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PROVISIONAL ANSWER KEY (CBRT)

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Instructions / સૂચના

Candidate must ensure compliance to the instructions mentioned below, else objections shall not be considered: -

- (1) All the suggestion should be submitted in prescribed format of suggestion sheet Physically.
- (2) Question wise suggestion to be submitted in the prescribed format (Suggestion Sheet) published on the website.
- (3) All suggestions are to be submitted with reference to the Master Question Paper with provisional answer key (Master Question Paper), published herewith on the website. Objections should be sent referring to the Question, Question No. & options of the Master Question Paper.
- (4) Suggestions regarding question nos. and options other than provisional answer key (Master Question Paper) shall not be considered.
- (5) Objections and answers suggested by the candidate should be in compliance with the responses given by him in his answer sheet. Objections shall not be considered, in case, if responses given in the answer sheet /response sheet and submitted suggestions are differed.
- (6) Objection for each question shall be made on separate sheet. Objection for more than one question in single sheet shall not be considered & treated as cancelled.

ઉમેદવારે નીચેની સૂચનાઓનું પાલન કરવાની તકેદારી રાખવી, અન્યથા વાંધા-સૂચન અંગે કરેલ રજૂઆતો ધ્યાને લેવાશે નહીં

- (1) ઉમેદવારે વાંધા-સૂચનો નિયત કરવામાં આવેલ વાંધા-સૂચન પત્રકથી રજૂ કરવાના રહેશે.
- (2) ઉમેદવારે પ્રશ્નપ્રમાણે વાંધા-સૂચનો રજૂ કરવા વેબસાઈટ પર પ્રસિધ્ધ થયેલ નિયત વાંધા-સૂચન પત્રકના નમૂનાનો જ ઉપયોગ કરવો.
- (3) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ ન કરતા તમામ વાંધા-સૂચનો વેબસાઈટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર)ના પ્રશ્ન ક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા.
- (4) માસ્ટર પ્રશ્નપત્ર માં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા-સૂચન ધ્યાને લેવામાં આવશે નહીં.
- (5) ઉમેદવારે જે પ્રશ્નના વિકલ્પ પર વાંધો રજૂ કરેલ છે અને વિકલ્પ રૂપે જે જવાબ સૂચવેલ છે એ જવાબ ઉમેદવારે પોતાની ઉત્તરવહીમાં આપેલ હોવો જોઈએ. ઉમેદવારે સૂચવેલ જવાબ અને ઉત્તરવહીની જવાબ ભિન્ન હશે તો ઉમેદવારે રજૂ કરેલ વાંધા-સૂચન ધ્યાનમાં લેવાશે નહીં.
- (6) એક પ્રશ્ન માટે એક જ વાંધા-સૂચન પત્રક વાપરવું. એક જ વાંધા-સૂચન પત્રકમાં એકથી વધારે પ્રશ્નોની રજૂઆત કરેલ હશે તો તે અંગેના વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.

010. Which of the following is false regarding ASRA guidelines in patients receiving low molecular weight heparin requiring epidural catheter placement:
- (A) Therapeutic dose of LMWH should be withheld for 12 hours before epidural catheter placement
 - (B) A platelet count is advisable prior to neuraxial block for patients receiving LMWH for greater than 4 days
 - (C) Post operative therapeutic LMWH can be restarted after 4 hours of epidural catheter removal and at least 24 hours after catheter placement, whichever is greater
 - (D) Anti factorXa activity should be checked in elderly patients or patients with renal insufficiency who are receiving higher therapeutic dose of LMWH
011. Following is true regarding metabolic equivalent (MET) except:
- (A) It indicates functional or exercise tolerance in an individual
 - (B) Oxygen consumption in resting state in a 70 kg, 40 year old male is about 3.5 ml /kg/min or 4 METS
 - (C) Ability to perform 4 METs of activity correlates with better perioperative outcome
 - (D) Ability to perform vigorous activities like swimming, jogging indicate >6 METS functional capacity
012. Which of the following is false regarding esmolol:
- (A) It is a selective beta -1 receptor blocker
 - (B) It has an elimination half life of about 9 minutes
 - (C) Peak effect after loading dose are seen in 1-2 minutes
 - (D) It may be useful in the management of supraventricular arrhythmias
013. Pulse pressure is:
- (A) Higher in peripheral arteries than in aorta
 - (B) High in low cardiac output states
 - (C) Not dependent on compliance of arterial tree
 - (D) The difference between mean arterial pressure and diastolic pressure
014. Which of the following is false regarding neuromuscular junction:
- (A) Botulinum blocks the post junctional acetylcholine receptors to cause muscle paralysis
 - (B) The post junctional membrane is thrown into folds
 - (C) The acetylcholine receptor is made up of 5 protein subunits
 - (D) The two alpha subunits of acetylcholine receptors have to be activated for the channel to open
015. Following is true regarding a normal cardiac cycle:
- (A) The duration of QRS complex depends on the heart rate
 - (B) The atrial contraction amounts to only about 25% of ventricular filling
 - (C) Ejection occurs throughout the systole
 - (D) The QT interval is equal to the period of ventricular diastole

016. Which of the following best describes the order of structures found just proximal to the wrist, from lateral (radial side) to medial (ulnar side)?
- (A) Radial artery, radial nerve, median nerve, ulnar artery, ulnar nerve
 - (B) Radial nerve, radial artery, median nerve, ulnar artery, ulnar nerve
 - (C) Radial artery, radial nerve, median nerve, ulnar nerve, ulnar artery
 - (D) Radial nerve, radial artery, median nerve, ulnar nerve, ulnar artery
017. Which of the following best describes the concept of physiologic dead space?
- (A) Alveoli that are not perfused
 - (B) It is any part of tidal volume that does not participate in gas exchange
 - (C) Fraction of tidal volume that remains in the conducting airways
 - (D) None of the above
018. According to the zone theory of lung perfusion as described by West, alveoli in zone 3 are characterized by:
- (A) Alveolar pressure > pulmonary arterial pressure
 - (B) Alveolar pressure > pulmonary venous pressure
 - (C) Pulmonary arterial pressure > alveolar pressure
 - (D) Pulmonary venous pressure = alveolar pressure
019. Following is true regarding oxygen saturation except:
- (A) High SaO₂ cannot differentiate hyperoxic and normoxic conditions
 - (B) Hb oxygen saturation is the major determinant of oxygen content in the blood
 - (C) Functional oxygen saturation is the amount of oxy-hemoglobin as a fraction of oxy and deoxy- hemoglobin
 - (D) The relationship of SaO₂ and PaO₂ is linear
020. A fully filled E sized oxygen cylinders will have a pressure of:
- (A) 1900 psig
 - (B) 745 psig
 - (C) 625 psig
 - (D) 610 psig
021. Considering the Mapleson circuits and their relative efficiency with respect to prevention of rebreathing CO₂, which of the following statements regarding spontaneous ventilation is TRUE?
- (A) A>DFE>BC
 - (B) DFE>A>BC
 - (C) BC>DFE>A
 - (D) DFE>BC>A
022. Potential difficulty in bag mask ventilation can be seen in all of the following patients except:
- (A) Body mass index less than 26
 - (B) Lack of teeth
 - (C) Beard
 - (D) History of snoring
023. Mallampati class III indicates visibility of:
- (A) Soft palate, fauces, uvula and tonsillar pillars
 - (B) Hard palate only
 - (C) Soft palate, fauces and portion of uvula
 - (D) Soft palate and base of uvula

