



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

Part A

1.

A 70-year old male complained of recent onset unsteady gait. Non-contrast CT scan of the brain showed an area suspicious of a secondary deposit in the cerebellum. Early hydrocephalus was also detected. CT Scan-thorax revealed a large central mass involving a main bronchus of the right lung.

He had been a heavy smoker for 20 years and he had stopped smoking when he was diagnosed and treated for laryngeal carcinoma, five years ago.

- 1.1 What is the most likely histological type of the malignant lesion in the cerebellum?
State reasons for your answer. (20 marks)
- 1.2 Briefly describe the pathogenesis of the mass in his lung. (40 marks)
- 1.3 Briefly explain the pathological basis of early hydrocephalus in this patient. (10 marks)
- 1.4 List three laboratory investigations that may be helpful in diagnosing the lung lesion. Indicate how you would make sure that the samples are well preserved for assessment by the pathologist. (30 marks)

Part B

2. Describe the pathological basis of the following

- 2.1 Acute left ventricular failure in a patient admitted with myocardial infarction. (50 marks)
- 2.2 Backache in a patient with prostatic carcinoma. (30 marks)
- 2.3 Granular contracted kidney in hypertension. (20 marks)

Part C

3.

- 3.1 Discuss briefly the different causes for enlargement of organs giving examples. (50 marks)
- 3.2.1 Briefly describe the pathological basis of Acute Haemolytic Transfusion Reaction (AHTR) due to ABO group mismatched transfusion. (25 marks)
- 3.2.2 List five different tests you would request urgently and the samples you would collect from a patient who is having AHTR indicating expected findings in each. (25 marks)

Part D

3 A 55 year-old male with a history of intravenous drug abuse presents to the medical clinic with abdominal pain and jaundice of three weeks duration. The clinical diagnosis is chronic active hepatitis.

4.1 State **three** general biochemical investigations you would do to support the diagnosis of chronic active hepatitis in this patient with their expected findings and the pathological basis for alterations. **(30 marks)**

4.2 State giving reasons the most likely etiological factors for chronic hepatitis in this patient.

Mention any relevant laboratory investigations you would do to identify the etiological agents mentioned. **(25 marks)**

Two years later the patient presents with severe right sided abdominal pain and ascites. The ultrasound scan revealed a cirrhotic liver with two solid areas suggestive of a malignant tumour.

4.3 State giving reasons one biochemical test you would perform to arrive at the diagnosis of the malignant tumour. **(10 marks)**

4.4 Describe the macroscopic features of the liver in this patient, at this stage. **(20 marks)**

4.5 Describe the microscopic features of cirrhosis in this patient. **(15 marks)**