

FACULTY OF SCIENCE

B.Sc. II – Year Examination, March / April 2016

Subject : MICROBIOLOGY

Paper – II

Microbial Physiology and Genetics

Time : 3 hours

Max. Marks : 100

Answer all questions from Part-A and Part-B.

Part – A (8 X 5 = 40 Marks)

(Short Answer Type)

- 1 Methylotrophs
- 2 Enzyme unit
- 3 Substrate-level phosphorylation
- 4 Glyoxylate cycle
- 5 Alleles
- 6 Frame shift mutations
- 7 Wobbel hypothesis
- 8 Vectors

Part – B (4 X 15 = 60 Marks)

(Essay Answer Type)

- 9 a) Discuss the nutritional requirements of micro-organisms in detail.
OR
b) Give an account on enzyme properties and their classification.
- 10 a) Describe the TCA cycle in detail with its metabolic significance.
OR
b) Describe the lactic acid fermentation in detail.
- 11 a) Describe briefly the semiconservative replication of DNA.
OR
b) Give an account on types of DNA damage and repair mechanisms.
- 12 a) Give an account on types of RNA and their functions.
OR
b) What are genomic and cDNA libraries? Give their importance in gene cloning.
