T – 1665

Reg. No. : .....

Name : .....

(Pages : 3)

Sixth Semester B.Sc. Degree Examination, April 2024

First Degree Programme under CBCSS

Botany

Core Course

BO 1642 : MOLECULAR BIOLOGY, GENERAL INFORMATICS AND BIOINFORMATICS

(2019 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

(Draw diagrams wherever necessary)

SECTION – A

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

1. What is a cistron?
2. What is a splice some?
3. What is Z- DNA?
4. What is RNA interference?
5. What are open access initiatives?
6. List any two operating systems.

7. What is a patent?

8. What is PDB?

9. What is wet lab?

10. What is DDBJ?

(10 × 1 = 10 Marks)

SECTION – B

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

11. Compare leading and lagging strand of DNA.

12. Compare transcription and translation.

13. What is p53?

14. What are promoters?

15. Compare housekeeping genes and luxury genes.

16. What is BRNET?

17. List any four major applications of power point.

18. Comment on 'Internet as a knowledge repository'.

19. What is a digital divide?

20. What is genomics?

21. What are biodiversity databases?

22. What is PHYLIP? Mention the importance.

(8 × 2 = 16 Marks)

SECTION – C

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

23. List the salient features of Watson and Crick model of DNA.
24. Explain Avery's experiment on DNA.
25. Discuss photoreactivation in detail.
26. Compare introns and exons.
27. Explain the following:
    (a) Cyber ethics
    (b) Cybercrime
    (c) Cyber addictions.
28. Write a brief note on guidelines for proper usage of computers.
29. Write a brief account of EMBL and its significance.
30. Explain the significance of Rasmol used in the molecular visualization.
31. Describe the applications of CLUSTAL X.

(6 × 4 = 24 Marks)

SECTION – D

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

32. Explain the role of IT in teaching and learning.
33. Briefly describe the enzymology of replication.
34. Write a brief account of structure and properties of various types of RNA.
35. Discuss objectives and applications of SWISS PROT and UNIPROT.

(2 × 15 = 30 Marks)
