



**Faculty of Medicine, University of Ruhuna**  
**Third Examination for Medical Degrees (Part II) – September 2014**  
**Pathology Paper I**

Wednesday 3<sup>rd</sup> September 2014

9.00 a.m. to 11.00 a.m.  
 Two hours

Answer ALL FOUR questions.  
 Answer each part in a SEPARATE book.

33<sup>rd</sup> - P.

**Part A**

1.1.1 Discuss the pathological basis of fibrosis in the lung (except pleura). (25 marks)

1.1.2 Discuss the effects of fibrosis in the lung. (25 marks)

1.2 Describe the pathological basis for the different manifestations in acute leukaemia. (50 marks)

bronchiectasis  
 TB  
 Fibrosis  
 Tissue repair

Lung per ↓  
 Lung collapse  
 bronch ↓

AML  
 ALL

**Part B**

2. A 40 year-old male was admitted to the Emergency Care Unit and was diagnosed of small bowel obstruction. He had a history of on and off low grade fever, abdominal pain and intermittent diarrhoea over months. He had lost weight by a couple of kilograms. His CRP level was found to be high. Part of the ileum was resected at the exploratory laparotomy to relieve the obstruction. The initial microscopic examination of the resected ileum revealed granulomatous inflammation.

2.1 What are the TWO most possible differential diagnoses? (10 marks)

2.2 Describe the possible macroscopic appearances of the intestines in this patient. (60 marks)

2.3 Describe the macroscopic and microscopic features which are helpful in differentiating the two conditions mentioned in 2.1. (20 marks)

2.4 List FOUR other causes of small intestinal obstruction. (10 marks)

Chronic Crohn's

**Part C**

3. A 44 year-old bank manager was referred to a medical clinic by a general practitioner. He had been in apparent good health until two weeks ago when he felt chest pain on physical exertion. The pain relieved with rest.

3.1 What is the likely clinical condition for his symptoms? (5 marks)

3.2 State FIVE important risk factors that you would check in this patient's history. (10 marks)

3.3 Describe the pathogenesis of the condition you mentioned in 3.1. (45 marks)

3.4 His fasting plasma glucose (FPG) was 130 mg/dL (7.2 mmol/L). Interpret the plasma glucose result. (5 marks)

3.5 State FOUR other biochemical tests you would do based on your interpretation of the FPG result, explaining the rationale for requesting them. (20 marks)

3.6 Three months later he was admitted to a medical ward with tightening chest pain & nausea not relieved by rest or analgesics. List THREE different biochemical markers which can be used to confirm the diagnosis of his present condition and explain how the serum levels of these markers change with time from the onset of chest pain. (15 marks)

Angina Pectoris

Lipid profile  
 Ur. microalbumin

S. Creatinine

45.5  
 5.6 - 6.9  
 77

Smooth muscle protein collagen

(15 marks)

Respi  
 Haemat.

MIT

CKS

Chemist

Abnormal  
 Crp  
 Cholesterol

37 marks

Top 1

Part D

A 35 year-old presented with severe headache and high fever of 1 day duration. He was conscious and rational. He had photophobia. On examination he had neck stiffness and positive Kernig's sign.

Meningitis

CNS

1. What is the most likely diagnosis? (10 marks)

2. State the laboratory investigations you would perform in this patient to confirm the diagnosis and give the expected results of those investigations. (30 marks)

3. Describe the macroscopic features of this patient's pathological condition. (20 marks)

4. Describe the microscopic features of this patient's pathological condition. (20 marks)

5. Briefly describe FIVE complications this patient may develop. (20 marks)

FBC  
ESR/CRP  
Blood culture  
Lumbar puncture

Cranial nerve  
Cerebral Swell  
or  
Septic  
Ventricles

turbid  
↑↑ - glucose  
↑ - Protein  
Neutrophil leucocytosis

2013 - July (2) CKD (70)