add a note on Biological indicators
5. Discuss in detail the bacterial growth curve. Write a note on its application in antimicrobial susceptibility test done in the laboratory
6. Describe the complement pathway and discuss the role in health and disease. Write a note on its laboratory diagnostic methods
7. List the types of hypersensitivity reactions. Describe in detail the pathogenesis, clinical features and management of anaphylaxis. Add a note on atopy.
8. Describe the mechanism of innate immunity with special reference to soluble molecules and cell types involved in innate immunity.
9. Describe the immunological aspect of organ transplantation. Discuss HLA typing and add a note on immunomodulators.
10. Classify antigen antibody reactions. Define agglutination reaction. Discuss the different types of agglutination reactions and its clinical application.
