The Open University of Sri Lanka
Bachelor of Medical Laboratory Sciences (B.MLS)
MLU3245- Advanced Clinical Haematology
Semester 02- Academic year 2015/2016
No Book Test 02
Return your question paper with the answer sheet

Date: 30.03.2016	**Duration – 1 1/2hour**
Time: 01.30 p m - 03.00 p m	**Registration No.....**

Please read the following instructions carefully before you answer the paper.
(100 marks)

Part – A (20 marks)

There are 10 multiple choice questions in this paper, each question with five responses. Select the **most suitable response** and mark in the paper.

Part - B (10 marks)

You are given 10 True / False questions. State whether they are "True" or "False" by underlining the correct response

Part C (40 marks)

You are given two (02) short answer questions. Each question contains three (03) parts. Answer all the questions in given spaces.

Part – D (30 marks)

There are two (02) structured essay questions. Each question contains three (03) parts. Answer all the questions in given spaces.

Good Luck!

Part B – 10 True False questions (10 Marks)

State whether following statements are **True**" or "**False**" by **underlining** the correct response

01	Thalassemia major and Sickle cell trait are associated with uncompensated hemolytic anemia.	(True/ False)
02	Presence of normoblasts in the peripheral blood indicates uncompensated hemolytic anemia.	(True/ False)
03	RDW measures degree of anisocytosis in peripheral blood.	(True/ False)
04	Heinz bodies are denatured hemoglobin detected in oxidative stress conditions in red cells.	(True/ False)
05	Leukemias are a group of hematological malignancies arise as a result of abnormal chromosomal translocations in the hemopoietic stem cell.	(True/ False)
06	Acute myeloblastic leukemia (AML) is common in children.	(True/ False)
07	A blood picture of Chronic lymphocytic leukemia (B CLL) usually shows many large lymphocytes and smudge cells.	(True/ False)
08	In immunophenotyping, Common Acute lymphoblastic leukemia (cALL) is predominant among all the ALL.	(True/ False)
09	Patients of Myelodysplastic syndrome (MDS) frequently prone to have ringed sideroblasts and myeloblasts > 5% in the bone marrow.	(True/ False)
10	Flow cytometry analysis of bone marrow cells of AML patients reveals TdT+, CD7+ and CD5(cyt)+.	(True/ False)

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Part C – Short Answer Questions (40 marks)

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1.1. List four (04) diseases/conditions associated with peripheral blood **normoblasts.** (8 marks)

i. .....

ii. .....

iii. .....

iv. .....

1.2. State three (03) **blood picture findings** in hereditary spherocytosis. (6 marks)

i. .....

ii. .....

iii. .....

1.3. List two (02) **bone marrow features** expected in iron deficiency anemia. (6 marks)

i. .....

ii. .....

iii. .....

2.

2.1. List three (03) bone **marrow findings** in multiple myeloma. (3 marks)

i. .....

ii. .....

iii. .....

2.2. List three (05) **types** of multiple myeloma. (5 marks)

i. .....

ii. .....

iii. .....

iv. .....

v. .....

2.3. State four (04) laboratory investigations used in the **diagnosis** of multiple myeloma? State the expected findings. (12 marks)

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Part – D - Structured Essay Questions (30 marks)

1. A 52-year old woman presents with symptoms of anemia, bleeding gums. Some of the parameters of her full blood count (FBC) are given below.

WBC – 217 x 10^9/L

DC –

Blasts	- 78% (morphology resembles myeloblasts)
Promylocytes	– 02%
Myelocytes	– 08%
Metamyelocytes	– 05%
N	– 06%
M	– 01%

Hb – 108 g/L

Platelet Count – 18 x 10^9/L

1.1 What is the most probable **diagnosis**? (3 marks)

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1.2 Describe the possible **bone marrow findings** in this patient. (3 marks)

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1.3 Write one (01) **confirmatory laboratory test** for diagnosis of the disease mentioned in 1.1. Interpret your results. (9 marks)

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2.

2.1 Write the principles of flow cytometry. (6 marks)

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2.2 Describe the importance of induced pluripotent stem cells (iPSCs) in organ transplantation. (6 marks)

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2.3 Briefly explain the role of G-CSF during stem cell transplantation. (3 marks)

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