

**MIZORAM PUBLIC SERVICE COMMISSION**

**TECHNICAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF  
GRADE-II OF MIZORAM HEALTH SERVICE (SPECIALIST SUB-CADRE)  
UNDER HEALTH & FAMILY WELFARE DEPARTMENT,  
GOVERNMENT OF MIZORAM. OCTOBER, 2022**

**PAPER - IV (TECHNICAL)  
ANAESTHESIOLOGY DEPARTMENT**

Time Allowed : 3 hours

Full Marks : 200

*All questions carry equal marks of 2 each.*

*Attempt all questions.*

1. The following is not disadvantage of NPPV
  - (a) Reduced need for sedation
  - (b) Claustrophobia
  - (c) Delay in intubation
  - (d) Possible upper extremity oedema, axillary vein thrombosis and tympanic membrane dysfunction
2. When NPPV is used inspiratory pressures greater than 20 cm H<sub>2</sub>O should be avoided to prevent
  - (a) Barotrauma
  - (b) CO<sub>2</sub> retention
  - (c) Gastric distension
  - (d) Hypoxia
3. The primary benefit of positive end-expiratory pressure (PEEP) during mechanical ventilation is
  - (a) Improved elimination of CO<sub>2</sub>
  - (b) Improved venous return and cardiac output
  - (c) Prevention and reversal of alveolar collapse (atelectasis)
  - (d) Reduction in peak inspiratory pressure
4. For pressure-preset ventilation (also known as “pressure-control ventilation”), the independent variable and dependent variable, respectively, are
  - (a) Tidal volume and FIO<sub>2</sub>
  - (b) Tidal volume and frequency
  - (c) SpO<sub>2</sub> and airway pressure
  - (d) Airway pressure and tidal volume
5. Advantage of SIMV is
  - (a) Less interference with normal cardiac-vascular function
  - (b) Increased work of breathing
  - (c) Rests muscles of respiration completely
  - (d) VT decreases with or increases with lung resistance/compliance
6. Which is true of pressure support ventilation (PSV) ?
  - (a) Delivers either volume cycled or time cycled breaths at a preset mandatory rate
  - (b) Set amount of pressure that is applied augments each patient-triggered breath.
  - (c) Delivers unassisted ventilator breaths at a pre-set rate
  - (d) This mode allows patients to contribute to and determine a portion of their ventilatory requirement

7. Primary goals of ventilatory support are all except
  - (a) Adequate oxygenation/ventilation
  - (b) Reduce work of breathing
  - (c) Asynchrony between patient and ventilator
  - (d) Avoidance of high end-inspiration alveolar pressures
8. Potential adverse effect from high inspiratory pressures include
  - (a) Barotrauma
  - (b) Hypertension
  - (c) Hypercapnia
  - (d) Respiratory acidosis
9. Which mode of ventilation locks out patient's effort to breath
  - (a) Controlled Mandatory Ventilation
  - (b) Synchronous Intermittent Mandatory Ventilation
  - (c) Assist Control Mode
  - (d) Pressure Control Mode
10. The mode of ventilation which allows the patient to breathe spontaneously at his or her own respiratory rate and depth between the ventilator breaths is
  - (a) Controlled Mandatory Ventilation
  - (b) Synchronous Intermittent Mandatory Ventilation
  - (c) Assist Control Mode
  - (d) Pressure Control Mode
11. Which are the Ventilator Parameters adjusted to maintain the optimum oxygenation?
  - (a) FiO<sub>2</sub> and PEEP
  - (b) Tidal Volume and Respiratory Rate
  - (c) Tidal Volume and PEEP
  - (d) FiO<sub>2</sub> and Tidal volume
12. One of the following modes of ventilation reduces the work of breathing by overcoming the resistance created by ventilator tubing
  - (a) Controlled Mandatory Ventilation
  - (b) Synchronous Intermittent Mandatory Ventilation
  - (c) Assist Control Mode
  - (d) Pressure Support Mode
13. CPAP and BiPAP modes are usually used
  - (a) In conjunction with sedation
  - (b) to delay intubation
  - (c) In unconscious patients
  - (d) In uncooperative patients
14. Which one of the following modes of ventilation is triggered by time, limited by pressure and inspiratory effort ?
  - (a) Controlled Mandatory Ventilation
  - (b) Synchronous Intermittent Mandatory Ventilation
  - (c) Assist Control Mode
  - (d) Pressure Control Mode
15. Which of the following conditions require a higher PEEP to be applied in recruiting collapsed alveoli?
  - (a) Asthma
  - (b) Acute Respiratory Distress Syndrome
  - (c) Bronchiectasis
  - (d) Emphysema
16. One of the following is a risk of keeping high PEEP
  - (a) Hypotension
  - (b) Hypertension
  - (c) Hyperthermia
  - (d) Hypothermia

