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**FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA  
FINAL EXAMINATION FOR MEDICAL DEGREES – November 2015  
MEDICINE PAPER 1**

**23<sup>rd</sup> November 2015**

***(1.00 – 4.00 pm) 3 hours***

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**Instructions:**

- 1. Write your index number in all the pages**
- 2. Answer all questions**
- 3. Write your answers in the space given after each part of the question.**
- 4. The space given is adequate for the expected answer.**
- 5. Please return the question book at the end of the examination.**
- 6. Required normal values were given within brackets**

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1. A 60 year old male presented with loss of appetite, lethargy, nausea and breathlessness for one month duration. He has hypertension for 3 years. On examination mucosal pallor and bilateral pedal oedema was present. The Blood pressure and heart rate were 190/100mm Hg, and 80 bpm respectively. The rest of the physical examination is normal.

**Investigations**

Hb 8g/dL, WBC 6000/mm<sup>3</sup>, platelets 200,000/mm<sup>3</sup>

FBS 119 mg/dL

ESR 50mm 1<sup>st</sup> hour

ECG – left ventricular hypertrophy

Serum creatinine 4.5 mg/dL

- 1.1 List four main problems in the given scenario in this patient (5 Marks)

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- 1.2 What is the most likely diagnosis? (10 marks)

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**1.3 List six questions that you would ask from this patient to find the possible aetiology of this patients illness (30 marks)**

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**1.4 List five further investigations that are indicated in management of this patient indicating the expected results (25 marks)**

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2. 42 year old previously healthy female presented with following investigation reports. Her general practitioner has started her on a medication for high blood pressure but she has stopped it due to increased passage of urine following its use. On examination her BMI was 26 kg/ m<sup>2</sup> and had blood pressure of 160 / 100 mm Hg.

Fasting blood glucose 240mg/dL – Glycosylated hemoglobin – 8.2%, Serum sodium – 142 mmol/ L, Serum potassium – 2.8 mmol/ L, Serum creatinine - 0.82 mg/ dL.

- 2.1 List two different abnormalities in her investigation reports? (10 marks)

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- 2.2 Name one pharmacological agent you would use to treat each of the abnormalities listed in 2.1 (15 marks)

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- 2.3 Name three different disease conditions that could explain elevated blood pressure in this patient. (30 marks)

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- 2.4 Mention one feature in the history or examination in support of each of the conditions mentioned in 2.3 (15 marks)

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2.5 Name **one** additional test along with the expected findings that would support each of the diagnosis mentioned in 2.3(30 marks)

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3. A 35 year old farmer presented with four day history of fever, body aches and headache with no rhinorrhea, sore throat or cough. On admission he was febrile and had severe myalgia and tender hepatomegaly with no icterus, neck stiffness or lymphadenopathy. His blood pressure was 100/70 mm Hg and lungs were clear. Initial full blood count revealed HB 13.2 g/dl, WBC 6000/mm<sup>3</sup>, N=65%, L= 35%, Platelet count 110,000/ mm<sup>3</sup>. Serum AST– 150 IU/L , ALT – 70 IU/L

3.1 List **two** differential diagnoses (10 marks)

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3.2 List **three** investigations you would request and mention how their results help in differentiating the two conditions mentioned in A .(30 marks)

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4. A 62-year-old hotelier was admitted to a medical ward for further evaluation of leg swelling for one month duration. Apart from bronchial asthma he has been well in the past. Examination revealed an averagely built male with bilateral leg swelling. His blood pressure was 124/74mmHg and abdominal examination revealed a moderate splenomegaly.

Following investigations were available at the time admission.

Urine full report – normal with no protein, or any active sediments

Hb- 12.5 mg/dL

White cell count-4300/mm<sup>3</sup> (N- 76%, L-23 %)

Platelet count- 102,000mm<sup>3</sup>

AST- 54U/L ( 7-55), ALT 32U/L( 8-48)

Serum albumin 3.2 g/dL

4.1 What is the most likely underlying diagnosis? (10 marks)

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4.2 Mention four additional investigations that you would perform to support the diagnosis mentioned in 4.1 and state the expected findings (20 marks)

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**4.3 List five features in the history that you would elicit to find out the underlying aetiology for the condition mentioned in 4.1 (20 marks)**

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Four days after hospital admission, he became drowsy and found to have fever, icterus and flapping tremors

**4.4 What specific complication of the condition mentioned in 4.1 would have given rise to this picture (10 marks )**

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**4.5 List three precipitating factors for the complication mentioned in 4.4 (15 marks)**

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A 70-year old male with type 2 diabetes mellitus and recurrent episodes of wheezing and cough in past presented with fever, cough, shortness of breath and right sided chest pain for four days duration.

**5.1 List three differential diagnoses (15 marks)**

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**5.2 Write one specific clinical feature that you would elicit (symptom or sign) in support of each of the diagnosis mentioned in 5.1 (15 marks)**

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**5.3 Describe in brief how the abnormalities of chest radiograph would help you to differentiate the conditioned mentioned in 5.1 (30 marks)**

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**Question 6**

Four hours later patient's condition deteriorated. Examination revealed: pulse 140 per minute and low volume and blood pressure was 60/40mmHg. Cardiac monitor revealed broad complex regular tachycardia.

6.3 What is the most likely cause for his deterioration? (10 marks)

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6.4 Indicate the specific urgent treatment. (20 marks)

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2D echocardiogram performed two days later revealed antero-septal hypokinesia with left ventricular dysfunction (ejection fraction - 25%)

6.5 List four medications other than anti-platelets you would prescribe to this patient to improve his prognosis. (20 marks)

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**Question 7**

**7.1** What factors need to be considered in selecting an antiepileptic drugs for patients with a seizure disorder? (25 marks)

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A 21-year-old unmarried female undergraduate is admitted with repeated generalized seizures and jerky movements of the upper limb in the morning. Her parents are paddy farmers and the patient helps them in the paddy fields during vacations. Their income is barely sufficient for living. Changes in the EEG has been reported as confirmatory of juvenile myoclonic epilepsy

**7.2** What anti epileptic drug would you select to treat this patient? ( 5 marks)

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**7.3** Give reasons for your choice in 7.1 above (15 marks)

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7.4 What advice would you give regarding the drug therapy? (20 marks)

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A 55-year-old previously healthy male driver presented with five attacks of secondarily generalized seizures.

7.5 What antiepileptic drug would you select to treat this man? ( 5 marks)

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7.6 What advice would you give to this patient other than those regarding drug therapy? (30 marks)

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8 A 18 year old previously healthy girl is admitted to the ward with fever, icterus and hepatomegaly.

Investigations:

Hb 7.0g/dL

WBC 6400/mm<sup>3</sup> Neutrophil 62%. Lymphocytes 36%, Eosinophils 2%

Serum AST 70U/L (7-55)

ALT 36U/L

Serum bilirubin: Direct 19.0 mmol/L,

Indirect: 60 mmol/L

8.1 What is the most likely clinical condition? ( 10 marks)

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8.2 List **four** additional investigations that will confirm the diagnosis mentioned in 8.1 with expected results in this condition ( 20 marks)

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8.3 List **three** differential diagnosis for the condition you mentioned in 8.1 ( 15 marks)

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**8.4 List one investigation that will confirm each of the differential diagnosis you mentioned in 8.3 (15 marks)**

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**8.5 Mention briefly the specific management of the three diseases you mentioned in 8.3 (40 marks)**

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