

**B.Sc. IN MEDICAL LABORATORY
TECHNOLOGY (BMLT)**

Term-End Examination

December, 2015

BAHI-010 : APPLIED HEMATOLOGY

Time : 3 hours

Maximum Marks : 70

Note : Question Paper consists of *three Parts - Part A, B and C. Attempt any four questions from Part A. Attempt all questions from Part B and Part C.*

PART - A

Answer **any four** questions. Each question carries **10 marks.**

1. Define Leukemia and Leukemoid reactions. Describe morphology of cells in acute myeloid leukemia. **3+3+4=10**
2. What are indications of bone marrow examination? Describe various cells found in bone marrow especially myeloid and erythroid cells in various stages of formation. Mention M/E ratio and its importance. **3+3+2+2=10**
3. Define and classify Thalassemia. Describe procedure of Alkali denaturation test for determination of HbF. **2+3+5=10**

4. What is HLA ? Describe how HLA typing is done. Give its clinical importance. $2+4+4=10$
5. What are abnormal haemoglobins ? Describe structural changes giving its clinical importance. $2+4+4=10$
6. What is osmotic fragility ? Describe the procedure of test and report. Write its clinical importance. $2+4+2+2=10$

PART - B

7. Write in brief **any two** of the following : $2 \times 10 = 20$
- (a) Anti haemophilic factor.
 - (b) PAS staining
 - (c) Role of non-specific esterase staining in bone marrow.

PART - C

8. Fill in the blanks : $1 \times 5 = 5$
- (a) Alkali denaturation method detects haemoglobin _____ .
 - (b) Pearls' reaction indicate presence of _____ in bone marrow.
 - (c) Positive L.E. Cells indicate presence of disease _____ .
 - (d) HbA₂ and HbF are major determinant for diagnosis of _____ .
 - (e) In Pulmonary embolism and venous thrombosis maintenance of _____ is at a level of 2.5 - 3.

9. Answer True (T) or False (F) of the following : 1x5=5

- (a) PT; PTTK are basic tests to evaluate coagulation profile.
 - (b) CRP, complement and ESR are essential test for diagnosis of autoimmune diseases.
 - (c) In vitro sickling phenomenon is performed by using sodium nitroprusside as surfactant.
 - (d) More than 50% count of myeloblast and promyelocyte in peripheral blood indicate bone marrow examination and immuno cytochemistry for confirmation of acute leukemia.
 - (e) Decrease quantities of factor VIII and factor IX indicates purpura disorders.
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