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UNIVERSITY OF JAFFNA, SRI LANKA

FINAL EXAMINATION FOR MEDICAL DEGREES - SEPTEMBER 2025

ACADEMIC YEAR 2018/2019

Surgery - Paper II

Date: 25.09.2025 **Time: 1.30 pm to 4.30 pm (03 hours)**

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1. A 65-year-old woman with a known history of gallstones, diabetes mellitus, and hypertension, who is awaiting elective surgery, presents with right upper abdominal pain accompanied by fever and vomiting. On examination, she appears ill, febrile, deeply jaundiced, and has marked tenderness in the right hypochondrium.

1.1. What is the most likely diagnosis? (05 Marks)

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1.2. List the laboratory investigations you would perform. (20 Marks)

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1.3. List two(2) radiological investigations you would perform in this patient. (10 Marks)

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1.4. Surgical team decided to manage this patient in the **ward**.

Outline the steps in the **initial** management of this patent. (25 Marks)

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1.5. How would you assess the severity of the condition mentioned in 1.1? (15 Marks)

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1.6. If the patient clinically deteriorates despite the management outlined in 1.4, what would be the next step in management before definitive treatment? (10 Marks)

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1.7. What is the definitive treatment for this patient during **this admission**? (10 Marks)

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1.8. What is the **definitive** surgical treatment after recovery from the acute illness? (05 Marks)

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2. A 50-year-old man presents with a 2-day history of right loin pain, vomiting, fever and dysuria. On examination, he appears ill and dehydrated. After clinical assessment, a diagnosis of urosepsis with obstructed infected kidney was made.

   2.1. List four (4) **clinical signs** that suggest urosepsis (10 Marks)

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   2.2. Explain the pathophysiology of above-mentioned clinical features in 2.1 (20 Marks)

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   2.3. Outline the initial management of this patient (20 Marks)

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2.4. Mention four (4) **laboratory** parameters for monitoring the clinical improvement in this patient. (10 Marks)

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2.5. List four other laboratory investigations you would request for this patient. (10 Marks)

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2.6. Mention the **imaging** modality used to confirm the diagnosis. (10 marks)

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2.7. The Arterial blood gas (ABG) analysis shows following findings. Interpret findings and explain briefly (15 marks)

pH :7.29	BE: -5
PCO_2 :30 mmHg	Lactate: 3
PO_2 :70 mmHg	RBS :130 mg/dL
HCO_3^- :18 mmol/L	

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2.8. What is the definite treatment in this patient to control the sepsis? (5 marks)

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3. A 68-year-old man presents with a 3-day history of pain and swelling of left leg. He has hypertension and history of smoking. He recently underwent a total hip replacement. Clinical examination shows swollen left calf with warm and tenderness compared to right side. His BMI is 32kg/m^2.Clinical diagnosis of deep venous thrombosis (DVT) was made.

3.1. List four (4) risk factors in this patient for developing DVT (10 Marks)

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3.2. List three clinical features that support the diagnosis of DVT in this patient (15 Marks)

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3.3. Name three (3) differential diagnosis to consider in this patient (10Marks)

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3.4. List four investigations you would perform in this patient with reasons (15Marks)

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3.5. Outline the management of this patient (20 Marks)

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3.6. Enumerate the measures you would take to prevent DVT following surgery (20 Marks)

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3.7. List two indications for usage of IVC filters in DVT patients (10 Marks)

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4.

4.1. A 58-year-old man with diabetes mellitus and chronic liver parenchymal disease, found to have a 3cm solitary lesion in the right lobe of the liver on routine ultrasound scan. Triphasic contrast enhanced CT (CECT) of the liver shows features of hepatocellular carcinoma (HCC). He has no known allergies. His Serum creatinine is 1.7 mg/dL.

4.1.1. Name a tumour marker which could be elevated in HCC (10 Marks).

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4.1.2. List the steps in preparation for the contrast enhanced CT in this patient (20)

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4.1.3. Outline the typical imaging features of HCC in a triphasic CT. (10 Marks)

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4.1.4. State 3 ways that an **Interventional Radiologist** can contribute in management of a HCC (10 Marks).

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4.2. A term neonate presents with bilious vomiting within a few hours after birth. The baby has not passed meconium. On examination, there is epigastric fullness with scaphoid lower abdomen. An abdominal X-ray shows the classic "double bubble" appearance.

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

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4.2.2. Explain the cause for "double bubble" appearance on the abdominal X-ray. (10)

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4.2.3. List other investigations you would perform in this neonate. (10 Marks)

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4.2.4. Outline the preoperative management of this neonate. (20 Marks)

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5. A 70-year-old man presents with progressively worsening lower urinary tract symptoms (LUTS) for the past 8 months. His past history is unremarkable. Diagnosis of benign prostatic obstruction was made.

