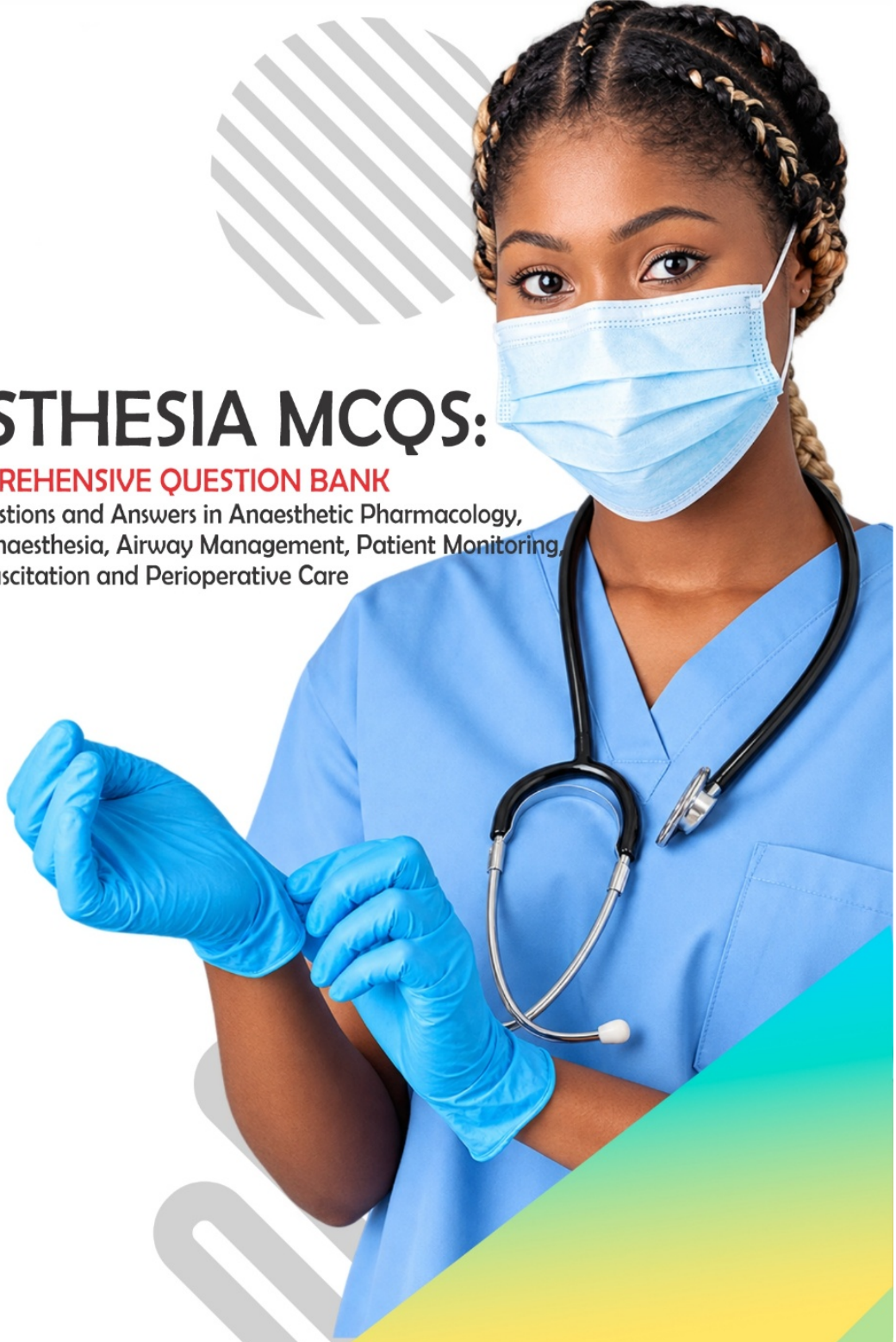
ANAESTHESIA MCQS:

A COMPREHENSIVE QUESTION BANK

Multiple-Choice Questions and Answers in Anaesthetic Pharmacology, General and Regional Anaesthesia, Airway Management, Patient Monitoring, Resuscitation and Perioperative Care



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First Published, 2026



Noogul Digital Publishing

(RC 3185897)

Registered Office(s): Block No. B34 Along PZ Area, Sabon Gari Zaria, Kaduna State - Nigéria

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SECTION ONE

General Anaesthesia, Airway Management, Anaesthetic Pharmacology, Regional Anaesthesia, Patient Monitoring And Perioperative Care

This section covers the core areas of anaesthesia practice, including general anaesthesia, airway management and endotracheal intubation, anaesthetic pharmacology, local anaesthetics, spinal and epidural anaesthesia, regional nerve blocks, and neuromuscular blockade.

SECTION TWO

Anaesthetic Pharmacology, General And Regional Anaesthesia, Airway Management, Anaesthetic Equipment, Respiratory Physiology, Patient Monitoring And Resuscitation

This section covers the pharmacology and clinical application of inhalational and intravenous anaesthetic agents, including isoflurane, halothane, nitrous oxide, ketamine, propofol, thiopental, etomidate, and sevoflurane. Key concepts include minimum alveolar concentration (MAC), blood–gas partition coefficients, anaesthetic potency, induction and recovery, stages of anaesthesia, adverse drug effects, malignant hyperthermia, and anaesthetic considerations in patients with specific medical conditions.

SECTION THREE

General Anaesthesia, Anaesthetic Pharmacology, Preoperative Assessment, Airway Management, Anaesthetic Equipment, Patient Monitoring And Perioperative Care

This section covers the core principles of general anaesthesia, including the mechanisms of anaesthetic action, intravenous and inhalational anaesthetic agents, induction and recovery, balanced anaesthesia, total intravenous anaesthesia (TIVA), and the pharmacological properties, clinical uses, adverse effects, and interactions of commonly used anaesthetic drugs.

SECTION FOUR

Anaesthetic Pharmacology, Nursing Research, Respiratory Physiology, Nursing Theory, Health Assessment, Leadership And Professional Practice

This section provides a comprehensive review of essential concepts in anaesthetic pharmacology, nursing research, respiratory physiology, nursing theory, health assessment, leadership, counselling, and professional practice. It examines the classification, mechanisms of action, clinical uses, adverse effects, and contraindications of anaesthetic agents, including ketamine, thiopental, etomidate, steroidal anaesthetics, opioids, and anticholinergic drugs.

SECTION FIVE

Anaesthetic Pharmacology, Respiratory Physiology, Nursing Practice, Research Methodology, Health Assessment, Leadership And Professional Education

This section covers the pharmacology and clinical application of anaesthetic agents, including ketamine, thiopental, halothane, cyclopropane, etomidate, steroidal anaesthetics, opioids, and anticholinergic drugs. Key topics include intravenous anaesthetic induction, emergence delirium, analgesia, cardiovascular effects, drug contraindications in porphyria, liver toxicity, and the clinical management of bradycardia and other perioperative complications.

SECTION SIX

Anatomy And Physiology, Nursing Fundamentals, Perioperative Care, Anaesthetic Pharmacology, Evidence-Based Practice, Computer Studies And Medical Microbiology

This section covers human anatomy and physiology, including the musculoskeletal system, endocrine glands, reproductive anatomy and hormones, menstrual regulation, contraception, vitamin deficiencies, nutritional disorders, and the functions of major organs. Respiratory physiology includes the nasal cavity, pharynx, alveolar gas exchange, oxygen transport, carbon dioxide carriage, lung volumes, ventilation–perfusion ratio, airway resistance, anatomical dead space, and the physiological mechanisms of breathing. Cardiovascular topics include blood pressure regulation, cardiac reflexes, acid–base balance, electrolyte disturbances, and the effects of disease on normal physiological function.