024. Which of the following shuts off or proportionately decreases the flow of other breathing gases as the oxygen supply pressure decreases?
- (A) Diameter index safety system (B) Pin index safety system
(C) Inspiratory check valve (D) Fail-safe valve
025. Typical mixed venous oxygen saturation in a healthy adult is:
- (A) 25% (B) 40-50%
(C) 65-80 % (D) More than 94%
026. Pulse oximetry illuminates tissue samples with two wavelengths of light in order to calculate oxygen saturation. These wavelengths are _____ nm:
- (A) 540 and 780 (B) 660 and 940
(C) 720 and 960 (D) 480 and 720
027. All of the following conditions are high risk for reduction in serum levels of ionized calcium except:
- (A) Hypothermia
(B) Liver transplantation
(C) After 2 units blood transfusion in any patient
(D) Hyperventilation
028. Following are the criteria for determining brain death, except:
- (A) Apnea test
(B) GCS less than 8
(C) Absent cranial nerve reflexes
(D) Lack of spontaneous movements other than spinal reflexes
029. The following factors influence carbon dioxide production except:
- (A) Dryness of absorbent (B) Indicator added to the absorbent
(C) Type of absorbent (D) Fresh gas flow rate
030. Following is true about post tetanic count stimulation:
- (A) PTC \geq 1 indicates intense block that occurs 3-6 min after intubating dose of non-depolarizing muscle relaxant
(B) Deep neuromuscular block shows a PTC of 0
(C) PTC of 0 indicates recovery from neuromuscular block
(D) Tetanic stimulation should ideally not be performed more often than every 6 minutes
031. The measurement of core body temperature is obtained via all the routes except:
- (A) Pulmonary artery (B) Tympanic membrane
(C) Skin (D) Nasopharyngeal
032. A proper sized classic LMA for children between 10 to 20 kg would be:
- (A) Size 1 (B) Size 2
(C) Size 3 (D) Size 4

033. The following are consensus criteria for diagnosis of acute kidney injury:
- (A) RIFLE criteria
 - (B) AKIN criteria
 - (C) KDIGO criteria
 - (D) All of the above
034. According to ACLS 2015 guidelines, all of the following factors indicate that a patient with tachycardia is unstable except:
- (A) Decreased pulse pressure
 - (B) Altered mental status
 - (C) Chest pain
 - (D) Cold clammy extremities
035. For using automated external defibrillator (AED) in pediatric patient, all of the following is true, except:
- (A) Pediatric dose attenuator should be used wherever available
 - (B) AED is preferable over manual defibrillators in pediatric patients
 - (C) Adult AED pads can be used in pediatric patients if they do not overlap each other
 - (D) Antero posterior placement of pads can be considered in small children
036. In a CO₂-absorbent canister, the greatest amount of carbon monoxide is produced by which of the following volatile agents?
- (A) Sevoflurane
 - (B) Halothane
 - (C) Isoflurane
 - (D) Desflurane
037. The National Institute for Occupational Safety and Health (NIOSH) recommendation for trace gas levels limit in operating-room concentration of nitrous oxide to _____ ppm:
- (A) 10
 - (B) 25
 - (C) 50
 - (D) 100
038. Cardiac output can be monitored by all the following methods except:
- (A) Partial CO₂ rebreathing
 - (B) Central venous pressure monitoring
 - (C) Analysis of arterial pressure waveform
 - (D) Thermo-dilution technique
039. Following is true about sensory evoked potential monitoring:
- (A) Cortical responses are very resistant to the anesthetic drugs
 - (B) Subcortical (spinal and brainstem responses) are more resistant to the effects of anesthetic drugs
 - (C) Inhaled anesthetics have lesser effect on sensory evoked responses than intravenous anesthetics
 - (D) All of the above
040. All of the following drugs can cause hyperkalemia except:
- (A) Angiotensin converting enzyme inhibitors
 - (B) Succinylcholine
 - (C) Insulin therapy
 - (D) Spironolactone
041. Following is a synthetic oxygen carrier:
- (A) Hespan
 - (B) HBOC
 - (C) Dextran
 - (D) Cryoprecipitate

