

Reg. No. : ......

Name : .....

IV Semester B.Sc. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/ Improvement) Examination, April 2025 (2020 to 2023 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. What is genomics?
- 2. Name the project that aimed to sequence the entire human genome.
- 3. What is the full form of SNP in genomics?
- 4. Which enzyme is used for DNA sequencing?
- 5. What is a cDNA?
- 6. Define map unit.

PART - B

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

- 7. Comment on DNA typing and mention its applications.
- 8. Explain Shotgun sequencing method.
- 9. What is DNA polymorphism?
- 10. What is the difference between a genome and a proteome?
- 11. Write notes on Taq polymerase.

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- 12. What is AFLP?
- 13. What is recombination frequency?
- 14. Comment on GFP.

## PART - C

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

- 15. Differentiate between ISH and FISH.
- 16. Comment on Genetic markers.
- 17. Explain Microarray technique.
- 18. Principle of Next generation sequencing.
- 19. Explain Yeast two-hybrid system.
- 20. Describe PCR.

## PART - D

Write essay on **any two** of the following questions. **Each** question carries **5** marks. **(2×5=10)** 

- 21. Comment on sequence specific tags and sequence tagged sites.
- 22. Explain Northern and Southern blotting and mention its applications.
- 23. Chromatography: basic principles, types and its applications.
- 24. Construction of cDNA and genomic library.

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