

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

**CERTIFICATE OF COMPETENCE IN ANAESTHESIOLOGY**  
**EXAMINATION – JUNE 2022**

**Date:-** 9<sup>th</sup> June 2022

**Time:-** 9.30 a.m. – 11.30 a.m.

**ESSAY PAPER**

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

Each question to be answered in a separate book.

1.
  - 1.1. Indicate the gas pressures in the following: (20 marks)
    - 1.1.1. Full oxygen cylinder attached to an anaesthetic machine
    - 1.1.2. Full Nitrous Oxide cylinder
    - 1.1.3. Oxygen pipeline outlet in theatre
    - 1.1.4. Fresh gas outlet in anaesthetic machine
    - 1.1.5. Pipeline air to drive surgical equipment (surgical air)
  - 1.2. Outline five (05) safety features incorporated into the anaesthesia machine to avoid delivery of a hypoxic gas mixture. (40 marks)
  - 1.3. List parameters you would monitor in relation to ventilation in an intubated and mechanically ventilated patient in the theatre. (40 marks)
2.
  - 2.1. List five (05) possible causes of maternal collapse. (20 marks)
  - 2.2. Outline how the anatomical and physiological changes of pregnancy affect your ability to resuscitate a pregnant lady who has suffered a cardiovascular collapse at term. (40 marks)
  - 2.3. State what you would do differently during resuscitation in a maternal cardiac arrest. (40 marks)

Contd..../2-

3. You are asked to see a 45-year-old, 60 kg man in the Emergency Department who has sustained 40 % burns.
- 3.1. What factors would suggest that he has suffered a significant inhalational injury? (30 marks)
- 3.2. Outline the fluid management in the first 24 hours. (40 marks)
- 3.3. How would you manage pain in this patient? (30 marks)
- 4.
- 4.1. Write two (02) indications with the relevant doses for each of the following drugs. (60 marks)
- 4.1.1. Propofol
- 4.1.2. Adrenaline
- 4.1.3. Enoxaparin
- 4.1.4. Magnesium Sulphate
- 4.2. State two (02) side effects for each of the drugs. (40 marks)
- 5.
- 5.1. List the criteria for diagnosis of acute respiratory distress syndrome (ARDS). (30 marks)
- 5.2. List five (05) causes for ARDS. (20 marks)
- 5.3. Outline
- 5.3.1. five (05) ventilatory; and (25 marks)
- 5.3.2. five (05) non-ventilatory (25 marks)
- measures that can be taken to manage a patient with ARDS.

Contd..../3-

6. A 40-year-old woman with a body mass index (BMI) of 35 kg/m<sup>2</sup> is scheduled for a paraumbilical hernia repair.

- 6.1. List the preoperative concerns. (40 marks)
- 6.2. Outline how you would optimise this patient. (40 marks)
- 6.3. Mention five (05) postoperative complications. (20 marks)

7. A 40-year-old woman following a laparoscopic ovarian cystectomy was extubated and is in the post anaesthesia care unit (PACU).

- 7.1. List the discharge criteria for this patient from PACU. (25 marks)

You are called to see this patient in PACU as her oxygen saturation was dropping.

- 7.2. List the possible causes for desaturation in this patient. (25 marks)
- 7.3. Outline your immediate management. (50 marks)

8. A 2-year-old, 10 kg boy is scheduled to undergo an urgent appendicectomy. He is febrile and had been vomiting.

- 8.1. List the problems you identify in this patient during the preoperative assessment. (35 marks)
- 8.2. List the equipment you would prepare for airway management in this patient. (25 marks)
- 8.3. How would you give intravenous fluids intraoperatively? (20 marks)
- 8.4. List the possible analgesic options with doses for the peri operative period. (20 marks)