

FACULTY OF SCIENCE

M. Sc. II – Semester Examination, May / June 2016

Subject : Microbiology

Paper – I : Microbial Physiology

Time : 3 Hours

Max. Marks: 80

Note : Answer all questions from Part–A and Part–B. Each question carries 4 marks in Part–A and 12 marks in Part – B.

PART – A (8 x 4 = 32 Marks)
(Short Answer Type)

- ~~1~~ Photoheterotrophy
- ~~2~~ Cytochromes
- ~~3~~ Complex media
- ~~4~~ Slant culturing
- ~~5~~ Supra molecules
- ~~6~~ Ideo phase
- ~~7~~ Spore structure
- ~~8~~ Virulence

PART – B (4 x 12 = 48 Marks)
(Essay Answer Type)

- ~~9~~ (a) What are heterotrops? Explain the heterotropic metabolism in bacteria with examples.
OR
(b) Explain the essential micro and macro nutrients required for microbes.
- ~~10~~ (a) Explain various aerobic and anaerobic culturing methods of microorganisms.
OR
(b) Discuss about various media used for cultivation of fungi and algae.
- ~~11~~ (a) Define Microbial growth. Discuss the various physical and nutritional factors effecting growth.
OR
(b) Explain various cell organelles of bacteria and comment on their functioning.
- ~~12~~ (a) Discuss the phenomenon of sporulation. Adding a note on its biochemistry and genetics.
OR
(b) Explain the laboratory testing methods for bacterial virulence properties.
