

C 80158

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Name.....

Reg. No.....

SIXTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, MARCH 2020

(CUCBCSS—UG)

Botany

BOT 6B 15—GENETICS AND CROP IMPROVEMENT

Time : Three Hours

Maximum : 80 Marks

Section A

Answer all questions.

Each question carries 1 mark.

1. Expand CIMMYT .
2. Name two pepper varieties developed by breeding technique.
3. Define interspecific hybridization.
4. Name a phosphate biofertilizer.
5. What are cryoproteins ?
6. Define acclimatization.
7. Where is KFRI located ?
8. Give two examples of abiotic stress in plants.
9. Name a bioinsecticide.
10. What is HSP ?

(10 × 1 = 10 marks)

Section B

Answer all questions.

Each question carries 2 marks.

11. Distinguish between vertical and horizontal disease resistance.
12. What is the significance of haploids in crop improvement ?
13. Give two major activities of TBGRI.
14. Write a note on heterobeltiosis.
15. Give an account on the origin of cashew.

Turn over

16. List two achievements in Rubber breeding.
17. What is the role of NBPGR in conservation of plant genetic resources ?
18. Explain two problems encountered in the breeding for salinity resistance.
19. Write a note on the use of nitrogen fixing biofertilizers.
20. How is pathogenicity genetically controlled ?

(10 × 2 = 20 marks)

Section C

Answer any six questions.

Each question carries 5 marks.

21. Write briefly on the steps involved in hybridization.
22. What are the difficulties encountered in breeding for disease resistance ?
23. List out the abiotic stresses encountered by plants.
24. What is nitrogen fixation ? Give an account on the genetics of nitrogen fixation.
25. Explain the activities of CTCRI.
26. Write a note on the breeding techniques and achievements with respect to Coconut.
27. Explain the steps involved in plant introduction. Cite an example.
28. Enlist the problems encountered in breeding for freezing tolerance.

(6 × 5 = 30 marks)

Section D

Answer any two questions.

Each question carries 10 marks.

29. What are mutagens ? Give an account on mutation breeding and add a note on its achievements.
30. List out the different types of mineral stress exhibited by plants. How do plants resist mineral stress ?
31. Explain in detail the breeding techniques adopted for insect resistance in plants.

(2 × 10 = 20 marks)