(02) MD (Anaesthesiology) Part 1A Examination

01. August 1990
02. April 1991 03. November 1992
04. April 1993 05. November 1993
06. April 1994 07. November 1994
POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (ANAESTHESIOLOGY) PART I EXAMINATION
AUGUST, 1990

Date: - 7th August, 1990             Time:- 2.00 p.m.- 5.00 p.m.

ESSAY PAPER

Answer each part in a separate book, marked A, B and C.
Answer two questions from each part.
The maximum possible marks, which can be awarded for each essay, are the same.

PART A
PHARMACOLOGY
(BOOK 'A')

1. Describe the mode of action of anti-coagulant drugs. How may their effects be modified by other drugs?

2. How may drugs modify the processes involved in neurotransmission at post-ganglionic sympathetic nerve endings?

3. Write short notes on:
   (a) midazolam
   (b) aminophylline
   (c) amiodarone

PART B
PHYSIOLOGY
(BOOK 'B')

1. Discuss the physiological role of the kidney in the regulation of arterial pH.

2. What physiological mechanisms are involved in perception of peripheral somatic pain?

3. What mechanisms are responsible for the difference between the partial pressure of oxygen in the alveoli and arterial blood?
   How are these affected by age?
1. Describe the physical principles involved in the direct measurement of arterial blood pressure.

2. Write short notes on:
   (a) Confidence intervals
   (b) the isobestic point
   (c) thermistors

3. Discuss the laboratory tests used in assessing thyroid function.
ESSAY PAPER

Answer each part in a separate book, marked A, B and C.
Answer two questions from each part.
The maximum possible marks, which can be awarded for each essay, is the same.

PART A
PHARMACOLOGY
(Book 'A')

1. Classify the opioid receptors.
   Describe the action of drugs that act on them.

2. Evaluate the drugs, which may be used to increase myocardial contractility.

3. Write short notes on :
   (a) competitive anatagonism
   (b) 2nd messengers
   (c) Hofmann degradation

PART B
PHYSIOLOGY
(Book 'B')

1. "In the homeostasis of extra cellular fluid (ECF), the body gives priority to volume maintenance". Discuss the validity of this statement.

2. Describe the physiological events following oral administration of 100 grams of glucose.

3. What is closing volume? Describe the factors, which influence it.
PART C
PHYSICS, CLINICAL MEASUREMENTS
& CLINICAL CHEMISTRY
(BOOK 'C')

1. Describe the principles involved in the indirect measurement of blood pressure. How are these utilized in automated apparatus?

2. What are the electrical hazards in the operating theatre? What precautions can be taken to minimize them?

3. Write short notes on three of the following:
   (a) Probability
   (b) Standard deviation
   (c) Chi-Squared test
   (d) Students t test
POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (ANAESTHESIOLOGY) PART I A EXAMINATION
NOVEMBER, 1992

Date: - 10th November 1992      Time: 2.00 p.m. - 5.00 p.m.

Answer six questions (3 questions from each part)
Each question should be answered in a separate book.

PART ONE

1. List the reasons why pregnant patients are at high risk of aspiration of gastric contents during anesthesia. What steps should be taken to minimize the risk?

2. Write short notes on 3 of the following
   1. Atracurium
   2. Bupivacaine
   3. Neostigmine
   4. Ketamine

3. List the sources of fluid loss during surgery indicating how you would replace these losses.
   What non-invasive monitoring methods help you to assess the adequacy of fluid replacement?

4. Give an account of the management of a 6-year-old child presenting for interval appendicectomy under general anesthesia.
PART TWO

5. List the anatomical structures encountered in the passage of a needle during lumbar puncture. How would you manage the immediate complications that may arise from spinal subarachnoid block?

6. Enumerate the problems of massive blood transfusion. How can you minimize such complications?

7. A 40-year-old diabetic of 10 years duration presents for routine abdominal surgery. How would you evaluate his fitness for anesthesia? Outline the problems that could occur during the intra-operative period.

8. A 32-year-old becomes cyanosed soon after induction of general anesthesia. Discuss the likely causes.
PART ONE

1. Discuss the problems associated with anaesthetizing a patient with severe pre eclampsia for emergency Caesarian section.

2. Write short notes on 3 of the following:
   a. Cimetidine
   b. Metoclopramide
   c. Neostigmine
   d. Naloxone

3. Describe how you would administer a caudal anaesthetic for haemorrhoidectomy for an adult. Outline the complications and their management.

4. A three-year-old child presents for laparotomy for intussusception
   Describe the
   a. Pre operative assessment and preparation
   b. Intraoperative management of this patient
PART TWO

5. Write short notes on the following intravenous fluids:
   a. 5% Dextrose solution
   b. Hartmann's solution (compound sodium lactate solution)
   c. Gelatin solutions (Gelafundin, Haemaccel)

6. Discuss the anaesthetic management of an adult for repair of an open eye injury following a road traffic accident.

7. A 40-year-old male with essential hypertension presents for repair of an inguinal hernia. He is found to have a blood pressure of 180/120 mm. on pre-operative examination. Discuss the anaesthetic management of this patient.

8. What factors would lead you to anticipate a difficult intubation during the pre-operative visit?
Date: 15th November 1993
Time: 1.00 p.m. - 4.00 p.m.

Answer six questions (3 questions from each part).
Each question should be answered in a separate book.