042. All of the following is true about a pulmonary artery catheter except:
- (A) Placement in zone 2 of the lung is necessary for accurate and continuous reading after balloon occlusion
 - (B) The pulmonary artery diastolic pressure is higher than pulmonary capillary wedge pressure in a properly placed catheter
 - (C) Continuous free aspiration of blood from the lumen of catheter after balloon occlusion indicates a well placed catheter
 - (D) Pulmonary artery pressure should be measured at the end of expiration to obviate the artifact caused by positive pressure ventilation
043. A rightward shift of the oxy-hemoglobin dissociation curve may be related to
- (A) Low levels of 2, 3-DPG in packed red blood cells
 - (B) Hypothermia resulting from transfusion of blood
 - (C) Both (A) and (B)
 - (D) None of the above
044. Administration of large volumes of normal saline can lead to:
- (A) Metabolic alkalosis
 - (B) Hyperchloremic non gap metabolic acidosis
 - (C) Anion gap lactic acidosis
 - (D) None of the above
045. Following is true about blood loss according to American College of Surgeons classification of acute hemorrhage:
- (A) Class I - 750 - 1000 ml
 - (B) Class II - loss of 15 - 30% of blood volume
 - (C) Class III - 1000 - 1500 ml
 - (D) Class IV - 30 - 40% of blood volume
046. Intense neuromuscular block of rocuronium or vecuronium can be reversed by:
- (A) A high dose of cholinesterase inhibitor
 - (B) A high dose of gamacyclodextrin
 - (C) Hemodialysis
 - (D) None of the above
047. The blood gas partition coefficient at 37 degree Celsius for Desflurane is:
- (A) 0.45
 - (B) 0.65
 - (C) 1.44
 - (D) 2.5
048. The ED 95 dose of rocuronium is:
- (A) 0.3 mg/kg
 - (B) 3 mg/kg
 - (C) 0.03 mg/kg
 - (D) 1.2 mg/kg
049. Pathological features of complex regional pain syndrome include all of the following, except:
- (A) Sensory symptoms like allodynia and hyperesthesia
 - (B) Vasomotor features like skin color changes and temperature asymmetry
 - (C) Sudomotor changes like edema and sweating
 - (D) Pain is strictly along the affected dermatome
050. Following changes are seen in raised intra-abdominal pressure except:
- (A) Increased intrathoracic pressure
 - (B) Increased central venous pressure
 - (C) Decreased venous return
 - (D) Decreased inferior caval pressure

051. All of the following is true for preoperative polysomnography in obese patient with suspected obstructive sleep apnea except:
- (A) It cannot differentiate central sleep apnea from obstructive sleep apnea
 - (B) It can help titrate positive airway pressure therapy
 - (C) It detects associated EEG and ECG changes
 - (D) It helps detect associated hyperventilation, hypoxia and assessment of severity of OSA
052. What is the recommendation by American heart association regarding End tidal CO₂ monitoring during resuscitation:
- (A) ETCO₂ of 5 to 10 mmHg during chest compressions is a reliable marker of adequate compressions
 - (B) ETCO₂ of more than 10 mmHg indicates possibility of return of spontaneous circulation
 - (C) Rise of ETCO₂ to 30 to 40 mmHg is a reliable marker of adequacy of chest compressions
 - (D) ETCO₂ of more than 10 mmHg is reliable marker of adequacy of chest compressions
053. According to typical color coded categories for triage classification, RED color indicates:
- (A) A patient who has no spontaneous ventilation or circulation, or having slim chance of survival regardless of care given
 - (B) For life threatening shock or hypoxia where patient is likely to survive if immediate care is given
 - (C) Patients with injuries having systemic implications but are not yet in life threatening shock or hypoxia, are likely to withstand 45-60 minutes wait without immediate risk
 - (D) Patients with localized injuries without systemic implications who are unlikely to deteriorate for several hours
054. The Berlin definition for acute respiratory distress syndrome classifies ARDS as:
- (A) Mild ARDS: ratio of arterial PaO₂/ FIO₂ is 300-500
 - (B) Moderate ARDS: ratio of arterial PaO₂/ FIO₂ is 200 -300
 - (C) Mild ARDS: ratio of arterial PaO₂/ FIO₂ is 200-300
 - (D) Moderate ARDS: ratio of arterial PaO₂/ FIO₂ is 300-500
055. Following is true regarding point of care ultrasound in pneumothorax:
- (A) A “sea-shore” sign revealing granular artifacts in lung in M mode indicate pneumothorax
 - (B) Presence of “lung sliding sign” is indicative of pneumothorax
 - (C) “Stratosphere” sign revealing parallel lines artifact in M mode indicates pneumothorax
 - (D) None of the above
056. Following is true regarding interpretation of bi-spectral index:
- (A) BIS of 80 to 100 during general anesthesia appears to ensure adequate unconsciousness with a hypnotic – opioid anesthetic
 - (B) BIS of 100 correlates with isoelectric EEG
 - (C) Infusion of inj. Esmolol can decrease BIS index during adequate clinical anesthesia
 - (D) N₂O in concentration of 50 -70 % profoundly impact BIS index

057. Treatment of malignant hyperthermia includes all the following except:
 (A) Discontinuation of triggering agent
 (B) Dantrolene 2 mg /kg IV may be repeated every 5 min till 10 mg /kg
 (C) Soda bicarbonate 2-4 meq/ kg
 (D) Hypoventilate the patient to prevent CO₂ washout
058. Following can be used for one lung ventilation except:
 (A) Robert Shaw double lumen tube (B) Bronchial blocker
 (C) Combitube (D) Carlen's tube
059. The Pin Index for Nitrous Oxide is:
 (A) 1, 5 (B) 2, 5
 (C) 7 (D) 3, 5
060. Following are the key components of ERAS (enhanced recovery after anesthesia) protocol except:
 (A) Reduced fasting duration
 (B) Carbohydrate loading
 (C) Use of intraoperative opioids for good analgesia
 (D) Avoidance of prophylactic NG tubes and drains
061. For a flow meter with a rotating float, the reading is taken at:
 (A) Upper rim of float (B) At the centre of the float
 (C) At the lower rim of the float (D) None of the above
062. Following is true about Mapleson D system:
 (A) A long Mapleson D, with aluminium APL valve can be used for anesthesia in MRI
 (B) Lacks system is a modification of Mapleson D system
 (C) Fresh gas flows of 4 to 5 times of the minute ventilation are required for spontaneous ventilation
 (D) It is the most efficient system during spontaneous breathing
063. Following is true about Murphy's eye of an endotracheal tube:
 (A) Its area is about 60 % of the cross sectional area of the endotracheal tube
 (B) It may mask a right mainstem bronchial intubation
 (C) It is a hole on the endotracheal tube wall on the side of the bevel
 (D) Tubes having Murphy's eye are called Magill's or Magill's type tube
064. Following is true about the ideal intra-cuff pressure of an endotracheal tube:
 (A) Should be 15-20 cm H₂O
 (B) Changes in the muscle tone of trachea do not cause any change in the cuff pressure
 (C) Nitrous oxide can cause the cuff pressure to increase
 (D) A cuff pressure adjusted to just abolish the audible leak at the peak inspiratory pressure is sufficient to prevent aspiration in low pressure high volume cuff
065. End tidal to arterial CO₂ gradient will be increased in all of the following except:
 (A) Right to left shunt (B) Increased patient dead space
 (C) Pulmonary embolism (D) Hyperventilation