SECTION SEVEN

Anaesthetic Pharmacology, Inhalational And Intravenous Anaesthesia, Airway Management, Anaesthetic Equipment, Physiological Monitoring And Advanced Perioperative Care

This section provides an extensive review of anaesthetic pharmacology, the principles of general and regional anaesthesia, airway management, anaesthetic equipment, and the physiological considerations involved in perioperative care. It examines anticholinergic drugs such as atropine, glycopyrrolate and scopolamine; inhalational anaesthetic agents including halothane, nitrous oxide, sevoflurane, isoflurane, desflurane and enflurane; and intravenous agents such as ketamine, thiopentone, propofol and etomidate. It also covers opioid analgesics, neuromuscular blocking drugs, reversal agents, local anaesthetics, and the pharmacological management of anaesthetic complications.

SECTION EIGHT

Anaesthetic Pharmacology, Regional Anaesthesia, Airway Management, Neuroanaesthesia, Obstetric And Paediatric Anaesthesia, And Perioperative Care

This section provides a comprehensive revision of anaesthetic pharmacology, general and regional anaesthesia, perioperative physiology, and the management of patients with complex medical conditions. It examines the pharmacological properties, clinical uses, adverse effects, and mechanisms of action of drugs such as midazolam, fentanyl, sufentanil, alfentanil, ketamine, thiopentone, etomidate, propofol, succinylcholine, dantrolene, dobutamine, and local anaesthetic agents. It also covers minimum alveolar concentration (MAC), anaesthetic potency, drug metabolism, cytochrome P450 interactions, age-related changes in drug response, and the prevention and treatment of malignant hyperthermia.

SECTION ONE

GENERAL ANAESTHESIA, AIRWAY MANAGEMENT, ANAESTHETIC PHARMACOLOGY, REGIONAL ANAESTHESIA, PATIENT MONITORING AND PERIOPERATIVE CARE

This section covers the core areas of anaesthesia practice, including general anaesthesia, airway management and endotracheal intubation, anaesthetic pharmacology, local anaesthetics, spinal and epidural anaesthesia, regional nerve blocks, and neuromuscular blockade.

Key topics include intravenous and inhalational anaesthetic agents, induction and maintenance of anaesthesia, anaesthetic equipment and breathing circuits, oxygen delivery systems, airway assessment, difficult intubation, anaesthetic monitoring, depth of anaesthesia, and intraoperative awareness. Respiratory and cardiovascular physiology, haemodynamic monitoring, fluid and electrolyte balance, blood transfusion, and the physiological effects of anaesthetic agents are also addressed.

The section further explores anaesthetic emergencies and complications, including malignant hyperthermia, local anaesthetic toxicity, aspiration, airway fires, respiratory depression, perioperative arrhythmias, and complications of spinal and epidural blocks. Additional areas include paediatric and obstetric anaesthesia, anaesthesia for patients with underlying medical conditions, postoperative recovery, pain management, postoperative nausea and vomiting, day-case surgery, cardiopulmonary resuscitation (CPR), and perioperative patient safety.

Questions are organised around essential anaesthetic principles, pharmacological actions, clinical applications, physiological responses, equipment, emergency management, and patient assessment to support focused revision and assessment of core anaesthesia knowledge.

All of the following are example of definite airways except:

A. Nasotracheal tube

B. Orotracheal tube

C. Laryngeal mask airway

D. Cricothyroidotomy

ANSWER: A

Which of the following anaesthetic agents is contraindicated in patients with hypertension?

