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.
   b) Give an account on enzyme properties and their classification.

10. a) Describe the TCA cycle in detail with its metabolic significance.
    b) Describe the lactic acid fermentation in detail.

11. a) Describe briefly the semiconservative replication of DNA.
    b) Give an account on types of DNA damage and repair mechanisms.

12. a) Give an account on types of RNA and their functions.
    b) What are genomic and cDNA libraries? Give their importance in gene cloning.