

**First Year B.Sc MLT Degree Regular/Supplementary Examinations**  
**December 2023**

**Basic Microbiology and Immunology**

**(2016 Scheme)**

**Time: 3 Hours**

**Total 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*

**Essay**

**(2x10=20)**

1. Enumerate different antigen- antibody reactions. Describe in detail about agglutination reactions and its applications (4+6)
2. What is biohazard. Classify microbes on basis of biohazards. Describe the principle of biosafety cabinet type II and its applications (2+2+6)

**Short notes**

**(10x5=50)**

3. Flagellar staining
4. Gram positive bacterial cell wall
5. Hot air oven
6. Monoclonal antibodies and its applications
7. Artificial acquired immunity
8. Gaseous disinfectants
9. Major Histocompatibility Complex
10. Louis Pasteur
11. Delayed Hypersensitivity
12. Cytokines

**Answer briefly**

**(10x3=30)**

13. Cleaning of glass wares
14. Name three viral vaccines
15. Primary infection
16. In use test
17. Natural Killer Cells
18. Name any three autoimmune diseases
19. Sterilization Controls
20. BOD Incubator
21. Adjuvants
22. Secretory Immunoglobulin A (Secretory IgA)

\*\*\*\*\*