

## SAMPLE QUESTIONS

1. A 72-year-old woman with stable angina is undergoing bowel resection. Anesthesia is induced with etomidate. Five minutes after starting isoflurane 1% in nitrous oxide 50%, her blood pressure decreases from 110/84 mmHg to 70/40 mmHg. Which of the following is the most likely cause?
  - A. Adrenocortical suppression produced by etomidate
  - B. Coronary steal produced by isoflurane
  - C. Direct myocardial depression produced by isoflurane
  - D. Vasodilation produced by isoflurane
2. A 38-year-old woman has a three-month history of intermittent, throbbing headaches in the left hemicranial area with associated nausea and photophobia. Examination shows no abnormalities except for a left lateral gaze palsy. Which of the following is the most appropriate initial diagnostic study?
  - A. Brainstem auditory evoked potentials
  - B. Cerebral angiography
  - C. EEG
  - D. Lumbar puncture
  - E. MRI of the head
3. Cessation of smoking 24 hours preoperatively is associated with which of the following perioperative findings?
  - A. Decreased carbon monoxide in blood
  - B. Decreased need for postoperative ventilatory support
  - C. Decreased sputum volume
  - D. Improved ciliary beating in the airways
4. A patient has seizure activity 15 seconds after receiving an injection of 0.25% bupivacaine 2 mL with epinephrine 1:200,000 for stellate ganglion block. Which of the following is the most likely cause of the seizure?
  - A. Anaphylactoid reaction to bupivacaine
  - B. Injection into the subarachnoid space
  - C. Injection into the vertebral artery
  - D. Intravenous injection
  - E. Reaction to epinephrine
5. A 95-year-old man is brought to the emergency department after falling and striking his forehead. He is awake and alert and is able to walk into the emergency department on his own. Blood pressure is 85/40 mmHg, and heart rate is 58 bpm. Arterial blood gas analysis shows pH is 7.29, PaCO<sub>2</sub> is 39 mmHg, and PaO<sub>2</sub> is 100 mmHg. Physical examination shows severe weakness of both arms. Serum lactate concentration is elevated. Which of the following is the most likely cause of these findings?
  - A. Anterior cord syndrome
  - B. Brown-Séquard (hemisection of cord) syndrome
  - C. Central cord syndrome
  - D. Posterior cord syndrome
  - E. Wernicke-Korsakoff syndrome
6. A patient with chronic renal failure has a serum potassium concentration of 7.5 mEq/L. Which of the following is the most appropriate method for decreasing the serum potassium concentration in this patient?
  - A. CRRT
  - B. Conventional hemodialysis
  - C. Ion-exchange resins
  - D. Loop diuretic
  - E. Slow continuous ultrafiltration

7. During controlled ventilation, which of the following causes an increase in PETCO<sub>2</sub> with a normal waveform on the capnograph?

- A. Bronchospasm
- B. Rapid blood loss
- C. Endobronchial migration of the endotracheal tube
- D. Release of a thigh tourniquet

8. Adenosine is most effective for treatment of which of the following conditions?

- A. Atrial fibrillation
- B. Paroxysmal supraventricular tachycardia
- C. Torsades de pointes
- D. Ventricular tachycardia

9. A 43-year-old man has been in a coma in the ICU since sustaining a closed head injury in a motor vehicle accident two days ago. ICP is increased, and he is receiving mechanical ventilation; diuretic therapy has not been administered. He has been hemodynamically stable with blood pressure of 112/68 mmHg and heart rate of 78 bpm. Over the next 12 hours, the patient's urine output markedly decreases. The following laboratory values are obtained:

Serum osmolality	258 mOsm/kg
Serum sodium	124 mEq/L
Urine osmolality	225 mOsm/kg
Urine sodium	40 mEq/L

Which of the following is the most appropriate next step in management?

