C 21102 (Pages : 2) Name.......................................

Reg. No..................................

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2017

(CUCBCSS–UG)

Botany

BOT 6B09—GENETICS AND PLANT BREEDING

Time : Three Hours Maximum : 80 Marks

Section A

Answer **all** *questions.*
Each question carries 1 mark.

1. Emasculation.

2. Acclimatization.

3. 9:7.

4. Turner's syndrome.

5. Interference.

6. Transgressive variation.

7. Pureline.

8. Law of purity of gametes.

9. Test cross.

10. Plant Quarantine.

(10 × 1 = 10 marks)

Section B

Answer **all** *questions.*
Each question carries 2 marks.

11. Mention the importance of linkage.

12. Define Hardey–Weinberg law.

13. What is inbreeding depression ?

14. What is incomplete dominance ? Write *one* example.

15. Differentiate between phenotype and genotype.

16. Enumerate the characteristics of quantitative inheritance.

Turn over

17. Define inter generic hybrids, citing an example.

18. What is uniparental inheritance ? Mention *one* example.

19. Write an account on clonal selection.

20. Define law of independent assortment, with *one* example.

(10 × 2 = 20 marks)

Section C

Answer any **six** *questions.*
Each question carries 5 marks.

21. Discuss on Genic balance theory.

22. Critically evaluate Y-linked inheritance, citing *one* example.

23. Write a short note on lethal genes and their inheritance.

24. What are the various agencies of plant introduction in India and their major achievements ?

25. Explain the inheritance of skin colour in human being.

26. Describe co-dominance with *one* example.

27. Briefly describe the procedure and applications of pureline selection.

28. What is dominant epistasis ? Explain it with example.

(6 × 5 = 30 marks)

Section D

Answer any **two** *questions.*
Each question carries 10 marks.

29. Describe multiple allelism with examples.

30. What are the characteristic features of sex linked inheritance ? Explain with examples.

31. What is hybridization ? Add a note on the procedure and the achievements of hybridization.

(2 × 10 = 20 marks)