

QP Code: 201383

Reg. No.....

**Second Year M.Sc. MLT Degree Regular/Supplementary Examinations
November 2019**

(Biochemistry)

Paper V - Molecular Biology & Immunology

Time: 3 hrs.

Max. marks: 100

- *Answer all questions*
- *Draw diagrams wherever necessary*

Essays:

(10x10=100)

1. Explain the steps of DNA replication. Add a note on inhibitors of replication. (8+2)
2. Explain the steps of polymerase chain reaction. Mention its applications in clinical medicine. (6+4)
3. What are restriction endonucleases. Explain their action with three examples. Describe restriction fragment length polymorphism. (1+6+3)
4. Describe the general structure of immunoglobulins. Mention the properties and functions of different types of immunoglobulins. (5+5)
5. Mention the types of T cells and their functions. Add a note on major histocompatibility complex. (5+5)
6. Describe the principle of enzyme linked immunosorbent assay (ELISA). Add a note on its applications. (7+3)
7. Explain the preparation, assessment and storage of antisera.
8. Explain the Southern and Western blotting techniques (5+5)
9. Give the principle of gene therapy. Mention and explain the types of gene therapy. Explain transgenesis. (2+4+4)
10. What are the types of inheritance patterns of genetic diseases. Explain each type with an example. (2+8)
