

**UNIVERSITY OF JAFFNA, SRI LANKA**  
**FACULTY OF MEDICINE**  
**FINAL EXAMINATION FOR MEDICAL DEGREES – NOVEMBER 2020**  
**MEDICINE PAPER II**

**Date: 16.11.2020**

**Time: 3 HOURS**

**Answer All TEN (10) Questions.**

**Answer each question in separate answer book.**

01. A 70-year-old male presents to the emergency department with a history of worsening of shortness of breath and orthopnea of two weeks duration. He is a known patient with diabetes mellitus, coronary heart disease and heart failure and is being followed up at cardiology unit.
- His regular medications are
- Premixed human insulin 20 units twice daily
  - Atorvastatin 20 mg daily
  - Aspirin 150 mg daily
  - Frusemide 40 mg mane
  - Metoprolol 25 mg bd
  - Enalapril 5 mg daily
- 1.1 Name 3 physical signs you would look for to support the diagnosis of acute on chronic heart failure? (15 marks)
- 1.2 Name 3 causes for the worsening of his cardiac condition. (15 marks)
- An ECG taken in the ward stay confirms a paroxysmal atrial fibrillation and 2D echo cardiogram reveals an Ejection Fraction of 25% with global hypokinesia.
- 1.3 Name 2 medications you would add to his regular medication regimen based on the above investigations. (20 marks)
- 1.4 Name 2 blood tests you would perform on follow up to monitor each of the medications you mentioned in 1.3? (20 marks)
- 1.5 Outline the "General lifestyle advice" you would give to this patient on discharge. (30 marks)

02. A 75-year-old diabetic patient presents to the medical emergency with an acute delirious state. Physical examination reveals a GCS of 11, febrile, pulse rate of 120 bpm, regular, BP of 80/50 mmHg, swelling and redness over the right leg. The oxygen saturation is 92% on room air. A bedside random blood glucose is 240 mg/dL. An indwelling urinary catheter is inserted and 20ml of concentrated urine is drained.
- 2.1 What is your complete diagnosis for this acute presentation? (10 marks)
- 2.2 Outline the important steps in the management of this patient for the next 2 hours. (40 marks)
- 2.3 What laboratory findings indicate worse prognosis of this condition? (20 marks)
- 2.4 The haemodynamic status has improved after resuscitation however the oxygen demand has increased to maintain oxygen saturation over the next 12 hours. (10 marks)  
What is the most possible cause for increased oxygen demand?
- 2.5 How will you manage the condition that you have mentioned in 2.4 (20 marks)
03. A 40-year-old farmer was brought to Accident & Emergency with a history of snake bite 3 hours prior while working in the paddy field. On examination, he looks anxious and there are signs of inflammation with bleeding at the site of bite. He also has bilateral ptosis and external ophthalmoplegia.
- 3.1 What is the most likely offending snake? (10 marks)
- 3.2 How do you manage this patient for 1<sup>st</sup> two hours? (40 marks)  
As he has not been passing urine, he was catheterized and about 150 ml of dark coloured urine was drained.
- 3.3 List two causes for his dark coloured urine. (15 marks)
- 3.4 What investigations you would perform to confirm the above diagnosis mentioned in 3.3? (15 marks)
- 3.5 List five preventive measures of snake bite. (20 marks)

04. A 32-year-old businessman presented with yellowish discoloration of the eyes associated with generalized ill health for 2 months. He denies abdominal pain or fever.

His initial investigations are as follows

WBC – 5000/mm<sup>3</sup>

Neutrophils -60%

Hemoglobin – 11g/dl

Platelets – 110 000/mm<sup>3</sup>

AST – 90 U/L (10-40)

ALT – 65 U/L (10-40)

ALP – 150 U/L (40-140)

Gamma GT – 90 U/L (10-40)

Albumin – 2.9 g/dl (3.5-5.0)

Globulin. – 3.9g/dl (2.0-3.5)

Total bilirubin – 5mg/dl (0.1-1.2)

Direct – 3.5mg/dl (<0.3)

Serum Creatinine -0.9 mg/dl

Sodium -132 mmol/l

Potassium – 4.1 mmol/l

His ultrasound abdomen revealed shrunken liver with increased echogenicity with irregular borders, mild splenomegaly and moderate ascites.