17. Ventilator associated pneumonia develops at least after how many hours of endotracheal intubation?
- (a) 24 to 48 hours (b) 36 to 72 hours  
(c) 48 hours (d) 72 hours
18. Endotracheal intubation is a major risk factor for ventilator-associated pneumonia due to the following reasons with the exception of
- (a) Endotracheal intubation breaches airway defences  
(b) impairs cough and muco-ciliary clearance, and facilitates micro-aspiration of bacteria-laden secretions that pool above the inflated endotracheal tube cuff  
(c) Bacteria form a biofilm on and within the endotracheal tube that protects them from antibiotics and host defences  
(d) Due to immuno-compromised condition in a ventilated patient
19. One of the preventive measures of ventilator-associated pneumonia is
- (a) Head end elevation by 30-45 degrees (b) Open suctioning system  
(c) Always keep ventilated patients deeply sedated (d) Gastric over distension need not be avoided
20. The main adverse effect of sedation with dexmedetomidine in a mechanically ventilated patient is
- (a) Bradycardia (b) Hypotension  
(c) Respiratory depression (d) Long duration of action
21. In patients who are critically ill, the most common pharmacologic agents for pain and first-line agents for non-neuropathic pain are
- (a) NSAIDs (b) Sedatives  
(c) Opioids (d) Muscle relaxants
22. Which statement is false regarding early enteral nutrient administration in a critically ill patient
- (a) Preserving gastrointestinal integrity and  
(b) Barrier function and maintaining intestinal immunologic defences  
(c) Decreasing infectious outcomes in critically ill patients  
(d) Rapid recovery in a coma patient
23. Inadequate nutrition in a critically intubated patient has been associated with
- (a) Improved wound healing  
(b) Neuromuscular improvement  
(c) Prolonged dependence on ventilators and protracted length of stay  
(d) Decreased morbidity and mortality.
24. Weaning from mechanical ventilation is expedited by
- (a) Daily spontaneous breathing trials  
(b) Synchronized intermittent mandatory ventilation (SIMV)  
(c) Administration of bronchodilating medications around the clock  
(d) Daily bronchoscopy
25. Nociceptive pain can be divided into two categories
- (a) Somatic pain and visceral pain (b) Somatic and neuropathic  
(c) Inflammatory and radicular (d) Acute and chronic
26. At what time frame following the postsurgical period does persistent postsurgical pain become defined as being "chronic pain"?
- (a) 1 to 2 weeks (b) 3 to 4 weeks  
(c) 1 to 2 months (d) 6 to 12 months

