61329

Third Semester B.Sc. Degree Examination, August/September 2021

(CBCS)

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. Define chromatin.
2. What are supernumerary B chromosomes?
3. State the features of attached X chromosome.
4. Give a note on Sex linkage.
5. What is crossing over? Mention its types.
6. List the significance of linkage group.
7. Distinguish between autopolyploidy and allopolyploidy.

PART – B

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

8. What are primary construction? Mention its functions.
9. Give a brief note on the significance of Hetero Chromatin.
10. Explain the sex linkage in moth.
11. What is meiotic non-disjunction?

12. Explain in brief linkage group in Drosophila.

13. Distinguish between coupling and Repulsion hypothesis.

14. Write short notes on translocation.

PART – C

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

15. Describe the structure of chromosome with a neat labelled diagram.

16. Write short notes on :

    (a) Nucleosome model

    (b) Kinetochore

17. Explain the inheritance of Kappa particle in paramecium.

18. Give a detailed account on the molecular mechanism of crossing over in Drosophila.

19. What is Genetic map? Add a note on interference and coincidence.

———————