

D2ABT2102

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Name.....

Reg.No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2022  
(Regular/Improvement/Supplementary)

BOTANY

FBOT2C05: GENETICS, BIOSTATISTICS, PLANT BREEDING AND EVOLUTION

Time: 3 Hours

Maximum Weightage: 30

**Part A: Answer any *four* questions. Each carries 2 weightage.**

1. What is progressive evolution? Give an example.
2. Give a short account on QTL mapping and its importance.
3. What is heterobeltiosis?
4. Differentiate between standard deviation and standard error.
5. What are LINES?
6. Elaborate on Hardy-Weinberg equilibrium.
7. What are the measures of central tendency?

(4 × 2 = 8 weightage)

**Part B: Answer any *four* questions. Each carries 3 weightage.**

8. Describe the changes during domestication of wild plants.
9. Write a note on methods of data presentation.
10. Describe the sources of natural variation in plant breeding.
11. Give an account on transposable elements in bacteria.
12. Discuss various data collection methods in biological sciences.
13. What are coacervates? Detail the process of coacervation.
14. Explain polygenic inheritance with example.

(4 × 3 = 12 weightage)

**Part C: Answer any *two* questions. Each carries 5 weightage.**

15. Discuss the factors that affect genetic equilibrium of a population.
16. Explain the major theories on organic evolution.
17. Write an essay on the role of transposons in biological evolution.
18. Give a detailed account on quality breeding.

(2 × 5 = 10 weightage)