

पुस्तिका में पृष्ठों की संख्या : 32  
Number of Pages in Booklet : 32

प्रश्न-पत्र पुस्तिका संख्या /  
Question Paper Booklet No.

5200029

पुस्तिका में प्रश्नों की संख्या : 180  
No. of Questions in Booklet : 180

**BSAPAn-02**

**Paper Code : 01**

**SUBJECT : Anaesthesiology**

परीक्षा दिनांक : 11/08/2020

समय : 3.00 घण्टे  
Time : 3.00 Hours

परीक्षा समय : 9:00 TO 12:00

अधिकतम अंक : 180  
Maximum Marks : 180

प्रश्न-पत्र पुस्तिका एवं उत्तर पत्रक के पेपर सील/पोलिथीन बैग को खोलने के बाद परीक्षार्थी प्रश्न-पत्र पुस्तिका संख्या को उत्तर पत्रक पर सावधानीपूर्वक अंकित करें। इसमें किसी भी प्रकार की त्रुटि होने पर जिम्मेदारी अभ्यर्थी की होगी।

The candidate fill the Question Paper Booklet No. on Answer Sheet carefully after opening the Paper Seal / Polythene bag. Candidate himself shall be responsible for any error.

**परीक्षार्थियों के लिए निर्देश**

- सभी प्रश्नों के उत्तर दीजिए।
- सभी प्रश्नों के अंक समान हैं।
- प्रत्येक प्रश्न का केवल एक ही उत्तर दीजिए।
- एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा।
- प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं, जिन्हें क्रमशः 1, 2, 3, 4 अंकित किया गया है। अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक गोले अथवा बबल को उत्तर पत्रक पर नीले बॉल प्वाइंट पेन से गहरा करना है।
- OMR उत्तर पत्रक इस परीक्षा पुस्तिका के अन्दर रखा है। जब आपको परीक्षा पुस्तिका खोलने को कहा जाए, तो उत्तर-पत्र निकाल कर ध्यान से केवल नीले बॉल पॉइंट पेन से विवरण भरें।
- प्रत्येक गलत उत्तर के लिए प्रश्न अंक का 1/3 भाग काटा जायेगा। गलत उत्तर से तात्पर्य अशुद्ध उत्तर अथवा किसी भी प्रश्न के एक से अधिक उत्तर से है। किसी भी प्रश्न से संबंधित गोले या बबल को खाली छोड़ना गलत उत्तर नहीं माना जायेगा।
- मोबाइल फोन अथवा इलेक्ट्रॉनिक यंत्र का परीक्षा हॉल में प्रयोग पूर्णतया वर्जित है। यदि किसी अभ्यर्थी के पास ऐसी कोई वर्जित सामग्री मिलती है तो उसके विरुद्ध आयोग द्वारा नियमानुसार कार्यवाही की जायेगी।
- कृपया अपना रोल नम्बर ओ.एम.आर. पत्रक पर सावधानीपूर्वक सही भरें। गलत अथवा अपूर्ण रोल नम्बर भरने पर 5 अंक कुल प्राप्तांकों में से काटे जा सकते हैं।

**चेतावनी :** अगर कोई अभ्यर्थी नकल करते पकड़ा जाता है या उसके पास से कोई अनधिकृत सामग्री पाई जाती है, तो उस अभ्यर्थी के विरुद्ध पुलिस में प्राथमिकी दर्ज कराते हुए विविध नियमों-प्रावधानों के तहत कार्यवाही की जाएगी। साथ ही विभाग ऐसे अभ्यर्थी को भविष्य में होने वाली विभाग की समस्त परीक्षाओं से विवर्जित कर सकता है।

**INSTRUCTIONS FOR CANDIDATES**

- Answer all questions.
- All questions carry equal marks.
- Only one answer is to be given for each question.
- If more than one answers are marked, it would be treated as wrong answer.
- Each question has four alternative responses marked serially as 1, 2, 3, 4. You have to darken only one circle or bubble indicating the correct answer on the Answer Sheet using BLUE BALL POINT PEN.
- The OMR Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully with blue ball point pen only.
- 1/3 part of the mark(s) of each question will be deducted for each wrong answer. A wrong answer means an incorrect answer or more than one answers for any question. Leaving all the relevant circles or bubbles of any question blank will not be considered as wrong answer.
- Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt as per rules.
- Please correctly fill your Roll Number in O.M.R. Sheet. 5 Marks can be deducted for filling wrong or incomplete Roll Number.

**Warning :** If a candidate is found copying or if any unauthorized material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would liable to be prosecuted. Department may also debar him/her permanently from all future examinations.

इस परीक्षा पुस्तिका को तब तक न खोलें जब तक कहा न जाए।

Do not open this Test Booklet until you are asked to do so.

01-□



1. In a 70 kg patient, 1 unit of platelet concentrate should increase the platelet count by

- (1) 2000 to 5000/mm<sup>3</sup>
- (2) 5000 to 10000/mm<sup>3</sup>
- (3) 15000 to 20000/mm<sup>3</sup>
- (4) 20000 to 25000/mm<sup>3</sup>

2. Which of the following clotting factors has the shortest half-life ?

- (1) Factor II
- (2) Factor X
- (3) Factor VII
- (4) Factor IX

3. A 38 year old, 70 kg patient with haemophilia A is scheduled for a right total knee arthroplasty. His laboratory test results show a hematocrit of 35, a factor VIII level of 0%, and no inhibitors to factor VIII. How much factor VIII concentrate do you need to give him to bring his factor VIII level to 100% ?

- (1) 1560 units
- (2) 1850 units
- (3) 2540 units
- (4) 2960 units

4. A 45 year old male with a positive blood group was brought to the emergency room with hemorrhagic shock. He was resuscitated and transfused with 4 units of type O, Rh-negative whole blood. Which of the following is the most appropriate blood type for further intraoperative transfusions ?

- (1) Type O, Rh-negative RBCs
- (2) Type A, Rh-positive whole blood
- (3) Type A, Rh-positive RBCs
- (4) Type O, Rh-positive whole blood

5. Which of the following is not a characteristic for packed RBC that have been stored for 35 days at 4 °C in citrate phosphate dextrose adenine-1 anticoagulant preservative ?

