

**FACULTY OF SCIENCE****M.Sc. IV-Semester Examination, May / June 2017****Subject: Microbiology  
Paper- I  
Molecular Biotechnology****Time : 3 Hours****Max. Marks: 80****PART – A (4x8=32 Marks)  
(Short Answer Type)**

1. X repressor and activators
2. Importance of secondary messengers
3. Transposon Mutagenesis
4. Designing PCR primes
5. Expression vectors
6. Western blot technique
7. AFLP and its importance
8. Pharmogenomics

**PART – B (4x12=48 Marks)  
(Essay Answer Type)**

9.(a) Give an account of levels of regulation of trp operan.

**OR**

(b) Describe the regulation of lambda phage.

10.(a) Describe principle and application of PCR and its variants.

**OR**

(b) Describe types of bacterial transposons and mechanism of transposition.

11.(a) Give an account of various blotting techniques along with their applications.

**OR**

(b) Describe the process of genomic library construction and compare it with C-DNA library construction.

12.(a) What is IPR? Describe the importance and significance of patenting.

**OR**

(b) Describe RAPD and AFLP techniques along with their applications.

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