

D 103024

(Pages : 2)

Name.....

Reg. No.....

**FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2024**

Biotechnology

BTY4B05—GENETICS

(2019 Admission onwards)

Time : Two Hours and a Half

Maximum : 80 Marks

Section A (Short Answers)*All questions can be attended.
Each question carries 2 marks.*

1. What are alleles ?
2. What is a holandric trait ?
3. What are crossover hotspots ?
4. What is genomic imprinting ?
5. What is maternal effect ?
6. What is random mating ?
7. What is genetic drift ?
8. What are lamp brush chromosomes ?
9. Comment on Ames test.
10. What is a retrotransposon ?
11. What is pedigree analysis ?
12. What is Genetic Counseling ?
13. What are Integrins ?
14. What is back cross ?
15. What is Frameshift mutation ?

(Ceiling 25 marks)

Turn over

494670

Section B (Paragraph Type Answers)

All questions can be attended.

Each question carries 5 marks.

16. Explain the law of purity of gametes ?
17. Explain the mechanisms of sex determination in animals ?
18. What are the different numerical aberrations of chromosomes ?
19. What are the different types of transposable elements ?
20. Explain holandric inheritance with suitable examples ?
21. What are the reasons for Mendel's success ?
22. What is transduction ? Explain two types of transduction
23. What is the significance of crossing over ?

(Ceiling 35 marks)

Section C

Answer any two question.

Each question carries 10 marks.

24. What are the different types of uniparental inheritance mechanisms ?
25. Describe the structure and organization of chromosome.
26. Explain lytic and lysogenic cycle of Bacteriophage.
27. Write an essay on Mendelian Inheritance.

(2 × 10 = 20 marks)