066. For non invasive arterial blood pressure monitoring:
- (A) An undersized cuff will give falsely low reading
 - (B) For every 20 cm of vertical height above or below the heart level, 7.5 mm Hg must be added or subtracted from the pressures observed
 - (C) The cuffs circumference should be 40 to 50 % of the circumference of the midpoint of the limb
 - (D) As the site of cuff placement becomes more and more peripheral, the systolic pressure decreases and diastolic increases
067. Arterial cannulation for invasive blood pressure monitoring can cause complications like:
- (A) Distal ischemia
 - (B) Arterial embolization
 - (C) Infection
 - (D) All of the above
068. Following is true regarding different hemoglobin and pulse oximeter reading:
- (A) Pulse oximeter over read by the percentage of HbCO present in the blood
 - (B) In Presence of Methemoglobin, pulse oximeters give falsely low reading for saturations below 85%
 - (C) HbCO has a different absorption spectrum from oxyhemoglobin
 - (D) Meth-hemoglobin absorbs more light in infrared band used by pulse oximeters
069. For the pressure gauge of a nitrous oxide cylinder which of the following is true?
- (A) It will start showing decrease after the cylinder is half empty
 - (B) It will start showing decrease after all the liquid has evaporated and only gaseous state remains
 - (C) It will not show any change till the cylinder is completely empty
 - (D) The decline in pressure is directly proportional to the decline in weight of the cylinder
070. In chest radiograph left atrial enlargement in mitral stenosis is seen as:
- (A) Straightening of left heart border
 - (B) Double density sign
 - (C) Elevation of left mainstem bronchus
 - (D) All of the above
071. Following are synthetic opioids except:
- (A) Butorphanol
 - (B) Pentazocine
 - (C) Codeine
 - (D) Meperidine
072. Gama cyclodextrin antagonizes the neuromuscular blockade by:
- (A) By nicotinic anticholinesterase action
 - (B) By acting as chelating agent by binding with non-steroidal neuromuscular blocking agents
 - (C) By forming tight complexes with steroidal neuromuscular blocking drug
 - (D) By hydrolyzing non-steroidal neuromuscular blocking drugs
073. The central venous pressure waveform in atrial fibrillation will show:
- (A) Cannon a wave
 - (B) Loss of a wave
 - (C) Attenuation of y decent
 - (D) Absent C wave
074. Desflurane vaporizer is an electrically heated vaporizer which is thermostatically controlled to:
- (A) 30° C at atmospheric pressure
 - (B) 22° C at atmospheric pressure
 - (C) 52° C at 2 atmospheric pressure
 - (D) 39° C at 2 atmospheric pressure

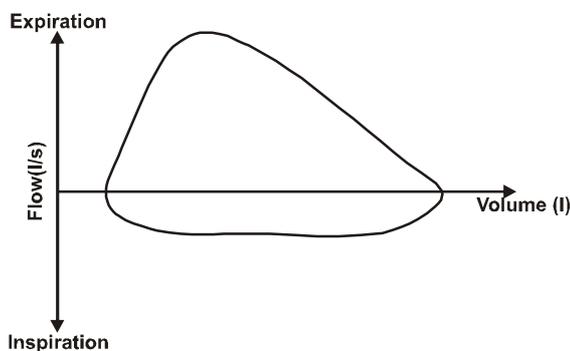
075. Propofol infusion syndrome occurs after infusion of propofol:
 (A) At more than 5 mg/kg /hour for more than 2 hours
 (B) At more than 5 mg/kg /hour for more than 2 days
 (C) After any duration and dose
 (D) None of the above
076. Which of the following is an opioid antagonist?
 (A) Nalmefene (B) Nalbuphine
 (C) Pentazocine (D) Butorphanol
077. Which of the following opioid consistently shown to have potentially fatal interaction with monoamine oxidase inhibitors?
 (A) Morphine (B) Meperidine
 (C) Butorphanol (D) Codeine
078. The dibucaine number of 50 to 60 indicates what type of butyryl cholinesterase?
 (A) Homozygous typical (B) Homozygous atypical
 (C) Heterozygous typical (D) Heterozygous atypical
079. Following is true about the relationship of functional residual capacity to closing capacity:
 (A) Airway closure can occur at or above FRC in older age
 (B) In youth, airway closure occurs earlier in expiration at higher lung volumes
 (C) COPD has no effect on the lung volume at which airway closure occurs
 (D) Both FRC and closing capacity are less in supine than in upright position
080. The rise in intraocular pressure after succinylcholine usually lasts for:
 (A) About 6 minutes (B) About 2-4 minutes
 (C) About 10-15 minutes (D) About 20 minutes
081. Following conditions show up-regulation of acetylcholine receptors except:
 (A) Burns (B) Prolonged immobility
 (C) Spinal cord injury (D) Myasthenia gravis
082. Following are steroidal muscle relaxants except:
 (A) Rapacuroium (B) Pancuronium
 (C) Vecuronium (D) Cisatracurium
083. Mechanism of action of dantrolene sodium in malignant hyperthermia is:
 (A) Direct muscle action (B) Blocks neuromuscular transmission
 (C) Inhibits Ca⁺⁺ release (D) None of the above
084. Work of breathing may be expressed as:
 (A) Work = volume X force (B) Work = pressure X volume
 (C) Work = force X distance (D) Work = resistance X volume
085. Ozone depleting potential is maximum with which of the following inhaled agent:
 (A) Halothane (B) Isoflurane
 (C) Sevoflurane (D) Desflurane

