



Pathology Paper I

Tuesday 23rd August 2005

9.00am to 11.00 am
2 hours

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

Part A

- 1 Explain the pathological basis of the following.
- 1.1 Enlarged axillary lymph nodes in a patient with breast carcinoma. (25 marks)
 - 1.2 Gangrenous foot in a patient with severe atherosclerosis. (25 marks)
 - 1.3 Cardinal features of acute inflammation. (50 marks)

Part B

- 2
- 2.1 Define emphysema. (10 marks)
 - 2.2 What are the different pathological types of emphysema? (10 marks)
 - 2.3 Describe the pathogenesis of emphysema. (50 marks)
 - 2.4 List the other respiratory diseases that are included in Chronic (diffuse) Obstructive Pulmonary Disease (COPD). (10 marks)
 - 2.5 Briefly discuss the main clinical consequences of COPD. (20 marks)

Part C

- 3 A 70 year-old male complained of passage of blood and mucus in stools of 3 months duration.
- 3.1 List THREE differential diagnoses? (10 marks)
 - 3.2 Describe the macroscopic and microscopic appearances of the intestines in ONE of the conditions you have listed in 3.1. (60 marks)
 - 3.3 Outline the probable complications affecting the liver in TWO of the conditions you have listed in 3.1. (30 marks)

Part D

- 4
- 4.1 Explain how samples should be collected and dispatched to the Pathology Laboratory with regard to each of the following investigations in order to ensure the accuracy of results.
 - 4.1.1 Creatinine clearance. (15 marks)
 - 4.1.2 Serum calcium. (10 marks)
 - 4.1.3 Blood pH (15 marks).



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4.2 A 39 year-old female received the following reports.

Haemoglobin 8.2 g/dl

Serum iron $7\mu\text{mol/L}$ (normal range $10 - 32\mu\text{mol/L}$)

Serum total iron binding capacity (TIBC) $75\mu\text{mol/L}$
(normal range $45 - 70\mu\text{mol/L}$)

Iron saturation 10.7% (normal range 15% - 45%)

4.2.1 What is the most likely diagnosis? (10 marks)

4.2.2 What changes do you expect to see in her
a) blood picture. (15 marks)
b) blood indices. (15 marks)

4.2.3 Briefly outline the causes that would lead to the condition you have mentioned in 4.3.1 (20 marks)