- (1) 2, 3-diphosphoglycerate (2, 3-DPG) < 1 μ M/L
- (2) pH < 7.0
- (3) Blood glucose < 100 mg/dL
- (4) P50 > 28

6. Which is not correct for patients of G 6pd deficiency ?
- (1) Common in black American male have common significant a variant.
  - (2) Mediterranean variants may be associated with chronic haemolytic anemia.
  - (3) Seen in individual of Chinese ancestry because the locus for the enzyme is on the Y chromosome abnormalities.
  - (4) Quinidine should be avoided because of potential cause of methemoglobinemia
7. Anticoagulation with low-molecular-weight heparin can be best monitored through which of the following laboratory tests ?
- (1) Anti-factor Xa assay
  - (2) Prothrombin time
  - (3) Thrombin time
  - (4) Clotting time
8. Which of the following processes reduces the possibility of transmission of CMV to a susceptible recipient via red cell transfusion ?
- (1) Washing erythrocytes
  - (2) Leukocyte reduction
  - (3) Irradiation
  - (4) Storage in ADSOL
9. Which of the following option is correct for distribution of blood volume ?
- (1) Arterial > Venous > Pulmonary > Heart
  - (2) Venous > Arterial > Pulmonary > Heart
  - (3) Venous > Heart > Pulmonary > Arterial
  - (4) Arterial > Pulmonary > Venous > Heart
10. Which coagulation factor is not produced by the liver ?
- (1) Prothrombin
  - (2) Proconvertin
  - (3) Christmas factor
  - (4) Antihemophilic factor
11. Which coagulation factor is decreased in disseminated intravascular coagulation ?
- (1) Prothrombin time
  - (2) Partial thromboplastin time
  - (3) Fibrinogen
  - (4) Thrombin time
12. Which factor does not predict cardiac risk in patients undergoing elective major noncardiac surgery ?
- (1) History of Myocardial infarction
  - (2) Preoperative Serum Creatinine concentration < 2 mg/dl
  - (3) History of stroke
  - (4) Insulin-dependent diabetes mellitus

13. Which of the following activities correspond to 4 METS (Metabolic Equivalents) ?
- (1) Take care of yourself
  - (2) Eat, dress and take care of yourself
  - (3) Walk indoor around the house
  - (4) Do light work around the house like dusting or washing dishes
14. In which of the following cases, cardiac patients need not undergo active cardiac evaluation and treatment prior to posting for non-cardiac surgery ?
- (1) Recent Myocardial infarction
  - (2) Compensated heart failure (NYHA Functional Class 2)
  - (3) Symptomatic mitral stenosis with progressive dyspnea on exertion
  - (4) Symptomatic ventricular arrhythmia
15. Following is the recommended time interval to wait for elective noncardiac surgery after coronary revascularization procedure. Which statement is wrong ?
- (1) No wait for elective surgery in angioplasty without stenting
  - (2) At least 30 days to 12 weeks preferable in bare-metal stent placement
  - (3) At least 6 weeks; 12 weeks preferable in coronary artery bypass grafting
  - (4) At least 12 months in drug-eluting stent placement
16. Which of the following is an indication of endocarditis prophylaxis in patients with valvular heart disease undergoing dental procedure ?
- (1) Gingival manipulation or perforation of mucosa
  - (2) Removal of prosthodontic implant
  - (3) Shedding of deciduous teeth
  - (4) Routine anaesthetic injection
17. Which of the following would provide the best prophylaxis against deep vein thrombosis in a 45 year old obese male in the intensive care unit ?
- (1) Pneumatic compression boots
  - (2) Heparin 5000 units SQ every 8 hours
  - (3) Early ambulation
  - (4) Dextran 10 mL/kg IV during surgery
18. A 57 year old male is undergoing a right hemicolectomy under general anaesthesia. Intraoperatively 5 mm ST segment elevation is noted on lead ii and the patient develops complete heart block. The coronary artery most likely affected is
- (1) Circumflex coronary artery
  - (2) Right coronary artery
  - (3) Left main coronary artery
  - (4) Left anterior descending coronary artery

19. Which of the following is correct incidence for Cyanotic Congenital Heart disease ?

- (1) VSD > ASD > PDA > Atrioventricular Septal Defect
- (2) VSD > PDA > ASD > Atrioventricular Septal Defect
- (3) PDA > VSD > ASD > Atrioventricular Septal Defect
- (4) VSD > PDA > Atrioventricular Septal Defect > ASD

20. Which condition is not associated with development of ventricular premature beats ?

- (1) Arterial Hypoxemia
- (2) Sympathetic nervous system activation
- (3) Hyperkalemia
- (4) Hypomagnesemia

21. Cyclic crescendo-decrescendo tidal volume patterns interrupted by apnea is which type of abnormal pattern of breathing ?

- (1) Cheyne-stokes breathing
- (2) Ataxic breathing
- (3) Apneustic breathing
- (4) Central neurogenic hyperventilation

22. Contralateral hemiparesis, hemisensory deficit, aphasia and contralateral visual field defect is seen in occlusion of which cerebrovascular artery ?

- (1) Anterior cerebral artery occlusion
- (2) Middle cerebral artery occlusion
- (3) Posterior cerebral artery occlusion
- (4) Basilar artery occlusion

23. Hypoparathyroidism secondary to the inadvertent surgical resection of the Parathyroid glands during total thyroidectomy typically results in symptoms of hypocalcaemia after how many hours postoperatively ?

- (1) 1 to 2 hours
- (2) 3 to 12 hours
- (3) 12 to 24 hours
- (4) 24 to 72 hours

24. In which of the following cases, postoperative complications of thyroid surgery do not result in upper airway obstruction ?

- (1) Tracheomalacia
- (2) Bilateral superior laryngeal nerve injury
- (3) Cervical hematoma
- (4) Bilateral recurrent laryngeal nerve injury



25. Which statement is false for malignant hyperthermia during general anaesthesia ?
- (1) Succinylcholine and halogenated anaesthetic agent induced
  - (2) Induced masseter spasm
  - (3) Decreased serum creatinine kinase
  - (4) Increased end-expiratory CO<sub>2</sub> tension
26. Which of the following is not a clinical sign of diabetic autonomic neuropathy ?
- (1) Painless myocardial ischemia
  - (2) Orthostatic hypotension
  - (3) Neurogenic bladder
  - (4) Delayed satiety
27. What is the P50 of haemoglobin for an adult ?
- |        |        |
|--------|--------|
| (1) 15 | (2) 20 |
| (3) 27 | (4) 30 |
28. Which statement is untrue regarding the action of oral hypoglycemic drugs ?
- (1) Alpha Glucosidase inhibitor improve carbohydrate absorption
  - (2) Sulphonylurea stimulate impaired insulin secretion
  - (3) Biguanides reduce excessive hepatic glucose output
  - (4) Glitazones improve peripheral action of insulin
29. Which parameters is not a diagnostic feature of Hyperglycemic Hyperosmolar Syndrome ?
- (1) Serum glucose level (Mg/dL)  $\geq$  600
  - (2) pH  $\geq$  7.3
  - (3) Serum osmolarity (Mosm/L)  $<$  350
  - (4) Serum HCO<sub>3</sub> (MEq/L)  $\geq$  15
30. Patients with known or suspected adrenal suppression should receive their baseline steroid hydrocortisone supplementation in the perioperative period. Which option is not correct ?
- (1) Superficial surgery (e.g., dental surgery, biopsy) – 12.5 mg IV
  - (2) Minor surgery (e.g., inguinal hernia repair) 25 mg IV
  - (3) Moderate surgery (e.g., cholecystectomy, colon resection) 50 – 75 mg IV, taper 1-2 days
  - (4) Major surgery (e.g., cardiovascular surgery, Whipple procedure) 100-150 mg IV, taper 1-2 days.