PART ONE

1. Describe the anaesthetic management of a 7-year-old child (20-Kg) requiring urgent surgery for torsion of testis.

2. Describe the anaesthetic management of a mother with severe bleeding after normal delivery, presenting for exploration of the uterus.

3. Give an account of the immediate management of a 23-year-old male admitted to hospital with severe injuries following a road traffic accident.

4. Write short notes on 3 of the following:
   a. Hydralazine
   b. Dopamine
   c. Aminophylline
   d. Mannitol
PART TWO

5. Compare the differences between lumbar epidural and spinal anesthesia with regard to advantages and disadvantages

6. Outline the peri-operative management of a patient with a history of bronchial asthma presenting for upper abdominal surgery.

7. Describe how you would anaesthetize a patient for fixation of fracture mandible highlighting the problems involved.

8. Describe the immediate management of a severe anaphylactoid reaction following induction of anesthesia.
Answer six questions (3 questions from each part).
Each question should be answered in a separate book.

PART ONE

1. List the complications that may arise when providing spinal anesthesia for a Caesarian section. What precautions would you take to minimize these complications?

2. Write short notes on three of the following:
   (a) Salbutamol
   (b) Ranitidine
   (c) Soda lime
   (d) Pancuronium

3. What are the possible causes of cardiac dysrhythmias during general anesthesia indicating the preventive measures that should be taken?

4. Describe the peri-operative management of a young female with a large goitre presenting for thyroidectomy.

PART TWO

5. Describe the anaesthetic management of a 6-year-old child (15-Kg) presenting with bleeding tonsil, one hour following tonsillectomy.

6. What are the advantages and disadvantages of using suxamethonium in anaesthetic practice?

7. What are the problems encountered in the anaesthetic management of a 75-year-old patient, presenting for cataract surgery under general anesthesia?

8. How would you prevent and treat the complications arising from the administration of local anaesthetic agents?
POSTGRADUATE INSTITUTE OF MEDICINE
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MD (ANAESTHESIOLOGY) PART I A EXAMINATION
NOVEMBER, 1994

Date: 7th November 1994 Time: 1.00p.m. - 4.00p.m.

Answer six questions (3 questions from each part).
Each question should be answered in a separate book.

PART ONE

1. What are the conditions in which a rapid sequence induction is indicated? Describe in detail how you would carry out this procedure, giving your reasons for each step.

2. List the pharmacological effects of Thiopentone sodium. What are the indications and contraindications for its use?

3. What are the problems encountered in the anaesthetic management of a morbidly obese patient presenting for major surgery?

4. What methods are used to monitor the cardio vascular system in routine anaesthetic practice for major surgery? What are the advantages and disadvantages of each method?

PART TWO

5. Discuss the anaesthetic management of a 4-year-old child (12 kg.) presenting for laparotomy for intestinal obstruction.

6. Write short notes on any three of the following:
   a) Halothane
   b) Atropine
   c) Magill breathing system (Mapleson A)
   d) Hypokalaemia

7. Describe the causes and management of respiratory obstruction occurring in the immediate postoperative period following thyroidectomy.

8. Discuss the methods available to relieve acute postoperative pain.
POSTGRADUALE INSTITUTE OF MEDICINE  
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MD (ANAESTHESIOLOGY) PART I A EXAMINATION  
APRIL 1995  

Date: 4th April 1995  
Time: 1.00 p.m. - 4.00 p.m.  

Answer six questions (3 questions from each part).  
Each question should be answered in a separate book.  

PART ONE  

1. Write short notes on any three of the following  
   a. Hyperkalaemic response to suxamethonium.  
   b. Control of intra-ocular pressure during anesthesia.  
   c. Uses and hazards of colloid intravenous solutions.  
   d. Nifedipine.  

2. Give an account of the causes and management of acute respiratory obstruction in a five-year-old child in the recovery room after adenoidectomy.  

3. List the problems associated with general anaesthesia for dental extraction in children as an outpatient procedure, How would you overcome such problems?  

4. Describe briefly the anaesthetic management of a forty-five year old jaundiced patient having a serum bilirubin of 10 mg/dl. Presenting for cholecystectomy.
PART TWO

5. Describe how you would check an anaesthetic machine and the circle system prior to its use.

6. What information can be gained by monitoring airway pressure in the ventilator during anesthesia?

7. What are the signs and symptoms of central nervous system toxicity of local anaesthetic agents?

   What precautions would you take to prevent its occurrence?

   How would you manage such a complication?

8. Describe the anaesthetic management of a woman with an uncomplicated pregnancy of 35 weeks gestation, presenting for appendicectomy.
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MD (ANAESTHESIOLOGY) PART IA EXAMINATION
NOVEMBER, 1995

Date: 7th November 1995               Time: 1.00 p.m. - 4.00 p.m.

Answer six questions (3 questions from each part).
Each question should be answered in a separate book.

PART ONE

1. What are the components of the Circle System with carbon-dioxide absorption?
What are its advantages and disadvantages?

2. List the causes and describe the immediate management of three of the following
life threatening situations in an anaesthetised adult.
   (a) Extreme sinus bradycardia
   (b) Pneumothorax
   (c) Severe bronchospasm
   (d) Acute left ventricular failure

3. List the causes of post-operative hypoxia.
What methods of oxygen therapy are available for a spontaneously breathing
patient?

