

15121

M.Sc. DEGREE EXAMINATION, NOVEMBER 2016.

FIRST SEMESTER

Genetics and Genomics

Paper I — PRINCIPLES OF GENETICS

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Lampbrush chromosomes
2. Telomeres
3. Co-dominance
4. Pleiotropism
5. Test cross
6. Polyteny
7. Pedigree analysis
8. Sex inked genes

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Give a detailed account on structure of eukaryotic chromosomes?

Or

10. Write a detailed note on meiosis and its significance.

11. Explain Mendel's principles of inheritance with suitable examples.

Or

12. Write an account on epistatic and non-epistatic interaction.

13. Explain heterosis and its significance.

Or

14. Write a detailed note on cytogenetic variations?

15. Write a detailed note on linkage. Explain factors affecting Strength of linkage.

Or

16. Write a detailed note on recombination and crossing over.