A. Ketamine

B. Propofol

C. Etomidate

D. Diazepam

ANSWER: A

Which of the following anaesthetic agents is contraindicated in patients with hypertension?
A. Isoflurane
B. Sevoflurane
C. Methoxyflurane
D. Halothane
ANSWER: B
Anesthetic agent with vasoconstrictor is contraindicated in?
A. Finger block
B. Spinal block
C. Epidural block
D. Regional anesthesia
ANSWER: A
Which anaesthetic modality is to be avoided in sickle cell disease
A. General anesthesia
B. Brachial plexus block
C. IV Regional Anesthesia
D. Spinal
ANSWER: C
Spinal anesthesia is given at which of the following levels:
A. L1-2
B. L3-4
C. Midline of thorax
D. Below L5 (caudal)
ANSWER: B
An anesthesia resident was giving spinal anesthesia when the patient had sudden aphonia and loss of consciousness. What could have happened?
A. Total spinal
B. Partial spinal
C. Vasovagal attack
D. Intra vascular injection
ANSWER: D
A 40 year old female underwent surgery. Postoperatively she told the anesthetist that she was aware of preoperative events. Individual Intraoperative awareness is evaluated by:
A. Pulse oximetry

B. Colour Doppler
C. Bispectral imaging
D. End tidal CO2
ANSWER: C
Rise in end tidal CO2 during thyroid surgery can be due to all except:
A. Anaphylaxis
B. Malignant hyperthermia
C. Thyroid storm
D. Neuroleptic malignant syndrome
ANSWER: A
Fire breaks out during laser vocal cord surgery. What is not to be done?
A. Pouring sterile water
B. Removing endotracheal tube
C. 100% oxygen after discontinuing anesthetic gases
D. Treatment with steroid and antibiotics
ANSWER: B
EMLA constituent is
A. Lidocaine + Cocaine
B. Lidocaine + Prilocaine
C. Lidocaine + Bupivacaine
D. Bupivacaine + Prilocaine
ANSWER: B
Bupivacaine toxicity causes
A. Renal toxicity
B. Pulmonary toxicity
C. Cardiotoxicity
D. None
ANSWER: C
All of the following are effective topically except-
A. Procaine
B. Cocaine
C. Lidocaine
D. Amethocaine
ANSWER: A
Which of the following anesthesia is safe in heart failure-
A. Etomidate

B. Propofol
C. Thiopentone
D. Ketamine
ANSWER: A
For prevention of headache during spinal anaesthesia-
A. Diluted solution of local anaesthetic should be used
B. Preloading with crystalloids
C. Finer LP needle should be used
D. Head end should be elevated
ANSWER: C
True about midazolam as inducing agent
A. Increase in BP
B. Does not produce pain on IV injection
C. Increase cerebral oxygen consumption
D. Increase peripheral vascular resistance
ANSWER: B
Which nerve provides sensory innervation to the larynx and trachea below the vocal cords down to the carina?
A. Glossopharyngeal nerve
B. External branch of the superior laryngeal nerve
C. Internal branch of the superior laryngeal nerve
D. Recurrent laryngeal nerve
ANSWER: D
During laser surgery of the airway, an endotracheal tube fire occurs when the surgeon cuts into the trachea with diathermy while nitrous oxide (N2O) is in use. In this scenario, what role does Nitrous oxide (N2O) play I the fire triad?
A. Fuel
B. Oxidizing agent
C. Reducing Agent
D. Cooling agent
ANSWER: B
What is the approximate average length of the adult human trachea?
A. 5 to 8 cm
B. 10 to 13 cm

C. 15 to 18 cm
D. 20 to 22 cm
ANSWER: B
Electrolytes:
A. Ions that carry electric charge
B. Vital to maintain body homeostasis
C. Fluids containing electrical charge are called “Crystalloids”
D. All of the above
ANSWER: D
Predictors of difficult intubation include:
A. Short muscular neck
B. Prominent upper incisor
C. Protruding mandible
D. All of the above
ANSWER: D
ASA standard monitors include all except:
A. Pulse oximeter
B. CVP
C. NIBP cuff
D. ECG
ANSWER: B
Ketamine; all are true except:
A. Induction of anesthesia by IV route
B. Induction of anesthesia ...
C. Supplementation of sedation...
D. Decrease cerebral blood flow
ANSWER: D
Ayre’s T-piece is which type of circuit-
A. Type A
B. Type B
C. Type E
D. Type D
ANSWER: C
Inducing agent of choice in DIC-
A. Thiopentone
B. Ketamine