4. An 86 year old patient is scheduled for open reduction and internal fixation of a
sub-trochanteric fracture of femur.
Describe the pre, intra and postoperative management.
PART TWO

5. List the pharmacological effects of ketamine. What are its advantages and disadvantages as compared with thiopentone.

6. A soldier involved in a blast injury is brought to the emergency department. Outline the management prior to surgery.

7. What anaesthetic techniques are available for Caesarean section of a pre-eclamptic patient?

Describe briefly the complications of each of these techniques.

8. A three-year-old boy is scheduled for surgery for correction of squint. Discuss the pre, intra and postoperative management.
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MD (ANAESTHESIOLOGY) PART I A EXAMINATION
FEBRUARY, 1996

Date: 12th February 1996      Time: 1.00p.m. - 4.00 p.m.

Answer six questions (3 questions, from each part).
Each question should be answered in a separate book.

PART ONE

1. Describe the pre operative assessment and preparation of a mother presenting for ligation of fallopian tubes within 24 hours of vaginal delivery. How would you overcome the problems associated with administering general anaesthesia for this patient?

2. Describe in detail the administration of intravenous regional anaesthesia (Bier's Block) for surgery of the forearm, indicating the precautions you would take to minimise complications.

3. Describe the components and flow requirements of the Mapleson F breathing system used to anaesthetize a 5kg child for a laparotomy, indicating the advantages of this system.

4. Describe the perioperative management of a young adult presenting for surgery for suspected splenic rupture following a blunt injury to the abdomen.

PART TWO

5. During a general anaesthetic procedure for a laparotomy the pulse oximeter shows 85% oxygen saturation. Describe how you would manage this situation indicating the causes.

6. Describe the pre operative evaluation and preparation of a 50-year-old man with ischaemic heart disease, presenting for elective major surgery.

7. What are the adverse effects of the following drugs.
   a) Halothane
   b) Ketamine
   c) Bupivacaine

8. A young adult with acute intestinal obstruction of 2 days duration presents for laparotomy. Describe the preoperative evaluation and optimization of this patient.
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MD (ANAESTHESIOLOGY) PART IA EXAMINATION
DECEMBER, 1996

Date : 2nd December, 1996               Time   1.00 p.m. - 4-00 p.m.

Answer six questions (3 questions from each part).
Each question should be answered in a separate book.

PART ONE

1. Discuss the anaesthetic management of a 6-year-old child who presents for multiple dental extractions under general anaesthesia.

2. Outline the consequences of anaesthetising a patient with uncorrected
   a) hypovolaemia
   b) hypokalaemia
   c) anaemia (Haemoglobin less than 7gm%)

3. How would you manage a patient who develops convulsions following a peripheral nerve block with Bupivacaine? What precautions should you take when administering such a block?

4. What are the complications of a massive blood transfusion? How would you minimize these complications?

PART TWO

5. Describe how the Magill breathing system (Mapleson A) functions during spontaneous respiration. What problems would arise if the system is used for controlled ventilation?

6. What are the special precautions you would take when anaesthetising a patient with bronchial asthma for cholecystectomy?

7. What are the problems involved in anaesthetizing a patient with burns for repeated wound toilet?

8. Enumerate the causes of delayed recovery from anaesthesia in a 70-year-old man after an emergency laparotomy. What immediate steps would you take to arrive at a diagnosis.
1. Describe the safety features of a modern anaesthetic machine.

2. What problems would you anticipate in anaesthetising a patient in the Radiology Department? What precautions would you take?

3. Describe the problems in anaesthetising a patient with ante-partum haemorrhage for a caesarean section.

4. How do you minimise the problems encountered with placing a patient in the prone position during anaesthesia?

5. What are the likely causes of hypercarbia during anaesthesia? What are its clinical manifestations?

6. What are the uses and limitations of electro cardio-graphy (ECG) in monitoring cardiovascular function during anaesthesia?

7. What are the indications for the use of Benzodiazepines in modern anaesthetic practice? What are the adverse effects of these drugs?

8. Describe the initial management of a patient admitted with obvious facial trauma following a road traffic accident.
1. A patient with severe pre eclamptic toxaemia needs an emergency Caesarean section. 
   Give short account of the anaesthetic problems you would anticipate in the perioperative period.

2. Describe how the Bain breathing attachment functions during spontaneous respiration.
   List the advantages and disadvantages of this breathing system.

3. A 65-year-old patient undergoing open prostatectomy under spinal anaesthesia develops a fall in blood pressure to 60 mmHg.
   How would you manage this patient?

4. Describe the indications, contraindications and side effects of suxamethonium.

5. A 70 year old diabetic patient presents for a below knee amputation.
   Describe the perioperative anaesthetic management.

6. Describe the anaesthetic management of a 5-year-old child (15-kg) presenting for surgery for an undescended testis.

7. How would you assess the airway during a pre operative assessment of a patient?
   What preparations would you make for an anticipated difficult intubation?

8. A previously healthy 25-year-old patient with a stab injury of the right lower chest presents for emergency laparotomy.
   How would you anaesthetise this patient?
POSTGRADUATE INSTITUTE OF MEDICINE
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MD (ANAESTHESIOLOGY) PART IA EXAMINATION
MARCH, 1998

Date: - 16th March 1998       Time: 1.30 p.m. - 4.30 p.m.

