



**FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA
FINAL EXAMINATION FOR MEDICAL DEGREES – MARCH 2021
MEDICINE PAPER 1**

8th March 2021

(1.00 – 4.00pm) 3 hours

Index Number:

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. Normal values are given within brackets.**

PART A

1) A 19- year old woman presents with progressive shortness of breath, chest pain, and leg oedema for one-month duration. She also has alopecia, oral ulcers, and bilateral knee arthralgia. On examination, she has malar rash, generalized oedema and blood pressure of 160/95 mmHg.

Investigations reveals

hemoglobin -	9.0 g/dL	(11.5-16.5)
serum creatinine-	2.68 mg/dL	(0.9-1.2)
urine dipstick test-	3+ protein	

A. What is the most likely clinical diagnosis? (10 marks)

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B. List five (5) other clinical findings you would look for in this patient in support of the diagnosis mentioned in A. (25 marks)

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C. List five (5) other investigations you would request and state the expected findings. (25 marks)

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D. List **four (4)** current problems seen in this patient (10 marks)

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E. Outline the management all **four (4)** problems mentioned above. (30 marks)

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2) A 28- year old man with type 1 diabetes mellitus presents with high-grade fever, and headache for two days. On examination, he is drowsy with GCS -14/15 and has neck stiffness. There is a widespread purpuric rash covering all four limbs associated with ecchymoses. His pulse rate is 110/min and blood pressure is 100/75mmHg.

investigations reveal,

haemoglobin 11.5 g/dL (11.5-16.5)

Total leukocyte count 21000/mm³ (4500-9500)

CRP 55mg/L (<6)

A. What is the most likely clinical diagnosis? (10 marks)

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B. List five (5) other clinical features (history or clinical signs) that would support the diagnosis mentioned in A. (25 marks)

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C. List five (5) other investigations that are important in the acute management of this patient and state the expected findings. (25 marks)

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D. List two life threatening complications of the condition mentioned in A. (10 marks)

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E. Outline the management of this patient. (30 marks)

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3) A 46-year man has undergone a routine medical examination and is found to have AST 102 u/L(<40) and ALT 110 u/L (<35). He has no symptoms other than occasional knee pain, which he attributes to his excess weight. He consumes alcohol on social occasions, on average once in two months.

A. How would you assess whether his weight is excessive? (10 marks)

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B. List **three (3)** other questions you would ask in the history to assess for an underlying cause of the abnormal investigation findings. (15 marks)

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C. If the answers to all three above questions are negative, what is the most likely cause of the abnormal investigation findings? (10 marks)

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D. List **three (3)** other investigations you would perform to assess the function of his liver and explain the expected finding if a liver disease is present. (15 marks)

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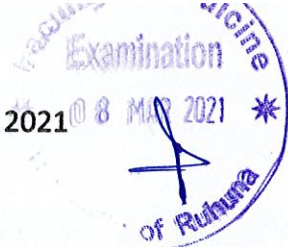
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PART B

4) A 25-year old man is admitted to hospital with swelling of ankles and face for five days duration. He has been previously well and not been on medications. Acute kidney injury is suspected as the likely reason for his symptoms.

A. List **five (5)** direct questions you will ask in his history to support the diagnosis of acute kidney injury. (15 marks)

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B. List **three (3)** additional physical signs that you would look for in this patient. (15 marks)

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C. List **five (5)** investigations that would help in identifying a cause for acute kidney injury in this patient and explain the expected findings. (25 marks)

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D. List **four (4)** life threatening complications that could occur in this patient. (20 marks)

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E. Briefly describe the steps in the management of **one (1)** of the condition mentioned in D. (25 marks)

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5) A 55-year old previously healthy man complains of breathlessness for three months. He has to stop twice to reach his office on the 2nd floor.

A. Give **five (5)** differential diagnoses for the above presentation. (10 marks)

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B. The patient says that he has worsening breathlessness for the past one week. He has a dry cough at night troubling his sleeping. Examination reveals bilateral leg oedema, irregularly irregular pulse with a rate of 120/bpm , blood pressure of 170/100mm/Hg, elevated JVP, and a cardiac apex at 6th intercostal space 2cm lateral to the midclavicular line. There are fine crackles in both lung bases.

