

UNIVERSITY OF JAFFNA, SRI LANKA

SECOND EXAMINATION FOR MEDICAL DEGREES PART II (2 nd)
2015 October

PATHOLOGY -Paper II

Date: 29.10.2015.

Time: 3 hours

ANSWER ALL TEN QUESTIONS

Answer each **QUESTION** in separate answer book

1. A 43-year old man, who has been smoking since he was a teenager, presents with a 2 week history of haemoptysis.
- 1.1 List the 5 commonest causes of hemoptysis. (15 marks)
- 1.2 Describe what you would be specifically looking for on examination of this patient. (40 marks)
- 1.3 What are the options for obtaining a cell/ tissue sample from a suspected bronchial lesion? (15 marks)
- 1.4 Draw a line diagram to illustrate the classification of carcinoma of the lung. (30 marks)
2. A 67-year old woman presents with spotty post-menopausal bleeding. Digital vaginal examination revealed an irregular growth in the cervix.
- 2.1 List 5 common causes of post-menopausal bleeding other than cervical cancer. (15 marks)
- 2.2 State the two commonest types of cervical cancer, describe the microscopic features of their precursors **and** aetiopathogenesis. (50 marks)
- 2.3 What are the principles of (35 marks)
A) grading and
B) Staging of cervical carcinoma?

- 3.
- 3.1 A 52 year old school teacher, whose mother died of metastatic colonic cancer, was referred to surgical outpatient clinic for further investigation of positive faecal occult blood test. He underwent colonoscopy examination and found to have a 17mm pedunculated polyp at 25 cm from the anal verge. Snare polypectomy was done and histopathology of the specimen reported as tubular adenoma with moderate to high grade dysplasia and no evidence of malignancy.
- 3.1.1 What is dysplasia? (10 marks)
- 3.1.2 Mention the different types of adenomatous polyp which arise in colon. (05 marks)
- 3.1.3 Mention the risk factors of colorectal cancer other than family history. (10marks)
- 3.1.4 What is the risk (percentage) of developing malignancy in this patient? (05 marks)
- 3.1.5 Describe the adenoma carcinoma sequence of colonic malignancy. (25 marks)
- 3.1.6 When will you do a surveillance colonoscopy in this patient? (05 marks)
- 3.2 Surveillance scope revealed an ulcerated growth at the sigmoid colon and biopsy showed a moderately differentiated adenocarcinoma.
- 3.2.1 Describe the mechanism of metastasis of colonic tumour to the liver. (20 marks)
- 3.2.2 Describe TNM staging of colonic cancer. (20 marks)
- 4 A 7 year old boy was admitted to hospital with easy bruising, fatigue and increased frequency of infection during the previous three months. Full blood count revealed pancytopenia.
- 4.1. Briefly describe the pathological basis for his symptoms based on the investigation findings. (15 marks)
- 4.2 List four (4) possible causes for pancytopenia (20 marks)
- 4.3. Bone marrow biopsy of the child revealed severe bone marrow hypoplasia.
- 4.3.1. List three (3) possible causes for bone marrow hypoplasia (15 marks)
- 4.3.2. Mention one inherited cause for bone marrow hypoplasia (10 marks)
- 4.3.3. List three (3) somatic abnormalities that can be associated with the condition you mentioned in 4.3.2. (15 marks)
- 4.3.4. Mention the underlying defect in the condition you mentioned in 4.3.2. (10 marks)
- 4.3.5. Mention the diagnostic test that will confirm the diagnosis you mentioned in 4.3.2. (15 marks)

5.

- 5.1 A 23 year old obese male with a history of hypertension diagnosed 3 months ago, not on treatment presented with shortness of breath (SOB) and blurred vision of 3 days duration. On arrival like patient was complaining of a severe headache. On examination, his blood pressure was 235/135 mm Hg. Urine full report showed 2 + proteinuria.
- 5.1.1. What is your diagnosis? (05 marks)
- 5.1.2. Briefly describe the pathophysiology of headache, SOB, blurred vision and proteinuria in this patient. (16 marks)
- 5.1.3. Mention **the** morphological changes that can be seen in the kidney of this patient. (20 marks)
- 5.1.4. List three predisposing conditions for the above diagnosis (09 marks)
- 5.2 A 23 year old male presented with intermittent, high grade fever of three weeks duration. He was diagnosed to have rheumatic fever 1 year back and on treatment since then. Examination revealed pansystolic murmur over the precordial region.
- 5.2.1. What is your first suspected diagnosis? (05 marks)
- 5.2.2. List three (3) risk factors for this condition. (09 marks)
- 5.2.3. List four (4) complications of this condition. (16 marks)
- 5.2.4. Briefly mention the morphological appearance of the heart in this condition. (20 marks)
6. **Mention**
- a) the diagnosis,
b) one aetiology,
c) two investigations to confirm the diagnosis, and
d) the morphological features of the lesion of the following conditions.
- 6.1. A 25 year old female presented with lumps on the left breast of 3 months duration. Examination revealed freely mobile, firm lumps on the left side of the breast (50 marks)
- 6.2. A 32 year old lady presented with palpitations, heat intolerance, diarrhea, restlessness and insomnia. Examination revealed lid lag and retraction. (50 marks)

7. A 4 year old boy presented with generalized lymphadenopathy and fever. He is suspected to have acute lymphoblastic leukaemia.
- 7.1. List three (3) clinical features that you would expect to see in this child. (15 marks)
- 7.2. Describe the pathogenesis for each clinical feature that you mentioned in 7.1. (30 marks)
- 7.3. List 3 investigations you would do to confirm the diagnosis. (15 marks)
- 7.4. Briefly describe the abnormalities that you expect to see in the investigations mentioned in 7.3. (15 marks)
- 7.5. What abnormalities do you expect to see in the full blood count of this patient? (15 marks)
- 7.6. List 2 prognostic factors in childhood acute lymphoblastic leukaemia. (10 marks)
8. A 55 year old male patient has had diabetes mellitus for the past 15 years. The diabetic control has been poor.
- 8.1. Briefly describe the pathological features that you would expect in
- 8.1.1. Heart. (30 marks)
- 8.1.2. Kidney. (30marks)
- 8.1.3. Liver. (20 marks)
- 8.2. List four (4) investigations that you would do when following up this patient and give your reasons. (20 marks)
- 9
- 9.1 Briefly describe the post mortem findings (macroscopy) of the brain of a patient who died of massive intracerebral haemorrhage due to long standing hypertension. (50 marks)
- 9.2 Compare the differences of cerebrospinal fluid in acute pyogenic, viral and tuberculous meningitis. (25 marks)
- 9.3 Briefly describe the aetiopathogenesis and pathological features of cerebral abscess. (25 marks)
- 10
- 10.1 Outline the macroscopic and microscopic features of acute pancreatitis. (30 marks)
- 10.2 List five (5) aetiological factors of the above condition. (15 marks)
- 10.3 Briefly outline the pathogenesis of acute pancreatitis. (30 marks)
- 10.4. List five (5) lethal complication of acute pancreatitis. (25 marks)