Answer six questions
Each question should be answered in a separate book.

1. Describe the functions of the different components of the Magill's Breathing (Mapleson A) attachment. Enumerate the advantages and disadvantages of this breathing system.

2. Following a rapid sequence induction for an emergency laparotomy you find excessive resistance to ventilation with no chest expansion. What are the possible causes? Briefly describe the immediate management of this patient?

3. List the methods of pain relief available to a 75-year-old patient following surgery for fracture neck of femur. Discuss the advantages and disadvantages of these methods.

4. A 40-year-old man needs a laparotomy for intestinal obstruction. Describe the peri operative management.

5. List the complications of blood transfusion. What factors would you take into account when you decide to administer blood during surgery?

6. Write short notes on:
   (a) Cardio vascular effects of halothane
   (b) Adverse effects of ketamine
   (c) Use of adrenaline in anaesthetic practice.

7. You fail to intubate a patient who is to undergo a Caesarean section. What is your plan of management?

8. Describe the anaesthetic management of a 4-year-old (15kgm) child presenting for correction of squint.
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MD (ANAESTHESIOLOGY) PART IA EXAMINATION
DECEMBER, 1998

Date: 14th December 1998
Time: 1.30 p.m. - 4.30 p.m.

Answer six questions.
Each question should be answered in a separate book.

1. Describe how you would check the anaesthetic machine and the Bain Breathing attachment prior to administering an anaesthetic.

2. Describe the anaesthetic management of a patient undergoing spinal subarachnoid anaesthesia for an elective caesarian section.

3. Write short notes on:
   1. Side effects of thiopentone sodium.
   2. Clinical assessment of adequate reversal from non-depolarising muscle relaxants.

4. Describe the anaesthetic management of a 5 year old (15 kg) for Tonsillectomy.

5. A 25-year-old patient is admitted with multiple injuries following a road traffic accident. Outline the immediate management (primary survey).

6. Describe the clinical features and management of anaphylactic shock during an anaesthetic.

7. Describe the preoperative evaluation and preparation of a 50-year-old patient with ischaemic heart disease presenting for routine major surgery.

8. What information can be obtained by monitoring the airway pressure during anaesthesia.
1. Draw a clearly labelled diagram of the Mapleson F circuit. What are the advantages of this circuit? What flow rates would you use for a 10kg baby for (a) Spontaneous ventilation and (b) Intermittent positive pressure ventilation.

2. Describe the peri-operative anaesthetic management of a mother for evacuation of retained products following post partum haemorrhage.

3. List the signs and symptoms of local anaesthetic toxicity. How would you minimize its occurrence? Describe the management of severe toxicity.

4. A 25-year-old previously healthy male was admitted to hospital with a history of blunt trauma to the right lower chest only. He was pale, dyspnoeic and showed evidence of subcutaneous emphysema. Describe the pre-operative preparation and induction of anaesthesia.

5. Describe the anaesthetic management of a healthy young man presenting for wiring of a fractured mandible.

6. Describe the special problems in anaesthetising an elderly patient.

7. Describe the special problems of anaesthetising a patient presenting for electro-convulsion therapy.

8. What special precautions should be taken when anaesthetising a deeply jaundiced patient?
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MD (ANAESTHESIOLOGY) PART IA EXAMINATION
DECEMBER, 1999

Date: - 13th December 1999      Time: 1.30 p.m. - 4.30 p.m.

Answer six questions.
Each question should be answered in a separate book.

1. List the immediately life threatening complications of suxamethonium. Briefly describe the management of each.

2. Describe the problems you would encounter when anaesthetizing a 10 month old infant.

3. Describe the perioperative control of blood sugar in a diabetic patient presenting for abdominal hysterectomy.

4. Describe the perioperative management in a 40 year old ASA I male patient presenting for cataract surgery under general anaesthesia.

5. Outline the anaesthetic management of a patient with severe degree of placenta praevia for elective Caesarean section.

6. A 40-year-old, whose hypertension is controlled on atenolol is scheduled for major elective surgery. List the problems that you may encounter during general anaesthesia and outline the management of each.

7. List the clinical indices, which are useful in assessing volume status of a patient with intra-abdominal bleeding. Describe briefly the volume resuscitation of such a patient.

8. List the signs and symptoms that would lead to a diagnosis of a "high spinal block", and describe your management.
POSTGRADUATE INSTITUTE OF MEDICINE
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MD (ANAESTHESIOLOGY) PART IA EXAMINATION
APRIL, 2000

Date: 3rd April 2000       Time: 1.30 p.m. - 4.30p.m.

Answer six questions.
Each question should be answered in a separate book.

1. (a) Draw a clearly labelled diagram of the circle system.
(b) Outline the function of each component.
(c) List the advantages and disadvantages of this system.
   (Each part carries equal marks)

2. Describe the immediate management (within the first hour) of a 35-year-old bomb blast victim admitted to the emergency department.

3. List the problems you would encounter in giving general anaesthesia for a patient with pre eclamptic toxaemia presenting for emergency Caesarian section.

4. Describe the anaesthetic management of a 3-year-old child (12kg) presenting for correction of squint.

5. A 50-year-old man with a suspected laryngeal tumour presents for direct laryngoscopy. Describe the anaesthetic management.

