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(Pages : 2)

Name.....

Reg. No.....

**SIXTH SEMESTER U.G.(CBCSS—UG) DEGREE EXAMINATION
MARCH 2024**

Microbiology

MBG 6B 10—GENETICS AND GENETIC ENGINEERING

(2019 Admission onwards)

Time : Two Hours and a Half

Maximum : 80 Marks

Section A (Short Answer Type Questions)

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

1. Crossing Over.
2. Epistasis.
3. Copy number.
4. Alleles.
5. Terminator Genes.
6. Pletropy.
7. Southern Blotting.
8. G1 phase in cell cycle.
9. Sex linked inheritance.
10. HFr conjugation.
11. GM foods.
12. Law of Dominance.
13. Test Cross.
14. Phenotypes.
15. Back Cross.

(Maximum 25 marks)

Turn over

Section B (Paragraph Type Questions)

*Answer **all** questions.*

Each question carries 5 marks.

16. PCR and its applications.
17. Extra Chromosomal inheritance.
18. Write on screening of recombinant.
19. Write on ethical problems related to rDNA technology.
20. Explain Mitosis.
21. Law of independent assortment with example.
22. Explain Pedigree analysis.
23. Transduction.

(Maximum 35 marks)

Section C (Essay Type Questions)

*Answer any **two** questions.*

Each question carries 10 marks.

24. Explain conjugation and transformation mechanisms.
25. Explain on DNA libraries.
26. Explain different phases in meiosis with the help of diagrams.
27. Explain various enzymes important in genetic engineering

(2 × 10 = 20 marks)