



**FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA  
FINAL EXAMINATION FOR MEDICAL DEGREE – JUNE 2020  
MEDICINE PAPER 1**

**15<sup>th</sup> June 2020**

**(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. Required normal values are given within brackets.**

**Part A**

1)

A 65 year old man is admitted with severe pain on right knee for three days. He is on diclofenac sodium 50 mg twice daily for 2 days which slightly improved his pain. He denied preceding trauma to knee. He has type 2 diabetes mellitus and hypertension.

On examination he is in pain, ill looking, temperature 101 F, pulse rate 104/min and blood pressure 90/60 mmHg. Right knee joint examination reveals severe tenderness, diminished knee flexion and extension with evidence of joint effusion. His other system examinations are unremarkable.

a. What is the most likely diagnosis? (20 marks)

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b. List five investigations you would perform mentioning the expected results. (40 marks)

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c. Outline four important steps in the acute management of this patient. (40 marks)

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2)

A 52 year old man presents with abdominal distension and ankle swelling for two months. He is a teetotaler. On examination he was icteric and had bi-lateral pitting ankle oedema and ascites.

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

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b. List four (4) different aetiologies for the clinical diagnosis mentioned in (a) (20 marks)

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c. List features that you would elicit in the history to support the four aetiologies mentioned in (b). (30 marks)

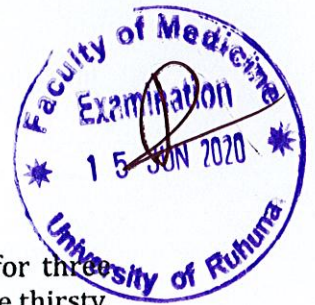
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**Part B**

3)

A 72-year old man with diabetes mellitus on metformin and gliclazide for three years is admitted to hospital with mild confusion, drowsiness and excessive thirst. On examination his GCS is 13/15, pulse rate 112/min, blood pressure 112/84mmHg, and has no neck stiffness or focal neurological deficit.

Investigations revealed

RBS	520mg/dL
Sodium	152 mEq/L (135-145)
Potassium	4.2 mEq/L (3.5-5.5)
CT brain( non contrast )	normal
UFR –	
sugar	+++,
protein	+++,
RBS, Pus cells, or granular cast	Nil
ketone bodies	Negative

a. What is the likely diagnosis? (15 marks)

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b. List three (3) other possible differential diagnoses. (10 marks)

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c. List three (3) important complications of the condition mentioned in (a). (10 marks)

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d. List five (5) other investigations that you would order on admission and explain the reasons for ordering them. (25 marks)

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e. Outline briefly the steps in managing this patient during the acute stage.  
(30 marks)

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f. Briefly explain the reasons for the following abnormalities in this patient.  
(10 marks)

Sodium -152

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Urine protein +++

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4)

A 35 year old woman is found to have blood pressure of 150/90 mmHg.

a. Define hypertension and state the blood pressure cutoff values for an adult. (10 marks)

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b. Mention two (2) methods that can be used to confirm hypertension. (10 marks )

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c. List five (5) features in the history or examination that would suggest an underlying secondary cause for hypertension and state the conditions suspected. (20 marks)

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d. List four (4) groups of first line medications used in hypertension (10 marks)

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Her subsequent investigations revealed following results

Serum creatinine	0.9 mg/dL ( 0.5-1.2)
Serum sodium	142 mEq/L(135-145)
Serum potassium	3.2 mEq/L(3.5-5.5)
UFR	no protein , 2-3 /pus cells in HPF
Hb	15.2 g/dL (13.5 -17.5 g/dL)
WBC	4500 mcL (3,400 to 9,600)
Platelets	223, 000 (150000-400000 x 10 <sup>6</sup> /L)

- e. Based on above investigations , mention three (3) possible secondary causes for her hypertension (15 marks)

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- f. Mention one (1) confirmatory test for each of the conditions mentioned in (e) (15marks )

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- g. What dietary advice you would give to this patient with hypertension? (10 marks)

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- h. How would you modify her pharmacologic management of hypertension if she wishes to get pregnant. (10 marks )

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**Part C**

5)

A 70 year old previously healthy man is admitted with cough and haemoptysis for three months. He gives a history of recent weight loss and mild fever. He has been smoking for nearly 20years and is being evaluated for recent onset constipation. His family doctor has noted an ill-defined shadow measuring 2x2cm in the right apical area in the chest radiograph done three weeks ago.