31. Which statement is false for myasthenia gravis ?

- (1) Extraocular, bulbar, and facial muscle weakness
- (2) Exercise improves muscle strength
- (3) Resistant to succinylcholine and sensitive to nondepolarizing muscle relaxants
- (4) Good response to anticholinesterases

32. A 65 year old patient admitted in emergency with severe shortness of breath on examination, found that the patient has inspiratory and expiratory stridor and wheezing due to marked extrinsic compression of the mid trachea by a tumor. Patients get symptomatic relief by administration of 70% helium in O<sub>2</sub>.

Choose the correct option.

- (1) Helium decreases the viscosity of the gas mixture
- (2) Helium decreases the friction coefficient of the gas mixture
- (3) Helium decreases the density of the gas mixture
- (4) Helium increases the Reynolds number of the gas mixture

33. Which of the following methods can be used to detect all leaks in the low-pressure circuit of any contemporary anesthesia machine ?

- (1) Oxygen flush test
- (2) Common gas outlet occlusion test
- (3) Traditional positive-pressure leak test
- (4) Negative-pressure leak test

34. Which of the following valves prevents transfilling between compressed gas cylinders ?

- (1) Fail-safe valve
- (2) Pop-off valve
- (3) Check valve
- (4) Pressure-sensor shutoff valve

35. The pressure gauge on a size "E" compressed-gas cylinder containing O<sub>2</sub> reads 1600 psi. How long can the O<sub>2</sub> be delivered from this cylinder at a rate of 5 L/min ?

- (1) 50 minutes
- (2) 100 minutes
- (3) 150 minutes
- (4) 200 minutes



36. In the O<sub>2</sub> pressure-sensor shut off valve, what is the minimum O<sub>2</sub> pressure required to keep it open and allow N<sub>2</sub>O to flow into the N<sub>2</sub>O rotameter ?
- (1) 25 psi
  - (2) 10 psi
  - (3) 50 psi
  - (4) 100 psi
37. The highest trace concentration of N<sub>2</sub>O allowed in the operative room atmosphere by the National Institute for Occupational Safety and Health (NIOSH) is
- (1) 35 ppm
  - (2) 15 ppm
  - (3) 25 ppm
  - (4) 45 ppm
38. Which of the following combinations would result in delivery of a higher than expected concentration of volatile anesthetic to the patient ?
- (1) Sevoflurane vaporizer filled with halothane
  - (2) Halothane vaporizer filled with isoflurane
  - (3) Isoflurane vaporizer filled with halothane
  - (4) Isoflurane vaporizer filled with sevoflurane
39. If the anesthesia machine is discovered Monday morning having run with 5 L/min of oxygen all weekend long, the most reasonable course of action to take before administering the next anesthetic would be
- (1) Turn machine off for 30 minutes before induction
  - (2) Administer 100% oxygen for the first hour of the next case
  - (3) Avoid use of sevoflurane
  - (4) Change the CO<sub>2</sub> absorbent
40. Which of the following systems prevent attachment of gas-administering equipment to the wrong type of central gas pipe line gas line ?
- (1) Pin-index safety system
  - (2) Diameter-index safety system
  - (3) Fail-safe system
  - (4) Proportion-limiting control system
41. At high altitudes, the flow of a gas through a rotameter will be
- (1) Greater than expected at high flows but accurate a low flows
  - (2) Greater than expected
  - (3) Greater than expected at high flows but less than expected at low flows
  - (4) Less than expected at high flows but greater than expected at low flows

42. Frost develops on the outside of an  $N_2O$  compressed-gas cylinder during general anesthesia. This phenomenon indicates
- (1) The saturated vapour pressure of  $N_2O$  within the cylinder is rapidly increasing
  - (2) The cylinder is almost empty
  - (3) There is a rapid transfer of heat to the cylinder
  - (4) The flow of  $N_2O$  from the cylinder into the anesthesia machine is rapid.
43. How long would a vaporizer filled with 100 mL volatile deliver 1% halothane if total flow is set at 5.0 L/minute ?
- (1) 452 minutes
  - (2) 445 minutes
  - (3) 365 minutes
  - (4) 515 minutes
44. Which of the following explanations would not cause an increase in inspired  $CO_2$  during a laparoscopic cholecystectomy ?
- (1) Channelling through soda lime
  - (2) Faulty expiratory valve
  - (3) Exhausted soda lime
  - (4) Absorption of  $CO_2$  through peritoneum
45. Which factor does not determine the alveolar gas concentration ?
- (1) Fresh gas flow rate
  - (2) Uptake
  - (3) Ventilation
  - (4) Concentration and second gas effect
46. Which compressed gas can be liquified at room temperature ?
- (1) Carbon dioxide
  - (2) Air
  - (3) Nitrogen
  - (4) Oxygen
47. Most frequently reported malfunction in a medical gas pipeline system is
- (1) Cross connection
  - (2) Excessive pressure
  - (3) Contamination of gases
  - (4) Inadequate pressure
48. Which is not an advantage of close suction in infectious intensive care unit ?
- (1) Reduction nosocomial infection
  - (2) Not as effective in removing secretions as open suctioning
  - (3) Decrease coughing and agitation
  - (4) Better oxygenation during suction

49. In an O<sub>2</sub> concentrator, \_\_\_\_\_ is most likely to cause deterioration of adsorbent medium.
- (1) Carbon dioxide
  - (2) Nitrogen
  - (3) Water vapour
  - (4) Hydrocarbon
50. Carlen double lumen tube
- (1) Is intended to be inserted into the left mainstem bronchus
  - (2) It not has carinal hook
  - (3) Connector not has port for fiberscope
  - (4) Not useful with massive hemoptysis
51. Which of the following would result in an increase in the production of compound A from the interaction between soda lime and sevoflurane ?
- (1) Low soda lime absorbent temperatures
  - (2) Short duration of sevoflurane administration
  - (3) Soda lime desiccation
  - (4) High fresh gas flows
52. How long after intravitreal injection of sulphur hexafluoride and air can N<sub>2</sub>O be used without risk of increasing intra-ocular pressure ?
- (1) 1 hour
  - (2) 10 days
  - (3) 24 hours
  - (4) 1 month
53. A retrobulbar block anaesthetizes each of the following nerves – except
- (1) Cranial nerve VII (Facial nerve)
  - (2) Cranial nerve IV (Trochlear nerve)
  - (3) Cranial nerve III (Oculomotor nerve)
  - (4) Cranial nerve VI (Abducens nerve)
54. A 50 kg woman is lethargic and is found to have plasma Na of 116 Meq/l. How much NaCl ml/hr. must be given to raise her plasma sodium to 130 Meq/l ?
- (1) 105 ml/hr.
  - (2) 110 ml/hr.
  - (3) 95 ml/hr.
  - (4) 115 ml/hr.

