FACULTY OF SCIENCE

M. Sc. IV – Semester Examination, May / June 2015

Subject : Microbiology

Paper – I

Molecular Biotechnology

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. Protein kinases
2. Promotor
3. Mechanism of plasmid transfer
4. Multiplex PCR
5. Clonning Vedors
6. Restriction Enzymes
7. Patent
8. 16S r RNA typing

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

9. (a) Elucidate the role of sigma switch in sporulation in *B.subtilis.*

OR

(b) Write on gene regulation in Eukaryotic system.

10. (a) Describe the mechanism of transposition.

OR

(b) Give the strategies for primer design and describe multiplex PCR and its application.

11. (a) Give the construction of c DNA library and add a note on its application.

OR

(b) Describe principle of hybridoma technology. Add a note on its application.

12. (a) Describe the micro array technique and its importance.

OR

(b) Give an overview of sequence data bases and data mining techniques.

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