6. A 50 year old lady (ASA - 1) with intestinal obstruction presents for laparotomy. Describe the anaesthetic management.

7. (a) What are the special indications for use of ketamine in anaesthetic practice.
(b) Give an account of advantages and disadvantages of ketamine as an anaesthetic agent.
   (Each part carries equal marks)

8. A patient, following laparotomy in the recovery room desaturates on air (SPO2 of 80%). List the possible causes. How would you arrive at the diagnosis?
Answer six questions. 
Each question should be answered in a separate book.

1. Enumerate the methods you would use to monitor the cardiovascular system during anaesthesia for major surgery. Give the limitations of 4 of the methods.

2. Five minutes following intubation of a young A.S.A.I patient, the pulse oxymeter shows a saturation of 85% and a pulse rate of 110/min. List the causes of desaturation. How would you manage this patient?

3. Describe the anaesthetic management of a patient who needs general anaesthesia for emergency Caesarean section for severe foetal distress.

4. List the causes of delayed recovery from general anaesthesia. What steps would you take to arrive at a diagnosis?

5. Write short notes on the following:
   5.1 Use of adrenaline in anaesthetic practice
   5.2 Atracurium
   5.3 Contraindications to the use of diclofenac sodium

6. List the clinical features and bed side tests which are useful in predicting difficult intubation. How would you confirm correct tracheal placement of an endotracheal tube?

7. A 4 year old 12 kg child is scheduled for multiple dental extractions (including pre-molars). Describe the anaesthetic management.

8. Describe the peri-operative management of a 35 year old with a history of bronchial asthma scheduled for mastectomy.
1. A primigravid mother with a blood pressure of 170/110 needs a caesarean section. Describe your pre operative assessment and preparation.

2. What are the safety features incorporated in an anaesthetic machine to prevent delivery of a hypoxic gas mixture?

3. Describe the anaesthetic management of a 4 year old child (15kg) for tonsillectomy.

4. What are the problems in anaesthetising for a surgical procedure in the prone Position? Outline how would you try to overcome these.

5. In a patient following a spinal anaesthetic how would you
   a. prevent and treat hypotension
   b. prevent and treat headache
   c. diagnose a "high spinal"

6. Write short notes on :-
   i. Side effects of halothane
   ii. Toxicity of lignocaine
   iii. Adverse effects of suxamethonium

7. Describe the perioperative management of a young ASA I patient presenting for laparotomy for liver damage following blunt trauma to the abdomen.

8. List the causes of high airway pressure during intermittent positive pressure ventilation.
   How would you manage anaphylactic shock during a general anaesthetic?
POSTGRADUATE INSTITUTE OF MEDICINE
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MD (ANAESTHESIOLOGY) PART IA EXAMINATION
DECEMBER, 2001

Date : 3rd December, 2001  Time: 1.30 p.m, -- 4.30 p.m.

Answer six questions.
Each question should be answered in a separate book.

1. a) Describe the components and the functions of Magill (Mapleson A)
breathing system.

   b) How does it perform during spontaneous and intermittent positive
      pressure ventilation.

2. How may hypercarbia develop during anaesthesia?
   What clinical changes may result?

3. A 60 year old patient who had a laparotomy under general anaesthesia developed
   hypotension (systolic BP 60 mm Hg.) in the immediate post operative period.
   List the causes and describe your management in the recovery area.

4. Outline why regional anaesthesia is safer in pregnancy.
   What is your pre-operative preparation of a patient undergoing spinal (sub
   arachnoid) anaesthesia for an elective cesarean section.

5. Describe your anaesthetic management of a 4 year old, 14 kg. child scheduled
   for an elective inguinal herniotomy.

6. Describe the anaesthetic problems in an obese patient.

7. Describe the initial assessment and resuscitation of a young male (ASA1)
   admitted to the casualty ward following multiple trauma.

8. What are the side effects of
   a) Thiopentone sodium
   b) Morphine sulphate
   c) Ketamine
Answer six questions
Each question should be answered in a separate book.

1. Draw and label the Bain breathing attachment. (Mapleson D coaxial circuit)
   List the advantages and disadvantages of Bain breathing system.
   How do you check this attachment?

2. List the indications for rapid sequence induction.
   Describe how you would perform rapid sequence induction.

3. Describe the preoperative evaluation and preparation of a 60 year old male with
   Ischaemic heart disease presenting for elective abdominal surgery.

4. Write short notes on:
   1. Uses of Midazolam
   2. Bupivacaine
   3. Atracurium

5. You fail to intubate a patient who is to undergo caesarean section. What is your
   management plan?

6. Describe the anaesthetic management of a 5 year old (15kg) child for correction
   of squint.

7. What are the possible causes of hypoxia in the immediate post operative period
   (recovery)?
   Outline your immediate management.

8. List the methods of pain relief available for a 60 year old patient scheduled for
   gastrectomy?
   What are the advantages and disadvantages of each method?
POSTGRADUATE INSTITUTE OF MEDICINE
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MD (ANAESTHIOLOGY) PART IA EXAMINATION
DECEMBER, 2002

Date: 2\textsuperscript{nd} December, 2002     Time: 1,30 p.m.- 4.30 p.m.

Answer six questions only.
Each question should be answered in a separate book.

1. Outline the safety features of the anaesthesia machine.

2. A young healthy female, who is thirty two weeks pregnant, is to undergo laparotomy for a twisted ovarian cyst. Describe your pre and intra operative management.