27. Nonsteroidal anti-inflammatory drugs (NSAIDs) are often used as part of “multimodal” analgesic therapy, some of the potential advantages include all of the following, except
- (a) Decreases opioid requirements
  - (b) Can decrease postoperative pain intensity
  - (c) Indirect effect of decreasing opioid-related side effects
  - (d) Can improve wound healing
28. Type(s) of symptomatic pain conditions that best describes “chronic” pain often includes
- (a) Neuropathic pain alone
  - (b) Nociceptive pain alone
  - (c) Neuropathic or nociceptive pain
  - (d) Somatic or visceral pain
29. Which of the following is false with use of opioid for chronic pain
- (a) Opioids not first-line or routine therapy for chronic pain
  - (b) Avoid concurrent benzodiazepines and opioids whenever possible
  - (c) Not necessary to discuss expected benefits and risks with patients
  - (d) Prescribe lowest effective dose
30. Chronic pain indications for insertion of a spinal cord stimulator include all of the following, except
- (a) Phantom pain
  - (b) Complex regional pain syndrome
  - (c) Chronic visceral pelvic pain
  - (d) Compartment syndrome pain
31. Major excitatory neurotransmitters responsible for pain modulation include all the following, except
- (a) Substance P
  - (b) Glutamate
  - (c) Somatostatin
  - (d) Aspartate
32. All the following are inhibitory neurotransmitters in the pain pathway, except
- (a) Norepinephrine
  - (b) Adenosine
  - (c) Serotonin
  - (d) Calcitonin gene-related peptide
33. All are true of Visual analogue scale (VAS) except
- (a) Correlate highly with pain measured on verbal and numerical rating scales
  - (b) Is minimally intrusive
  - (c) Assumes that pain is a multidimensional experience
  - (d) Measures the intensity of pain
34. In all chronic pain there are problems in the nervous system except
- (a) Complex regional pain syndrome (CRPS)
  - (b) Fibromyalgia
  - (c) Migraine
  - (d) Rheumatoid arthritis
35. The benzodiazepine which is used to treat various neuropathic pain syndromes is
- (a) Diazepam
  - (b) Clonazepam
  - (c) Flunazepam
  - (d) Lorazepam
36. Allodynia is
- (a) Neuropathic pain caused by stimuli that are usually not painful
  - (b) The ‘burning’ sensation of causalgia
  - (c) Red flare with nerve damage
  - (d) Due to reflex sympathetic dystrophy

37. Which of the following conditions is more likely to be associated with neuropathic pain?  
(a) Traumatic nerve injury (b) Stroke  
(c) Syringomyelia (d) Multiple sclerosis
38. Most commonly missed nerve with interscalene approach to brachial plexus  
(a) Ulnar (b) Median  
(c) Musculocutaneous (d) Radial
39. Regarding Epidural Abscess - which is wrong-  
(a) Diagnosis is dependent on triad of back pain, fever, and paralysis  
(b) Occurs at a rate of 1:1000-3000 (OR 1:2000 -1:5000)  
(c) Worse outcomes if advanced age  
(d) Usually gram positive cocci
40. Regarding monitoring for paediatric inhalation induction  
(a) Temperature monitoring is essential during induction.  
(b) It is unwise to upset anxious children by placing a blood pressure cuff before induction.  
(c) A baseline ECG must be obtained before induction, especially in anxious children  
(d) It is unnecessary to obtain pre-induction blood pressures in neonates, often difficult to obtain due to motion.
41. A 6-year-old, 20-kg girl develops pulseless ventricular tachycardia after induction of anaesthesia with halothane, nitrous oxide, and oxygen for a tonsillectomy. The anaesthesiologist intubates the child, administers 100% oxygen, and starts chest compressions. When the defibrillator quickly arrives in the OT the defibrillator should be charged to what energy level for the initial shock?  
(a) 20 joules (b) 40 joules  
(c) 60 joules (d) 80 joules
42. What is the first sign of inhalation anaesthetic induction in a child?  
(a) Disappearance of eyelash reflex (b) Shallow, rapid breathing  
(c) Appearance of nystagmus (d) The patient does not react to verbal stimuli
43. Which of the following is the most common reason for the cancellation of paediatric procedures?  
(a) Asthma Exacerbation (b) Upper Respiratory Infections  
(c) Non-compliance with NPO requirements (d) Instability due to illness
44. A 7 year old child must not eat solid food for how many hours prior to procedure?  
(a) 6 hours (b) 8 hours  
(c) 3 hours (d) 4 hours
45. What type of breathing circuit would you choose for a child weighing less than 10 kg?  
(a) Small semi-closed Circuit (b) Mapleson A  
(c) Standard adult semi closed system (d) Jackson-Rees Circuit
46. What would be an appropriate sized uncuffed ETT for a 3 year old child weighing 18 kgs?  
(a) 4.5 (b) 4  
(c) 3.5 (d) 3 Bottom of Form
47. What is an appropriate hourly maintenance fluid rate for a child weighing 18 kg?  
(a) 68 ml/hour (b) 58 ml/hour  
(c) 70 ml/hour (d) 45 ml/hour

