



UNIVERSITY OF JAFFNA, SRI LANKA
FINAL EXAMINATION FOR MEDICAL DEGREES - MARCH 2025
ACADEMIC YEAR 2017/2018
Medicine - Paper II

Date: 17.03.2025

Time: 1.30 pm to 4.30 pm (03 hours)

Answer All Ten Questions

Index Number:

QUESTION 01

A 50-year-old female presents to the medical clinic with a history of pain and swelling involving small joints of hands and feet symmetrically over the past two months. She had been treated for similar illness since 30 years of age and defaulted the follow up for the last two years. She also complains that her symptoms are worse in the morning and the joints are stiff for an hour in the morning.

1.1 What is the most probable clinical diagnosis for the above clinical presentation? (10 marks)

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1.2 What are the physical signs you would look for on examination of hands to support your clinical diagnosis? (15 marks)

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1.3 Examination of the lower limb revealed a painful swelling over the posterior aspect of the knee. What could be the possible complication? (05 marks)

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1.4 Name **five(5)** extra articular manifestations of the condition you mentioned in 1.1 (10 marks)

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1.5 On systemic examination she was found to be having cervical lymphadenopathy and splenomegaly. Name the possible complication she has developed. (10 marks)

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1.6 List the blood investigations you would perform to assess her disease status and monitor the treatment. Give reasons. (20 marks)

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1.7 Outline the pharmacotherapy you would institute on this patient. Mention the important side effects of these medications. (30 marks)

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QUESTION 02

A 50-year-old male with end stage renal disease on hemodialysis has following FBC report.

Hb	7.2g/dL(12.5-15.5),MCV 84fL(80-96)
WBC	7600/mm ³ (4000-11000),N-68%,L-25%
Platelet	156000/mm ³ (150000-400000)

2.1 Explain the pathophysiological mechanism of the anaemia in this patient (15 marks)

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2.2 How do you assess the iron status of this patient? (15 marks)

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2.3 If iron deficiency is identified, how will you treat it? (20 marks)

2.4 Discuss the management of anaemia in this patient. (30 marks)

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2.5 What complications you may expect with the above management? (20 marks)

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3.4 This patient’s respiratory rate is 30/minute, Blood pressure 80/55mmHg and SpO2 89% on room air.Mention the empirical antibiotic treatment you will start.(Including drug name, frequency and dose) (15 marks)

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3.5 Patient failed to respond to above mentioned treatment by day 4. List the possible reasons for the inadequate response? (20 marks)

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3.6 The patient was appropriately managed and shown significant improvement in clinical and laboratory parameters. On the 10th day of the illness while awaiting for discharge she developed acute shortness of breath and SpO₂ dropped suddenly to 68%. What is the most likely cause for the sudden deterioration? (10 marks)

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QUESTION 04

A 55-year-old diagnosed patient with hypertension with poor compliance presents with sudden onset severe headache and weak left upper and lower limbs. On examination he is not pale, pulse 90 bpm, blood pressure 220/140mmHg, heart sounds dual rhythm, GCS -15/15 and there is no neck stiffness. Power of left upper and lower limbs is grade 2 with extensor plantar response, pupils equal and reactive. Swallowing is affected. Other system examinations are normal.

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

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4.2 List **three(3)** common causes for the diagnosis mentioned in 4.1? (10 marks)

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4.3 What is the first diagnostically important investigation you need to perform in this patient? (5 marks)

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4.4 What are the other investigations you need to perform in this patient? (20 marks)

4.5 Brief out the management of this patient for the diagnosis mentioned in 4.1? (40 marks)

4.5 Brief out the management of this patient for the diagnosis mentioned in 4.1? (40 marks)

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4.6 On the 4th day of his illness his GCS dropped to 12/15. List **five(5)** possible causes for the drop of GCS in this patient? (15 marks)

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QUESTION 05

A 68-year-old man presents with shortness of breath of 2 days duration. He is a known patient with hypertension, type 2 diabetes and IHD and defaulted the medical follow-up. On examination, he is tachypnoec with RR 25/minute, SpO₂ 87% on room air, pulse rate 110bpm, regular, BP 220/110mmHg and auscultation over lung bases reveals fine creptitations upto midzone.

5.1. What is the diagnosis of this presentation? (10 marks)

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5.2. Give **five(5)** essential investigations you will arrange in this patient? Write the expected findings.

(20 marks)

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5.3. How will you manage this patient in the A&E? (35 marks)

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5.4. What is the ECG diagnosis? (10 marks)

5.5. What additional management you will consider based on the finding in 5.4. Give reasons? (25 marks)

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QUESTION 06

A 32-year-female presents with recent weight gain of 5 kg body weight and letharginess. She found difficult to complete her household activities lately. She is following a gynaecology clinic for further evaluation of menorrhagia as well. On examination she is not pale, BP 150/100mmHg, PR 56bpm and there is a goitre in the anterior neck.

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

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6.2. Mention **five(5)** clinical signs you expect to see in this patient? (15 marks)

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6.3. How will you confirm your clinical diagnosis? Mention the expected abnormalities? (15 marks)

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6.4. How will you manage this patient?

(25 marks)

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This lady underwent a surgical removal of the neck lump due to cosmetic reason. During the post op review she complains numbness around the mouth and tingling sensation on her hands at times.

6.5. What is the likely cause for her new symptoms?

(10 marks)

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6.6. How will you confirm your diagnosis?

(10 marks)

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6.7. How will you treat the condition?

