Reg. No. :
Name :

IV Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/ Improvement) Examination, April 2024 (2020 to 2022 Admissions)

GENERAL AWARENESS COURSE IN LIFE SCIENCES (ZOOLOGY) AND COMPUTATIONAL BIOLOGY

4A14ZCB: Genomics and Proteomics

Time: 3 Hours Max. Marks: 40

PART - A

Answer all questions. Each question carries 1 mark.

 $(6 \times 1 = 6)$

- 1. Define proteomics.
- 2. Expand RFLPs and give uses.
- 3. Name any two techniques used for DNA typing.
- 4. Expand FISH.
- 5. Write notes on SAGE.
- 6. What are primers?

PART - B

Answer any 6 of the following questions. Each question carries 2 marks. (6×2=12)

- 7. Explain the concept of gene mapping.
- 8. What is Thermal cycling?
- 9. Define Isoelectric Focusing (IEF).

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- 10. Write notes on VNTR.
- 11. Write notes on the applications of MALDI-TOF mass spectrometry.
- 12. Write notes on Mass spectroscopy.
- 13. Define map unit.
- 14. Write notes on restriction endonuclease.

PART - C

Write short essay on **any four** of the following questions. **Each** question carries **3** marks. **(4×3=12)**

- 15. Differentiate SNP and SSLP markers.
- 16. Explain the principle and application of PCR.
- 17. Write notes on different types of genetic markers and their special features.
- 18. Explain the principle and application of Isoelectric focusing.
- 19. Explain Sanger method of DNA sequencing.
- 20. Write notes on Human genome project.

PART – D

Write essay on **any two** of the following questions. **Each** question carries **5** marks.

 $(2 \times 5 = 10)$

- 21. Write notes on cDNA and genomic DNA libraries.
- 22. Explain different types of spectroscopy.
- 23. Give the principle and applications of mass spectroscopy and Isoelectric focusing.
- 24. Explain the different types of Genetic mapping.