55. Hetastarch interferes with coagulation through interacting with
- (1) Antithrombin III
  - (2) Factor VIII
  - (3) Fibrinogen
  - (4) Protein S
56. Electrocardiographic changes associated with hyperkalemia include
- (1) Increased P wave amplitude
  - (2) Shortened PR interval
  - (3) Narrowed QRS complex
  - (4) Narrowed and peaked T waves
57. Which of the following is not a sign of severe hypovolemia ?
- (1) Parched mucus membrane and obtunded sensorium
  - (2) Marked increased heart rate and decrease blood pressure
  - (3) Pretibial or presacral edema and elevated jugular pulse pressure
  - (4) Decrease urinary flow.
58. Which crystalloid solution is hyperosmolar ?
- (1) D5 ½ NS
  - (2) Lactated Ringer solution
  - (3) Normal Saline
  - (4) Plasmalyte

59. Which body fluid has maximum  $\text{HCO}_3$  (Meq/liter) ?
- (1) Saliva
  - (2) Diarrheal stool
  - (3) Pancreatic secretion
  - (4) Biliary secretion
60. Calculate the amount of  $\text{NaHCO}_3$  necessary to correct base deficit of  $-10$  Meq/L for a 50 kg man with an estimated  $\text{HCO}_3$  space of 30% ?
- (1) 150 Meq
  - (2) 160 Meq
  - (3) 170 Meq
  - (4) 180 Meq
61. A 60 kg man is found to have a plasma Na of 155 Meq/l. What is his water deficit ?
- (1) 3.0 liter
  - (2) 3.5 liter
  - (3) 4.0 liter
  - (4) 4.5 liter



62. What is the treatment of choice for patients with absent renal function and hyperkalemia ?

- (1) 10% calcium gluconate or calcium chloride
- (2) Intravenous sodium bicarbonate
- (3) Cation-exchange resin
- (4) Intravenous infusion of glucose and insulin

63. Which of the following is most responsible for maintenance of cardiac output during isoflurane administration in an elderly patient with severe coronary artery disease ?

- (1) Coronary artery vasodilation
- (2) Increased systemic vascular resistance
- (3) Increased venous capacitance
- (4) Increased heart rate

64. Which complications are incorrectly paired with volatile anesthetic agents ?

- (1) Carbon monoxide toxicity and Desflurane
- (2) Bone marrow depression and Halothane
- (3) Compound a toxicity and Sevoflurane
- (4) Macrocytic anemia and nitrous oxide

65. The reason desflurane is not used for inhalation induction in clinical practice is because

- (1) Its low blood/gas partition coefficient
- (2) Its propensity to produce hypertension in high concentrations
- (3) Its propensity to produce airway irritability
- (4) Its propensity to produce tachyarrhythmias

66. Which of the following organs is not considered as a member of the vessel rich group ?

- (1) Lungs
- (2) Brain
- (3) Liver
- (4) Kidney

67. Which of the following inhalational agents most likely produces a decrease in systemic blood pressure by causing a junctional rhythm ?

- (1) Desflurane
- (2) Halothane
- (3) Isoflurane
- (4) Sevoflurane

68. Which of the following inhalational anesthetics is most likely to produce a coronary steal syndrome ?
- (1) Halothane
  - (2) Isoflurane
  - (3) Desflurane
  - (4) Sevoflurane
69. Which of the following characteristics of volatile anesthetics is necessary for calculation of the time constant ?
- (1) Blood/gas partition coefficient
  - (2) Oil/gas partition coefficient
  - (3) Brain/blood partition coefficient
  - (4) Minimum alveolar concentration
70. The concept of "context sensitive half time" emphasizes the importance of the relationship between half time and
- (1) Anesthetic metabolism
  - (2) Blood solubility
  - (3) Concentration
  - (4) Duration
71. Which of the following antiemetics would be the best choice for treatment of nausea in the patient of Parkinson's disease undergoing a cataract operation ?
- (1) Droperidol
  - (2) Promethazine
  - (3) Ondansetron
  - (4) Metoclopramide

72. Which of the following statement is not true for Pheochromocytoma ?
- (1) Measurement of plasma free metanephrines is sensitive test for patients at high risk of familial Pheochromocytoma
  - (2) Plasma free normetanephrine level higher than 200 pg/ml and/or a metanephrine level higher than 120 pg/ml confirms the diagnosis of Pheochromocytoma
  - (3) Pheochromocytoma is excluded if the normetanephrine level is less than 112 pg/ml and the metanephrine level is less than 61 pg/ml.
  - (4) Plasma catecholamine increase of at least two times the baseline values within 1-3 minutes of glucagon administration.
73. Which of the following intravenous anesthetics is converted from a water-soluble to a lipid-soluble drug after exposure to the bloodstream ?
- (1) Propofol
  - (2) Midazolam
  - (3) Etomidate
  - (4) Ketamine

74. Which drug exerts its main Central Nervous System (CNS) action by inhibiting the N-methyl-D-aspartate receptors ?

- (1) Ketamine
- (2) Midazolam
- (3) Etomidate
- (4) Propofol

75. Which of the following premedications is associated with extrapyramidal side effects ?

- (1) Cimetidine
- (2) Scopolamine
- (3) Metoclopramide
- (4) Glycopyrrolate

76. Which of the following is not a volume regulation sensor ?

- (1) Hypothalamic osmoreceptor
- (2) Atrial stretch receptor
- (3) Carotid baroreceptor
- (4) Afferent renal arteriole baroreceptor

77. Dose of which intravenous anesthetic drug is recommended as per lean body weight in obese patient?

- (1) Thiopental
- (2) Midazolam
- (3) Succinylcholine
- (4) Pancuronium

78. Which of the following urinary indices does not match with pre renal azotemia?

- (1) Osmolality > 500 Mmol/kg
- (2) Urine/sodium < 10 Meq/L
- (3) Urine /plasma creatinine ratio < 20
- (4) Fractional excretion of sodium < 1 %

79. Which criteria does not match with RIFLE criteria for acute kidney injury?

- (1) Increase serum Creatinine 1.5 times with GFR decrease > 25 % and Urine output < 0.5 ml/kg/h < 6 hr.
- (2) Increase serum Creatinine 2 times with GFR decrease > 50 0% and Urine output < 0.5 ml/kg/h <12 hr.
- (3) Increase serum Creatinine 3 times with GFR decrease > 75% and Urine output < 0.5 ml/kg/h < 24 hr.
- (4) Persistent ARF AND Complete loss of kidney function <4 week

80. Which surgical complication is LESS commonly associated with Trans urethral resection of prostate?

- (1) Clot Retention
- (2) Failure to Void
- (3) Bladder Perforation
- (4) Uncontrolled Acute Hematuria

81. Plasma concentration of following liver enzymes does not increase in patients with biliary obstruction?

- (1) Serum  $\gamma$ -glutamyl transferase
- (2) I 5'-nucleotidase
- (3) Serum glutamic-oxaloacetic transaminase
- (4) Alkaline phosphatase

82. According to the Child-Pugh scoring system, which criteria does not indicate severe hepatic dysfunction?

- (1) Encephalopathy III-IV grade
- (2) Serum Bilirubin  $>3$  mg/dl
- (3) Albumin  $<2.8$ (g/dl)
- (4) International Normalized Ratio  $<2$

83. Which statement is false for Hepatopulmonary syndrome?

- (1) Persistence of liver disease usually with portal hypertension and cirrhosis
- (2) Alveolar to arterial  $O_2$  gradient  $<15$  mm Hg
- (3) Micro aggregated albumin lung perfusion scan
- (4) Delayed contrast enhanced echocardiography

