

**FACULTY OF SCIENCE**

**M.Sc. II-Semester (CBCS / NONCBCS) (New) Examination, May / June 2015**

**Subject : Biochemistry**

**Paper : II  
Molecular Biology**

**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 mt DNA replication
- 2 Fidelity of replication
- 3 DNA photolyases
- 4 Role of BRCA in DNA repair
- 5 Actinomycin D
- 6 Promoters
- 7 Isoprenylation
- 8 PEST-sequences

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

- 9 a) Outline various steps involved in replication of circular chromosome by rolling circle model.  
**OR**  
b) Describe the roles of various eukaryotic DNA-polymerases.
- 10 a) Outline DNA repair by Excision – repair mechanisms.  
**OR**  
b) Describe the mechanism of mismatch repair in *E.coli*.
- 11 a) Differentiate between eukaryotic and prokaryotic RNA-polymerases.  
**OR**  
b) Describe the structure of Ribosomes.
- 12 a) Define signal peptide and describe protein targetting to mitochondria.  
**OR**  
b) Outline the role of ubiquitin in protein degradation.

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