3. Describe the pre-operative assessment and preparation of a 6 yr. old child (20 kg.) with intestinal obstruction scheduled for urgent laparotomy.

4. What are the methods available to assess a difficult airway preoperatively? List the equipment used in difficult intubation.

5. Regarding local anaesthetic toxicity:
   a. List the causes.
   b. What precautions should you take?
   c. What are the symptoms and signs?

6. List the complications of blood transfusion. What factors do you take into account when transfusing blood during surgery?

7. What special considerations should be made to ensure patient safety when the patient is kept in the lateral position for surgery?

8. Describe the peri-operative management of a 30 year old patient with bronchial asthma for elective repair of a paraumbilical hernia.
POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (ANAESTHESIOLOGY) PART IA EXAMINATION
APRIL, 2003

Date :- 1st April, 2003     Time :- 1.30 p.m. - 4.30 p.m.

Answer six questions only.
Each question should be answered in a separate book.

1. (a)  
   i. Draw a clearly labelled diagram of the circle system.  
   ii. How would you check the circle system ?  

   (b) List the methods available for post operative oxygen therapy  
       (Part A and B carry equal marks)

2. Following general anaesthesia for a laparotomy, a patient was found to be restless  
in the recovery room.  
List the possible causes.  
Briefly describe how you would arrive at a clinical diagnosis.

3. Give an account of the immediate management of a young healthy man with  
severe injuries following a road traffic accident.

4. Immediately following spinal anaesthesia for a caesarean section, a young healthy  
mother complained of difficulty in breathing.  
How would you manage this patient ?

5. Describe the problems you would encounter when anaesthetising a 5 year old  
child for extraction of teeth.

6. An adult male (ASA-I) is scheduled for haemorrhoidectomy.  
   (a) List the anaesthetic techniques which could be used.  
   (b) How would you perform one of the regional anaesthetic techniques  
       mentioned.
7. A 52 year old diabetic patient who is on short acting oral hypoglycaemic drugs is presenting for abdominal hysterectomy. Describe the perioperative management.

8. Write short notes on three of the following :-

1. uses and side effects of atropine
2. side effects of diclofenac sodium
3. uses of midazolam in anaesthetic practice
4. propofol
Answer six questions only.
Each question should be answered in a separate book

I.

(a) What are the characteristic features of an ideal anaesthetic breathing system.

(b) Draw and label a Magill (Mapleson A) breathing system and briefly describe how it differs from a ideal breathing system.

2. Outline briefly the pre-operative management of an eclamptic mother presenting for an emergency caesarean section.

3. Describe the anaesthetic management of a 5 year old (15 kg) child admitted for a circumcision.

4. 40 year old lady with simple obesity (70kg) is scheduled for an open cholecystectomy. Briefly describe the problems you would encounter when anaesthetising this patient.

5. Write short notes giving the uses and disadvantages of the following fluids in the perioperative period.
   a) Normal saline
   b) 5 % dextrose
   c) Gelatin solution
6. A patient anaesthetised with thiopentone sodium and suxamethonium for an elective herniotomy immediately develops a red urticarial rash and severe hypotension.
   a) What is your diagnosis.
   b) Describe your management.

7. A 48 year old lady with menorrhagia is scheduled for a total abdominal hysterectomy is found to have a haemoglobin level of 7g/dl.
   a) How would you evaluate and prepare this patient for surgery.
   b) List the intra operative problems you would encounter.

8. Regarding spinal sub arachnoid block (spinal anaesthesia) for non-obstetric surgery.
   a) List the contraindications.
   b) Outline intra operative management.
   c) What are the complications.
1. How do you ensure that the pulse oximeter reading is reliable? Outline the limitations of its use.

2. A 34 year old lady is brought to the operating theatre with severe foetal distress for an emergency caesarean section. Outline your anaesthetic management.

3. Briefly describe the methods of pain relief available for a 4 year old child weighing 15 kg, undergoing circumcision.

4. A patient with a long standing multinodular goitre is scheduled for thyroidectomy.
   a) Outline the pre-operative assessment of this patient.
   b) List the possible post operative complications.

5. A 65 year old man has been vomiting for the last 48 hrs. He is admitted with intestinal obstruction. You are the casualty anaesthetist and have been asked to see this patient before laparotomy. He complains of thirst and has a pulse rate of 110/min, and BP of 90/70 mmHg.
   a) List the aims of pre-operative preparation of this patient.
   b) Briefly describe how you would prepare him for surgery.

6. A medium built ASA I female of 60 yrs was anaesthetised for a paraumbilical herniotomy and repair. Within 3 minutes of intubation her oxygen saturation dropped to 85 % and pulse rate was 100/min.
   a) List the possible causes.
   b) Outline your immediate management.
7. List the
   
a) Contra-indications for the use
   
b) Cardiovascular and respiratory effects of the following drugs:
   
i. Ketamine
ii. Thiopentone sodium
iii. Propofol

8. A young adult is admitted with a history of blunt trauma to the left hypochondrium. Briefly outline the anaesthetic management of this patient.
1. A five (05) year old child weighing 15 kg is scheduled for inguinal herniotomy under general anaesthesia.
   a) Draw a labelled diagram of the anaesthetic breathing system used.
   b) Describe the function of each component.
   c) Give the reasons for selecting the above system.
   d) What is the recommended Fresh Gas Flow for
      i) Spontaneous breathing
      ii) IPPV

2. List three (03) life threatening complications that may follow the use of suxamethonium.
   Briefly describe the clinical management of two of these complications.

