

Seat No.	
----------	--

B.Sc. (Part - III) (Semester - V) (CBCS)

Examination, October - 2023

ZOOLOGY

Molecular Cell Biology and Animal Biotechnology (Paper - X)

Sub. Code : 79694

Day and Date : Wednesday, 25 - 10 - 2023

Total Marks : 40

Time : 10.30 a.m. to 12.30 p.m.

- Instructions :
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.
  - 3) Neat diagrams must be drawn wherever necessary.

Q1) Select the correct alternatives and rewrite the sentence : [8]

a) \_\_\_\_\_ is the process of RNA synthesis from DNA.

- |                   |                    |
|-------------------|--------------------|
| i) Transcription  | ii) Transformation |
| iii) Transduction | iv) Transversion   |

b) Initiation codon, AUG specifies amino acid \_\_\_\_\_

- |              |                |
|--------------|----------------|
| i) Tyrosine  | ii) Methionine |
| iii) Glycine | iv) Lysine     |

c) Fragment of DNA can be identified by the technique of

- |                        |                       |
|------------------------|-----------------------|
| i) Western blotting    | ii) Eastern blotting  |
| iii) Northern blotting | iv) Southern blotting |

d) The genetic code is \_\_\_\_\_

- |              |                |
|--------------|----------------|
| i) Triplet   | ii) Quadruplet |
| iii) Doublet | iv) Singlet    |

P.T.O.

- e) \_\_\_\_\_ recognize complementary sequences by hybridization in nucleic acid sample.
- i) PCR  
ii) Vector  
iii) ELISA  
iv) DNA probes
- f) Boliver and Rodriguez constructed \_\_\_\_\_ Plasmid vector.
- i) PBR-322  
ii) PBR-300  
iii) PUC-18  
iv) PUC-19
- g) Northern blot is the technique for \_\_\_\_\_ blot.
- i) RNA  
ii) Lipid  
iii) DNA  
iv) Protein
- h) In a \_\_\_\_\_, base sequence in first half of DNA is mirror image of second half.
- i) Protein  
ii) Palindrome  
iii) Probe  
iv) Lipid

Q2) Attempt any two of the following:

[16]

- a) What is genetic code? Explain different properties of genetic code.
- b) What is DNA Replication? Explain mechanism of semiconservative mode of replication.
- c) What is translation? Describe the process of translation in prokaryotes.

Q3) Attempt any four of the following:

[16]

- a) Restriction enzymes
- b) Plasmids
- c) Western Blotting
- d) DNA Finger Printing
- e) Codon Assignment
- f) Polymerase chain reaction.