84. HELLP syndrome include each of the following EXCEPT

- (1) Hemolysis,
- (2) Liver enzymes increased
- (3) Low Platelet count,
- (4) Pulmonary hypertension

85. Which of the following option is not the correct criteria for weaning from mechanical ventilation?

- (1) Rapid shallow breathing index  $> 100$
- (2) Vital capacity  $>10$  ml/kg
- (3) Inspiratory pressure  $< -25$  cm water
- (4) Tidal volume  $> 5$  ml/kg

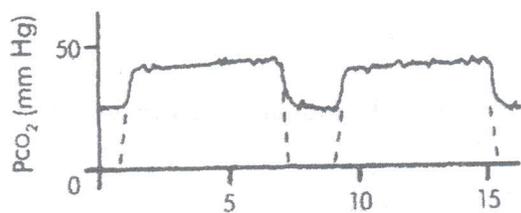
86. Which of the following indices is not the criteria for requirement of mechanical ventilation?

- (1) Maximum inspiratory force  $> 25$  cm H<sub>2</sub>O
- (2) PaO<sub>2</sub>/FiO<sub>2</sub> ratio  $< 300$  mm Hg
- (3) PA-aO<sub>2</sub> gradient  $< 350$  mm Hg
- (4) VD/VT  $> 0.6$

87. Which of the drugs below would have the least impact on somatosensory evoked potentials monitoring in a 15-year-old patient undergoing scoliosis surgery?

- (1) Midazolam
- (2) Fentanyl
- (3) Thiopental
- (4) Vecuronium

88. The capnography waveform below represents which of the following situations?



- (1) Incompetent expiratory valve
- (2) Kinked endotracheal tube
- (3) Bronchospasm
- (4) Incompetent inspiratory valve

89. Which of the following is most likely associated with a falsely lower SaO<sub>2</sub> as measured by pulse oximetry?

- (1) Hemoglobin F
- (2) Carboxyhemoglobin
- (3) Bilirubin
- (4) Methylene blue dye.

90. Select the false statement regarding noninvasive arterial blood pressure monitoring.

- (1) If the width of the blood pressure cuff is too narrow, produce an over estimation of systolic pressure.
- (2) If the width of the blood pressure cuff is wider, produce a under estimation of systolic pressure.
- (3) If the blood pressure cuff is wrapped around the arm too loosely, the measured blood pressure will be falsely lowered.
- (4) The width of the blood pressure cuff should be 40% of the circumference of the patient's arm.

91. Which of the following pharmacologic agents would have the least effect on transcranial motor evoked potentials?

- (1) Isoflurane
- (2) Nitrous oxide
- (3) Etomidate
- (4) Fentanyl

92. Which option is incorrect about postoperative shivering?
- (1) Shivering can increase metabolic rate and  $O_2$  consumption.
  - (2) Best treated by a combination of supplemental oxygen
  - (3) Usually not occurs in patients with decreased body temperature
  - (4) Rewarming the patient and/or administering IV meperidine
93. A 72-year-old patient undergoing resection of an astrocytoma in the sitting position suddenly develops hypotension. Air is heard on the precordial doppler ultrasound. Which therapeutic maneuver to treat venous air embolism is inappropriate?
- (1) Discontinue  $N_2O$
  - (2) Apply jugular venous pressure
  - (3) Implement positive end-expiratory pressure (PEEP)
  - (4) Flood the surgical wound with saline

94. Which statement is incorrect about rating of central venous access?
- (1) Internal jugular central venous access - Best success rate
  - (2) Basilic central venous access - Worst in technique related complication
  - (3) Femoral central venous access - Worst in long term use
  - (4) Subclavian central venous access - Worst in ease of cannulation
95. What percentage does cerebral blood flow change for each mm Hg change in  $PaCO_2$ ?
- (1) 1%
  - (2) 2%
  - (3) 7%
  - (4) 10%
96. What is the normal cerebral metabolic rate for oxygen per minute?
- (1) 0.5 mL/100 g brain tissue
  - (2) 2.0 mL/100 g brain tissue
  - (3) 3.5 mL/100 g brain tissue
  - (4) 7.5 mL/100 g brain tissue

97. Which clinical criteria is inconsistent with a diagnosis of brain death?

- (1) Persistent apnea for 10 minutes
- (2) Absence of pupillary light reflex
- (3) Absence of oropharyngeal reflex
- (4) Decorticate posturing

98. How long after a cerebrovascular attack, elective surgery can be carried out to minimize the risk of occlusive vascular accident?

- (1) 6 weeks
- (2) 6 months
- (3) 9 months
- (4) 1 year

99. In patients with increased ICP, hyperventilation is typically limited to a PaCO<sub>2</sub> in the range of 30 to 35 mm Hg because additional hyperventilation-

- (1) Is virtually impossible
- (2) Causes brain ischemia due to a rightward shifting of the oxyhemoglobin dissociation curve
- (3) May be associated with a worsening of neurologic outcome
- (4) Could result in paradoxical cerebral vasodilation

100. Which of the following fluid & electrolyte disorder is not associated with cerebral salt wasting intra cranial pathology?

- (1) Low serum sodium concentration
- (2) Low plasma volume
- (3) Low urine sodium concentration
- (4) Normal or high serum osmolarity

101. Diagnosis of Guillain-Barre syndrome is not supported by-

- (1) Progressive bilateral weakness in arms and legs areflexia
- (2) Persistent asymmetry of the symptom
- (3) Progression of symptoms over 2-4 weeks
- (4) Increased concentration of protein in CSF with a cell count

102. Which of the following criteria does not fulfil the diagnosis of preeclampsia?

- (1) Blood pressure > 139/89 mm Hg after 20 weeks' gestation in a woman with previously normal blood pressure
- (2) Proteinuria (<300 mg in a 24hour urine specimen)
- (3) Thrombocytopenia (platelet count < 100,000/ $\mu$ L)
- (4) Renal insufficiency (serum creatinine > 1.1 mg/dL)

103. Which drugs are useful in the treatment of uterine atony in an asthmatic patient with preeclampsia?

- (1) Oxytocin only
- (2) Oxytocin and 15-methyl PGF<sub>2a</sub>
- (3) Oxytocin and methyl ergotamine
- (4) 15-methyl PGF<sub>2a</sub> only

104. Which condition best describes the maternal condition with the first painless vaginal bleeding during the second or third trimester?

- (1) Uterine rupture
- (2) Placenta abruption
- (3) Ectopic pregnancy
- (4) Placenta previa

105. Which of the following pressure or capacities changes most during pregnancy?

- (1) Systolic blood pressure
- (2) Diastolic blood pressure
- (3) Central venous pressure
- (4) Vital capacity

106. After how many weeks of gestation does the aortocaval compression start to become significant?

- (1) 5 weeks
- (2) 10 weeks
- (3) 15 weeks
- (4) 20 weeks

107. Which agent is most useful for raising the gastric pH just before induction of general anesthesia for emergency cesarean section?

