C 80152   (Pages : 2)   Name...

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

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

(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. What is hybrid vigour ?

2. Expand ICAR.

3. What is lethal gene ?

4. Define test cross.

5. State law of purity of gametes ?

6. Name a disease caused due to monosomy of sex chromosome.

7. Who discovered linkage ?

8. Give an example for crop variety introduced to India.

9. Which is a selection method suitable for self pollinated crops ?

10. Give the ratio of complementary gene interaction.

(10 × 1 = 10 marks)

Section B

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

11. What is holandric gene? Give an example.

12. Explain quarantine regulations.

13. What is clonal selection ?

14. State Hardy-Weinberg law.

15. What is the significance of crossing over ?

16. Write a note on Down's syndrome.

17. What is dihybrid cross ? Which law of Mendel is derived from it ?

18. Write short note on emasculation.

19. What is interference ?

20. Distinguish between autpolyploidy and allopolyploidy.

(10 × 2 = 20 marks)

Section C

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

21. Explain XX-XY mechanism of sex determination.

22. Write a short note on 'screening of resistant source'.

23. Explain incomplete dominance with an example.

24. Explain crisscross inheritance with an example.

25. Write a note on genetically modified crops.

26. Explain ABO blood group in man.

27. Write a note on gamma garden.

28. What is pure line ? What are its advantages ?

(6 × 5 = 30 marks)

Section D

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

29. Explain cytoplasmic inheritance with plastid inheritance in (*Mirabilis*) as example.

30. Give a detailed account on plant Introduction.

31. Explain polygenic inheritance with an example.

(2 × 10 = 20 marks)