

FACULTY OF SCIENCE
M. Sc. IV – Semester Examination, May / June 2016

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 G-proteins
- 2 Enhancers
- 3 Primer designing
- 4 Multiplex PCR
- 5 cDNA library
- 6 DNA methylation
- 7 Patenting
- 8 Pharmacogenomics

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

- 9 (a) Describe the phenomenon of repression in bacterial gene regulation? Give examples.
- OR**
- (b) How does steroid / peptide hormone regulation occur? Mention the role of G-protein coupled receptors.
- 10 (a) What are transposable elements? Classify and give their properties.
- OR**
- (b) Classify plasmids and mention their applications.
- 11 (a) Mention the various blotting techniques with a brief note on their applications.
- OR**
- (b) What is hybridoma technology? Mention its applications.
- 12 (a) What are microarrays? Classify and give examples of their applications.
- OR**
- (b) What are molecular markers? How are they identified?
