

Roll No.

Total No. of Pages : 01

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M.Sc. MLS (Biochemistry) (Sem.-3)

APPLIED MOLECULAR BIOLOGY

Subject Code : MMLT302-18

M.Code : 76877

Date of Examination : 27-06-2025

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries FOURTEEN marks.

1. Discuss principle, isolation, handling and procedure of agarose gel electrophoresis. Describe the preparation of labeled DNA probes.
2. What is restriction endonuclease? Discuss detail application of restriction endonuclease in molecular biology. Explain cloning strategies.
3. What are the roles of chromatin in gene regulation? How auto regulation proven key mechanism for controlling post transcriptional gene expression.
4. What is the difference between transformation and transfection? Discuss detail account of isolation, handling and quantification of nucleic acid.
5. Explain cloning strategies. Discuss detail account of cloning from mRNA. Write a short note on vaccine.
6. Discuss the Sanger sequencing method for DNA sequencing. Give approaches and applications of site directed mutagenesis.
7. Discuss detail applications of recombinant DNA technology in forensic science.
8. Write the applications of mutation linkage. Give brief detail of chromosome mapping and hormonal regulation of genetic coding.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.