

First Year B.Sc MLT Degree Regular Examinations October 2025
Basic Medical Laboratory Sciences & Hematology - I
(2024 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*

Essays**(2x10=20)**

1. What is the principle of Romanowsky staining. Briefly describe components, methods of preparation and procedure of Leishman staining (2+8)
2. What is ESR. What are the stages of ESR. Briefly describe the advantages, disadvantages and sources of errors in different methods of ESR estimation. (1+2+7)

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

3. Advantages and disadvantages of various disposable lab ware
4. Osmotic Fragility Test
5. Automatic Blood cell counters
6. Haematocrit estimation
7. Methods of blood collection
8. Total WBC count
9. Differential count
10. Supravital staining technique
11. Anticoagulants in clinical laboratory
12. Collection of Bone marrow and Preparation of Bone marrow smears

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

13. Absolute eosinophil count
14. Vacutainers
15. Sickling Test
16. Phase contrast microscope
17. Bulk dilution
18. Medical ethics – Definition – Goal- Scope
19. Hemoglobin electrophoresis
20. Laboratory hazards and safety measures
21. Erythropoiesis
22. Principles of Light Microscopy
