61329

Third Semester B.Sc. Degree Examination, November/December 2019

(CBCS –2018-19 Onwards)

Genetics

Paper III – CYTOGENETICS

Time : 3 Hours]   [Max. Marks : 70

Instructions to Candidates : *Draw diagrams wherever necessary.*

PART – A

Answer any **FIVE** of the following :   **(5 × 3 = 15)**

1. What are 'Histones'?

2. Distinguish between 'Euchromatin' and 'Heterochromatin'.

3. List the factors affecting linkage.

4. What is sex-linked inheritance?

5. Write a note on Somatic crossing over.

6. Define Chiasma. Mention its significance.

7. What is monoploidy?

PART – B

Answer any **FIVE** of the following :   **(5 × 5 = 25)**

8. Explain the inheritance of sigma factor in Drosophila.

9. Write a note on sex-linked genes in poultry.

10. Describe Holliday model of crossing over.

11. Explain 'Bridges theory of Non-disjunction'.

12. What is Haemophilia? Explain its inheritance in man.

13. Explain ultra structure of chromosome with a neat labelled diagram.

14. Write a note on 'Autopolyploidy'.

PART – C

Answer any **THREE** of the following :   (3 × 10 = 30)

15. Explain the structure of lamp brush chromosome with a neat labelled diagram.

16. Write short notes on :

    (a)   Monosomy

    (b)   Trisomy.

17. Describe the structural chromosome abberations.

18. Explain the steps in construction of genetic map in Drosophila.

19. Write notes on :

    (a)   Karyotype and Idiogram

    (b)   B-Chromosome.