

## FACULTY OF ALLIED HEALTH SCIENCES, UNIVERSITY OF RUHUNA

Department of Medical Laboratory Science Year End Examination – Year 2 – 8<sup>th</sup> Batch

MLS 2103: Haematology - Theory II (SEQ)

Tuesday 24th July 2018

Time: 10.15 a.m. - 11.15 a.m.

Answer only two questions.

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1. A 7 years-old boy presented with fever for 3 days duration. He was given antibiotics for two days and complained of malaise and passing red colour urine. On examination he was pale and icteric. His preliminary investigation results are given below.



Full Blood Count

Hb 7 g/dl WBC 17000 x 10 9/L N 9000 x 10 9/L

Plt 350 x 10 9/L Serum bilirubin Total 42.5 mmol/L

Indirect 40.5 mmol/L

Retic count 11.7%

Coombs test Negative

Urine: Haemoglobinurea Positive

1.1. What is the most likely condition? (10marks)

1.2. List three (03) abnormalities you would expect to see in his blood picture. (15 marks)

1.3. State the confirmatory test and correct timing of the test. (10marks)

1.4. List three (03) other laboratory tests which are useful in this condition and expected findings.

(30 marks)

1.5. Briefly explain the pathophysiology of this condition. (35 marks)

2. A 65 year-old patient presents with lymphnode enlargement. Clinician suspects a lymphoma.

2.1. Define lymphoma. (10 marks)
2.2. List four (04) different causes/ etiological factors for lymphoma. (20 marks)

2.3. Describe how lymphoma differs from acute lymphoblastic leukemia. (20 marks)

2.4. Discuss the statement "lymphoma classification is complex and changing" (30 marks)

2.5. List four (04) tests useful to diagnose and confirm presence of a lymphoma. (20 marks)

3.1. List three (03) peripheral blood morphologies you would observe in myelodysplastic syndrome (MDS). (15 marks)

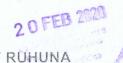
3.2. State four (04) common sub types of myeloproliferative neoplasia (MPN). (15 marks)

3.3. Briefly compare and contrast MDS and MPN. (35 marks)

3.4. List four (04) tests useful in the diagnosis of MPN. (20 marks)

3.5. Briefly explain the precaution you should take when blood is collected for haematological investigations from patients with MPN.

(15 marks.)





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Year End Examination – Year 2 – 8<sup>th</sup> Batch

MLS 2103: Haematology - Theory II (Essay)

Tuesday 24th July 2018

Time: 11.30 a.m. - 12.30 p.m.

Answer only two questions.

Index No: .....

- 1. Explain the absorption and transportation of vitamin  $B_{12}$  and discuss the causes and laboratory diagnosis of vitamin  $B_{12}$  deficiency. (100 marks)
- 2. Write an account on usefulness of automated full blood count analyzer generated report contents (including novel parameters) and its uses in the diagnosis of different diseases giving examples.

  (100 marks)

3.

3.1 Describe normal haemopoiesis in adults

(50 marks)

3.2 Discuss tests useful for the evaluation of haemopoiesis and their limitations.

(50 marks)