Mode of Examination: Open Book Examination

SET- 1

Unique Paper Code	:	42237903
Name of the Paper	:	DSE: Animal Biotechnology
Name of the Course	:	B.Sc. (Prog.) Life Sciences - **LOCF**
Semester	:	Semester – V
Duration	:	3 hours
Maximum Marks	:	75 Marks

Instructions for Candidates

- Write your Roll No., Name of the paper, Course, Semester, and Date of examination on the first page of answer sheet.
- Attempt **'ANY FOUR' QUESTIONS**. All questions carry equal marks.
- Draw well labeled diagrams wherever necessary.

Q1. Define restriction enzymes with examples. Elaborate on the pattern of cleavage, classification and nomenclature of restriction enzymes. Explain how restriction enzymes can be an important tool in biotechnology based on examples on their usage in various techniques for gene manipulation. 18.75

Q2. In order to investigate a blood sample obtained from crime scene the amount of DNA need to be amplified. Which technique would be suitable for this purpose? Explain the principle and steps involved in this technique. Make a well labeled diagram. Write a note on some applications of this technique. 18.75

Q3. What are cloning vectors? Give characteristics of good cloning vectors. Elaborate on role of plasmid cloning vectors in gene cloning. Write a note on vectors used for cloning larger pieces of DNA from eukaryotic cells. 18.75

Q4. Explain the disease caused by mutation in the CFTR gene. Describe the diagnostic procedures for molecular screening of this disease. 18.75

Q5. Describe the methods used for the production of transgenic animals. Write a note on applications of transgenic animals with examples. 18.75

Q6. What is the significance of gene therapy? Write a short note on its types. Enumerate the application of gene therapy with suitable examples. 18.75

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