- (1) Metoclopramide
- (2) Ranitidine
- (3) Sodium citrate
- (4) Magnesium hydroxide and aluminum hydroxide

108. What is the serum concentration of magnesium associated with loss of the deep tendon reflexes?

- (1) 2.0-3.5 mEq/L
- (2) 10-13 mEq/L
- (3) 7-10 mEq/L
- (4) 13-15 mEq/L

109. According to the Gross classification, what is the most common congenital anomalies of trachea and esophagus?

- (1) Esophageal atresia without fistula
- (2) Esophageal atresia with proximal fistula.
- (3) Esophageal atresia with distal fistula.
- (4) Esophageal atresia with proximal and distal fistulas.



110. Compared with the adult dose, the dose of succinylcholine administered to neonate patient should be

- (1) Diminished because of the immature nervous system
- (2) Increased because of greater volume of distribution
- (3) Increased because of increased acetylcholine receptors
- (4) Decreased because of decreased acetylcholine receptors

111. The most common cause of neonatal bradycardia is

- (1) Congenital heart disease
- (2) Maternal drug intoxication (narcotics, alcohol, magnesium, barbiturates, digitoxin)
- (3) Hypoxemia
- (4) Postpartum cold stress

112. A 20-kg, 6-year-old girl develops pulseless ventricular tachycardia. As per 2005 American Heart Association Guidelines for Cardiopulmonary Resuscitation what should be the energy level for the initial shock ?

- (1) 20 Joules (J)
- (2) 40 Joules (J)
- (3) 60 Joules (J)
- (4) 80 Joules (J)

113. Which of the following is the least appropriate technique for the induction of general anesthesia in a newborn for surgical repair of tracheoesophageal fistula?

- (1) Awake tracheal intubation
- (2) Inhalation induction with spontaneous ventilation and tracheal intubation
- (3) Inhalation induction using positive-pressure bag and mask ventilation and tracheal intubation
- (4) Rapid IV induction and tracheal intubations

114. A 50-kg, 12-year-old child sustains a thermal injury to his legs, buttocks, and back. The estimated area involved is 50%. How much fluid should be administered during the first 24 hours?

- (1) 4.0 L
- (2) 5.5 L
- (3) 8.0 L
- (4) 10.0 L

115. Complete the following statement- Retinopathy of prematurity

- (1) Occurs only after exposure to high concentrations of O<sub>2</sub> for 12 or more hours
- (2) Is most commonly seen in newborns younger than 44 weeks post conceptual age
- (3) Cannot occur in patients who have never received supplemental O<sub>2</sub>
- (4) Is caused by obliteration of immature retinal arteries

116. Which of the following complications would be **LEAST** likely with deep cervical plexus nerve block ?

- (1) Vertebral artery injection
- (2) Blockade of the spinal accessory nerve
- (3) Epidural injection
- (4) Blockade of phrenic nerve

117. Congenital syndromes frequently associated with the cardiac abnormalities does not include -

- (1) Tracheoesophageal fistula
- (2) Meningomyelocele
- (3) Gastroschisis
- (4) Congenital diaphragmatic hernia

118. A 3-kg term neonate is scheduled for intra-abdominal surgery.

The preoperative haematocrit is 50%. What is the maximum allowable blood loss to maintain the haematocrit at 40%?

- (1) 56 ml
- (2) 36 ml
- (3) 66 ml
- (4) 46 ml

119. Which of the following is not a component of the post-anaesthetic discharge scoring system?

- (1) Drinking and eating
- (2) Surgical bleeding
- (3) Nausea and vomiting
- (4) Pain

120. What is not the guideline for safe discharge after ambulatory surgery?

- (1) Stable vital sign for 1 hr
- (2) Able to walk with assistance
- (3) Orient to person, place and time
- (4) Minimal nausea & vomiting

121. Which one is not the original criteria for post anaesthesia Aldrete Morgan Recovery Score?

- (1) SpO<sub>2</sub> < 90% on oxygen and breathes deeply and cough freely
- (2) Blood pressure within 20% of normal
- (3) Fully awake & move all extremities
- (4) Post-operative pain, nausea and vomiting

122. Which muscle group is affected when there is active injury at S1 root level of spinal cord?

- (1) Knee extensors
- (2) Ankle dorsiflexors
- (3) Long toe extensors
- (4) Ankle plantar flexors

123. Which one is not a risk factor of Post-operative nausea & vomiting?

- (1) Perioperative history of smoking
- (2) First trimester pregnancy
- (3) Volatile anaesthetic agent
- (4) Strabismus surgery



124. Which parameter does not confirm the diagnosis of systemic inflammatory response syndrome?

- (1) White blood cell count  $< 12,000/\text{mm}^3$  and  $> 4000/\text{mm}^3$
- (2) Heart rate  $> 90$  beats/min
- (3) Temperature  $> 38^\circ\text{C}$  or  $< 36^\circ\text{C}$
- (4) Respiratory rate  $> 20$  breaths/min or  $\text{PaCO}_2 < 32$  mm Hg

125. Which one is not a complication of total and peripheral parenteral nutrition?

- (1) Hypokalemia
- (2) Hyperchloremic metabolic acidosis
- (3) Hypocalcemia
- (4) Decreased levels of liver enzyme

126. Which statement is not true for prevention from awareness?

- (1) Consider administering an amnestic premedication
- (2) Prefer intravenous anaesthetic drug and minimise use of potent inhalation agent
- (3) Avoid or minimize muscle relaxant
- (4) Set an alarm for low anaesthetic gas concentration

127. What does polysomnography finding indicate for apnea longer than 10 seconds with a  $\geq 90\%$  air flow reduction despite respiratory effort?

- (1) Hypoventilation
- (2) Obstructive Apnea
- (3) Central Apnea
- (4) Hypopnea

128. Which is not a diagnostic parameter of metabolic syndrome?

- (1) Fasting plasma glucose level  $\geq 110$  mg/dl
- (2) Abdominal obesity (waist girth  $> 40$  inches in men and  $> 35$  inches in women)
- (3) Serum triglyceride level  $\geq 150$  mg/dl
- (4) Serum high-density lipoprotein cholesterol level  $> 40$  mg/dl in men and  $> 50$  mg/dl in women

129. Which option is not the primary management of anaphylactic reactions during anaesthesia?

- (1) Stop administration of all drugs, colloids, blood products.
- (2) Intravenous hydrocortisone or methylprednisolone
- (3) Maintain airway with 100% oxygen.
- (4) Epinephrine administration titrate dose according to symptom severity and clinical response.

130. Choose the correct sequence for onset of drug-induced hyperthermia syndrome.

- (1) Malignant hyperthermia > sympathomimetic syndrome > serotonin syndrome > neuroleptic malignant syndrome
- (2) Sympathomimetic syndrome > malignant hyperthermia > serotonin syndrome > neuroleptic malignant syndrome
- (3) Sympathomimetic syndrome > neuroleptic malignant syndrome > serotonin syndrome > malignant hyperthermia
- (4) Serotonin syndrome > malignant hyperthermia > sympathomimetic syndrome > neuroleptic malignant syndrome

131. A eutectic mixture of the local anesthetics cream is a mixture of which local anesthetics?

- (1) Lidocaine and prilocaine
- (2) Lidocaine and benzocaine
- (3) Prilocaine and benzocaine
- (4) Mepivacaine and lidocaine

132. How many hours should elapse before performing a single-shot spinal anesthetic in a patient who is receiving 1 mg/kg enoxaparin twice a day for the treatment of a deep vein thrombosis?