C. Methohexitone
D. Propofol
ANSWER: B
A patient with Bilirubin value of 8mg/dl and serum creatinine of 1.9 mg/dl is planned for surgery. What is the muscle relaxant of choice in this patient
A. Vecuronium
B. Pancuronium
C. Atracurium
D. Rocuronium
ANSWER: C
All of the following statements about neuromuscular blockage produced by succinylcholine are true, Except:
A. No fade on train of four stimulation
B. Fade on tetanic stimulation
C. No post-tetanic facilitation
D. Train of four ratio <0.4
ANSWER: B
A 25 year old overweight female was given Fentanyl + pancuronium anesthesia for surgery. After surgery and extubation she was observed to have limited movement of the upper body and chest wall in the recovery room. She was conscious and alert but voluntary respiratory effort was limiteD. Her blood pressure and heart rate were normal. The likely diagnosis is:
A. Incomplete reversal of pancuronium
B. Pulmonary embolism
C. Fentanyl induced chest wall rigidity
D. Respiratory depression
ANSWER: A
A 27-year-old female was brought to emergency department for acute abdominal pain following which she was shifted to the operation theatre for laparotomy. A speedy intubation was performed but after the intubation, breath sounds were observed to be decreased on the left side and a high end tidal CO2 was recordeD. The likely diagnosis is:
A. Endotracheal tube blockage
B. Bronchospasm
C. Esophageal intubation

D. Endobronchial intubation
ANSWER: D
Individual Intraoperative awareness is evaluated by:
A. Pulse oximetry
B. Colour Doppler
C. Bispectral imaging
D. End tidal CO2
ANSWER: C
Which of the following responses is least affected by Anesthesia
A. Brainstem Auditory Evoked response (BAER)
B. Visual Evoked Response (VER)
C. Somatosensory Evoked potential (SSEP)
D. Electroencephalogram (EEG)
ANSWER: A
Which of the following statements about Anesthetic Machine is true:
A. Temperature of Desflurane Vaporizer chamber is 49°C
B. Flow meters (Rotameters) are Interchangeable
C. Oxygen sensors are placed on the expiratory limb of the anesthesia circuit.
D. All of the above91. Receptor responsible for malignant hyperthermia
ANSWER: A
Concentration of adrenaline used with Lidocaine is?
A. 1:200
B. 1:2000
C. 1:20000
D. 1:200000
ANSWER: D
All are related to difficult intubation EXCEPT:
A. Miller's sign
B. TMJ ankylosis
C. Increased thyromental distance
D. Micrognathia
ANSWER: C
Anesthetic of choice for status asthmaticus is?
A. Ketamine
B. Thiopentone

C. Ether
B. N2O
ANSWER: A
Hoffman degradation is seen in which muscle relaxant?
A. Atracurium
B. Succinylcholine
C. Gallamine
D. Pancuronium
ANSWER: A
Which of the following increases duration, extent, potency of epidural
A. Volume of local anesthetic
B. Concentration of local anesthetic
C. Dose of local anesthetic
D. Speed of Injection
ANSWER: C
Most common injury during anesthesia
A. Ulnar nerve injury
B. Common peroneal nerve injury
C. Corneal abrasion
D. Brachial plexus injury
ANSWER: C
Scopolamine all are true except
A. Causes less tachycardia than atropine
B. Causes less bronchodilation than atropine
C. Has less Antisialagogue effect than atropine
D. Causes more sedation than atropine
ANSWER: C
25 year old man with 25% burn
A. Resistant to depolarizing and sensitive to non depolarizing muscle relaxants
B. Sensitive to depolarizing and resistant to non depolarizing muscle relaxants
C. Resistant to both depolarizing and non depolarizing muscle relaxants
D. Sensitive to both depolarizing and non depolarizing muscle relaxants
ANSWER: B