48. The majority of paediatric cardiac arrests occur during which phase ?
- (a) Induction (b) Maintenance  
(c) Emergence (d) Rates are equal during all 3 phases
49. What is the most common cause of respiratory arrest in paediatric patients?
- (a) Airway Obstruction (b) Difficult intubation  
(c) Laryngospasm (d) Bronchospasm
50. Which of the following is not a risk factor associated with cardiac arrests in the paediatric patient?
- (a) Emergency Surgery (b) ASA 3-5  
(c) Congenital Airway Deformities (d) Children 1-4 years old
51. A child with a recent URI undergoing anaesthesia would be at an increased risk for all of the following except:
- (a) Laryngospasm (b) Gastro-oesophageal reflux  
(c) Atelectasis (d) Bronchospasm
52. When monitoring the paediatric patient, where should the precordial stethoscope be placed?
- (a) Left sternal border 2nd or 3rd intercostal space  
(b) Right sterna border 2nd or 3rd intercostal space  
(c) Left midclavicular line 5th intercostal space  
(d) Depends upon what you are trying to monitor
53. For a normal inhalational induction your N<sub>2</sub>O should be at \_\_\_\_\_ and your O<sub>2</sub> should be at \_\_\_\_\_ respectively to start out with
- (a) 70%, 30% (b) 50%, 50%  
(c) 40%, 60% (d) 0 %, 100 %
54. Bottom of Form Which of the following is incorrect regarding recovery position?
- (a) Place nearest arm at right angle  
(b) Put the back of other hand straight on side of the victim  
(c) Bend the far knee, grasp the far leg and roll them onto their side  
(d) Open airway
55. The MAC for all anaesthetic agents are highest at what age?
- (a) 6-12 months (b) 4-6 years  
(c) 1-4 years (d) 0-6 months
56. Which of the following inhalational anaesthetic agents may cause bradycardia, vasodilation and myocardial depression in infants?
- (a) Desflurane (b) Isoflurane  
(c) Sevoflurane (d) Opioids
57. Which of the following children is the best candidate for a deep extubation?
- (a) An 18 month old child who just had a minor procedure, no past HX and spontaneous ventilation for whole case.  
(b) A 9 year old healthy child with asthma (no attacks in one year and no wheezes) having a minor elective procedure, spontaneous ventilation maintained throughout procedure  
(c) An 5 year old healthy child with no medical history, needed paralysis during procedure but has now been fully reversed.  
(d) A 7 year old child who came for emergency appendectomy

58. Which of the following is not helpful in preventing laryngospasm?
- (a) Suction secretions immediately after extubation
  - (b) Extubate deep
  - (c) Extubate totally awake
  - (d) Immediately after extubation, stretch the larynx
59. What is the most important component of physical examination for down syndrome patient?
- (a) Airway examination and neck stability
  - (b) Assessing degree of mental retardation
  - (c) Obtaining history from parents regarding any heart conditions
  - (d) Assessing for reflux and signs of URI
60. Neonates and infants have less effective ventilation due to all of the following except
- (a) Larger tongue and head
  - (b) Weak intercostals and diaphragmatic musculature
  - (c) More pliable and horizontal ribs
  - (d) Protuberant abdomen
61. What side effect is commonly associated with fentanyl that we are concerned about during paediatric anaesthesia?
- (a) Myocardial depression
  - (b) Chest Wall Rigidity
  - (c) Renal Toxicity
  - (d) Cytochrome P450 induction
62. What is the incidence of Malignant Hyperthermia in children?
- (a) 1: 50,000
  - (b) 1: 100,000
  - (c) 1: 15,000
  - (d) 1: 250,000
63. Malignant Hyperthermia is a severe reaction which results in ryanodine receptor activation leading primarily to...
- (a) Intracellular Hyperkalaemia
  - (b) Intracellular Hypernatremia
  - (c) Intracellular Hypercalcemia
  - (d) Intracellular Hyperglycaemia
64. A patient with a history of uncontrolled hypertension, diabetes, and angina who is to undergo a laparoscopic cholecystectomy, will be classified as an
- (a) ASA II
  - (b) ASA III
  - (c) ASA IV
  - (d) ASA V
65. ASA classification for risk stratification is validated for predicting preoperative morbidity associated with the following, except
- (a) General or regional anaesthesia
  - (b) Conscious sedation
  - (c) Monitored anaesthesia care
  - (d) Surgical procedure
66. A 70-year-old male, who is diabetic for the last 20 years, is scheduled for an elective surgery. Which of the following is not a sign of autonomic diabetic neuropathy?
- (a) History of recurrent diarrhoea
  - (b) History of postural hypotension
  - (c) History of recurrent constipation
  - (d) History of urinary retention
67. Iatrogenic contributions to maternal supine hypotension syndrome can be minimized by
- (a) Left hip elevation
  - (b) Left-uterine displacement
  - (c) Regional anaesthesia
  - (d) General anaesthesia