- (1) 2 hours
- (2) 6 hours
- (3) 12 hours
- (4) 24 hours

133. Which of the following is the earliest sign of lidocaine toxicity?

- (1) Shivering
- (2) Nystagmus
- (3) Lightheadedness and dizziness
- (4) Tonic-clonic seizures

134. In what sequence (First to Last) would the nerve fibers get blocked in a sciatic nerve block?

- (1) Sympathetic, Proprioception, Pain, Motor
- (2) Sympathetic, Pain, Proprioception, Motor
- (3) Motor, Pain, Proprioception, Sympathetic
- (4) Pain, Proprioception, Motor, Sympathetic



135. The correct arrangement of local anesthetics in order of their ability to produce cardiotoxicity from most to least is-

- (1) Bupivacaine, lidocaine, ropivacaine
- (2) Bupivacaine, ropivacaine, lidocaine
- (3) Lidocaine, bupivacaine, ropivacaine
- (4) Ropivacaine, bupivacaine, lidocaine

136. Select the **incorrect** statement regarding spinal anatomy and spinal anesthesia.

- (1) The addition of epinephrine to lidocaine will prolong spinal anesthesia
- (2) The spinal cord extends to L3 in the infant and L1 in adults
- (3) Taylor approach for spinal anesthesia uses a paramedian approach to the L5-S1 largest interspace of the vertebral column
- (4) The Dural sac extends to the S4-S5 interspace

137. How much local anesthetic should be administered per spinal segment to patients between 20 and 40 years of age receiving a lumbar epidural anesthetic?

- (1) 0.25 to 0.5 mL
- (2) 0.5 to 1.0 mL
- (3) 1 to 2 mL
- (4) 2 to 3 mL

138. Important landmarks for performing a sciatic nerve block (classic approach of Labat) include

- (1) Iliac crest, sacral hiatus, greater trochanter
- (2) Iliac crest, coccyx, and greater trochanter
- (3) Posterior superior iliac spine, coccyx, and greater trochanter
- (4) Posterior superior iliac spine, greater trochanter and sacral hiatus

139. Which portions of the upper extremity is not innervated by the brachial plexus?

- (1) Posterior medial portion of the arm
- (2) Elbow
- (3) Lateral portion of the forearm
- (4) Anterolateral portion of the arm

140. Which of following factor does not change minimum alveolar concentration?

- (1) Hypercalcemia
- (2) Hyponatremia
- (3) Hypothermia
- (4) Hyperthyroidism

141. Drug induced allergic reactions occurring during the immediate perioperative period are most commonly attributed to administration of:

- (1) Muscle relaxants
- (2) Opioid
- (3) Antibiotics
- (4) Local Anesthetic

142. Which disease does resistance to the response of non-depolarizing blockage?

- (1) Guillain-barre syndrome
- (2) Myasthenia gravis
- (3) Cerebral palsy
- (4) Duchenne muscle dystrophy

143. A 24-year-old primiparous woman is undergoing an elective cesarean section. After pre hydration with 1500 mL of saline, a spinal anesthetic is performed and 5 minutes later the blood pressure is noted to be 80/40 and the heart rate is 100. The best treatment after assuring that adequate left uterine displacement is performed would be

- (1) Phenylephrine
- (2) Epinephrine
- (3) 1000 mL Ringer lactate
- (4) 1000 mL Hetastarch

144. Apnea hypopnea index 30 indicates-

- (1) Episodes of hypopnea are 30 times more common than apnea
- (2) Episodes of apnea are 30 times more common than hypopnea
- (3) Episodes of apnea and hypopnea occur at a rate of 30 per hour
- (4) Apnea/hypopnea episodes in last 30 seconds

145. Stainless steel tube with a smooth plastic surface and matte finish tracheal tube designed for use with CO<sub>2</sub> and KTP laser is

- (1) Laser flex tracheal tube
- (2) Laser shield 2 tracheal tube
- (3) Laser resistant tracheal tube
- (4) Sheridan laser tracheal tube

146. Which distribution of blood flow does not match with its pulmonary zone?

- (1) Zone 1 –  $pA > pa > pv$
- (2) Zone 2 –  $pa > pA > pv$
- (3) Zone 3 –  $pa > pv = pA$
- (4) Zone 4 –  $pa > pis > pv > pA$

147. Which is not a common indication for lung transplantation?

- (1) Chronic obstructive pulmonary disease
- (2) cystic fibrosis
- (3) pulmonary cyst
- (4) primary pulmonary hypertension

148. Which statement is not true for berlin definition of acute respiratory distress syndrome?

- (1) Lung injury of acute onset with 1 week of an apparent clinical insult
- (2) Progression of pulmonary symptoms, bilateral opacities on lung imaging not explainable by other lung pathology
- (3) Respiratory failure not explained by heart failure or volume overload
- (4) Arterial  $PaO_2/FiO_2$  ratio is  $> 200$  in severe ARDS

149. Compression only life support (COLS) is an effective management for cardiopulmonary arrest in adults. Which statement is false?

- (1) Early recognition of cardiac arrest and activation
- (2) 30 effective chest compression without any interruption
- (3) Mouth to mouth breathing
- (4) Early transfer to medical facility

150. Which is not a property of Fospropofol?

- (1) Is prodrug of propofol indicated for monitored anesthesia care
- (2) More painful at the site of intravenous administration
- (3) Less potential for hyperlipidemia with long term administration.
- (4) Administrated in conjunction with opioid such as fentanyl

151. Which statement is true for streamlined pharynx airway liner supra glottic device?

- (1) Silicone reusable supra glottic device
- (2) Uncuffed device that is anatomically pre shaped to line the pharynx,
- (3) Difficult to insert even in experienced hands
- (4) Cannot be used in controlled ventilation

152. Which statement is incorrect for Dexmedetomidine?

- (1) More selective alpha 2 receptor agonist.
- (2) Can be used in ICU for more than 24 hour.
- (3) Ability to produce cooperative sedation
- (4) Does not interfere with the respiratory drive

153. Which statement is incorrect for Sugammadex?

- (1) Modified gamma cyclodextrin selective relaxant binding agent
- (2) Used to reverse amino steroid non depolarizing neuromuscular blocking agent
- (3) Recommended for reversal of rocuronium and vecuronium induced neuro muscular blockage in adult patients
- (4) Anticholinergic coadministration is required

154. As per WHO guidelines, which lung protective ventilation setting is not advisable for COVID patients with persistent severe hypoxemia?

