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Name.....

Reg. No.....

SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2024

(CBCSS—UG)

Botany

BOT 6B 10—GENETICS AND PLANT BREEDING

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

Section A*Answer all questions.**Each question carries 2 marks.**Ceiling : 20 Marks.*

1. Define back cross.
2. Define law of dominance.
3. Define linkage and crossing over.
4. What is quantitative inheritance ?
5. What are multiple alleles ?
6. Differentiate mass selection and pure line selection.
7. Briefly explain the role of ICAR in plant breeding.
8. What is inbreeding depression.
9. What polyploidy breeding ?
10. Explain Hardy-Weinberg Law and factors affecting it.
11. Define chromosome mapping.
12. What are lethal genes ?

Turn over

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Section B

Answer all questions.

Each question carries 5 marks.

Ceiling : 30 Marks.

13. Discuss Mendel's laws of inheritance. Which one of these laws you consider the most and why ?
14. What is dominant epistasis ? Give a suitable example.
15. Write a short note on heterosis breeding.
16. What are the components of plant genetic resources.
17. Briefly describe the procedures of mutation breeding.
18. What is polygenic inheritance ?
19. Explain multiple allelic inheritance and its significance

Section C

Answer any one question.

The question carries 10 marks.

20. With a suitable example write an essay on extra nuclear inheritance.
21. What are the objectives of plant breeding ? Briefly explain modern tools for plant breeding.

(1 × 10)