68. The most significant change in maternal lung volume that occurs in the third trimester of pregnancy includes
- (a) Decrease in vital capacity
  - (b) Increase in residual volume
  - (c) Decrease in functional residual capacity (FRC)
  - (d) Decrease in closing capacity (CC)
69. Which of the following is not associated with oxytocin administration?
- (a) Myocardial ischemia
  - (b) Respiratory depression
  - (c) Hypotension
  - (d) Tachycardia
70. During maintenance of a general inhaled anaesthetic for an urgent non-obstetric surgery, one would expect this difference in the pregnant patient versus a nonpregnant patient
- (a) Slower emergence from anaesthesia
  - (b) Minimal changes in depth of anaesthesia
  - (c) Faster induction of anaesthesia
  - (d) There is to be no difference
71. When providing general anaesthesia during pregnancy, minimum alveolar concentration (MAC) is
- (a) Increased
  - (b) Decreased
  - (c) Unchanged
  - (d) Unclear
72. During pregnancy, hepatic changes contribute to
- (a) Decreased albumin levels contributing to higher free blood levels of highly protein-bound drugs
  - (b) Decreased liver function tests due to decreased blood flow
  - (c) Decreased concentration levels of coagulation factors leading to easy bruisability
  - (d) Decreased activity of plasma cholinesterase resulting in significantly longer duration of action of succinylcholine
73. Which of the following intravenous induction agents is the most suitable for day care surgery?
- (a) Morphine
  - (b) Ketamine
  - (c) Propofol
  - (d) Diazepam
74. The surgeon is performing a right total knee arthroplasty under a combined spinal–epidural anaesthetic. The surgical team is providing you with information that within the next 15 minutes they plan to place bone cement (polymethylmethacrylate) to anchor the prosthesis. The most likely immediate side effect that may occur is
- (a) Hypotension
  - (b) Increased work of breathing and hypercapnia
  - (c) Cardiac arrhythmias
  - (d) Decreased pulmonary shunt
75. Potential complications of use of a pneumatic tourniquet include all of the following except
- (a) Tourniquet pain that is relieved by performing a peripheral nerve block
  - (b) A compression nerve injury
  - (c) Development of arterial thromboembolism
  - (d) Pulmonary embolism
76. Incorrect statement regarding neuraxial anaesthesia and deep-vein thrombosis/pulmonary embolism (DVT/PE) in orthopaedic surgical procedures is
- (a) Neuraxial anaesthesia may reduce thromboembolic complications
  - (b) Neuraxial anaesthesia may reduce blood loss
  - (c) Neuraxial anaesthesia may decrease platelet reactivity
  - (d) Neuraxial anaesthesia may increase activity of both factor VIII and von Willebrand factor