086. Following administration of soda bicarb for the treatment of acidosis, there can be adverse effects like:
(A) Excess CO₂ production
(B) Can cause hyperosmolar hyponatremia
(C) There may be overcorrection towards metabolic alkalosis
(D) All of the above
087. According to Holiday and Segar, a 25 kg patient will require how much maintenance fluid:
(A) 40 ml /kg/hour (B) 80 ml/hour
(C) 25 ml/hour (D) 65 ml/hour
088. Modified Cormack –Lehane score classification for laryngoscopic views has:
(A) 3 grades (B) 4 grades
(C) 5 grades (D) 6 grades
089. All of the following factors affect epidural local anesthetic distribution except:
(A) Volume (B) Level of injection
(C) Dose of injection (D) Speed of injection
090. Clinical assessment for the sympathetic autonomic nervous system can be done by:
(A) Heart rate response to Valsalva maneuver (B) Heart rate response to deep breathing
(C) Blood pressure response to sustained hand grip (D) Cannot be tested clinically
091. When given in more than 1 MAC, which volatile anesthetic agent shows the maximum increase in cerebral blood flow?
(A) Halothane (B) Isoflurane
(C) Enflurane (D) Desflurane
092. Following is true about epileptogenic activity of etomidate:
(A) Myoclonus after etomidate is associated with epileptiform activity on EEG
(B) It can be used to activate seizure foci for intraoperative EEG localization
(C) It has no association with seizure duration during Electro-convulsive therapy
(D) All of the above
093. Which of the following statements is true regarding using Succinylcholine for myasthenia gravis patient?
(A) Cannot be given in these patients
(B) Should be given in less than normal dose for tracheal intubation
(C) Needs to be given in more than normal dose for tracheal intubation
(D) None of the above
094. Following criteria are considered for neonatal APGAR score except:
(A) Heart rate (B) Blood pressure
(C) Reflex irritability (D) Color
095. The definitive treatment of HELLP syndrome is:
(A) Seizure prophylaxis (B) Platelet transfusion
(C) Steroids (D) Delivery of fetus regardless of gestational age

096. Following are the physiological changes in pregnancy except:
- (A) Increase in intravascular fluid volume by 35%
 - (B) Increase in cardiac output by 40%
 - (C) Increase in PaCO₂ by 10 mm Hg
 - (D) Reduction in functional residual capacity
097. The most common type of tracheo esophageal fistula is:
- (A) Esophageal atresia without fistula
 - (B) Esophageal atresia with proximal fistula
 - (C) Esophageal atresia with distal fistula
 - (D) Esophageal atresia with proximal and distal fistula
098. Separation anxiety begins at about what age:
- (A) 2-3 months
 - (B) 2-3 years
 - (C) 3-4 months
 - (D) 8-10 months
099. Plateau pressure measured after inspiratory pause is generally considered to be equivalent to:
- (A) The total pressure measured by ventilator incorporating resistive and elastic pressures of the lung
 - (B) Pressure existing in airways due to frictional resistance to gas flow
 - (C) Alveolar pressure
 - (D) None of the above
100. Pulmonary vascular resistance is lowest at:
- (A) Functional residual capacity
 - (B) Residual volume
 - (C) Total lung capacity
 - (D) All of the above
101. Allergic reactions are more common in which type of local anesthetics:
- (A) Amide type local anesthetics cause more allergies than ester type of local anesthetics
 - (B) Both esters and amides are equally prone to cause allergic reactions
 - (C) Ester type of local anesthetics cause more allergies than amide type of local anesthetics
 - (D) Local anesthetics do not cause allergic reactions
102. Ventilator associated pneumonia is:
- (A) Any pneumonia developing 24 hours after initiation of mechanical ventilation
 - (B) Any pneumonia developing 12 hours after initiation of mechanical ventilation
 - (C) Any pneumonia developing 48 hours after initiation of mechanical ventilation
 - (D) Community acquired pneumonia diagnosed after initiation of mechanical ventilation
103. Which of the following anti-thyroid drug prevent peripheral conversion of T₄ to T₃:
- (A) Propyl-thiouracil
 - (B) Radiocontrast dye ipodate
 - (C) Propranolol
 - (D) All of the above
104. Unilateral recurrent laryngeal nerve injury affecting abductor fibers after thyroidectomy can cause:
- (A) Airway obstruction
 - (B) Risk of aspiration
 - (C) Hoarseness of voice
 - (D) All of the above

105. 45 years old female patient underwent total thyroidectomy. 24 hours later she developed circum oral tingling, muscle cramping and positive Chvostek sign. Most likely diagnosis is:
 (A) Injury to recurrent laryngeal nerve (B) Hypercalcemia
 (C) Myxedema (D) Hypoparathyroidism
106. Airway obstruction immediately post extubation after thyroidectomy can occur due to all of the following except:
 (A) Hypoparathyroidism (B) Tracheomalacia
 (C) Bilateral recurrent laryngeal nerve palsy (D) Rapidly expanding tracheal hematoma
107. Glucagon stimulation test is used in the diagnosis of:
 (A) Diabetes mellitus (B) Medullary carcinoma of thyroid
 (C) Pheochromocytoma (D) Malignant hyperpyrexia
108. Phenoxybenzamine was used for preoperative alfa blockade in a pheochromocytoma patient. Which of the following statements is true:
 (A) No risk of orthostatic hypotension
 (B) It is a competitive alfa -2 receptor blocker
 (C) It may lead to severe hypotension due to vascular unresponsiveness after tumor resection
 (D) It has a shorter duration of action as compared to prazosin
109. Which oral hypoglycemic agents delay carbohydrate absorption from the gut?
 (A) Alfa glucosidase inhibitors (B) Sulfonylurea
 (C) Bi-guanides (D) Glitazones
110. Child Pugh's scoring system to assess the severity of liver disease includes all of the following criteria except:
 (A) Serum transaminases (B) Ascites
 (C) Encephalopathy (D) International normalized ratio
111. Dynamic hyperinflation in mechanically ventilated COPD patients may be diagnosed by:
 (A) Expiratory flow not reaching the baseline before initiation of next breath as seen on flow time scalars
 (B) A sudden rise in ETCO₂
 (C) A fall in peak pressure
 (D) All of the above
112. Cerebral perfusion pressure is:
 (A) Difference between intracranial pressure and CSF pressure
 (B) Difference between mean arterial pressure and intracranial pressure
 (C) Difference between systolic blood pressure and CSF pressure
 (D) CSF pressure + mean arterial pressure
113. Mannitol used for reduction of raised intracranial pressure:
 (A) Has duration of action of about 20 minutes
 (B) Is given in the dose of 0.25 to 0.5 mg/kg IV
 (C) Acts by increasing the serum osmolarity
 (D) Is safe in patients with limited cardiac reserve

