M.Sc 2nd Semester Examination, 2010

BIOMEDICAL LABORATORY SCIENCE AND MANAGEMENT

PAPER—V (U - 10)

Full Marks : 40

Time : 2 hours

Answer **all** questions

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

MODULE—1

1. Answer any *five* of the following : 1 x 5

(*a*) What is thrombocytopenia ?

(*b*) What is plasma cell ?

(*c*) Define haematocrit ?

(*d*) What is Arneth index ?

(*e*) What is Poikilocytes ?

(*f*) Define hinz body ?

(*g*) What is the difference between bleeding time and clotting time ?

(*h*) Write the full form of MCHC.

2. Represent diagrammatically haemoglobin molecule. What are the different types of haemoglobin. Mention its molecular composition. 4 + 4

Or

What is megaloblastic anaemia ? Describe briefly different types of Lukaemia. Mention the cause of haemophilia 'A'. 2 + 4 + 2

3. What is Thalassemia? What are the types of Thalassemia? How do you detect Thalassemia carrier? 2 + 3 + 2

Or

Describe the process of erythropoiesis. What is the normal WBC count in neonates (0-28 days)? 6 + 1

MODULE—2

4. Answer any *five* questions of the following : 1 x 5

(*a*) What is Kleihauer Betke test?

(*b*) What is tactoid in sickle cell anaemia?

(*c*) What is the clinical significance of TIBC?

(*d*) What is the clinical significance of plasma haemoglobin detection?

(*e*) Write the application of Perls Prussian Blue staining in haematology.

(*f*) What is clot retraction?

(*g*) What is meant by left shift?

(*h*) What is hypochromic microcytic anaemia?

5. What is the full form of LE? Briefly describe the method of LE cell preparation. Write the application of cellulose acetate electrophoresis in haematology, with example and diagram. 1 + 3 + 4

Or

Enumerate the principle of HbA_{1C} detection. What is the cause of PNH? Describe a method to detect PNH. 2 + 2 + 4

6. Describe the features of an automated blood cell counter by the help of a diagram. What is the function of floating discriminator? What is coincidence phenomenon? 3 + 2 + 2

Or

Write down the haematological findings in pyogenic and tubercular meningitis. What is INR? Write down the abnormalities is coagulation profile in a case of Von-Willebrand disease. 3 + 1 + 3