3. a) How would you estimate the intra-operative fluid requirement for a
   55 yr. old man undergoing major bowel surgery.
   b) Outline how you would monitor the adequacy of fluid replacement.
   c) List the IV fluids you might require in this patient stating indications for
      their use.

4. What prophylactic measures would you undertake in a patient undergoing general
   anaesthesia to minimize the risk of pulmonary aspiration syndrome in the peri
   operative period.
5. A 50 year old hypertensive patient is scheduled for abdominal hysterectomy under general anaesthesia. Describe the perioperative management of this patient.

6. a) How would you perform a Bier's block (Intra venous Regional Anaesthesia) for removal of a ganglion in the left wrist.

b) List the contraindications for Bier's block.

7. Why is Spinal Anaesthesia safer than General Anaesthesia for a patient presenting for Caesarean Section?
Outline how you would perform a sub arachnoid block (spinal) for a caesarean section.

8. You are called to the Casualty ward to attend to a 45 yr old man following a road traffic accident. He is bruised over the front of his chest and complains of right sided chest pain. His pulse is 120 beats/min and BP is 80/60 mmHg.. Describe your management of this patient in the first hour.
1. (a) Describe the factors that would affect the accuracy of the reading when using a mercury sphygmomanometer.

(b) List other methods available to monitor blood pressure.

2. Describe the peri-operative management of a five year old child weighing 15 kg, presenting for removal of a foreign body in the nose.

3. Describe the anaesthetic management of a mother presenting for manual removal of the placenta.

4. (a) You have anaesthetised a 45 year old man (ASA I) for elective cholecystectomy using a non-depolarizing muscle relaxant. At laryngoscopy you find it difficult to intubate. Describe your immediate management.

(b) Outline how you predict a difficult intubation.

5. (a) List the indications for mechanical ventilation in general anaesthesia.

(b) Outline the advantage and disadvantages of mechanical ventilation.

6. A 50 year old female with a history of stable angina presents with an obstructed para umbilical hernia. Describe the peri-operative management of this patient.
7. A 25 year old man undergoing inguinal herniotomy under a spinal anaesthetic starts to complain of pain and discomfort when the surgeon dissects the hernial sac. Outline briefly the steps you would take to manage this patient.

8. Write short notes on the following drugs:

   (a) metoclopramide
   (b) morphine sulphate
   (c) neostigmine
1. Describe how you would check the
   (a) Anaesthetic machine
   (b) Bain breathing system
   (c) Circle system

2. A 30 year old multipara after normal delivery at term, is brought to the
   operating theatre with vaginal bleeding. Her systolic blood pressure is
   60 mmHg and her pulse rate is 130 beats per minute.
   (a) List the important steps in the resuscitation of this patient.
   (b) Outline briefly your anaesthetic management for emergency
       surgery.

3. Describe your anaesthetic management of a 5 year old child (15 kg)
   admitted for a right inguinal herniotomy.

4. Write short notes on the following:
   (a) The universal precautions that should be followed during intra-venous
       cannulation.
   (b) Uses of the laryngeal mask airway.

5. A 70 year old female with a history of diabetes mellitus of 15 years duration
   presents with a peri anal abscess.
   Describe your anaesthetic management.
6. 
(a) List the causes of restlessness in the immediate post operative period.
(b) Outline the management of an adult patient with laryngospasm in the recovery area.

7. A 20 year old male is admitted with multiple injuries following a road traffic accident.
Outline how you would assess the patient for life threatening injuries and briefly describe the management (Primary survey).

8. Regarding local anaesthetic toxicity,
(a) Describe briefly the symptoms and signs.
(b) Outline the preventive measures.
POSTGRADUATE INSTITUTE OF MEDICINE  
UNIVERSITY OF COLOMBO 

MD (ANAESTHESIOLOGY) PART IA EXAMINATION  
APRIL, 2006 

Date :- 3rd April, 2006  
Time :- 1.00 p.m. - 4.00 p.m. 

Answer six questions only. 
Each question should be answered in a separate book. 

1. (a) Draw and label a normal capnograph. 

(b) Briefly describe its uses in anaesthetic practice. 

2. A five year old child weighing 15 kg with suspected torsion of testis needs exploration of the scrotum. Describe the anaesthetic management highlighting the special problems. 

3. (a) Describe how you would diagnose a 'high spinal block' in a patient undergoing an elective lower segment caesarean section. (LSCS) 

(b) Briefly describe your management. 

4. A 24 year old (ASA 1) male is admitted to the casualty ward with a history of a stab injury to the right hypochondrium. He is pale, dyspnoeic, pulse rate 120/min, BP 100/70 mmHg and a respiratory rate of 35/min. Describe how you would assess and prepare this patient prior to surgery. 

5. Write short notes on 

(a) Propofol  
(b) Atracurium  
(c) Halothane
6. The airway pressure rises to more than 40 cm H₂O in a 50 year old patient anaesthetized for a total abdominal hysterectomy.

(a) List the likely causes.

(b) Outline your immediate management.