What is the complete clinical diagnosis? (10 marks)

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C. List **five (5)** questions that you would ask in the history to find the etiology of his acute illness. (20 marks)

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D. List **five (5)** investigations that are useful in the acute management of this patient explaining the relevance. (20 marks)

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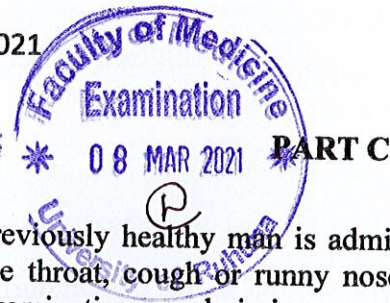
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F. Describe in brief the steps in the management of this patient during first 24 hours. (20 marks)

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F. List **four (4)** medications you would prescribe to this patient on discharge giving reasons for prescribing each. (20 marks)

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6) A middle-aged previously healthy man is admitted with fever and body aches for three days. He has no sore throat, cough or runny nose and no contact history of COVID 19 infection. Physical examination on admission reveals temperature of 40.1 C , pulse rate of 98 /min , and blood pressure of 120/ 80 mm Hg with normal findings on respiratory system examination.

A. List **three (3)** differential diagnoses. (10 marks)

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B. Mention **one (1)** clinical feature (history or physical sign) each that would support the conditions mentioned in A. (10 marks)

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C. List **five (5)** investigations you would request on admission and mention the value in the differential diagnoses. (30 marks)

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D. List **four (4)** clinical parameters you would monitor in this patient during hospital stay and briefly mention their value in the management (20 marks)

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E. On the fourth day after admission, the patient's general condition deteriorated with pulse rate of 130/ minutes and blood pressure of 80 / 60 mm Hg with cold clammy extremities. Name **one (1)** complication for the each of the diagnoses mentioned in A that could explain these new findings. (10 marks)

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F. Outline the management of **one (1)** of the complications mentioned in E. (20 marks)

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7) A 35-year old woman complains of weight loss of 5 kg over one month duration despite having good appetite.

A. Mention **two (2)** likely causes for her weight loss. (10 marks)

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B. List **three (3)** other symptoms of each of the conditions mentioned in A. (10 marks)

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C. Examination reveals warm and moist skin, irregularly irregular pulse with a rate of 130/bpm, and blood pressure of 160/100 mm/Hg. What is the most likely clinical diagnosis? (5 marks)

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D. Mention **two (2)** possible causes for the diagnosis mentioned in C. (10 marks)

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E. Briefly describe how you would clinically differentiate the two causes mentioned in D. (10marks)

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F. List **five (5)** investigations that you would arrange and mention their expected findings. (15 marks)

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G. Few days later, she became confused and agitated and the examination reveals high fever, excessive perspiration, tachycardia with a heart rate of 144 /min and blood pressure of 100/60 mmHg. What is the likely reason for the acute deterioration of her health? (10 marks)

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H. Discuss in brief the steps in managing the condition mentioned in G. (30 marks)

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8) A 38-year old previously healthy woman presents with acute shortness of breath and right-sided pleuritic chest pain for two days duration. She has no history of fever or cough. She returned from Australia five days ago and is under quarantine. Examination reveals respiratory rate of 26/min, heart rate of 114/min and a blood pressure of 110/70 mmHg. Rest of respiratory and cardiovascular examinations is normal.

Her investigations are as follows

SpO2 on air –	93%	(>94%)
Chest radiograph –	normal	
Haemoglobin –	11.5 g/dL	(11.5-15.5)
WBC –	10,000	(4500-9500)
Neutrophils –	75%, lymphocytes-	22%
Platelets -	210,000/uL	(150000-450000)

A. What is the most likely diagnosis? (10 marks)

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B. List five (5) other investigations that are useful for the acute management mentioning their expected results. (30 marks)

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D. Outline the plan of management on discharge for this patient. (20 marks)

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