



Reg. No. :

Name :

VI Semester B.Sc. Degree (CBCSS – Supple./Improv.) Examination, April 2022
(2016 – 2018 Admissions)
CORE COURSE IN ZOOLOGY

6B10 ZLG : Molecular Biology and Informatics and Bioinformatics

Time : 3 Hours

Max. Marks : 40

Instruction : Answer may be written either **English** or **Malayalam**.
Give illustrations **wherever** necessary.

SECTION – A
(Molecular Biology)

- I. Answer **any one**. (1×8=8)
 - 1) Explain the process of protein synthesis.
 - 2) Make a note on cloning vectors.
- II. Answer **any one**. (1×4=4)
 - 3) Describe semi conservative method of DNA replication.
 - 4) Note on genetic code and mention its characteristics.
- III. Answer **any three**. (3×2=6)
 - 5) One gene one enzyme hypothesis.
 - 6) Mitochondrial genome.
 - 7) Split genes and pseudogenes.
 - 8) Lac operon.
 - 9) Reverse transcription.
- IV. Answer **two** of the following. (2×1=2)
 - 10) Which of the following is not a termination codon ?
 - a) UAA b) UAG c) UGA d) UUU
 - 11) Name the protein play a role in folding and spatial arrangement of polypeptide.
 - a) Chaperones b) Muton c) Recon d) Cistrons
 - 12) _____ is an inducible operon.
 - a) Tryp operon b) Lac operon c) Both (a) and (b) d) None of these

P.T.O.



- 13) The enzyme helps to join Okazaki fragments is
 - a) DNA polymerase b) Endonuclease
 - c) DNA ligase d) Helicase

SECTION – B
(Informatics and Bioinformatics)

- V. Answer **any one**. (1×8=8)
 - 14) Describe on DNA sequencing.
 - 15) Explain tools and applications of proteomics.
- VI. Answer **any one**. (1×4=4)
 - 16) Make a note on various applications of Bioinformatics.
 - 17) Explain on metabolite databases.
- VII. Answer **any three**. (3×2=6)
 - 18) FASTA.
 - 19) MOODLE.
 - 20) Swiss prot.
 - 21) Primary database.
 - 22) Digital libraries.
- VIII. Answer **two** of the following. (2×1=2)
 - 23) Which of the following is not a genbank protein sequence data base ?
 - a) PIR b) MIPS c) EMBL d) Swiss prot
 - 24) Molecular graphic program for visualisation of proteins is
 - a) RasMol b) PHYLIP c) YAC d) All these
 - 25) Expand EMBL.
 - 26) The entire protein complement of an organism is called
 - 27) Match the following.

A	B
a) Metabolite database	i) Floppy disc
b) Search engines	ii) Dial up
c) Web site	iii) KEGG
d) Input device	iv) Google
	v) NCBI