



RAN-1903080502030001

M. Sc. (Sem. - II) Examination September - 2025

Zoology (Paper - Zoo-2003) Animal Biotechnology and Biostatistics

Time: 3 Hours]

[Total Marks: 70

સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book
- (2) Mention below given details in answer book
- (3) Figures to the right indicate full marks.
- (4) Draw neat and labeled diagrams wherever necessary.

Seat No.:

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Student's Signature

Q. 1. Answer any Two of the following: (18)

- A. **Write detail notes on:** Materials and Equipment used in animal tissue culture lab.
- B. **Explain:** Cell and organ culture.
- C. **Describe:** Suspension cultures as a primary culture in view of animal biotechnology.

Q. 2. Answer any Two of the following: (18)

- A. **Write detail notes on:** How cloning and expression of genes accomplish via vectors.
- B. **Explain:** Restriction, digestion and ligation steps for PCR.
- C. **Describe:** Hybridoma technology, advantages and disadvantages.

Q. 3. Answer any Two of the following: (18)

- A. **Write detail notes on:** Mean and Mode: - types, merits and demerits.
- B. **Explain:** Various Methods of sampling in Biostatistics.
- C. **Describe:** Sampling error, non-sampling error and Standard error in detail.

Q. 4. Answer any Two of the following: (16)

- A. **Write detail notes on:** Probability - concept and theories.
- B. **Explain:** Regression analysis - concept, types and uses.
- C. **Describe:** Chi-square test as a test of statistical significance.