UNIVERSITY OF JAFFNA, SRI LANKA

BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES

SECOND YEAR FIRST SEMESTER EXAMINATION- JULY2013

MLSHE 2102 HAEMATOLOGY I

PAPER II

Date: 21.08.2013 **Time: 2 Hours**

ANSWER ALL EIGHT QUESTIONS.

1. Automated blood count techniques are in widespread use.

1.1. List the advantages of automated techniques over manual techniques for performing blood counts. (30 marks)

1.2. Mention the two technologies that are in use for blood cell count in automated techniques. (20 marks)

1.3. Briefly describe the principle behind one of the technology you mentioned in 1.2. (50 marks)

2. The most useful classification of anaemia is based on red cell indices.

2.1. List 3 causes for microcytic anaemia. (15 marks)

2.2. List 4 investigations that are useful in differentiating the conditions you mentioned in 2.1. (20 marks)

2.3. Describe the changes in blood film you can observe in Megaloblastic anaemia. (20 marks)

2.4. Describe the changes you can observe in bone marrow aspirate film of a patient with megaloblastic anaemia. (30 marks)

2.5. List 3 causes of normocytic anaemia (15 marks)

3.

3.1. List 5 laboratory results that are indicative of haemolytic anaemia. (25 marks)

3.2. Enumerate 4 hereditary causes of haemolytic anaemia. (20 marks)

3.3. List 5 causes of intravascular haemolysis. (25 marks)

3.4. List the 2 methods available for the estimation of plasma haemoglobin in intravascular haemolysis. (10 marks)

3.5. List 4 causes of acquired haemolytic anaemia. (20 marks)

4.

4.1. Briefly describe the functions of Neutrophil. (30 marks)

4.2. List 5 causes of Neutrophil leucocytosis. (25 marks)

4.3. Define the term neutropenia. (15 marks)

4.4. List 3 causes of neutropenia. (30 marks)

5.

5.1. Briefly describe the functions of T and B Lymphocytes. (40 marks)

5.2. List 4 causes of lymphocytosis. (20 marks)

5.3. Mention one investigation that would differentiate reactive and clonal lymphocytosis. (20 marks)

5.4. List 4 causes of Eosinophilia. (20 marks)

6.

6.1. List 4 species of malaria parasites. (20 marks)

6.2. Describe the morphological criteria for differentiation of 4 species of malaria parasites you mentioned in 6.1. (80 marks)

7.

7.1. List 3 anticoagulants used in the haematology laboratory. (15 marks)

7.2. Mention the mode of action of the 3 anticoagulants you mentioned in 7.1. (15 marks)

7.3. Mention 2 clinical uses of each of the 3 anticoagulants you mentioned in 7.1. in the haematology laboratory. (30 marks)

7.4. Describe the changes that take place in the anticoagulated blood when it is stored at room temperature. (40 marks)

8. Write short notes on

8.1. Howell-Jolly bodies. (30 marks)

8.2. Basophilic stippling. (30 marks)

8.3. Factitious (Spurious) thrombocytopenia. (40 marks)