114. Corticosteroids are least effective in reducing intracranial pressure due to:
 (A) Patients with closed head injury causing raised intracranial pressure
 (B) Patients with pseudotumor cerebri
 (C) Patients with raised ICP due to brain tumors
 (D) All of the above
115. Paradoxical air embolism is:
 (A) Embolism of air in dural venous sinuses
 (B) Right ventricular outflow obstruction due to air lock
 (C) The passage of air from right to left circulation due to septal defects
 (D) Embolised air entering pulmonary artery
116. According to Glasgow Coma Scale, withdrawal to painful stimulus by pain indicates best motor response of:
 (A) 1 (B) 2
 (C) 3 (D) 4
117. The statistical test to estimate the difference in quantitative parameter between two independent groups in a population is:
 (A) Independent sample t test (B) Mann whitney U Test
 (C) Wilcoxon signed rank test (D) All of the above
118. Validity of a test in any clinical research is:
 (A) The extent to which the test measures what we actually wish to measure
 (B) Indicates whether the measuring instrument provides accurate and consistent results
 (C) Both (A) and (B)
 (D) None of the above
119. Heart block with progressive prolongation of PR interval until a beat is entirely blocked (dropped beat) is called
 (A) 1st degree heart block (B) 2nd degree Mobitz type 1 block
 (C) 2nd degree Mobitz type two block (D) 3rd degree heart block
120. Unstable wide complex regular tachycardia is best treated by:
 (A) Injxylocard (B) Synchronized cardioversion with 100 J
 (C) Injamiodarone (D) Synchronized cardioversion with 50 J
121. Study the following flow volume loop and identify the pathology:



- (A) Extrathoracic obstruction (variable) (B) Intrathoracic obstruction (variable)
 (C) Fixed obstruction (D) None of the above

122. The most important concern in ventilation of asthmatic individual during surgery is:
- (A) Spontaneous ventilation should be encouraged
 - (B) Sufficient time must be provided for exhalation during controlled ventilation
 - (C) Target $P_a\text{CO}_2$ should be 30 mm Hg
 - (D) P max should be monitored
123. The paradigm shift in the management of blood sugar level after NICE-SUGAR trial 2009 in critically ill patient supports:
- (A) Blood sugar range of 80-120 mg%
 - (B) Blood sugar range 140-180 mg%
 - (C) Blood sugar range 120-140mg%
 - (D) None of the above
124. Model for End Stage Liver Disease (MELD) score used to predict morbidity and mortality in hepatic pathology patients undergoing non liver transplant surgery includes all of the following except:
- (A) PT/INR
 - (B) Bilirubin level
 - (C) Creatinine level
 - (D) Serum proteins
125. In pharmacological stress testing one of the following is NOT used:
- (A) Dobutamine
 - (B) Dipyridamole
 - (C) Milrinone
 - (D) Regadenosone
126. Following biomarker is used to determine whether the symptoms of patients such as dyspnea on exertion are of cardiac origin:
- (A) A type natriuretic peptide
 - (B) B type natriuretic peptide
 - (C) Creatinine kinase MB
 - (D) Myoglobin
127. If emergency defibrillation is necessary in a patient with a CIED (permanent cardiac pacemaker or ICD that is turned off), All of the following are true except:
- (A) An effort should be made to keep the defibrillation current away from the pulse generator and lead system
 - (B) Transcutaneous cardiac pacing or temporary transvenous pacing may be required
 - (C) Programming to asynchronous mode is recommended
 - (D) All sources of EMI should be eliminated and the magnet be removed to reactivate the antitachycardia capabilities of the device
128. Which one of the following is the most sensitive test to diagnose venous air embolism?
- (A) Esophageal stethoscope
 - (B) End tidal nitrogen level
 - (C) End tidal carbon dioxide level
 - (D) Doppler ultrasonic transducer
129. All of the following are major goals during multi-organ retrieval of a brain dead patient except:
- (A) Oxygenation and perfusion of the organs to be retrieved should be optimized
 - (B) Vasoconstrictor drugs should be used when considering pharmacologic treatment of hypotension
 - (C) Inspired oxygen concentration and ventilatory parameters should be adjusted in an attempt to maintain normoxia and normocapnia

- (D) Diabetes insipidus frequently occurs in brain-dead patients, should be treated
130. All of the following drugs are known to provoke mediator release to cause a life threatening carcinoid crisis except:
- (A) Succinylcholine (B) Mivacurium
(C) Atracurium (D) Vecuronium
131. Following is not True for anesthesia in patient of Zenker's diverticulum:
- (A) There can be regurgitation of food contents and the risk of aspiration
(B) There can be leakage around the endotracheal tube cuff
(C) General anesthesia is induced in the head-up position without cricoid pressure
(D) Insertion of a nasogastric tube should be done to reduce the size of diverticulum
132. The single most important factor determining survival after cardiac arrest due to Ventricular fibrillation (VF) is
- (A) Time between arrest and the first defibrillation attempt
(B) The energy used for defibrillation
(C) Time between arrest and starting of chest compression
(D) Cause of VF
133. All of the following are involved in MEN 1 syndrome except:
- (A) Pituitary gland (B) Thyroid gland
(C) Pancreas islet cells (D) Parathyroid gland
134. Which one of the following is safe in acute porphyria attacks?
- (A) Thiopental (B) Ketamine
(C) Propofol (D) Etomidate
135. Ramping position in airway management of obese patient should achieve following:
- (A) Sternal notch should be in line with cricoid cartilage
(B) Auditory meatus should be in line with sternal notch
(C) Cricoid cartilage should be in line with the auditory meatus
(D) None of the above
136. In obese patient, all of the following drug loading doses should be given according to the total body weight except:
- (A) Propofol (B) Succinyl choline
(C) Midazolam (D) Fentanyl
137. Life-threatening signs of hypermagnesemia may be temporarily ameliorated with:
- (A) IV calcium administration (B) Forced saline diuresis
(C) Loop diuretic (D) None of the above
138. Henderson-Hasselbalch equation explains:
- (A) The relationship of the CO₂/HCO₃ buffer system to pH
(B) Relationship of pKa and pH
(C) Calculation of the pH of a solution containing the acid and one of its salts
(D) All of the above

