D 100516 **(Pages : 2)** **Name.....**

Reg. No.....

SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2024

(CBCSS—UG)

Botany

BOT 6B 14 (E3)—GENETICS AND CROP IMPROVEMENT

(2019 Admission onwards)

Time : Two Hours Maximum : 60 Marks

Section A

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

1. What is Selection ? Give any *two* methods of selection strategies.
2. Expand CIMMYT and add a note on its activities.
3. Write a note on importance of floral biology in crop improvement.
4. What is Quarantine ? Why is it important ?
5. What is back crossing ? How is it done ?
6. Give an account of biopesticides.
7. What is the significance of haploids in plant breeding ?
8. Differentiate between polygenic and oligogenic resistance.
9. What is Quarantine ? Why is it important ?
10. What is Conservation ? Mention its significance.
11. Write a note on origin of pepper.
12. What is Mutation ? Give its application in crop improvement

Turn over

Section B

Answer **all** *questions.*
Each question carries 5 *marks.*
Ceiling : 30 *Marks.*

13. Explain the activities of NBPGR.

14. Describe the breeding techniques and achievements in Rubber.

15. What is Hybridization ? Explain heterosis. Give its impact on crop improvement

16. What is nitrogen fixation ? Write a note on genetics of nitrogen fixation.

17. Write a note on any *two* International research institutes contributing their research activities for crop improvement

18. Explain Plant introduction.

19. What is heteroploidy in crop improvement ? Explain various methods you have studied.

Section C

Answer any **one** *question.*
The question carries 10 *marks.*

20. Explain the various breeding strategies adopted in crop improvement. Mention their advantages and limitations.

21. List out the different types of abiotic stresses exhibited by plants. Explain the breeding approaches for any *two* abiotic stresses you have studied.

(1 × 10 = 10 marks)