

25P229

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Name:

Reg.No:

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2026

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19PBOT2C05 - CYTOGENETICS, GENETICS, BIOSTATISTICS, PLANT BREEDING AND EVOLUTION

(Botany)

(2019 Admission onwards)

Time : 3 Hours

Maximum : 30 Weightage

Part-A

Answer any *four* questions. Each question carries 2 weightage.

1. Differentiate between X number and n number.
2. What are Ring chromosomes? What is the fate of ring chromosomes in cell division?
3. Explain Extranuclear inheritance with example.
4. Explain various methods of census and sampling.
5. Explain biased and non-biased errors.
6. What is meant by IPR protection of a plant variety?
7. Explain Darwin's theory of evolution.

(4 × 2 = 8 Weightage)

Part-B

Answer any *four* questions. Each question carries 3 weightage.

8. Explain the different types of trisomics. Mention their significance.
9. Write notes on FISH and GISH.
10. Explain transformation and mapping of genes in bacteria.
11. Describe Transposable elements in Eukaryotes.
12. Describe SPSS.
13. Mention the main conventional methods of plant breeding.
14. Give an account on polyploidy breeding.

(4 × 3 = 12 Weightage)

Part-C

Answer any *two* questions. Each question carries 5 weightage.

15. Explain Hardy-Weinberg law. Write a note on Factors effecting Hardy Weinberg equilibrium
16. Describe how correlation and regression analysis helps in concluding our experimental hypothesis?
17. Explain a detailed account on any eight organization involved in plant breeding studies.
18. Explain evidences of evolution.

(2 × 5 = 10 Weightage)
