

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

CERTIFICATE OF COMPETENCE IN ANAESTHESIOLOGY
EXAMINATION - DECEMBER 2021 (RESCHEDULED)

Date:- 16th December 2021

Time:- 9.30 a.m. – 11.30 a.m.

ESSAY PAPER

Answer **all eight (08)** questions.

Each question must be answered in a separate book.

1.
 - 1.1. What are the advantages and disadvantages of the circle system?
(40 marks)
 - 1.2. Outline the advantages of low flow anaesthesia. (20 marks)
 - 1.3. List the requirements necessary for administration of low flow anaesthesia. (40 marks)
2. A previously healthy primigravida at POA 37 weeks develops foetal distress while in the labour ward. She needs an emergency lower segment caesarean section (LSCS).
 - 2.1. What immediate measures would you take to improve foetal wellbeing? (40 marks)
 - 2.2. List different modes of anaesthesia available for this patient. (15 marks)
 - 2.3. Justify your choice of anaesthesia with reasons. (45 marks)
3. A healthy 45-year-old man, was admitted to Accident & Emergency Department following a high speed collision. He had two episodes of vomiting. His GCS was 10/15. He had an externally rotated left lower limb. His heart rate was 104/minute and blood pressure 90/50 mmHg.
 - 3.1. Outline your initial resuscitation. (40 marks)
 - 3.2. What investigations are necessary for this patient? (20 marks)
 - 3.3. What further arrangements would you ensure for safe transfer of this patient to a neuro-surgical centre? (40 marks)

4. What are the indications, doses and side effects of the following drugs?
- 4.1. Suxamethonium (35 marks)
- 4.2. Salbutamol (30 marks)
- 4.3. Ketamine (35 marks)

5. A 60-year-old man with suspected bowel perforation was admitted to ICU for stabilization.

Below is his arterial blood gas (ABG) report done on breathing room air.

pH	7.26
PaO ₂	90 mmHg
PaCO ₂	22 mmHg
Lactate	6.0 mmol/L
HCO ₃ ⁻	12 mmol/L
BE	-9 mmol/L

- 5.1. Interpret the above report. (30 marks)
- 5.2. What is the likely diagnosis? (10 marks)
- 5.3. Briefly mention the reasons for the above derangements. (30 marks)
- 5.4. List the important initial steps you would take to manage this patient. (30 marks)
6. A 65-year-old woman with a history of myocardial infarction 1 year ago is scheduled for a mastectomy.
- 6.1. Outline the preoperative steps that could be taken to optimize her cardiac status prior to surgery. (40 marks)
- 6.2. List the strategies you adopt during the intraoperative period to prevent a perioperative myocardial ischaemic event. (30 marks)
- 6.3. Outline the options available for post operative pain relief in this patient. (30 marks)

7. Regarding extubation of an anaesthetized patient.
 - 7.1. List the factors that may contribute to high risk extubation. (30 marks)
 - 7.2. What are the airway, respiratory and cardiovascular problems that may follow extubation? (40 marks)
 - 7.3. Outline the strategies used to prevent post-extubation airway complications. (30 marks)

8. An 8-year-old child with Down syndrome is admitted for multiple tooth extractions.
 - 8.1. What are the patient, surgical and anaesthetic problems you would anticipate? (60 marks)
 - 8.2. Justify with reasons, your plan to secure the airway of this child. (40 marks)