

FACULTY OF SCIENCE

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

Subject : Biochemistry

Paper : III

Biochemical Genetics and Model Organizations

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 Polygenic inheritance and polyploidy
- 2 Spontaneous and induced mutations
- 3 Yeast Ty elements
- 4 Recombination
- 5 Transduction
- 6 Conservative transposition
- 7 GLO fish
- 8 Arabidopsis Thaliana

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

- 9 a) Give an account of gene interactions.
OR
b) Write a note on :
i) Mutagens ii) Mendel's laws
- 10 a) What is genetic variation? Describe Hardy-Weinberg law and its applications in genetics.
OR
b) Write a note on :
i) Two-point crosses ii) Morgan's experiments
- 11 a) Give an account of complementation analysis.
OR
b) Write a note on :
i) Conjugational gene mapping ii) Deletion mapping
- 12 a) How does development and nervous system can be studied using C elegans?
OR
b) Write a note on :
i) Cytological proof of crossing over
ii) Embryogenesis in xenopus.