5.1. List the two main categories of LUTS and give three examples for each. (10 Marks)

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5.2 Mention three (3) other causes for LUTS. (10 Marks)

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5.3 Name three bedside clinical examinations useful in the assessment of LUTS. (10 Marks)

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5.4 What is the role of International Prostate Symptom Score (IPSS). (10 Marks)

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5.5 State two (2) initial laboratory investigations in this patient. (10 Marks)

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5.6 Name the initial imaging modality useful in this patient, and list three key information it can provide (10 Marks)

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5.7 List two (2) medical treatment options for him (10 Marks)

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5.8 What are three (3) common indications for surgical treatment (TURP) in benign prostatic obstruction (10 Marks)

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5.9 Name three (3) important perioperative complications of TURP. (10 Marks)

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5.10 State two (2) distinguishing features between BPH and prostate cancer on clinical evaluation. (10 Marks)

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6 A 65-year-old man, presents with a 2-day history of colicky, central abdominal pain and absolute constipation. He had three episodes of bilious vomiting on the day of admission. He underwent surgery for ruptured appendix 40 years ago. On examination, he was anxious, and afebrile. His heart rate was 112 bpm, and the blood pressure was 100/60 mmHg. His abdomen was distended and tympanitic. There was a visible, old midline scar. Palpation revealed generalized tenderness, but no signs of peritonism. Bowel sounds were hyperactive with occasional tinkling sounds. Digital rectal examination revealed an empty rectum.

6.1. Mention the most likely diagnosis in this patient, giving reasons (10 Marks)

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6.2. Outline the immediate management of this patient in the first 6 hours (40 Marks)

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6.3.Name the appropriate initial imaging and the findings that would support the likely diagnosis mentioned in 6.1.(10 Marks)

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Next day the patient developed fever and his pulse rate was 120 /min and the blood pressure was 90/60 mmHg. The abdominal examination revealed guarding and rigidity.

6.4.What is the likely cause for this deterioration and explain the pathophysiology of it (15)

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6.5.Name the next step of definite management of this patient and outline the steps in preparation (15 Marks)

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6.6.List three the likely complications that can arise following the management you mentioned in 6.5 (10 Marks)

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7. A 32-year-old construction worker is brought to the emergency department 45 minutes after a fall from 6m height. He was conscious at the scene but complained of severe abdominal and pelvic pain. He was able to speak on admission; his respiratory rate was 28/min and SpO2 was 96% on room air; his pulse rate was 128/min and the blood pressure was 90/50 mmHg. There were bruising over the left lower ribs, flank and left iliac crest.

7.1. Outline how you will prioritize and proceed with initial management of this patient (20)

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7.2. List two abdominal organ injuries you suspect in this patient (10 Marks)

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7.3. What is the appropriate imaging that would aid in the initial management of this patient considering his abdominal pain and expected findings. (10 Marks)

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7.4. The patient remains haemodynamically unstable despite resuscitation. How would you proceed with further management. (10 Marks)

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X ray imaging of this patient showed a right sided pubic rami fracture and diastasis of the right sacroiliac joint.

7.5 Mention how the above injury could cause haemodynamic instability in this patient (15)

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7.6 Outline the management of pelvic fracture in this patient (20 marks)

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7.7 List three potential complications related to pelvic injury (10 marks)

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7.8 Outline the rehabilitation of this patient (5 marks)

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8.1 A 55-year-old woman presents with a painless lump in the upper outer quadrant of her right breast, which she noticed 2 months ago. She reports no other symptoms. Upon examination, a firm, 3cm irregular, non-tender lump is found, accompanied by ipsilateral axillary lymphadenopathy.

8.1.1 Name the most likely diagnosis in this patient? (5 Marks)

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8.1.2 List other clinical features that support above diagnosis. (15 Marks)

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8.1.3 Outline the diagnostic workup you would undertake to confirm the diagnosis and stage the disease (10 Marks)

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8.1.4 Mention the principles of surgical management of breast for this patient. (10 Marks)

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8.1.5 Explain the role of axillary management in this patient. (10 Marks)

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8.1.6 Outline the postoperative adjuvant treatment options and their indications. (10 Marks)

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8.2 A 45-year-old man presents with a 3cm suprarenal mass discovered on imaging during evaluation for headache and hypertension. He reports episodes of palpitations, sweating, and tremors. His blood pressure is persistently elevated.

8.2.1 What is the likely diagnosis? (10 Marks)

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8.2.2 Describe the appropriate diagnostic workup to confirm the diagnosis and to determine the functional status of the tumour. (20 Marks)

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8.2.3 Outline the management of this patient (10 Marks)

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