

UNIVERSITY OF JAFFNA, SRI LANKA
SECOND EXAMINATION FOR MEDICAL DEGREES-PARTII (2nd)-
NOVEMBER 2014-
PATHOLOGY-Paper II

Date: 05.11.2014.

Time: 03 hours

ANSWER ALL 10 QUESTIONS

Answer each question in separate answer book

- 1 1.1 A 50 year old female presented with excessive weight gain in spite of decreased appetite. Clinical diagnosis of hypothyroidism was made.
- 1.1.1 List two investigations that would confirm the diagnosis and mention the changes that you would expect in the investigations in primary and secondary hypothyroidism. (20Marks)
- 1.1.2 List three causes of hypothyroidism. (10Marks)
- 1.1.3 List the clinical manifestations of hypothyroidism in relation to
- 1.1.3.1. Cardiovascular system. (10Marks)
- 1.1.3.2. Central nervous system (10 Marks)
- 1.2 1.2.1 List two causes for each of the following conditions.
- 1.2.1.1. Hypocortisolism (10Marks)
- 1.2.1.2. Hypercortisolism (10Marks)
- 1.2.2. Describe the biochemical investigations you would carry out to confirm the diagnosis mentioned in 1.2.1.1, 1.2.1.2 (30Marks)
2. A 55 year old presented with tiredness and was found to have a Hb of 8 g/dl. A haemolytic anaemia was suspected.
- 2.1. Briefly describe the classification of haemolytic anaemia. (25 Marks)
- 2.2. List 2 clinical findings that you would expect to see in a patient with haemolytic anaemia. (10Marks)
- 2.3. List 3 investigations that you expect to be abnormal in a patient with a haemolytic anaemia. List the expected abnormality for each investigation that you mention. (15 Marks)

- 2.4. Describe the pathogenesis of 2 of the laboratory abnormalities that you mention in (2.3) (20Marks)
- 2.5. List 2 complications that a patient with haemolytic anaemia may have. (20Marks)
- 2.6. State one medication that is usually prescribed for patients with haemolytic anaemia. (10 Marks)
- 3
- 3.1 A 60 year old man presented with progressive dyspnea and cough for 1 year duration. The chest Xray showed hyperinflated lungs with reduced vascular markings.
- 3.1.1. What is the most probable diagnosis? (5Marks)
- 3.1.2. Discuss the pathogenesis of the above process. (25Marks)
- 3.1.3. Describe the pathological feature of the above condition. (20 Marks)
- 3.2 A 35 year old male patient presented with severe persistent cough with expectoration of mucopurulent sputum. Chest x-ray revealed a cavitating lesion of the lungs with surrounding consolidation. He is diagnosed as having bronchiectasis.
- 3.2.1. List two other differential diagnoses for the above mentioned radiographic appearance. (10Marks)
- 3.2.2. Describe the microscopic appearance of one of the conditions mentioned above (20Marks)
- 3.2.3. List 3 predisposing factors for bronchiectasis and explain the pathological mechanism for each. (20Marks)
4. Mention **two etiologies / risk factors** and **pathological changes** (macroscopy and microscopy) that may occur in the following conditions.
- 4.1 A 60 year old female presented with lump in the left breast and crusting exudate over the nipple and areolar skin. (35Marks)
- 4.2 A 58 year old male presented with ulcer in glans penis. (30 Marks)

- 4.3 A 75 year old male presented with urinary out flow obstruction, haematuria and back pain .Digital rectal examination revealed irregular palpable nodules (35 Marks)
- 5.
- 5.1 Define a polyp. (10 Marks)
- 5.2 List 4 types of polyps that occur in the colon. (40Marks)
- 5.3 Describe the microscopy of one of the polyps mentioned in (5.2). (30 Marks)
- 5.4 List 2 features that determine the malignant potential of a polyp in the colon. (20Marks)
- 6.
- 6.1 Define an infarct. (10 Marks)
- 6.2 List four (4) causes for vascular occlusion (20Marks)
- 6.3 Describe one of the causes mentioned in 6.2. (30 Marks)
- 6.4 Briefly describe four factors that determine effects of arterial obstruction. (40 Marks)
- 7.
- A 60 year lady presented with symptoms of gradually progressive anaemia. Based on the clinical findings and baseline investigations a provisional diagnosis of megaloblastic anaemia was made.
- 7.1. Briefly describe the biochemical basis for megaloblastic anaemia due to vitamin B₁₂ and folate deficiency (30Marks)
- 7.2 List the abnormalities you can observe in the blood film of a patient with megaloblastic anaemia (15Marks)
- 7.3 Briefly describe the abnormalities you can observe in the bone marrow aspirate film of a patient with megaloblastic anaemia (15Marks)
- 7.4 Mention the neurological manifestations of vitamin B₁₂ and folate deficiency (20 Marks)
- 7.5 List the causes of vitamin B₁₂ deficiency (20Marks)

8. A 60 year old previously hypertensive man died of intracranial haemorrhage. An autopsy was performed.
- 8.1 Briefly describe the expected autopsy (macroscopic) findings of the brain of this patient. (75Marks)
- 8.2 Briefly describe the aetiopathogenesis and pathological features of cerebral abscess (25 Marks)
- 9
- 9.1 Briefly describe the pathogenesis of glomerular injury in glomerulonephritis. (50 Marks)
- 9.2 Describe the pathological (macroscopic and microscopic) findings of the kidneys in malignant hypertension. (25Marks)
- 9.3 Briefly describe the pathological features of diabetic nephropathy. (25Marks)
- 10
- 10.1 A 30 year old male patient admitted to surgical causality ward with right leg cellulitis for last two days.
- 10.1.1. What are the cardinal signs help to confirm the diagnosis? (10Marks)
- 10.1.2. Explain the pathological basis of these cardinal signs. (50Marks)
- 10.2 The above patient developed abscess in the right leg on the fourth day after admission.
- 10.2.1. What is an abscess? (15Marks)
- 10.2.2. Explain the pathological basis of the treatment of abscess. (25Marks)