



**K24P 0336**

Reg. No. : .....

Name : .....

**IV Semester M.Sc. Degree (C.B.S.S.– Reg./Supple.-(One Time Mercy  
Chance)/Imp.) Examination, April 2024  
(2014 Admission Onwards)**

**ZOOLOGY**

**ZOO4C12 : Biotechnology and Bioinformatics**

Time : 3 Hours

Max. Marks : 60

I. Answer **any two** of the following :

- 1) What is Transgenesis ? Discuss the applications of transgenic plants and animals.
- 2) Write an essay on the hazards and risks of modern biotechnology.
- 3) Explain the major steps involved in gene cloning.
- 4) Give an account on Cosmids, BAC and YAC.

**(2×12=24)**

II. Answer **any two** of the following :

- 5) Highlight steps and applications of DNA fingerprinting.
- 6) Discuss Ex Vivo and In Vivo gene therapy with suitable examples.
- 7) Discuss the scope and importance of bioinformatics.
- 8) Give an account of strategies for analyzing gene expression.

**(2×8=16)**

III. Answer **any four** of the following :

- 9) Give an overview of DNA and protein databases.
- 10) Discuss the features of Ti plasmid.
- 11) Comment on FASTA, BLAST and CLUSTAL W.
- 12) Differentiate between transcriptome and proteome.
- 13) What is gene silencing ?
- 14) Differentiate between chromosomal walking and chromosomal jumping.

**(4×5=20)**