



Faculty of Medicine University of Ruhuna

**Third Examination for Medical Degrees (Part II) – August/September 2022
Pathology Paper I**

Monday 22nd August 2022

9.00 am to 11.00 am

Two hours

Answer **ALL SIX** questions.

Answer each part in a **SEPARATE** book.

Part A

1. A 65 year old patient with long standing hypertension and diabetes mellitus presented with retrosternal chest pain. His ECG showed ST segment elevations.
 - 1.1. State the biochemical test you would request to confirm the acute illness in this patient. (10 marks)
 - 1.2. Describe briefly the early complications of his acute illness. (30 marks)
 - 1.3. He died on the 2nd day of admission.
 - 1.3.1. Describe the macroscopic appearance expected in his heart. (30 marks)
 - 1.3.2. Describe the microscopic appearance expected in his heart. (30 marks)

Part B

2. Explain the pathological basis of following.
 - 2.1. Cardinal features of acute inflammation. (40 marks)
 - 2.2. Squamous cell carcinoma of the lung in a chronic smoker. (30 marks)
 - 2.3. Axillary lymphadenopathy in a patient with breast carcinoma. (30 marks)

Part C

3. Describe briefly the macroscopic and microscopic appearances of the following conditions.
- 3.1. Lobar pneumonia. (35 marks)
 - 3.2. Seminoma testis (30 marks)
 - 3.3. Cirrhosis. (35 marks)

Part D

4. A 60 year old male is presented with pallor and laboratory investigations confirmed iron deficiency anaemia. Examination of the patient revealed a firm palpable mass in iliac fossa. US scan abdomen revealed a growth in the caecum.
- 4.1. State the most important condition you suspect in this patient. (10 marks)
 - 4.2. State the investigation to confirm the diagnosis and describe briefly, how you would transport the clinical sample. (20 marks)
 - 4.3. Describe the macroscopic appearance of the lesion mentioned in 4.1 (25 marks)
 - 4.4. Describe the microscopic appearance of the lesion mentioned in 4.1 (25 marks)
 - 4.5. Discuss the complications this patient can get if the diagnosis is delayed (20 marks))

Part E

5. 5.1. A 50 year old woman with polyuria, polydipsia and progressive loss of weight was referred to a medical clinic. She also complained of recurrent episodes of perineal itching.

5.1.1. State the most likely diagnosis and explain how you would confirm the diagnosis. (30 marks)

5.1.2. Discuss the additional biochemical investigations you would perform in this patient giving reasons. (30 marks)

5.2. A 45 year old farmer with no history of hypertension or diabetes presented with lethargy and bilateral ankle swelling. His biochemical investigations are given below.

Serum creatinine:	184 $\mu\text{mol/L}$	(60-110)
eGFR	: 60ml/min/1.73m ²	(>90)
Serum potassium:	5.2 mmol/L	(3.5-5.3)
Serum sodium	: 135 mmol/L	(33-146)

5.2.1. Interpret the laboratory results and state the most likely diagnosis. (15 marks)

5.2.2. Describe briefly the pathological basis of ankle swelling in this patient. (25 marks)

Part F

6. Describe the pathological basis of following

6.1. Mucocutaneous bleeding in a patient with aplastic anaemia. (35 marks)

6.2. Prolonged prothrombin time in a patient with liver disease. (35 marks)

6.3. Elevated reticulocyte count in haemolytic anaemia (30 marks)