

UNIVERSITY OF JAFFNA, SRI LANKA
THIRD EXAMINATION FOR MEDICAL DEGREES – PART II **JANUARY 2009**

PATHOLOGY PAPER - II

Date: 08-01-2009

Time allowed : 3 Hours
9.00am – 12.00 pm

Answer all ten questions

Answer each question in a separate answer book

1. A patient presenting with an acute abdomen was found to have perforation of the stomach.
 - 1.1 Describe the macroscopic appearance of the stomach in chronic gastric ulcer perforation. (30 marks)
 - 1.2 Mention three other complications that can occur in chronic gastric ulcer. (15 marks)
 - 1.3 Brief out the pathological mechanism of how *Helicobacter pylori* causes peptic ulcer. (35 marks)
 - 1.4 Mention two other causes for perforation of stomach. (10 marks)
 - 1.5 Mention five pathophysiological changes that can occur after perforation of stomach. (10 Marks)

2. A female patient presented with solitary nodule of thyroid.
 - 2.1 Explain the possible results of the following investigation in the above patient.
- TSH, T₃, T₄ (15 marks)
 - 2.2 Enumerate the significance of FNAC in this patient. (30 marks)
 - 2.3 Describe briefly the microscopic findings of one of the primary thyroid malignancies (35 marks)
 - 2.4 What are the tumour markers that are useful in thyroid carcinoma? (10 marks)
 - 2.5 What are the common sites of metastasis in various types of primary thyroid carcinoma? (20 marks)

3.
 - 3.1 Discuss briefly the “effects of tumour on host” (50 marks)
 - 3.2 Briefly describe how grading and staging of malignant disease influences the prognosis. (30 marks)
 - 3.3 Mention five various methods available for laboratory diagnosis of cancer. (20 marks)

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4. Mention the aetiology and pathological changes that occur in the following conditions.

- 4.1 A patient's plain X'ray abdomen revealed pancreatic and bilateral renal area calcification. His serum calcium level is raised significantly. (25 marks)
- 4.2 Benign Prostatic enlargement in a 70 year old male. (25 marks)
- 4.3 Barret's oesophagus (25 marks)
- 4.4 Venous thrombosis in the lower limb (25 marks)

5. Write short notes on the following

- 5.1 Chronic osteomyelitis (30 marks)
- 5.2 Cervical Intra Epithelial Neoplasia (CIN) (40 marks)
- 5.3 Factors affecting wound healing (30 marks)

6. A patient is found to have an obstruction of the right main bronchus.

- 6.1 List 3 possible causes for obstruction of a main bronchus. (15 marks)
- 6.2 Describe the pathology of one of the causes you have mentioned in 1.1 above. (25 marks)
- 6.3 Describe the pathological features that could be seen in the rest of the lung in a patient with such a lesion (Obstruction). (60 marks)

7. A 46 year old female presented with yellowish discoloration of the sclera, pruritus and clay coloured stools.

Her investigation findings are as follows:

Albumin	-	36 g/L	(37-52)
Alkaline phosphatase	-	1075 U/L	(30 - 120)
Alanine transaminase	-	185 U/L	(<35)
Bilirubin	-	340 µmol/L	(<20)

She is diagnosed as having Gall stones in the bile duct.

- 7.1 Give 2 other possible causes for the above findings. (20 marks)
- 7.2 Describe the pathological basis for this patient's pruritus and clay coloured stools. (20 marks)
- 7.3 Describe briefly the pathological features expected in the gall bladder giving reasons. (30 marks)
- 7.4 Explain the results of the following investigation findings.
 - 7.4.1 Alkaline phosphatase.
 - 7.4.2 Alananine transaminase. (20 marks)
- 7.5 Name 2 other investigations that you would perform giving reasons. (10 marks)

8. Explain the pathological basis of the following.

- 8.1 A shrunken liver in post viral cirrhosis compared to an enlarged or normal sized liver in alcoholic cirrhosis.
- 8.2 Early presentation of left sided colorectal carcinoma as opposed to late presentation/clinically silent right sided colonic carcinoma.
- 8.3 Presence of embolic phenomenon in infective endocarditis and absence in rheumatic endocarditis.
- 8.4 Resolution being commoner in acute inflammation than in chronic inflammation.

(25 marks for each)

9. A patient is diagnosed as having chronic renal failure. He has been on treatment for diabetes mellitus for the past 15 years.

- 9.1 Describe the pathological changes in the kidney of this patient. (40 marks)
- 9.2 Describe the pathological changes you would expect to see in the heart of this patient. (40 marks)
- 9.3 List 4 extra renal pathological changes related to uraemia. (20 marks)

10. A 30 year old mother of 3 children presents with shortness of breath on exertion. Her full blood count is given below.

Hb - 7 g/dl
MCH - 24 pg
MCV - 72 fl
WBC - 5,400/mm³
Neutrophils - 58 %
Lymphocytes - 35 %
Eosinophils - 5 %
Monocytes - 2 %
Basophils - 0 %
Platelets - 200, 000 mm³

- 10.1 What is the most likely cause for her anaemia? (10 marks)
- 10.2 List 2 biochemical investigations that would support this. (20 marks)
- 10.3 Describe the abnormalities that you would expect to see in the investigations that you mentioned in 10.2. (20 marks)
- 10.4 Describe the morphological features that you would see in the blood picture of this patient. (20 marks)
- 10.5 List 3 conditions that may have given rise to this anaemia. (30 marks)