

**First Year B.Sc MLT Degree Examinations, August 2016**

**BASIC MEDICAL LABORATORY SCIENCE & HAEMATOLOGY**

**(Common for 2010 and 2015 Scheme)**

**Time: 3 Hours**

**Total Marks: 100**

- Answer all Questions.
- Draw Diagrams wherever necessary.

**Essay**

**(2x10=20)**

1. Describe the different methods for hemoglobin estimation, its advantages and disadvantages. Mention the normal values and the conditions in which you get abnormal values for hemoglobin.
2. List the common laboratory glassware. Describe briefly the methods for cleaning of glassware in the laboratory.

**Short notes**

**(10x5=50)**

3. Brilliant cresyl blue stain and its use
4. Microhaematocrit
5. Explain - resolution, magnification and numerical aperture of a microscope
6. Preparation and staining of a 'thick smear' of blood
7. Method for eosinophil counting
8. Tests for HbS.
9. Neubauer counting chamber and its uses
10. Precautions to prevent physical hazards in the laboratory
11. Management of biomedical waste in the laboratory
12. Demonstration of fetal hemoglobin (HbF)

**Answer briefly**

**(10x3=30)**

13. Stages of sedimentation of erythrocytes
14. Explain the term 'buffy-coat' with the help of a diagram
15. Mention the functions of various white blood cells (WBCs)
16. Describe the morphology of a 'myeloblast' with the help of a diagram
17. WBC diluting fluid and methods of dilution
18. Vacutainer tubes for blood collection
19. Preparation of plasma from blood
20. Principle and use of 'phase contrast' microscope
21. Draw a normal RBC histogram plotted by an automated cell counter
22. Mean corpuscular hemoglobin concentration (MCHC)