Which one of the followings local anesthetics has vasoconstrictive properties?
A. Bupivacaine
B. Lignocaine
C. Chlorprocaine
D. Procaine
E. Cocaine
ANSWER: E
The most potent volatile anesthetic is:
A. Halothane
B. Sevoflurane
C. Desflurane
D. Mexyflurane
E. Isoflurane
ANSWER:D
During first minute of apnea PCO_2 rises
A. 3mmHg
B. 4mmHg
C. 5mmHg
D. 6mmHg
E. 7mmHg
ANSWER:D
The commonest cause of hospital admission after day case surgery
A. Surgical pain
B. Respiratory complication
C. Blood pressure
D. Postoperative nausea and vomiting
ANSWER: D

Which one of the following is not a suitable candidate for day case surgery:
A. College student who had undergone kidney transplantation 3 years ago
B. Well controlled diabetes mellitus
C. Well controlled high blood pressure
D. 4 months old premature baby
E. 65 year pharmacist who lives 10 miles away from hospital
ANSWER: D

pH of thiopentone is:
A. 10.8
B. 6.5
C. 8.1
D. 3.5
ANSWER: A
The eye drop which causes bradycardia
A. Atropine
B. Scopolamine
C. Pilocarpine
D. Phenylephrine
ANSWER: C
Approximate blood volume in a 4kg neonate:
A. 380ml
B. 340ml
C. 320ml
D. 300ml
E. 260ml
ANSWER: C
Main nerve supply to larynx:
A. Recurrent laryngeal nerve
B. Superior laryngeal nerve
C. Phrenic nerve
D. Glossopharyngeal nerve
ANSWER: B
Cardiac Index is equal to
A. Systolic blood pressure/body surface area
B. Systolic blood pressure/diastolic blood pressure
C. Body surface area/cardiac output
D. Cardiac output/body surface area
ANSWER: D
A twelve year old patient is prepared for dental surgery; his uncle has a history of hemophilia, which lab test should be done?
A. PT
B. APTT
C. Platelet count

D. BT & CT
ANSWER: B
Magnesium Sulphate, which statement is wrong
A. Potentiate neuromuscular blockade
B. Toxicity occurs with serum concentration 2,10meq/L.
C. It is safe in patients with heart block
D. Caution in patient with renal failure
ANSWER: C

Compliance is
A. Change in volume/change in pressure
B. Change in pressure/change in volume
C. Change in volume/change in temperature
D. Change in temperature/change in volume
ANSWER: A
The common abnormal rhythm which worry the anesthetist during general anesthesia
A. Sinus tachycardia
B. Nodal rhythm
C. 1^{st} degree AV block
D. PVCs
ANSWER: D
Thyrotoxicosis is characterized by each of the following except
A. Hypertension
B. Tachycardia
C. Fever
D. Increased CO_2
ANSWER: A
In adults dural sac ends at the level of
A. L1
B. L2
C. S1
D. S2
ANSWER: D

Patient with open angle glaucoma receiving ecothiophate eye drops, which is contraindicated
A. Atracurium
B. Pancuronium
C. Succinylcholine
D. Vecuronium
ANSWER: C
Sticking in expiratory valve causes
A. Hypoventilation
B. Increased noise in ventilator
C. Barotrauma
D. Awareness
ANSWER: C
Sodium Nitroprusside
A. Has delayed onset and long duration of action
B. Mainly arteriolar vasodilator
C. May cause cyanide or thiocyanate toxicity
D. It cannot cause methemoglobinemia
ANSWER: C
Scopolamine as a premedication is best avoided in:
A. Closed angle glaucoma
B. Prevention of motion sickness
C. Preoperative sedation
D. Prevention of bradycardia
ANSWER: A
PEEP is not contraindicated in
A. Atelectasis
B. Septic shock
C. Hypoxia
D. Coma
ANSWER: A
Patient with pheochromocytoma, the drug is contraindicated
A. Vecuronium
B. Pancuronium
C. Phenoxybenzamine
D. Phentolamine

