

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (ANAESTHESIOLOGY) FINAL EXAMINATION – AUGUST 2022

Date: 10th August 2022

Time: 9.30 a.m. – 12.30 p.m.

SHORT ANSWER QUESTIONS

Candidates are required to answer **all twelve (12) questions**.

Candidates who fail to attempt any **one (01) question** will not pass the examination

All questions carry equal marks.

Answer each question in a separate book.

PART A

1. A 52-year-old known hypertensive for 10 years is scheduled for a laparoscopic cholecystectomy. He gives a history of recurrent transient ischaemic attacks (TIA) within the last six months. He is on losartan 50mg daily. 12 lead ECG shows left ventricular hypertrophy.
 - 1.1. What are the different groups of antihypertensive medications recommended for a hypertensive patient? (20%)
 - 1.2.
 - 1.2.1. Briefly explain the mechanisms of action of losartan. (30%)
 - 1.2.2. What is the additional benefit of using losartan in this patient? (10%)
 - 1.2.3. State three (03) investigations specifying different organs to determine the hypertension mediated organ dysfunction (HMOD) in this patient. Explain the reasons for ordering each. (40%)
2. A 30-year-old male was admitted to the hospital following an accidental kerosene oil burn involving the face and upper body. Burn surface area (BSA) was 35%.
 - 2.1. What symptoms and signs would make you suspect an inhalational burn injury? (15%)
 - 2.2. Enumerate the steps in the initial management of this patient. (45%)

48 hours later he was taken for a wound debridement under general anaesthesia.

 - 2.3. What problems could be encountered in the management of his airway and state how you would overcome them. (40%)

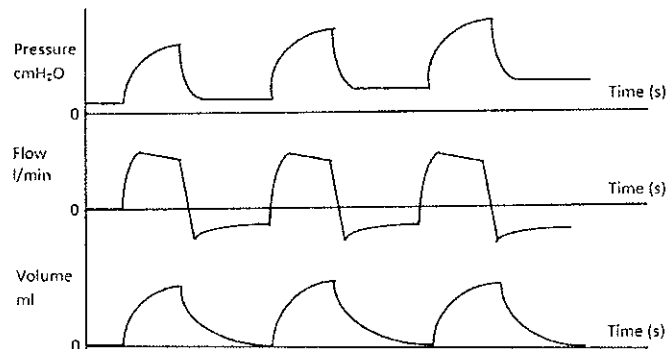


Contd...../2-

3. A 50-year-old woman has undergone a left sided mastectomy six months ago for carcinoma of the breast. She is referred to the pain clinic with pain over the left chest.
- 3.1. Briefly explain the possible causes for her pain. (30%)
- A decision was made to prescribe opioids for her pain management.
- 3.2.
- 3.2.1. Outline the principles of an opioid prescription plan (35%)
- 3.2.2. List the side effects of chronic opioid use. (15%)
- 3.2.3. How would you minimize the above side effects. (20%)
4. A 44-year-old patient was scheduled for a trans-sphenoidal resection of a pituitary tumour.
- 4.1. Draw a labelled diagram illustrating the pituitary gland and its important surrounding structures. (20%)
- 4.2. Enumerate possible presentations of a patient with a pituitary tumour. (20%)
- 4.3. What advantages would the above surgical approach have over the other approaches? (15%)
- 4.4. A CSF leak was noted on the second post operative day.
- 4.4.1 What are your concerns (10%)
- 4.4.2. What steps should be taken in managing the above condition? (35%)

Contd...../3-

5. A patient admitted with pneumonia is being ventilated in the ICU. The following is a schematic of the scalar graphic seen on the screen.



5.1.

- 5.1.1. What are the derangements seen? (20%)
- 5.1.2. List three (03) possible effects of the above (5.1) on the patient. (15%)
- 5.1.3. Outline the measures to manage this condition. (35%)


5.2. Draw a pressure time scalar with an inspiratory hold in a (30%)

5.2.1. normal patient

5.2.2. patient with poor lung compliance

6.

- 6.1. What is "retained placenta"? (10%)
- 6.2. What are the predisposing conditions which lead to the above? (15%)
- 6.3. List the complications of a retained placenta. (15%)
- 6.4. What are the anaesthetic options available for manual removal of a retained placenta? (10%)
- 6.5. Briefly explain the advantages of each method you have mentioned in 6.4. (50%)

 Contd...../4-

PART B

7. A 67-year-old woman is scheduled to have an open Whipple's procedure. A thoracic epidural is planned for intra and postoperative analgesia.
- 7.1. Outline the advantages of epidural analgesia over intravenous morphine infusion in this patient? (35%)
- 7.2. Enumerate the known risk factors for an anastomotic leak following this procedure and outline the measures taken to address them. (45%)
- 7.3. Outline four (04) other possible causes of mortality in this patient. (20%)
8. A 25-year-old man presents with status epilepticus.
- 8.1. Define status epilepticus. (10%)
- 8.2. Give three (03) causative categories with two examples for each. (15%)
- 8.3. Enumerate main goals in the management of status epilepticus. (25%)
- 8.4. Outline the general (30%) and pharmacological (20%) management of this patient.
9. A 13-year-old girl (30Kg) is scheduled for corrective surgery for idiopathic scoliosis. Her left sided Cobb's angle is 120 degrees.
- 9.1. How would you identify the specific pre-operative issues? (40%)
- 9.2. Outline the intraoperative considerations in
- 9.2.1. Monitoring (20%)
- 9.2.2. Positioning (20%)
- 9.3. How would you manage her post operative pain. (20%)

Contd...../5-

10. An eight-week-old baby (4kg) admitted with projectile vomiting for 3 days is scheduled for pyloromyotomy.
- 10.1. Outline specific metabolic derangements expected in this baby (25%)
- 10.2. How would you optimise the above derangements? (40%)
- 10.3. Outline the specific intra-operative considerations and the measures that can be taken to overcome them. (35%)
11. "Safe Surgery Saves Lives". The WHO surgical safety checklist is a tool developed to reduce morbidity and mortality.
- 11.1. Write the three (03) critical steps of a procedure, as per the "WHO surgical safety check list". (15%)
- 11.2. A 30-year-old ASA 1 female underwent endoscopic retrograde cholangiography (ERCP) in the endoscopy suite. During the procedure she had a cardiac arrest leading to an unexpected death.
- 11.2.1. Briefly explain the immediate steps to be followed. (60%)
- 11.2.2. What are the steps followed in breaking bad news. (25%)
12. A 32-year-old woman is scheduled to undergo surgical closure of atrial septal defect (ASD). She has a simple ostium secundum ASD, 15mm in size, with mild to moderate pulmonary arterial hypertension (PVR: 3 Wood units) and good RV function (TAPSE: 20).
- 12.1. Outline the pathophysiology of a left to right cardiac shunt. (25%)
- 12.2. State with reasons, three (03) intra operative concerns related to ASD closure in this patient. (30%)
- 12.3. Outline the measures you would adopt to minimise them. (45%)