

**First Year B.Sc MLT Degree Supplementary Examinations  
December 2023  
Basic Medical Laboratory Science & Haematology  
(Common for 2010, 2012 and 2015 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. List the different types of 'haemocytometers'. Describe the procedure of total leucocyte count using a haemocytometer. Mention the normal total and differential leucocyte counts (3+6+1)
2. Discuss the cleaning of glassware in the laboratory. List the common cleaning solutions and describe the preparation of any one of them. How are the laboratory equipments carefully maintained (3+4+3)

**Short notes****(10x5=50)**

3. Types of microscope objectives and their uses
4. Tallquist method for hemoglobin estimation
5. Fuchs Rosenthal counting chamber
6. Principle of Transmission Electron Microscope
7. Micro pipette method and bulk dilution technique in cell counting
8. Functions of RBC (Red Blood Cell)
9. Laboratory work benches-types
10. Fluorescent microscope
11. Ethylene Diamine Tetra-Acetic Acid (EDTA), uses and mechanism of its action
12. Biomedical waste management in the laboratory

**Answer briefly****(10x3=30)**

13. Normal platelet counts and two causes for thrombocytopenia
14. Buffy- coat smears
15. Sites of bone marrow aspiration
16. Describe a Monocyte with a diagram
17. Iodine containing antiseptics
18. Acid elution test
19. Morphological changes of cells on storage
20. Hingleman fluid
21. Micrometry
22. Normoblast