- a. List three (3) possible causes for his illness (20 marks)

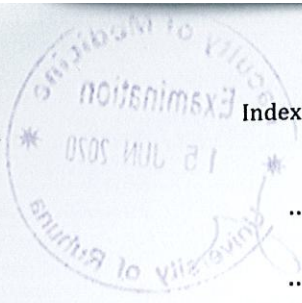
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- b. List four (04) physical signs that you would look for and indicate how that would help in arriving at the final diagnosis. (40marks)

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- c. List four (4) investigations you would perform and indicate how they would help in differentiating the three conditions mentioned in (a). (40 marks)

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6)  
A 50-year old female schoolteacher has recent onset fatigue. Her Full Blood Count is as follows.

Hb                    8g/ dL (13.5 -17.5 g/dL)  
WBC                2800 mcL (3,400 to 9,600)  
Platelets         80,000 (150000-400000 x 10<sup>6</sup>/L)

a. List five (5) possible differential diagnoses, which are compatible with the above findings. (25 marks)

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b. List one feature in the history for each of the diagnosis mentioned in (a) (20marks)

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On examination she has moderate splenomegaly.

- c. List two (2) most likely diagnoses considering the complete clinical picture (Consider the clinical features and the FBC results). (20 marks)

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- d. List four (4) investigations to support the two diagnoses listed and state the expected results. (25 marks)

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Three months later her FBC was as follows  
Hb 7.5g/dL, WBC1200/mm<sup>3</sup> platelets 20,000/ mm<sup>3</sup>

- e. List two (2) anticipated complications (10 marks)

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**Part D**

7)

A 28 year man is admitted to the casualty medical unit complaining of difficulty in walking for three days. The difficulty, which was mild on first day , had progressed and he could no longer stand unsupported. He had fever for three days one week ago, which was diagnosed as a viral fever by the general practitioner.

- a. List five (5) clinical features you would elicit on examination to differentiate between a possible Upper Motor Neuron (UMN) or Lower Motor Neuron (LMN) cause . (25 marks)

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- b. Mention one UMN and one LMN diagnosis which could explain the above clinical presentation (20 marks)

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- c. On day two of admission, he complains of inability to feel anything below his umbilicus and was found to have loss of sensation . Which of the above diagnoses is most likely? (10 marks)

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- d. List one other differential diagnosis (in addition to what is listed in c ) which will explain the weakness and the sensory abnormality described (15 marks)

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- e. His ankle and knee reflexes are diminished. State the explanation for this finding. (10 marks)

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- f. What is the most important investigation to confirm the diagnosis and state how it is helpful? (20 marks)

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8)

A 55 year old man a farmer by profession, has recently been diagnosed as having depression. He was started on Fluoxetine 20 mg once a day. He is found unconscious in the paddy field by a family member. He is brought to the casualty medical unit. The family members bring a half empty bottle of agro chemicals found near the patient.

- a. List four (4) differential diagnoses (other than agro chemical poisoning) which could explain the clinical condition. (20 marks)

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- b. The label of the bottle says 'Dimethoate'. List three (3) resources that you may use to find further details about the contents of the agrochemical bottle (15 marks)

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- c. The resource provides the information that the bottle contains an organo-phosphate. List five (5) clinical features which would suggest an organophosphate ingestion. (25 marks)

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- d. Describe briefly the immediate management of this patient . (20 marks)

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- e. Patient makes a good recovery after 24 hours, but his condition deteriorates on the 3<sup>rd</sup> day. His respiration is noted to be shallow and he is unable to lift his head off the pillow. Name the complication that has arisen. (10 marks)

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- f. Describe briefly the management of this complication. (10 marks)

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