- (1) Tidal volume- 6 ml/kg
- (2) Plateau airway pressure >40 cm H<sub>2</sub>O
- (3) SpO<sub>2</sub>-88-93 or PaO<sub>2</sub> 55-80 mmHg
- (4) Allow permissive hypercapnia and adequate PEEP

155. What type of data do you need for a chi-square test?

- (1) Ratio
- (2) Ordinal
- (3) Categorical
- (4) Interval

156. Bullard laryngoscopes would not be helpful in

- (1) Limited mouth opening
- (2) Treacher Collins syndrome
- (3) Morbid obesity
- (4) Anesthesia provider who has limited use of the left arm

157. The operator can visualize in a laryngoscopy (II) b view of a Modified Cormack-Lehane grading system

- (1) More than 50% of the glottic opening
- (2) Posterior part of the glottis and arytenoids, but not the glottis
- (3) The epiglottis only, which can be lifted from the posterior pharyngeal wall
- (4) The epiglottis only, which cannot be lifted from the posterior pharyngeal wall.

158. Which of the following has not been predictors of difficult face mask ventilation ?

- (1) Lack of teeth
- (2) Presence of beard
- (3) History of snoring
- (4) Male sex

159. American heart association 2010 guideline discouraged Sellick's maneuver

- (1) During routine intubation of cardiac arrest victim.
- (2) Improve laryngoscope view by applying backward, upward and rightward pressure
- (3) Occlude the esophagus against the cervical vertebra
- (4) Reduce risk of regurgitation

160. Negative-pressure pulmonary edema can occur at or around the time of extubation. All of the following statements are correct except

- (1) It may occur in spontaneously breathing patients.
- (2) The inciting factor is inspiratory effort against closed glottis, generating a negative intrathoracic pressure in excess of 100 cm H<sub>2</sub>O.
- (3) Rib retraction, laryngospasm and stridor may lead to this condition.
- (4) First step of treatment is rapid administration of furosemide to facilitate fluid removal.

161. Retrograde intubation can be a useful technique for the difficult airway. It would be reasonable to consider it in all of the following situations except :

- (1) Trismus
- (2) Ankylosis of the mandible
- (3) Pathology in the area of cricothyroid
- (4) Maxillofacial surgery

162. According to the difficult airway algorithm which actions should be considered after initial intubation attempts are unsuccessful ?

- (1) Proceed without intubating trachea
- (2) Returning to spontaneous ventilation
- (3) Supraglottic airway device insertion
- (4) Awakening the patient

163. Which of the following is not a suggested use for the laryngeal mask airway ?

- (1) Emergency ventilation when tracheal intubation has failed.
- (2) Assisting a tracheal intubation
- (3) Providing an airway with minimal changes in blood pressure and heart rate.
- (4) To protect against aspiration.

164. Remifentanyl is metabolized primarily by

- (1) Kidneys
- (2) Non-specific esterase
- (3) Liver
- (4) Pseudocholinesterase

165. Which option is not correct for opioid receptor ?

- (1) Mu receptor – Supraspinal analgesia and respiratory depression
- (2) Kappa receptor – Spinal analgesia and sedation
- (3) Delta receptor – Behavioral and epileptogenic
- (4) Sigma receptor – Analgesia and respiratory depression

166. Which of the following opioid-receptor agonists has anticholinergic properties ?

- (1) Meperidine
- (2) Morphine
- (3) Fentanyl
- (4) Sufentanil

167. Which of the following choices is not consistent with a limb affected by complex regional pain syndrome ?

- (1) Cool, red, clammy skin and hair loss in the involved extremity.
- (2) Associated with trauma burning and continuous pain exacerbated by normal movement.
- (3) Pain that is greater than would be expected from the injury.
- (4) Atrophy and osteoporosis of the involved extremity.



168. The main advantage of neurolytic nerve blockade with phenol versus alcohol is

- (1) Denser blockade
- (2) Blockade is permanent
- (3) The effects of the block can be evaluated immediately.
- (4) The block is less painful

169. Allodynia is defined as

- (1) Spontaneous pain in an area or region that is anesthetic.
- (2) Pain initiated or caused by a primary lesion or dysfunction in the nervous system.
- (3) An unpleasant abnormal sensation, whether spontaneous or evoked.
- (4) Pain caused by a stimulus that does not normally provoke pain.

170. A celiac-plexus block would not effectively treat pain resulting from a malignancy involving which of the following organs ?

- (1) Uterus
- (2) Adrenal gland
- (3) Stomach
- (4) Pancreas

171. Transcutaneous Electric Nerve Stimulation (TENS) is low-intensity electrical stimuli mechanism of the TENS unit in relieving pain is

- (1) Direct electrical inhibition of type A-delta and C fibers
- (2) Depletion of neurotransmitter in nociceptors
- (3) Hyperpolarization of spinothalamic tract neurons
- (4) Inhibitory effect at the neurons spinal cord level and augment descending inhibitory pathways

172. Which lamina of the spinal cord has predominant sympathetic function ?

- (1) Lamina I
- (2) Lamina VII
- (3) Lamina II
- (4) Lamina V

173. Which neurotransmitter has an excitatory effect on nociception ?

- (1) Glutamate
- (2) Somatostatin
- (3) Acetylcholine
- (4) Serotonin

174. Disorder having physical symptoms of a medical condition that cannot be explained, resulting in involuntary distress and physical impairment is termed as

- (1) Conversion disorder
- (2) Somatization disorder
- (3) Substance related disorder
- (4) Hypochondriasis

175. Which syndrome is not matched with following entrapment neuropathies ?

- (1) Pronator syndrome – Radial nerve
- (2) Tarsal tunnel syndrome – Posterior tibial nerve
- (3) Cubital tunnel syndrome – Ulnar nerve
- (4) Carpal tunnel syndrome – Median nerve

176. William T.G. Morten conducted the first publicized demonstration of general anaesthesia for surgical operation using ether in

- (1) 16<sup>th</sup> October, 1847
- (2) 16<sup>th</sup> October, 1846
- (3) 16<sup>th</sup> October, 1848
- (4) 16<sup>th</sup> October, 1845

177. Who gave the demonstration of cocaine in topical anaesthesia and is also credited with original application of modern local anaesthesia ?

- (1) Albert Niemann
- (2) Carl Koller
- (3) Alfred Einhorn
- (4) William Halsted

178. Following all are the effects of laryngeal nerve injury on the voice – Except :

- (1) Hoarseness and tiring of voice due to bilateral superior laryngeal nerve injury.
- (2) Stridor of voice and distress due to acute bilateral recurrent laryngeal nerve injury.
- (3) Aponia of voice due to bilateral vagus nerve injury.
- (4) Stridor of voice due to unilateral superior laryngeal nerve injury.

179. What is the pathophysiological cause of hypoxic hypoxia ?

- (1) Alveolar hypoventilation
- (2) Inability of cell to utilize oxygen
- (3) Microvascular dysfunction
- (4) Increased oxygen consumption

180. Which of the following treatment might not be useful in restoring a prolonged prothrombin time to the normal range ?

- (1) Vitamin K
- (2) Recombinant factor VIII
- (3) Fresh frozen plasma
- (4) Cryoprecipitate



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