139. Dialysis disequilibrium syndrome is marked by nausea, headaches, fatigue which may progress to seizures or coma. The condition is thought to result from:
- (A) Rapid changes in pH and solute concentrations in the central nervous system
 - (B) Raised ICP
 - (C) Rapid rate of dialysate infusion
 - (D) All of the above
140. One of the following is NOT included in the diagnostic features of metabolic syndrome:
- (A) Random plasma glucose level ≥ 200 mg/dL
 - (B) Abdominal obesity (waist girth > 40 inches in men, >35 inches in women)
 - (C) Serum triglyceride level ≥ 150 mg/dL
 - (D) Serum high-density lipoprotein cholesterol level < 40 mg/dL in men, <50 mg/dL in women
141. Glycine containing irrigating fluids may cause all the following complications during TURP except:
- (A) Hyperglycemia
 - (B) Hyperammonemia
 - (C) Transient blindness
 - (D) Seizures
142. Preoperative medical management of a patient with pheochromocytoma includes:
- (A) α blocker followed by β blocker
 - (B) β blocker followed by α blocker
 - (C) Combined α and β blocker
 - (D) None of the above
143. One of the following is not true about local anesthetic action in pediatric population:
- (A) Diluted solutions of local anesthetics provide the same quality of nerve blockade
 - (B) Onset time is shortened
 - (C) Large dose of local anesthetic is required as compared to adults
 - (D) Duration of blockade is reduced
144. How much is the total CSF space and total daily CSF production respectively?
- (A) 150 ml, 450 ml
 - (B) 150 ml, 150 ml
 - (C) 300 ml, 450 ml
 - (D) None of the above
145. Following is the difference between junctional and extrajunctional acetyl choline receptor:
- (A) Extra- junctional receptor consists of two $\alpha 1$ -subunits and one each of the $\beta 1$ -, δ -, and γ -subunits
 - (B) Junctional receptor consists of two $\alpha 1$ -subunits and one each of the $\beta 1$ -, δ -, and γ - subunits
 - (C) Extra- junctional receptor consists of two $\alpha 1$ - subunits and one each of the $\beta 1$ -, δ , and ϵ subunits
 - (D) None of the above
146. A leftward shift of Frank Starling's curve indicates:
- (A) Enhancement of inotropic state
 - (B) Decreased inotropic state
 - (C) Myocardial depression
 - (D) None of the above
147. Cardiac muscle cells contain following types of intercellular junctions:
- (A) Gap junctions
 - (B) Spot desmosomes
 - (C) Sheet desmosomes
 - (D) All of the above

148. Enhanced recovery after surgery (ERAS) protocols for NBM guidelines allow patients to have:
 (A) Clear fluids till 2 hrs before surgery (B) Clear fluids till 6 hrs before surgery
 (C) Clear fluids till 4 hrs before surgery (D) None of the above
149. This system at the gas pipeline inlet minimizes wrong gas pipeline connections which is used at pressure less than 200 psig:
 (A) Diameter index safety system (B) Pin index safety system
 (C) Pneumatic safety system (D) None of the above
150. Variable orifice flow meter tube is also known as:
 (A) Thorpe tube (B) Anesthesia tube
 (C) Float (D) Bobbin
151. Advantage of CO₂ absorbent containing lithium hydroxide monohydrate is:
 (A) Produce less heat (B) Generates endothermic reaction
 (C) Is more effective (D) All of the above
152. This test performed during pre-anesthesia checkout procedure is known as universal leak test:
 (A) Positive pressure leak test (B) Negative pressure leak test
 (C) Pethick's test (D) None of the above
153. Where is the major site of extra hepatic metabolism of propofol?
 (A) Kidney (B) Lung
 (C) GI tract (D) Gall bladder
154. The major metabolic pathway of ketamine to produce metabolite noeketamine involves following reaction:
 (A) Hydroxylation (B) N- demethylation
 (C) Conjugation (D) None of the above
155. Ratio of receptor specificity for the α_2 : α_1 receptor of dexmedetomidine is:
 (A) 1600:1 (B) 220:1
 (C) 600:1 (D) None of the above
156. Mechanism of action of gabapentin is:
 (A) It blocks voltage-gated calcium channels by binding to the α_2 - δ subunit thereby reducing calcium influx
 (B) COX-2 inhibition
 (C) It blocks NMDA receptor
 (D) None of the above
157. Which is the process by which drug passes through skin after application of transdermal patch?
 (A) Osmosis (B) Diffusion
 (C) Iontophoresis (D) None of the above
158. The dose of rocuronium required for rapid tracheal intubation within 60 to 90 sec is:
 (A) 0.9-1.2 mg/kg (B) 2.0 mg/kg
 (C) 0.6 mg/kg (D) None of the above

159. All of the following undergo ester hydrolysis except:
 (A) Atracurium (B) Cis-atracurium
 (C) Mivacurium (D) Gantacurium
160. All of the following are side effects of sugammadex except:
 (A) Anaphylaxis (B) Coughing
 (C) Parosmia (D) Neuropathy
161. What property of local anesthetic appears to determine its intrinsic anesthetic potency?
 (A) Hydrophobicity (B) Physicochemical property
 (C) Molecular weight (D) pKa
162. Which of the following gives qualitative assessment of plasma cholinesterase activity?
 (A) Dibucaine number (B) Fluride number
 (C) Plasma cholinesterase level (D) Both (A) and (B)
163. All of the following factors are considered in Johns Hopkins surgical risk classification (2005) except:
 (A) Invasiveness of procedure
 (B) Blood loss
 (C) Risk to the patient independent of anesthesia
 (D) Comorbidities of patients
164. All of the following herbs except one, which are used as alternative medicine increase the risk of bleeding:
 (A) Ginger (B) Ginkgo
 (C) Ginseng (D) Kava
165. The acupuncture point for prevention of postoperative nausea and vomiting which is located between the palmarislongus and flexor carpi radialis muscle tendons, 4 cm proximal to the distal wrist crease and 1 cm below the skin is called:
 (A) P6 (B) P5
 (C) PV2 (D) None of the above
166. In a healthy, non obese adult with maximal pre oxygenation, the time for oxyhemoglobin to desaturate below 80% takes:
 (A) 3 Min (B) 5 Min
 (C) 7 Min (D) 9 Min
167. Minimum alveolar concentration of anesthetic gases is a measure of:
 (A) Anesthetic potency (B) Early induction and recovery
 (C) Absorption in anesthesia circuit (D) All of the above
168. Nitrous oxide should be avoided in all of the following except:
 (A) Patient with pneumothorax
 (B) Patient posted for intraocular sulphur -hexafluoride injection
 (C) In suspected air embolism
 (D) All of the above

