TRIVANDRUM

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R – 1288

Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree Examination, April 2023

First Degree Programme under CBCSS

Botany

Core Course X

BO 1642 : MOLECULAR BIOLOGY, GENERAL INFORMATICS AND BIOINFORMATICS

(2014-2018 Admission)

Time : 3 Hours

Max. Marks : 80

(Draw diagrams wherever necessary)

I. Answer **all** questions in one or two sentences. Each question carries **1** mark.

1. What is photoreactivation?
2. What are transposons?
3. What is Chargaff's rule?
4. What is a primase?
5. What is cyber ethics?
6. List any two peripherals of a computer.
7. What is copyright?
8. What is CLUSTAL X?

9. What is proteomics?

10. What is SWISS PROT?

(10 × 1 = 10 Marks)

II. Answer **any eight** of the following. Each question carries **2** marks.

11. What is a cistron? Mention its significance.

12. Compare promoters and enhancers.

13. What is reverse transcription?

14. What are housekeeping genes?

15. Briefly describe Hershey-chase experiment.

16. What is plagiarism? List any two-software used for plagiarism.

17. List any four major applications of excel.

18. What do you mean by information overload?

19. What is comparative genomics?

20. Compare wet lab and web lab.

21. What are biodiversity databases?

22. What is PDB? Mention the importance.

(8 × 2 = 16 Marks)

III. Answer **any six** of the following. Each question carries **4** marks.

23. List the salient features of A-DNA.

24. Explain any four features of genetic code.

25. With a diagram explain the structure of tRNA.

26. Comment on 'internet as a knowledge repository.'

27. Write a brief note on IPR.

28. Explain catabolic repression.

29. Write a brief account of BLAST and its significance.

30. Explain the tool used in the molecular visualization.

31. Describe the advantages of molecular phylogeny.

(6 × 4 = 24 Marks)

IV. Write essay on **any two** of the following. Each question carries **15** marks.

32. Explain the role of IT in society.

33. Briefly describe the semiconservative method of replication of DNA.

34. Write a brief account of various academic services in the field of informatics.

35. Discuss various nucleic acid databases studied by you.

(2 × 15 = 30 Marks)
