MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND YEAR SECOND SEMESTER EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCE WITH INFORMATION TECHNOLOGY

(CITY CAMPUS - WEEKEND)

PMT 224: HAEMATOLOGY

Date: 21st July, 2014 Time: 5.30 - 7.30 p.m.

INSTRUCTIONS:

- **Answer ALL questions in Section A and B.**
- **Answer Question 11 and ANY OTHER question in Section B.**

Second Semester Exams 2013/2014 Academic Year

Bachelor of Science in Medical Laboratory Science

Kisumu City Campus

PMT 224: HAEMATOLOGY **2 HOURS**

SECTION A: ANSWER ALL THE QUESTIONS (Each Question is 4 marks)

1. Describe the four stages of hypovolemic shock.
2. Define anaemia and explain the clinical features under which the presence or absence of anaemia can be considered.
3. Describe three essential attributes of hematopoietic stem cells.
4. (a). Define adhesion molecules.

   (b). List the three main families of adhesion molecules and state their functions.
5. Describe the three phases under which the functions of neutrophils and monocytes may be divided.
6. (a). Define hematopoietic growth factors.

   (b). Outline the general characteristics of myeloid and lymphoid growth factors
7. Describe the aspiration and trephine biopsy techniques used in bone marrow examination
8. Describe the following hemolytic anaemias:
   (a). Hereditary spherocytosis

   (b). Hereditary elliptocytosis and hereditary pyropoikilocytosis
9. Outline the vascular functions of platelets
10. Outline the clinical features and laboratory diagnosis alpha (α)-thalassemia syndrome

Section B (30 marks)

Answer any TWO questions. Question 11 is compulsory

11. Describe the immune response conferred by B and T cells.(15 marks)

12. Discuss the amplification and maturation sequence of red blood cells. (15 marks)

13. (a). Differentiate between intravascular and extravascular hemolysis. (8 marks)

    (b). Define and classify hemolytic anaemias (7 marks)