77. All of the following statements when positioning patients for spine surgery in the prone position are true, except
- (a) The neck should be in neutral position (without hyperextension or hyperflexion)
  - (b) The eyes must be free of pressure and checked periodically
  - (c) The abdomen must always be supported (never permitted to hang freely)
  - (d) The arms are kept at less than 90 degrees of extension and flexion
78. The most incorrect statement regarding postoperative vision loss (POVL) that may occur during prone positioning in spine surgery patients is
- (a) Ischemic optic neuropathy accounts for the highest incidence of POVL
  - (b) Ischemic optic neuropathy is associated with decreased ocular perfusion pressure
  - (c) Prone positioning, greater than 1 L intraoperative blood loss, and surgery lasting greater than 6 hours represent the highest risk
  - (d) POVL due to central retinal artery occlusion (CRAO) tends to be bilateral
79. Increases in intraocular pressure (IOP) following succinylcholine administration for tracheal intubation can be minimized by all of the following, except
- (a)  $\alpha$ -Adrenergic blocker
  - (b) Nondepolarizing relaxant
  - (c) Detachment of extraocular muscles from the globe
  - (d) Lidocaine
80. The ocular effects of ketamine includes
- (a) Pupillary constriction
  - (b) Blepharospasm
  - (c) Decrease in intraocular pressure
  - (d) Myoclonus
81. An air bubble is injected into the posterior chamber at the conclusion of retinal surgery (pneumatic retinopexy) to facilitate anatomically correct healing. The most appropriate anaesthetic management, before the air bubble is injected, is
- (a) Increase depth of anaesthesia
  - (b) Discontinue nitrous oxide (N<sub>2</sub>O)
  - (c) Ensure adequate muscle relaxation
  - (d) Hyperventilate the patient
82. A 10-year-old girl with hoarseness presents for laser microsurgery to address laryngeal papillomas. She is otherwise healthy. The surgeon is requesting a general endotracheal anaesthetic (GETA). The gas mixture least likely to support combustion is
- (a) Oxygen 35%, air 65%
  - (b) Oxygen 30%, helium 70%
  - (c) Oxygen 20%, nitrous oxide (N<sub>2</sub>O) 80%
  - (d) Oxygen 30%, nitrogen (N<sub>2</sub>) 70%
83. Appropriate anaesthetic management for ophthalmic surgery requires tight control of intraocular pressure (IOP) before, during, and after the procedure. The accurate effect of an anaesthetic drug on IOP is
- (a) Decreased by glycopyrrolate
  - (b) Increased by hyperventilation
  - (c) Decreased by nitrous oxide
  - (d) Increased by nondepolarizing muscle relaxants
84. A 64-year-old female is undergoing a left video-assisted thoracoscopy for a suspicious pulmonary nodule. Immediately after positioning the patient laterally, which of the following alarms indicate a malposition of the double-lumen tube (DLT)?
- (a) High CO<sub>2</sub> alarm
  - (b) Low O<sub>2</sub> alarm
  - (c) Low tidal volume alarm
  - (d) Unable to drive bellows alarm

85. In which of the following situations is applying continuous positive-airway pressure (CPAP) to the nondependent lung most ideal for improving oxygenation?
- (a) Bronchopleural fistula
  - (b) Open lobectomy
  - (c) Massive pulmonary haemorrhage
  - (d) Sleeve resection
86. Which of the following statements is false regarding ventilation/perfusion relationship in a lateral decubitus position during spontaneous ventilation?
- (a) Ventilation/perfusion matching remains the same
  - (b) Contraction of dependent hemi diaphragm is more efficient
  - (c) Dependent lung is on a more favourable part of the compliance curve
  - (d) The lower lung receives less ventilation and more perfusion than the upper lung
87. Treatment of a patient with mannitol can lead to all the following, except
- (a) Oliguria
  - (b) Hypotension
  - (c) Hypervolemia
  - (d) Hypokalaemia
88. A patient is undergoing craniotomy for subdural hematoma. During the procedure, the surgeon requests lowering the intracranial pressure. All the following can be used, except
- (a) Mannitol
  - (b) Hyperventilation
  - (c) Steroids
  - (d) Furosemide
89. The desired level of PaCO<sub>2</sub> in a neurosurgical patient is
- (a) 30 to 35 mm Hg
  - (b) 25 to 30 mm Hg
  - (c) 20 to 25 mm Hg
  - (d) 15 to 25 mm Hg
90. Intraoperative anaesthetic management of a patient undergoing cerebral aneurysm repair includes all, except
- (a) Maintenance of hypotension
  - (b) Mannitol for facilitating surgical exposure
  - (c) Maintaining mild hypothermia
  - (d) Patient remaining intubated for 24 hours postoperatively
91. Preoperative assessment of patients with diabetes mellitus should include
- (a) An assessment of functional status
  - (b) 24-Hour creatinine clearance
  - (c) Pulmonary function testing
  - (d) Cancellation of the surgical case if HbA<sub>1c</sub> >10%.
92. Preferred inhalational anaesthetic agent in a patient with hyperthyroidism is
- (a) Desflurane
  - (b) Ketamine
  - (c) Sevoflurane
  - (d) Meperidine
93. Patients with obstructive sleep apnoea (OSA)
- (a) Are at increased risk of left-heart failure
  - (b) Have the same perioperative complication rate as patients without OSA
  - (c) May have an increased likelihood of difficult intubation
  - (d) Rarely require continuous positive airway pressure (CPAP) after bariatric surgery

