



FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA
FINAL EXAMINATION FOR MEDICAL DEGREE – NOVEMBER 2019
MEDICINE PAPER 1

25th November 2019

(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.**

1) A 40-year-old employee of hospital cleaning service is admitted with fever, myalgia and arthralgia of five day duration. Apart from hypertension for which he has been on losartan 25mg twice a day, he has been generally well. On admission, his BP is 90/70mmHg and pulse rate 120 bpm.

1.1 List two (2) possible causes for his illness . (10 marks)

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1.2 List four (4) physical signs that would help in differentiating the two conditions mentioned in 1.1 and discuss how these signs differ in the two conditions. (20 marks)

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1.3 List five (5) investigations you would order/perform on admission and give reasons for performing them. (35 marks)

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1.4 List three (3) immediate steps you would take in his management until laboratory investigations are available. (35 marks)

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2) A 55-year-old man presents with shortness of breath on mild exertion and lethargy for four weeks and oliguria for two days. On examination, he was dyspnoeic, pale and had bi-lateral pitting ankle oedema. His blood pressure was 180/110mmHg and JVP was elevated. Auscultation of the lung bases revealed bilateral fine crepitations.

Investigations on admission:

Hb	8.9 g/dL (11.5 – 16.5)
WCC	5500/mm ³ (4000 – 9000)
Platelet count	222000 /mm ³ (150,000 – 450,000)
Serum creatinine	4.5 mg/dL (normal <1.1 mg/dL)
Serum sodium	134mmol/L (135 – 150)
Serum potassium	6.8mmol/L (3.5 – 5.5)
SGOT	54 IU/L (<35)
SGPT	68 IU/L (<45)
Serum albumin	38 g/L (35 – 54)
UFR	Pus cells 1-2/HPF
	Red cells -occasional
	Albumin - trace

2.1 List four (04) major problems identified in the given clinical scenario. (20 marks)

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

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2.3 List five (5) further investigations that would help in the management this patient giving expected results. (30 marks)

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2.4 Outline the immediate management of this patient. (40 marks)

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3) A 65-year-old female presents with painful swelling of right knee joint for two weeks duration. On examination, right knee is swollen with limited movements.

3.1 Mention three (3) likely possibilities for above presentation. (15 marks)

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3.2 Mention one (1) feature in the history that would support each of the differential diagnosis mentioned above. (15 marks)

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3.3 Briefly discuss how the plane x-ray of the affected joint would help in differentiating the conditions mentioned above. (20 marks)

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3.4 Briefly discuss how the analysis of joint aspiration would help in differentiating the three (3) conditions mentioned above. (20 marks)

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3.5 Outline the steps in the management of one of the condition mentioned in 3.1 during the acute stage. (15 marks)

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3.6 Describe in brief the long-term management of one of the conditions mentioned in 3.1. (15 marks)

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(4) A 60-year-old previously healthy male presents with fever, cough and right sided chest pain of five day duration. On examination he was dyspnoeic and febrile with a respiratory rate of 24 cycles per minute. Respiratory system examination revealed coarse crepitations over the mid and lower zones of the right chest.

4.1 What is the clinical diagnosis? (10 marks)

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4.2 List five (5) investigations you would request in this patient on admission and write down the expected results in each. (50 marks)

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4.3 What specific treatment would you start in this patient and give reasons for your choice. (20 marks)

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4.4 List four (4) complications that may occur in this patient during the first week of the illness. (20 marks)

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5) A 55-year-old man who is under treatment for type 2 diabetes and dyslipidemia presents with mild abdominal distension and ankle swelling for three weeks. Physical examination revealed mildly icteric sclera with bilateral pitting ankle oedema. His blood pressure is 130/ 80 mmHg and there is no pallor. Abdominal examination reveal moderate ascites.

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

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5.2 List two (2) investigations useful in confirming the clinical diagnosis you mentioned in 5.1 and write down the expected findings in each investigation. (30 marks)

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5.3 List three (3) different aetiologies for the clinical diagnosis you mentioned in 5.1. (30 marks)

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5.4 List one (1) investigation to confirm each of the aetiology you mentioned in 5.3. (30 marks)

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6) A 35-year-old man is admitted with shortness of breath on exertion and anaemia. His full blood count report is as follows.

Haemoglobin 8.2 g/dL (12-15)
PCV (HCT) 36% (36%-46%)
MCV: 72 fL (80-100)
MCH: 28 pg (27-34)
MCHC 30 g/dL (32-36)

WBC 8400 / mm³ (4500 - 9000)
Neutrophil 61 %
Lymphocytes 36%
Eosinophils 3%
Platelet Count 363,000 /mm³ (150,00-400,000)

6.1 Mention two (2) possible causes for the abnormalities seen in this patient's full blood count. (10 marks)

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6.2 List three (3) clinical features to support each of the condition mentioned in 6.1 (30 marks)

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6.3 Mention one (1) other investigation to confirm each of the diagnosis you mentioned in 6.1 indicating expected results. (20 marks)

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**6.4 Briefly discuss the management of one (1) of the condition mentioned in 6.1
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7) A 23-year-old man is admitted with sudden onset severe headache in the occipital region. On examination his GCS is 14/15, he had neck stiffness and positive Kernig's sign.

7.1 What is the most likely diagnosis? (10 marks)

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7.2 What urgent investigation would you arrange on arrival to confirm the diagnosis? (10 marks)

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7.3 If the diagnosis is confirmed what further investigations would you perform to find out the cause? (20 marks)

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7.4 Discuss the management of this patient if the most likely diagnosis is confirmed. (45 marks)

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7.5 List three (3) complications of the condition mentioned in 7.1 (15 marks)

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8) A 65-year-old man is admitted to a medical ward with a leg wound. He has been on intravenous antibiotics for the past seven days and the infection is gradually improving and he is afebrile now. Over the past six hours he has been complaining of worsening shortness of breath. He also has chest pain, which is localized to lower lateral aspect of right chest. He says that this pain gets worse with deep inspiration.

8.1 List two (2) likely causes for the shortness of breath. (10 marks)

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Examination reveals a swelling in the calf region in the leg without the wound. There is no redness or warmth in this area.

8.2 What is the most likely diagnosis from those listed in 8.1 above? (05 marks)

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8.3 List four (4) additional physical signs that will support the above diagnosis? (20 marks)

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8.4 List six (6) investigations that will support the diagnosis mentioned in 8.2 and write the expected findings (30 marks)

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8.5 Outline the immediate and long term management of the diagnosis mentioned in 8.2. (35 marks)

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