

QP Code:101109

Reg.No.:.....

**PG Degree Supplementary Examinations in Microbiology (MD) -
November 2015**

Paper I – General Microbiology and Immunology

Time: 3 hrs

Max marks:100

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

Essays: (20)

1. Describe with flow diagram, various metabolic pathways bacteria have evolved for breaking down hexoses into smaller molecular weight compounds.

Short essays: (8x10=80)

2. Discuss quality management of microbiology laboratory.
3. Discuss AmpC β -lactamases. Outline both phenotypic and genotypic methods for its detection. How will you differentiate it from ESBL producing pathogens.
4. Enumerate guidelines for disinfection of surgical scopes. Outline factors affecting efficacy of disinfection. Briefly describe in-use test.
5. Discuss the role of antigen presenting cells in antigen processing and MHC restriction of T-cells. Outline role of MHC in health and disease.
6. Discuss the role of cytokines in health and disease. Briefly describe role of NK cells.
7. Discuss the role of mucosal immunity as initial defence against HIV infection.
8. Enumerate various types of antigen-antibody reactions. Briefly describe various gel diffusion techniques to detect antigen-antibody reactions.
9. Describe the various procedures a laboratory has to follow to undertake for accreditation of laboratories.