E. Labetalol
ANSWER: B
Patient under general anesthesia for endarterectomy developed decreases cardiac output after clamp of aorta due to:
A. Hypoxia
B. Hypovolemia
C. Bleeding
D. Arteriovenous O_2 admixture
ANSWER: B
Endotracheal tube migrate nearer to carina with
A. Neck flexion
B. Trendelenburg position
C. From supine to sitting position
D. All of the above
ANSWER: D
Which agent is competitive antagonist at nicotinic receptors
A. Neostigmine
B. Atropine
C. Atracurium
D. Dantrolene
ANSWER: C
The late sign of malignant hyperthermia
A. Masseter muscle rigidity(MMR)
B. Tachycardia
C. Myoglobinemia and myoglobinuria
D. Hypercarbia
ANSWER: C
Which one of the following is the earliest and most sensitive indicator of malignant hyperthermia?
A. Hyperthermia
B. Tachycardia
C. The unanticipated doubling or tripling of end-tidal carbon dioxide (Hypercarbia)
D. Tachypnea
ANSWER: C
Propofol has all of the following properties EXCEPT:

A. Antiemetic
B. Antipyretic
C. Antiemetic
D. Antipruritic
ANSWER: B
Risk of infection through blood transfusion
A. Hepatitis B= 1: 60,000
B. Hepatitis C= 1:100,000
C. HIV (AIDS)= 1:450,000
D. All are correct
ANSWER: D

Oculocardiac reflex, what should first immediately be done?
A. Temporary cessation of manipulation
B. Adequate ventilation with O2 and increased depth of anesthesia
C. Atropine iv
D. Local infiltration of rectus muscle
ANSWER: A

Pulmonary capillary wedge pressure (PCWP) all are correct EXCEPT:
A. It provides an indirect measure of left atrial pressure
B. It provides an indirect measure of right atrial pressure
C. It is considered the gold standard for determining the cause of acute pulmonary edema
D. It is important in the diagnosis of acute respiratory distress syndrome (ARDS)
ANSWER: B
Aspiration of gastric contents is more dangerous if
A. Gastric pH is > 2.5 and volume is < 25ml
B. Gastric pH is < 2.5 and volume is > 25ml
C. Gastric pH is > 2.5 and volume is < 50ml
D. Gastric pH is < 2.5 and volume is > 50ml
ANSWER: B
Relation of femoral artery to femoral vein behind inguinal ligament
A. Medial
B. Lateral

C. Anterior
D. Posterior
ANSWER: B
Relation of femoral nerve to femoral artery behind inguinal ligament
A. Medial
B. Lateral
C. Anterior
D. Posterior
ANSWER: B
Relation of femoral artery to femoral nerve behind inguinal ligament
A. Medial
B. Lateral
C. Anterior
D. Posterior
ANSWER: A
The dural sac in children ends at
A. L1
B. L2
C. S3
D. S2
ANSWER: C
Dopamine has following effects:
A. Small doses (≤ 2μg/kg/min) activate dopaminergic receptors, which cause vasodilation of the renal vasculature and promotes diuresis
B. Moderate doses (2 - 10μg/kg/min) stimulate β_1 receptors, which increase myocardial contractility, heart rate and cardiac output.
C. Higher doses (10 - 20μg/kg/min) stimulate α_1 receptors which increase peripheral vascular resistance and a fall in renal blood flow.
D. All of the above
ANSWER: D
Higher blood concentration after local anesthesia injection
A. Intercostals
B. Sub cutaneous
C. Para cervical
D. Brachial
ANSWER: A

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