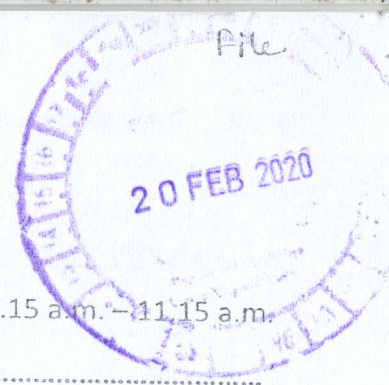**FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA**
B.Sc. Medical Laboratory Science Degree Programme
Year End Examination - Year 2 – 7th Batch
Haematology – Theory II – SEQ (MLS 2103)
Monday 27th March 2017   Time: 10.15 a.m. – 11.15 a.m.

Instructions: Index Number:...............................
Answer two questions only. First question is compulsory.

1. A 45 year-old lady presents to the hospital complaining of generalized weakness, vomiting and diarrhea. Physical examination reveals a smooth, red tongue and numbness in the extremities. Laboratory tests reveal that the patient has Pernicious anemia.

   1.1. Define the term "anemia".   (20 marks)

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   1.2. What is the most common cause of Pernicious anemia?   (20 marks)

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   1.3. State the possible findings of the following investigations in the above patient.   (40 marks)

   1.3.1. Full Blood Count

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   1.3.2. Blood picture

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   1.3.3. Bone marrow examination

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1.3.4. Reticulocyte count

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1.4. Name **two** laboratory investigations that could be useful in the confirmation of the diagnosis of pernicious anemia.   (20 marks)

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2.1.   List the anticoagulants commonly used in haematology laboratory.   (10 marks)

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(40)

2.2.   Briefly explain the actions of the anticoagulants stated above.   (20 marks)

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2.3.   State the effects of the above anticoagulants on full blood count test.   (20 marks)

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2.4. Briefly explain the two major principles used in automated haematology analyser. (50

3. A 2 years-old boy was brought to hospital with a history of excessive bleeding after minor cut injury. He is having a past history of frequent bruises. His two maternal uncles are having a history of bleeding tendency.

3.1.   What is the most likely diagnosis/ diagnoses?

(10 marks)

.... (39)

3.2.   A blood sample for coagulation studies was sent from ETU.

(20 marks)

3.2.1. State the sample requirement for coagulation studies.

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3.2.2. List five rejection criteria related to coagulation studies.

(30 marks)

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3.2.3. Coagulation studies show the following results.

(15 marks)

    PT - 12 sec   (12- 14 sec)

    APTT - 85 sec (26 – 35 sec)

Briefly explain the next step you would do to arrive at a diagnosis.

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3.2.4. Discuss two other investigations you need to do to arrive at a complete definitive diagnosis.

(25 marks)