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| 4.1 | What is the complete diagnosis?              | (20 marks) |
| 4.2 | List 5 causes of the above condition.        | (20 marks) |
| 4.3 | List 5 complications of the above condition. | (20 marks) |
| 4.4 | Outline the management of ascites            | (40 marks) |

05. A 25-year-old female underwent following blood investigations for the complaint of heavy menstrual periods and multiple ecchymosis patches.  
Hb 10.5 g/dL  
WBC 5600/mm<sup>3</sup>  
PLT 10,000/mm<sup>3</sup>  
BU 4.8 mmol/L  
Serum creatinine 88 μmol/L  
Ultrasound abdomen – No abnormality detected
- 5.1 What further information you would gather from this patient to arrive at a diagnosis? (30 marks)
- 5.2 List the blood investigations you will request in this patient. Give reasons. (20 marks)
- 5.3 A bone marrow biopsy is performed and it is normal. (10 marks)  
What is the likely diagnosis?
- 5.4 Outline the management of this patient. (40 marks)
06. A 30-year-old female presents with multiple joint pain involving bilateral small joints of the hand of three months duration. On examination she is pale and has active arthritis involving all proximal interphalangeal and metacarpophalangeal joints.
- 6.1 What is the likely diagnosis? (10 marks)
- 6.2 Give four reasons for the anaemia? (20 marks)
- 6.3 What investigations will help to confirm your diagnosis mentioned in 6.1? (20 marks)
- 6.4 How will you treat this patient in this admission? (30 marks)
- 6.5 List 5 other manifestations this patient could develop later? (20 marks)
07. A 56-year-old female presents with coughing out blood with sputum of 5 days.
- 7.1 Write 5 causes for above presentation. (15 marks)
- 7.2 Write 5 physical examination findings that would help to differentiate the causes mentioned in 7.1 (15 marks)
- 7.3 Discuss the investigations need to be done on this patient. (50 marks)
- 7.4 If this patient cough out massive amount of blood, how will you manage immediately? (20 marks)

08. A 60-year-old male is admitted to accident & emergency with a history of shortness of breath since morning. He has past history of hypertension and stage V Chronic kidney disease.
- 8.1 List 5 possible causes for shortness of breath in this patient? (15 marks)
- 8.2 Write 5 immediate investigations you will do, and give reasons. (25 marks)
- 8.3 Discuss the management of this patient for first 24 hours. (60 marks)
09. A 23-year-old male presents to the emergency department with acute onset left sided hemiparesis and impaired conscious level. He was last seen well 2 hours ago. On examination he has eye opening to deep pain, an extensor response to deep pain and made incomprehensible sounds to deep pain. An urgent non contrast CT brain done after stabilizing the patient shows a large intracerebral haemorrhage with midline shift. Collateral history reveals that he has a valvular heart disease and has been on warfarin.
- 9.1 What is the GCS of this patient and mention each component (10 marks)
- 9.2 How will you manage this patient in the first 24 hours? (70 marks)
- 9.3 What are the indications for neurosurgical referral for this patient? (20 marks)
10. A 21-year-old male with type 1 diabetes mellitus presents to the emergency department with altered level of conscious. He has been unwell for 3 days and has not taken his insulin for the past 3 days. He has been vomiting and complaining of abdominal pain. On examination, he is severely dehydrated and is hyperventilating. His Glasgow Coma Scale is 9/15. An urgent Arterial Blood Gas done at the emergency department shows an arterial P<sup>H</sup> of 7.0 and bicarbonate level of 10 mmol/L, and a urine dip stick is positive for ketones. His random blood glucose is 14 mmol/L.
- 10.1 What is the diagnosis? (10 marks)
- 10.2 How would you manage this patient in the first 6 hours? (70 marks)
- 10.3 List 4 complications of the above condition. (20 marks)