7. Describe the anaesthetic management of a 17 year old healthy male for removal of impacted wisdom teeth.

8. A 45 year old 50 kg ASA 1 patient is to undergo an open cholecystectomy. Describe the methods available for postoperative pain relief.
POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (ANAESTHESIOLOGY) PART IA EXAMINATION
NOVEMBER, 2006

Date :- 20th November, 2006      Time :- 1.00 p.m. - 4.00 p.m.

Answer six questions only.
Each question should be answered in a separate book.

1. List the safety features incorporated in an anaesthetic machine to prevent ;
   (a) delivery of a hypoxic gas mixture
   (b) delivery of gases at high pressure

2. A patient anaesthetized with thiopentone sodium and suxamethonium for an appendicectomy is red, flushed with a systolic BP 60 mmHg and is difficult to ventilate.
   (a) What is the most likely diagnosis ?
   (b) Describe how you would manage this patient.

3. A 35 year old unconscious patient with severe head injury (GCS of 8) needs transfer for a CT scan to another hospital. Describe how you would prepare this patient for transfer.

4. List the adverse effects of the following drugs ;
   (a) Suxamethonium
   (b) Ketamine
   (c) Morphine
5. Describe the peri-operative management of a mother (ASA 1) undergoing caesarean section under general anaesthesia.

6. Describe the anaesthetic management of a 5 year old (15kg) child for correction of squint.

7. (a) Outline the ASA classification.
    (b) A 50 year old controlled hypertensive patient, on diuretics and an ACE inhibitor, is to undergo total abdominal hysterectomy. State with reasons what preoperative investigations you would order.

8. A 70 year old woman is scheduled for vaginal hysterectomy and repair.
   (a) Outline the advantages of a subarachnoid block for this patient.
   (b) State the precautions you would take for this elderly patient.
1. (a) Draw and label the Mapleson A breathing system (Magill attachment) (20 marks)
   (b) Describe the functions of each of its components. (50 marks)
   (c) List the advantages and limitations of this system. (30 marks)

2. An otherwise healthy 35 year old man undergoes general anaesthesia for acute appendicitis. At the end of surgery lasting 45 minutes, there are no signs of recovery.
   (a) List the possible causes. (30 marks)
   (b) Describe your immediate assessment and management of this patient. (70 marks)

3. A 7 year old (20 kg) child is admitted with a left supracondylar fracture with an absent left radial pulse. Describe your anaesthetic management for manipulation under anaesthesia. (100 marks)

4. Regarding the following drugs
   1. adrenaline
   2. fentanyl
   3. lignocaine
   (a) List three (03) uses of each of the above drugs with the appropriate dosage. (60 marks)
   (b) Enumerate three (03) common side effects of each drug. (40 marks)
5. A 22 year old healthy lady presents for an elective caesarian section.
   (a) Describe how you would perform a subarachnoid block on this patient. (80 marks)
   (b) Outline how you would check the adequacy of the block. (20 marks)

6. A 40 year old lady with a history of bronchial asthma is scheduled for a total abdominal hysterectomy under general anaesthesia.
   (a) Describe briefly how you would assess and optimize this patient. (60 marks)
   (b) Outline the special precautions you would take in anaesthetising this patient. (40 marks)

7. A 25 year old patient is admitted with multiple trauma following a road traffic accident.
   He is pale, has a pulse rate of 130/min. His blood pressure is 70/50 mmHg and respiratory rate is 30/min.
   Describe the immediate management of this patient. (100 marks)

8. Describe your anaesthetic management of a 60 year old man for rigid oesophagoscopy to remove a fish bone. (100 marks)
POSTGRADUATE INSTITUTE OF MEDICINE  
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MD (AESTHESIOLOGY) PART IA EXAMINATION  
NOVEMBER, 2007

Date: 19th November 2007 Time: 1.00 p.m. - 4.00 p.m.

Answer six questions only  
Each question should be answered in a separate book

1.  
1.1 List the minimum standards of monitoring during anaesthesia

1.2 Briefly describe the advantages and limitations of Electro Cardiographic monitoring (ECG) in anaesthesiC practice

2.  
2.1 How do you recognize post dural puncture headache?

2.2 Outline its management

3. A general anaesthetic was administered for an emergency caesarean section and at laryngoscopy, you failed to intubate. Outline your management.

4. A 60 years old previously healthy patient weighing 60 kg, was brought to the recovery area after an uneventful operation for a perforated peptic ulcer.

4.1 Describe briefly the parameters you would assess before discharging this patient to the ward

4.2 Outline the postoperative instructions you would give for the first 24 hours

5. List four contraindications to the use of each of the following drugs. Indicate the reasons for your answer.

5.1 Ketamine
5.2 Suxamethonium
5.3 Diclofenac sodium
5.4 Thiopentone sodium
6. A 4 year old (15 kg) child with moderate dehydration is scheduled for an urgent laparotomy due to small bowel obstruction.

6.1 List the preoperative problems you may encounter in this child

6.2 Describe the preoperative management of dehydration in this child

7. A previously healthy young adult receives 10 units of blood following major trauma

7.1 What is 'massive blood transfusion'?

7.2 Outline the problems of massive blood transfusion

7.3 How would you minimize the above problems?

8. A 50 years old male with a long standing history of diabetes mellitus presents for a wound toilet in the left leg.
Outline your perioperative management of this patient