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**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (ANAESTHESIOLOGY) FINAL EXAMINATION – AUGUST 2018**

**Date:-** 9<sup>th</sup> August 2018

**Time :-** 1.00 p.m. – 4.00 p.m.

**LONG ESSAY QUESTIONS**

Answer any **three (03) questions**.

Answer each question **in a separate book**.

1. Primi mother with a POA of 38 weeks, is admitted to the casualty ward in labour. She is tachycardic (heart rate 140/minute), hypotensive (blood pressure 80/50 mmHg) and tachypnoeic (respiratory rate 40/minute). She complains of abdominal pain.
  - 1.1. List the possible causes. What other clinical features would enable you to differentiate each cause? (30%)
  - 1.2. Outline the resuscitation and initial management of this patient. (50%)
  - 1.3. She develops a cardiac arrest during resuscitation. What strategies would you adopt? Explain the physiological basis for the above strategies. (20%)
  
2. A 40 year old male with BMI of 37kg/m<sup>2</sup> is admitted to the surgical ward with epigastric pain radiating to the back.
  - 2.1. State the diagnostic criteria for acute pancreatitis. (10%)
  - 2.2. List the common aetiological factors. (10%)
  - 2.3. Explain the different scoring systems available for severity assessment. (20%)
  - 2.4. List the complications of severe acute pancreatitis. (20%)
  - 2.5. Outline the management of severe acute pancreatitis. (40%)

3. A 25 year old patient was admitted to HDU with a retroperitoneal haematoma following blunt trauma. He needed transfusion of blood and blood products due to low haemoglobin and deranged coagulation.
  - 3.1. Describe the physiological changes of haemorrhage in trauma. (50%)
  - 3.2. Describe the management plan for this patient. (50%)
  
4.
  - 4.1. What are the different types of congenital tracheoesophageal fistulae? (10%)
  - 4.2. Outline the specific preoperative assessment and optimization required. (30%)
  - 4.3. Describe the intraoperative management with special emphasis on challenges posed with tracheal intubation. (40%)
  - 4.4. Outline the postoperative management. (10%)
  - 4.5. List the factors that determine the prognosis of this baby. (10%)

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**Date:-** 10<sup>th</sup> August 2018

**Time:-** 1.00 p.m. – 4.00 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.

1. A 20-year-old patient is admitted for navigator guided excision of a brain stem tumour.
  - 1.1. What are the preoperative concerns? (40%)
  - 1.2. List the positions which can be used for the procedure. (10%)
  - 1.3. What measures would you adopt to provide brain relaxation during surgery? (25%)
  - 1.4. Enumerate the possible post-operative complications in this patient. (25%)
  
2. A 60 year old diabetic patient is admitted for vitreo-retinal surgery for a retinal detachment.
  - 2.1. List the factors that would make you decide to provide a general anaesthetic for this patient. (20%)
  - 2.2. Briefly describe your general anaesthetic technique. (50%)
  - 2.3. What are the advantages of local anaesthesia over general anaesthesia for this surgery? (30%)

3.
  - 3.1. Outline with an illustration the important anatomical relations of the internal jugular vein in the neck. (30%)
  - 3.2. What are the ultrasonographic features of internal jugular vein? (30%)
  - 3.3. Enumerate the complications of central venous cannulation. How would you minimize them? (40%)
  
4. A 65 year old previously healthy male is awaiting laparoscopic anterior resection. His BMI is 35kg/m<sup>2</sup>.
  - 4.1. Outline the potential risks and complications of the laparoscopic technique for anterior resection. (50%)
  - 4.2. What measures would you take to minimize them? (50%)
  
5.
  - 5.1. What is the most suitable nerve and relevant muscle for monitoring the adequacy of paralysis for intubation? Give reasons for your selection. (15%)
  - 5.2. How would you diagnose residual muscle paralysis during recovery from anaesthesia? (40%)
  - 5.3. Compare and contrast neostigmine and sugammadex with regard to reversal of neuromuscular blockade. (45%)
  
6. A 45year old lady presents to the pain clinic due to persistent severe pain and swelling of her right leg for six months, following removal of a full POP applied for a fracture tibia. She was diagnosed to have Complex Regional Pain Syndrome. (CRPS)
  - 6.1. What are the currently used criteria for the diagnosis of CRPS? (40%)
  - 6.2. List four (04) possible pathophysiological mechanisms of CRPS. (20%)
  - 6.3. Outline the treatment modalities available for management giving reasons. (40%)

7.

- 7.1. What criteria are used to diagnose peripartum cardiomyopathy (PPCM)? (20%)
- 7.2. Enumerate the differential diagnosis of PPCM. (20%)
- 7.3. Outline the key points in the management of acute heart failure in PPCM. (50%)
- 7.4. List the analgesic options for pain relief in labour for PPCM. (10%)

8.

- 8.1. What are the hormones secreted by different zones of the adrenal cortex?  
Enumerate the functions of each. (30%)
- 8.2. What are the clinical features of Addison's disease? (20%)
- 8.3. A patient with Addison's disease is presenting for a major surgery.  
What are the specific peri-operative concerns? (50%)

9. A 60 year old male is awaiting right pneumonectomy with one lung ventilation.

- 9.1. How would you assess his suitability for lung resection? (30%)
- 9.2. Outline how you would optimize him prior to surgery. (20%)
- 9.3. During surgery his oxygen saturation drops to 85%.  
What are the possible reasons? How would you manage? (50%)

10.A 50 year old male is awaiting a deceased donor liver transplant.

- 10.1. What are the important clinical considerations in the pre operative evaluation? (50%)
- 10.2. List the anticipated consequences of the reperfusion phase? (15%)  
Indicate how you would prevent each of them. (35%)

11.

- 11.1. Describe the innervation of the knee joint. (30%)
- 11.2. What peripheral nerve block options are available for total knee arthroplasty (TKA)? (25%)
- 11.3. What other analgesic options are available for TKA? (25%)
- 11.4. What other pharmacological adjuvants enhance recovery after TKA? How do they act? (20%)

12.

- 12.1. List the most common causes (20%) and clinical features (15%) of airway obstruction in an adult.
- 12.2. What clinical features should alert us of a time-critical situation? (15%)
- 12.3. What immediate measures could be taken while patient is prepared for any definitive treatment? (20%)
- 12.4. Outline the pros and cons of awake fiberoptic intubation to secure an emergency airway in a patient with an obstructed airway. (30%)