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C 40620

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Name.....

Reg. No.....

SIXTH SEMESTER U.G. DEGREE EXAMINATION MARCH 2023

(CBCSS—UG)

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. HFr conjugation.
2. GM foods.
3. Law of dominance.
4. Test cross.
5. Phenotype.
6. Back cross.
7. What are transductants ?
8. What is recombination frequency ?
9. What is pedigree analysis ?
10. Lethal allele.
11. Polyploidy.
12. Multiple allele.
13. Epistasis.
14. PCR.
15. DNA libraries.

(Maximum : 25 marks)

Turn over

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Section B (Paragraph Type Questions)

*Answer **all** questions.*

Each question carries 5 marks.

16. Explain Mitosis.
17. Law of independent assortment with example.
18. Explain pedigree analysis.
19. Transduction.
20. Explain transformation in bacteria.
21. Crossing over mechanism.
22. Explain extra chromosomal inheritance with any *one* example.
23. Environmental effects on phenotypic expression.

(Maximum : 35 marks)

Section C (Essay Type Questions)

*Answer any **two** questions.*

Each question carries 10 marks.

24. Explain different phases in meiosis with the help of diagrams.
25. Explain principles of inheritance with the Mendelian experiments.
26. Explain sex linked inheritance with suitable example.
27. Explain various enzymes important in genetic engineering.

(Maximum 20 Marks)