D 40070

(Pages : 2)

Name...................................

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

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2018

(CUCBCSS—UG)

Botany

BOT 6B 09—GENETICS AND PLANT BREEDING

Time : Three Hours

Maximum : 80 Marks

Section A

Answer all questions.
Each question carries 1 mark.

1. Crossing over.

2. Polyploid breeding.

3. Reciprocal crosses.

4. Rh factor.

5. 12 : 3 : 1.

6. Inbreeding depression.

7. Coefficient of coincidence.

8. 1 : 1 : 1 : 1.

9. Holandric genes.

10. Haemophilia.

(10 × 1 = 10 marks)

Section B

Answer all questions.
Each question carries 2 marks.

11. Mention the limitations of mutation breeding.

12. Define Hardey-Weinberg law.

13. What is sickle cell anaemia ?

14. What is genic balance theory ?

15. Differentiate between pure line and pure breeding.

Turn over

16. What are the advantages of mass selection ?

17. Define inter specific hybrids, citing an example.

18. What is co dominance ? Mention one example.

19. Write an account on GM crops.

20. Define law of segregation, with one example.

(10 × 2 = 20 marks)

Section C

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

21. What is linkage ? Discuss on different types of linkage and their importance.

22. Briefly describe any *two* sex chromosomal abnormalities in human.

23. Explain the inheritance of ear size in maize.

24. Write note on resistance breeding.

25. Explain the inheritance of coat colour in rabbit.

26. Write a short note on sex determination in higher plants.

27. What is hybridization ? Describe the steps involved in the procedure of hybridization.

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

(6 × 5 = 30 marks)

Section D

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

29. Describe the characteristics of polygenic inheritance with examples.

30. Explain the various methods of plant selection, enumerating their merits and demerits.

31. What is cytoplasmic inheritance ? Explain it with examples.

(2 × 10 = 20 marks)