169. Modified Bromage scale score of 3 indicates:
- (A) No motor block
 - (B) Complete motor block of limb
 - (C) Inability to raise extended leg, ability to move knees and feet
 - (D) Inability to move extended leg and knees but able to move feet
170. All of the following statements about LMA ProSeal are true except:
- (A) It is a reusable first-generation SGA that incorporates a posterior cuff
 - (B) It incorporates a gastric drainage tube that allows for gastric access with an orogastric tube
 - (C) It has an incorporated bite block
 - (D) It has a fixation tab
171. ASA physical status 6 is:
- (A) Moribund patient who is not expected to survive without operation
 - (B) Declared brain dead organ donor
 - (C) Patient with severe systemic illness which has constant threat to life
 - (D) Patient with mild systemic illness
172. What is the difference between transfusion associated circulatory overload (TACO) and transfusion related acute lung injury (TRALI)?
- (A) BNP is elevated in TACO but not in TRALI
 - (B) Evidence of left heart failure is present in TRALI
 - (C) CVP might be high in TRALI but not in TACO
 - (D) All of the above
173. The ratio of the density of a local anesthetic solution to the density of CSF is called as:
- (A) Baricity
 - (B) Molarity
 - (C) Osmolarity
 - (D) None of the above
174. Which maneuver used during extubation of difficult airway?
- (A) Chnady's maneuver
 - (B) Bailey maneuver
 - (C) BURP maneuver
 - (D) None of the above
175. The effect of intrathecal opioid is a result of:
- (A) Direct spinal cord dorsal horn opioid receptor activation
 - (B) Cerebral opioid receptor activation after CSF transport
 - (C) Peripheral and central systemic effects after vascular uptake
 - (D) All of the above
176. The most common organisms responsible for postspinal bacterial meningitis is:
- (A) Streptococcus viridians
 - (B) Staphylococcus aureus
 - (C) Streptococcus thermophilus
 - (D) None of the above

177. What is the success rate of epidural blood patch?
- (A) 50% (B) 60%
(C) 70% (D) 90%
178. During fibreoptic bronchoscopy the only three orifice structure one will come across is:
- (A) Rt upper lobe bronchus (B) Lt upper lobe bronchus
(C) Rt lower lobe bronchus (D) Lt lower lobe bronchus
179. Which of the following is Not a contraindication to autologous blood transfusion?
- (A) Evidence of infection and risk of bacteremia
(B) Scheduled surgery to correct aortic stenosis
(C) Unstable angina
(D) Uncontrolled diabetes mellitus
180. In patients on aspirin therapy, which of the following coagulation test is abnormal?
- (A) Prothrombin time (B) PTTK
(C) Fibrinogen level (D) None of the above
181. All of the following are true in the treatment of hemolytic transfusion reaction except:
- (A) Stop transfusion and administer fluids
(B) Acidification of urine
(C) Administer frusemide
(D) Send patient's urine and blood for examination
182. In all of the following conditions PCWP > LVEDP except:
- (A) Ventilation with PEEP (B) Non-West zone III PAC placement
(C) Mitral valve disease (D) Aortic regurgitation
183. All of the following reflex should be absent to declare the diagnosis of brain stem death except:
- (A) Pupillary light reflex (B) Corneal reflex
(C) Oculo-cardiac reflex (D) Oculo- vestibular reflex
184. Hypothermia during cardiopulmonary bypass for cerebral protection has all of the following effects except:
- (A) Favorable balance between oxygen supply and demand
(B) Increased excitotoxic neurotransmitter release
(C) Decreased blood brain barrier permeability
(D) Decreased inflammatory response
185. All of the following factors may influence the magnitude and direction of physiologic changes occurring with aortic cross-clamping except:
- (A) Level and duration of aortic cross clamp (B) Vasodilator use
(C) Temperature (D) Mean arterial pressure

194. Heliox mixture used in the management of stridor has the following composition
 (A) 60 % helium and 40% oxygen (B) 50 % helium and 50% oxygen
 (C) 80 % helium and 20% oxygen (D) 70 % helium and 30% oxygen
195. While giving a retrobulbar block, a patient suddenly becomes apnoic and unconscious. The most likely diagnosis is:
 (A) Retrobulbar hemorrhage.
 (B) Local anesthetic systemic toxicity.
 (C) Globe perforation.
 (D) Brainstem anesthesia due to retrograde spread along the optic nerve sheath.
196. During a laparoscopic surgery, all the following signs hint towards the possibility of subcutaneous emphysema except:
 (A) Increased PETCO₂. (B) Increase peak airway pressure.
 (C) Subcutaneous swelling and crepitus. (D) Normal SPO₂ on pulse oximeter.
197. Following is a disadvantage of gasless laparoscopy:
 (A) Does not maintain renal and splanchnic circulation.
 (B) Has more risk in patients with cardiopulmonary morbidities than laparoscopy using CO₂.
 (C) Higher incidence of port site metastasis after laparoscopic surgery in cancer.
 (D) Compromises surgical exposure and increases technical difficulty.
198. During an uneventful CO₂ pneumoperitoneum, partial pressure of arterial carbondioxide progressively increases to reach a plateau by what time after start of CO₂ insufflation:
 (A) 5 - 10 minutes. (B) 10 - 15 minutes.
 (C) 15 - 30 minutes. (D) 34 - 45 minutes.
199. The following is False regarding anesthesia management in Jehova's witness:
 (A) Acceptable anesthetic techniques to reduce blood loss include deliberate hypotension, deliberate hypothermia, and hemodilution
 (B) Most Jehovah's Witnesses do not accept synthetic colloid solutions, dextran, erythropoietin, desmopressin and preoperative iron
 (C) Some Jehovah Witnesses accept autologous banked blood or cell-saver blood and blood removed at the beginning of surgery and returned in a closed loop
 (D) While obtaining informed consent, it is crucial to precisely document what interventions are acceptable to crystallize and clearly communicate the patient's desires and to provide legal documentation for the anesthesiologist
200. If a senior anaesthesiologist delegates his task to his junior, nursing staff or to any doctor, then for their wrong doings, the senior anaesthesiologist is responsible. This is known as:
 (A) Res Ipsa Louitor (B) Vicarious liability
 (C) Criminal negligence (D) Good Samaritan lawp