

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

**Basic Medical Laboratory Sciences & Hematology  
(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. Explain ESR. Write the clinical significance and normal values of ESR. Describe the principles and different methods of determining ESR (1+3+6)
2. Explain the different methods of blood collection. Discuss the various anticoagulants used in haematology, their mode of action, advantages and disadvantages (3+7)

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

3. Erythropoiesis
4. General principles of lab safety
5. Buffy coat preparation and uses
6. Romanowsky stains
7. HbF and its detection
8. Differential WBC count
9. Diluting fluids used in haematology
10. Glassware used in laboratory
11. Light microscopy
12. Haematocrit

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

13. Blood cell counters
14. Platelet count
15. Thick blood smear
16. Bone marrow
17. Cleaning solutions
18. Supravital stains
19. Sickling test
20. Micrometry
21. Electron microscope
22. Total WBC count

\*\*\*\*\*