(15 marks)

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QUESTION 07

A 58-year-old male with liver cirrhosis presents with fever, abdominal pain, and worsening abdominal distension for a duration of three days. On examination, his GCS is 15, febrile, pale, and icteric. Other notable findings include bilateral ankle edema, generalized abdominal tenderness and gross ascites.

WBC	4500/mm ³ (4000-11000)
Hb	10g/dl(12.5-15.5), MCV 90fL(80-96)
Platelet	120 000/mm ³ (150000-400000)
AST	110
ALT	45
ALP	110
GGT	80
Albumin	2.8g/l
Globulin	3.0g/l
Total bilirubin	3.8 mg/dl
Direct bilirubin	2.9 mg/dl
Serum Creatinine	2mg/dl
Sodium	130mmol/l
Potassium	4.9mmol/l
Ascitic fluid full report	
Protein	2.9 g/dl
White cells	700/μl
Neutrophils	450/μl
Lymphocytes	250/μl
Red cells	50/μl

7.1 What is the cause of his acute presentation?

(10 marks)

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7.2 How would you manage the above condition?

(40 marks)

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7.3 How do you prevent further episodes of the condition mentioned in 7.1 (10 marks)

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7.4 On day three of his hospital stay, he became confused. What are the possible causes? (15 marks)

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7.5 What further investigations would you perform to determine the likely cause of his confusion? Write the expected findings (25 marks)

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QUESTION 08

A 50-year-old woman with Diabetes mellitus on metformin presents with a history of fever with chills and rigor, dysuria, increased frequency of urination and vomiting of 7 days, and dizziness and episodes of confusion of one day. On examination, following findings were recorded.

Temperature – 40°C

Blood pressure – 70/45 mmHg

PR – 128 bpm

RR – 28/min

GCS – 14/15

Lungs-Clear

Abdomen – Normal except right renal angle tenderness

8.1 Define the term sepsis and septic shock

Sepsis

(10 marks)

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Septic shock

(10 marks)

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8.6 Patient random blood glucose is 420 mg/dL

- a. Write the name and route of administration of medication you will use to control the blood glucose (5 Marks)

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- b. What is the target blood glucose level (5 Marks)

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8.7 List three complications she may develop due to her acute illness (10 marks)

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QUESTION 09

Part A

A 20-year- old school girl presents to A&E, 30 minutes after ingestion of a few “Alary (Kaneru)” seeds. On admission, she complains of dizziness and vomiting. On examination, she is restless, pulse rate is 52 bpm, and her BP is 90/60 mmHg.

9.1 Mention the active agent which causes the clinical syndrome and briefly explain the mechanism of action. (10 marks)

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9.2 List two essential investigations you would carry out in this patient with expected findings. (10marks)

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9.3 What will be your immediate steps of management in this patient? (20 marks)

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Part B

A 40-year-old manual worker was brought to A&E with a history of reduced level of consciousness.

Initial investigations showed the following results

Random Plasma glucose	5 mmol/L	(4-5.6)
Serum Na	140 mmol/L	(135-145)
Serum K	4 mmol/L	(3.5-5.0)
Blood urea Nitrogen (BUN)	5 mmol/L	(2.5-7)
Serum bicarbonate	12 mmol/L	(22-28)
Serum chloride	100 mmol/L	(97-107)
Non-contrast CT brain - Normal		

9.4 Calculate the serum osmolality (10 marks)

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9.5 Calculate anion gap (10 marks)

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if Measured serum osmolality is 356 mOsmol/kg

9.6 Write two differential diagnoses

(10 marks)

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Results of his blood gas analysis are shown below

pH – 7.32
pO₂ – 192 mmHg
pCO₂ -24 mmHg
HCO₃ – 12 mmol/L
lactate – 1.5 mmol/L

9.7 What is the interpretation of ABG?

(10 marks)

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Later it was noted that he had afferent pupillary defect

9.8 What is the most likely diagnosis?

(10 marks)

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9.9 List two antidotes for above condition mentioned in 9.8

(10 marks)

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QUESTION 10

A 47-year-old man is referred to nephrology clinic for further evaluation of impaired kidney function while being evaluated for a new onset hypertension. Patients is asymptomatic and there aren't any significant finding on examination. He informs about his mother who had had kidney failure and needed haemodialysis at the age of 65. His blood pressure on examination is 130/80 mmHg and he takes losartan 25mg BD and HCT 25 mg mane on regular basis.

His investigations are as follows,

UFR	++ of protein
	RBC: Nil /HPF
	Pus cells 5-8/HPF
Hb	14g/dL(12.5-15.5) – MCV 83 fl
WBC	11.7 x10 ⁹ /L(4-11x10 ⁹)
Platelets	260 x 10 ⁹ /L(150-400 x 10 ⁹)
CRP	6 mg/dL (<6mg/L)
ESR	35 mm/hour
Uric acid	7.8 mg/dL (3.5-7.2 mg/dL)
Serum creatinine	1.8mg/dl (0.7-1.1 mg/dL)
Serum Sodium	138 mmol/l
Serum Potassium	4.6 mmol/l
FBS	5.2 mmol/l
Urine protein creatinine ratio – 1.4 mg/mg (less than 0.15 mg/mg)	
USKUB- showed enlarged kidney of 14cm each and there are 4 large cysts in left kidney and 5 cysts in the right.	

There is a single cystic lesion in the left lobe of the liver as well

10.1 What is the likely diagnosis? (10 marks)

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10.3 His mother had died due to sudden onset intracranial bleed , what complication his mother could have developed ? (10 marks)

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10.4 How could you prevent the above mentioned complication in this patient ? (15 marks)

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10.5 What other 5 complications this patient could develop? (25 marks)

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