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Reg. No......

Name.....

**M.Sc. (MEDICAL BIOCHEMISTRY) DEGREE EXAMINATION
DECEMBER 2024**

Sixth Semester

Paper XVI—MOLECULAR CELL BIOLOGY AND MEDICAL GENETICS

(2021 Admissions—Regular/2018–20 Admissions—Supplementary/2017 Admissions – First
Mercy Chance/2016 Admissions—Second Mercy Chance)

Time : Two Hours and a Half

Maximum Marks : 80

All questions are Compulsory.

Draw neat and labelled diagrams wherever necessary.

- I. Discuss the steps involved in the process of recombinant DNA technology. Explain the roles of restriction enzymes, vectors and host cells in detail.
(20)
- II. Explain the process of translation in detail, highlighting the initiation, elongation, and termination phases.
(10)
- III. Describe the post-transcriptional and post-translational modifications in eukaryotic cells. (10)
- IV. Write short notes on the following :
 - (1) Applications of cell and tissue culture in biomedical sciences.
 - (2) Proteomics and proteins microarrays.
 - (3) DNA replication.
 - (4) Apoptosis.
 - (5) Cell culture.
 - (6) Gene therapy.
 - (7) Molecular events in cell cycles.
 - (8) Gel Electrophoresis.

(8 × 5 = 40)

