

PG Degree Supplementary Examinations in Microbiology (MD) -
November 2016

Paper I – General Microbiology and Immunology

Time: 3 hrs

Max marks:100

- ***Answer all questions***
- ***Draw diagrams wherever necessary***

Essays: (20)

1. Discuss various mechanisms of development of antimicrobial resistance in bacteria. Briefly outline various laboratory methods of detection of NDM-1.

Short essays: (8x10=80)

2. Enumerate various bacteriocin typing methods of bacteria. Briefly describe pyocin typing methods in pseudomonas aeruginosa.
3. Discuss various hospital environment surveillance methods. Add a note on the role of microbiologist in control of nosocomial infections.
4. Discuss various strategies developed by bacteria for evading the host immune response.
5. Discuss flexible genetic exchange systems in evolution of bacterial virulence.
6. Role of microbiologist in formulation of hospital antibiotic policy.
7. Define autoimmunity. Discuss the mechanisms underlying autoimmunity.
8. Discuss various bio-containment levels to handle pathogenic microorganisms. Add a note on the various types of microbiological bio-safety cabinets.
9. Discuss DNA fingerprinting techniques for the epidemiological analysis of pathogenic microorganisms.
