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BAHI-010

B.Sc. IN MEDICAL LABORATORY TECHNOLOGY (BMLT)

Term-End Examination

June, 2016

00196

BAHI-010 : APPLIED HAEMATOLOGY

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt any **four** questions from Part A. Attempt **all** the questions from Part B.*

PART A

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

1. Enumerate the special stains for bone marrow examination. Describe haemosiderin (Iron) staining procedure for bone marrow. *4+6*

2. What is sickle cell phenomenon ? How will you demonstrate sickle cells in vitro ? *4+6*

3. Differentiate between L.E. cells and Tart cells. Describe the procedure of preparation, staining and morphological identification of L.E. cell with illustrative diagrams. *2+2+3+3*

4. Enumerate coagulation factors. Describe in detail the mechanism of coagulation and deficiencies of each step resulting in disease process. *4+4+2*

5. Describe the procedure of Hb-electrophoresis. Give the clinical importance of abnormal haemoglobins. *6+4*

6. Describe the morphology of blast cells in bone marrow. Give its importance in consideration of acute leukaemia. *6+4*

PART B

7. Write in brief any ***two*** of the following : *2×10=20*

   (a) Peroxidase staining

   (b) HLA typing

   (c) Christmas factor deficiency

8. Fill in the blanks. *5×1=5*

   (a) Presence of more than 60% _____ in the bone marrow indicates Acute Lymphoblastic Leukaemia (ALL).

   (b) _____ examination is essential to evaluate leukaemia when there are raised total leucocyte counts and abormal cells in peripheral smears.

   (c) Fibrinogen is converted in _____ in coagulation mechanism.

   (d) Presence of 1-2 nucleoli and abundant cytoplasm with indentation of nucleus is a cell designated as _____ in haemopoiesis mechanism.

   (e) _____ band in Hb-electrophoresis confirms thalassaemia.

9. Answer *true (T)* or *false (F)* in the following : $5 \times 1 = 5$

(a) Activated thrombin is required to convert factor IX to factor X in coagulation mechanism.

(b) Pressure of excessive normoblasts in peripheral smear indicates depression of bone marrow in iron deficiency anaemia.

(c) Presence of Hb-S in electrophoretic pattern is indicative of sickle cell disease for confirmation.

(d) Reticulocyte count and index is an essential parameter for determination of compensatory or haemolytic anaemia.

(e) Increased count of myelocytes and metamyelocytes along with PMNS leukocytosis is indicative to rule out chronic myeloid leukaemia.