B. Sc. DEGREE (C.B.C.S.) EXAMINATION, MARCH 2023
(2020 Admission Regular, 2019, 2018 Admissions Supplementary)
SEMESTER VI - CORE COURSE (ZOOLOGY)
ZY6B11B18 - BIOTECHNOLOGY, BIOINFORMATICS AND MOLECULAR BIOLOGY

Time : 3 Hours   **Maximum Marks : 60**

Part A

I. Answer any Ten questions. Each question carries 1 mark   **(10x1=10)**

1. Distinguish between linkers and adapters.

2. Define Biotechnology.

3. Comment on Bt cotton.

4. Distinguish between Somatotropin and Somatostatin.

5. Name the scientists who coined the term bioinformatics.

6. Which are the 2 sequence alignments based on the number of sequences?

7. Expand a) OTU b) HTU

8. Differentiate between cistron and muton.

9. Differentiate between leading and lagging stands.

10. Explain TATA box in eukaryotes.

11. Distinguish between inducible and repressible genes.

12. Explain alternative splicing.

Part B

II. Answer any Six questions. Each question carries 5 marks   **(6x5=30)**

13. Comment on plasmid vectors.

14. Write notes on DNA modifying enzymes.

15. Write an account on the social issues related to genetic engineering.

16. Explain bioremediation and its methods.

17. Write briefly on Proteomics and its applications.

18. Explain the pipeline of drug discovery.

19. Write an account on transposons.

20. Describe the features of Watson and Crick model of DNA.

21. Describe post translational modifications.

Part C

III. Answer any Two questions. Each question carries 10 marks   **(2x10=20)**

22. Explain recombinant DNA technology and the steps involved in gene cloning.

23. Describe the medical applications of Biotechnology.

24. Classify protein databases with suitable examples.

25. Write an account on prokaryotic gene regulation.