94. You are taking care of a 45-year-old patient undergoing a left adrenalectomy for a pheochromocytoma. Intraoperative management includes
- (a) Use of ketamine as an induction agent to counteract the effects of preoperative  $\alpha$ -adrenergic blockade
  - (b) Long-acting antihypertensive agents should be available to treat hypertension
  - (c) Judicious fluid replacement as these patients are usually volume-overloaded
  - (d) Magnesium sulphate infusion to treat hypertension
95. 48-year-old woman with temporomandibular joint dysfunction and limited mouth opening is scheduled for thyroidectomy for goitre. Due to concern for a difficult laryngoscopy, the anaesthesiologist elects to perform an awake oral fibreoptic intubation. To reliably blunt the afferent limb of the cough reflex, the anaesthesiologist should perform a bilateral block of the
- (a) Internal and external branches of the superior laryngeal nerve
  - (b) Glossopharyngeal nerve and internal branch of the superior laryngeal nerve
  - (c) Glossopharyngeal nerve and external branch of the superior laryngeal nerve
  - (d) Superior laryngeal nerve and the recurrent laryngeal nerve
96. Which statement concerning the adult failed airway is incorrect?
- (a) Airways such as the laryngeal mask airway and oesophageal obturator airway are always useful in the event of a failed airway.
  - (b) Awake intubation may be done by the nasotracheal route.
  - (c) Care should be taken before intubation to assess the airway for ease of ventilation as well as intubation.
  - (d) Cricothyrotomy is the crucial rescue procedure when intubation and ventilation fail.
97. All are predictors of difficult intubation except
- (a) Low Cormack and Lehane Scores from past history
  - (b) High Mallampati Score
  - (c) Subglottic stenosis
  - (d) Marfan's syndrome
98. After rapid sequence induction of general anaesthesia, a patient is unable to be intubated. Subsequent attempts at ventilation by face mask and a supraglottic airway device are also unsuccessful. One of the following statements regarding transtracheal jet ventilation and surgical cricothyrotomy in this situation is most correct
- (a) Transtracheal jet ventilation does not require a patent natural airway
  - (b) Ventilation through a surgical cricothyrotomy allows both inhalation and exhalation to occur
  - (c) The development of laryngospasm during ventilation through a cricothyrotomy would rapidly cause pulmonary over inflation and barotrauma
  - (d) Transtracheal jet ventilation can be continued for a longer period of time than can ventilation via a cricothyrotomy
99. Use of a laryngeal mask airway would be most appropriate for airway management in the following patient
- (a) An obese patient with acute appendicitis who, after rapid sequence induction, cannot be intubated
  - (b) An elderly patient with restrictive lung disease scheduled for inguinal hernia repair
  - (c) An obese male patient with a hiatal hernia and GERD scheduled for umbilical hernia repair
  - (d) A full-term parturient brought to the OR for emergent caesarean section because of foetal bradycardia

- 100.** One of the following is a primary risk factor for difficult mask ventilation
- (a) Limited mouth opening
  - (b) Thyromental distance less than 3 fingerbreadths
  - (c) High arched palate
  - (d) Inability to bring mandibular incisors anterior to the maxillary incisors

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