

Reg. No. : .....

Name : .....

**VI Semester B.Sc. Degree (CBCSS – OBE – Regular) Examination, April 2022  
(2019 Admission)**

**CORE COURSE IN ZOOLOGY**

**6B10 ZLG : Molecular Biology and Bioinformatics**

Time : 3 Hours

Max. Marks : 40

- I. Essay Questions (**Each** question carries **8** marks). Answer **any two** : **(2×8=16)**
- 1) Describe the regulation of transcription in eukaryotes.
  - 2) Give an account on the types of DNA repair mechanisms.
  - 3) Describe different DNA databases.
  - 4) Explain the modern concept of genes.
- II. Short Essay Questions (**Each** question carries **4** marks). Answer **any two** : **(2×4=8)**
- 5) Discuss nucleosome structure and packaging of DNA into higher order structures.
  - 6) What are the applications of bioinformatics ?
  - 7) Give an account on PCR.
- III. Short Answer Questions (**Each** question carries **2** marks). Answer **any six** : **(6×2=12)**
- 8) What is Wobble hypothesis?
  - 9) What are metabolic databases ? Give an example.
  - 10) What is central dogma of molecular biology ?
  - 11) List any 4 features of genetic code.
  - 12) What is SDS PAGE ?
  - 13) What is CRISPR gene editing?
  - 14) What are split genes ?
  - 15) What is BLAST ?

P.T.O.

IV. Multiple Choice Questions (**Each** question carries **0.5** mark). Answer **all** questions : **(8×0.5=4)**

- 16) The histone associated with linker DNA is
 

a) H3	b) H2A	c) H1	d) H4
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- 17) PCR technique was discovered by
 

a) Sanger	b) Frederick
c) Messehlson and Stahl	d) Kary Mullis
- 18) The inducer in Lac operon is
 

a) Lactose	b) Sucrose	c) Lactic acid	d) Arabinose
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- 19) An example for protein database is
 

a) EMBL	b) Swiss Prot	c) KEGG	d) Genbank
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- 20) Which of the following is not a STOP codon ?
 

a) UGA	b) UAA	c) UAG	d) AUG
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- 21) Enzyme known as molecular glue is
 

a) Endonuclease	b) DNA ligase	c) Exonuclease	d) Helicase
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- 22) Nitrogen base not present in DNA is
 

a) Guanine	b) Adenine	c) Thymine	d) Uracil
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- 23) Most abundant RNA in the cell is
 

a) tRNA	b) mRNA	c) rRNA	d) SnRNA
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