

B.Sc. IN MEDICAL LABORATORY TECHNOLOGY

Term-End Examination

June, 2013

BAHI-002 : BASIC HAEMATOLOGY

Time : 3 hours

Maximum Marks : 70

PART - A

Answer *any three* questions.

1. (a) Describe the morphology of platelet in a stained smear in normal and abnormal conditions. 1+2+4+3
 - (b) Write the functions of platelets
 - (c) Describe the direct method of platelet count in standard laboratories.
 - (d) Write the values of platelet count in the following conditions :
 - (i) Aplastic anaemia
 - (ii) Chronic myeloid leukaemia
 - (iii) Normal healthy adult

2. (a) Draw and describe the development of granuloocytes (stages of haemopoieses for granuloocytes) 6+4

- (b) Define and give values in the following conditions :
- (i) Leukopenia
 - (ii) Leukocytosis
 - (iii) Lymphocytosis
 - (iv) Thrombocytosis
3. (a) Define ESR. **1+3+4+2**
- (b) Describe the stages taking place during the sedimentation of RBCs.
- (c) Enumerate the physiological and pathological conditions affecting ESR.
- (d) Write the values of ESR in the following conditions :
- (i) Normal value in men
 - (ii) Multiple myeloma
 - (iii) Polycythemia Vera
 - (iv) Rheumatic arthritis
4. (a) Define haemoglobin. **1+2+1+4+2**
- (b) Enlist the different methods of estimation of haemoglobin.
- (c) Write the most accurate and sensitive method used in standard laboratories.
- (d) Explain the principle, procedure and preparation of standard curve.
- (e) Enlist the advantages, disadvantages of this method.

PART - B

5. Write short notes on *any four* of the following : 5x4=20
- (a) EDTA (Ethylene Diamine Tetra Acetic Acid)
 - (b) Myeloblast
 - (c) Plasma cell
 - (d) RBC inclusions
 - (e) Commonly used Romanowsky stains
 - (f) Differential Leucocyte Count (DLC)
6. Write short answers of the following : 2x5=10
- (a) Spherocyte
 - (b) Causes of thrombocytopenia
 - (c) Special stains for bone marrow
 - (d) Aplastic anaemia
 - (e) Factor IX deficiency (hemophilia B)

PART - C

7. (a) **Fill in the blanks :** **1x10=10**

- (i) Normal WBC count of a person is _____.
- (ii) PT in liver disease is _____.
- (iii) Reticulocyte count in iron deficiency anaemia is _____.
- (iv) _____ is commonly used RBC diluting fluid.
- (v) _____ is the largest cell in the peripheral blood.

(b) Write *True* or *False* for the following :

- (i) ESR is increased, if the ESR tube is inclined.
 - (ii) If the red blood cells stained red, it is because the buffer is acid.
 - (iii) In CLL 70-90% of cells are blast cells.
 - (iv) Anticoagulant therapy is monitored by P.T.
 - (v) In improved Neubauer ruling chamber, the corner squares are divided into 25 squares.
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