TB245454J

Reg. No :.............................

Name :...............................

BACHELOR'S DEGREE (C.B.C.S) EXAMINATION, NOVEMBER 2024
2022 ADMISSIONS REGULAR
SEMESTER V - CORE COURSE (ZOOLOGY)
ZY5B06B18 - Cell Biology and Genetics

Time : 3 Hours

Maximum Marks : 60

Part A

I. Answer any Ten questions. Each question carries 1 mark

(10x1=10)

1. What is virion?

2. What are the functions of nucleolus?

3. Define nucleosome.

4. Define Telomere.

5. Define cytokines.

6. Distinguish between test cross and back cross.

7. Distinguish between genotype and phenotype.

8. Distinguish between single and double cross over.

9. What are Free Martins?

10. Define gametic coupling and gametic repulsion.

11. Define pedigree.

12. Write any two characteristic features of mutations.

Part B

II. Answer any Six questions. Each question carries 5 marks

(6x5=30)

13. Explain the structure and classification of viruses.

14. Explain the characteristics of a bacterial cell.

15. Explain the functions of lysosome.

16. Define polygenes. Explain skin colour inheritance in man.

17. Comment on complementary genes.

18. Explain genic balance theory of sex determination.

19. Describe Barr body and Lyon Hypothesis.

20. Write notes on complete and incomplete linkage.

21. Write a note on different types of mutations.

Part C

III. Answer any Two questions. Each question carries 10 marks

(2x10=20)

22. Explain the structure and functions of Golgi complex.

23. Explain the sequence of meiotic events with diagrams.

24. Explain different types of allelic and non-allelic interactions with examples for each.

25. Explain the different types of gene mutations and the molecular mechanism involved.