

QP Code: 104385

Reg. No.....

**First Year M.Sc. MLT Degree Regular/Supplementary Examinations
August 2022
(Microbiology)
Paper IV - Immunology**

Time: 3 hrs.

Max. marks: 100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essays:

(10x10=100)

1. Explain the mechanism of antibody production. Describe the structure and properties of IgM.
2. Describe hybridoma technique and its clinical use.
3. Primary and secondary immune response.
4. Define agglutination. Describe heterophile agglutination and its application.
5. Define autoimmunity. Describe the mechanisms of autoimmunity. Classify autoimmune diseases and briefly describe the autoimmune basis of systemic lupus erythematosus.
6. Describe the principle of ELISA. Enumerate its types and describe them in brief. Describe the generations of HIV ELISA in detail.
7. Describe subunit and toxoid vaccine using examples.
8. Define and classify hypersensitivity. Discuss type I & IV hypersensitivity reactions.
9. Cytokines
10. Flow cytometry and its applications