- A. Desmopressin (DDAVP)
- B. Lithium
- C. Mithramycin
- D. Infusion of 3% saline
- E. Water restriction

10. A 100-kg, 47-year-old woman with type 1 diabetes mellitus has a painful left foot one month after undergoing vaginal hysterectomy in the lithotomy position during continuous epidural anesthesia. On current physical examination, there is weakness of foot dorsiflexion only. Which of the following is the most likely diagnosis?

- A. Common peroneal neuropathy
- B. Diabetic peripheral neuropathy
- C. Lumbar radiculopathy
- D. Meralgia paresthetica
- E. Spinal stenosis

11. A 48-year-old man has onset of diarrhea while being treated with intravenous antibiotics for pneumonia. He has been receiving continuous enteral tube feeding formula. As assay of stool for *Clostridium difficile* cytotoxin is negative. Which of the following is the most appropriate next step in management?

- A. Add fiber to the tube feeding formula.
- B. Begin intravenous metronidazole
- C. Change to elemental tube feeding formula
- D. Change to parenteral nutrition
- E. Repeat the *C. difficile* cytotoxin assay.

12. In an 11-month-old boy with a large anterior mediastinal mass, the administration of muscle relaxants is associated with an increased risk for

- A. aspiration of gastric contents
- B. hyperkalemic response
- C. tracheobronchial collapse

D. ventricular arrhythmias

13. During a lumbar sympathetic block under fluoroscopic guidance, a bandlike striated pattern is seen after contrast medium has been injected through the needle. Which of the following muscles has most likely been entered?

- A. Erector spinae
- B. Latissimus dorsi
- C. Longus colli
- D. Psoas major
- E. Quadratus lumborum

14. A 22-year-old woman is brought to the emergency department by her husband because of a one-day history of a progressively worsening, persistent headache that has not responded to acetaminophen or ibuprofen. She also has neck stiffness, diplopia, nausea, fever, and confusion. Which of the following is the most likely explanation for these findings?

- A. Acute Lyme disease
- B. Bacterial meningitis
- C. Basilar migraine
- D. Brain tumor
- E. Cluster headache

15. A 4-year old boy is brought to the emergency department because of sudden onset of fever, lethargy, and drooling. He insists on sitting up and leaning forward. Examination shows stridor with intercostal retractions. Which of the following is the most appropriate management?

- A. Examination of the throat with a tongue blade
- B. Direct laryngoscopy with sedation
- C. Direct laryngoscopy during general anesthesia
- D. Emergency tracheostomy with local anesthesia

16. A 44-year-old man has chronic burning pain in the right ankle six months after undergoing fasciotomy for treatment of a crush injury. He has been unable to return to work. Treatment includes administration of progressively increasing doses of sustained-release morphine and nonsteroidal anti-inflammatory drugs. The most appropriate additional treatment is administration of which of the following drugs?

- A. Amitriptyline
- B. Baclofen
- C. Diazepam
- D. Haloperidol
- E. Phenytoin

17. A 45-year-old woman who had a hysterectomy six weeks ago has severe burning pain in her lower abdomen. Palpitation along the right lateral end of the scar exacerbates burning pain and sets off a tingling sensation. Which of the following best describes this kind of pain?

- A. Inflammatory
- B. Myofascial
- C. Neuropathic
- D. Somatic
- E. Visceral

18. An anesthetized and paralyzed patient is mechanically ventilated. The unidirectional valve on the inspiratory limb of the circle system is found to be incompetent, and a replacement is not immediately available. The most appropriate management is to increase the

- A. fresh gas flow rate
- B. I:E ratio
- C. inspired oxygen concentration

D. respiratory rate

19. A 4-year old boy is scheduled to undergo a bone marrow biopsy, and his parents are concerned about how to best prepare him for the procedure. Which of the following is the most appropriate response?

- A. Discuss the procedure only if he asks about what will happen
- B. Do not discuss the procedure with him
- C. Explain to him in detail what will happen
- D. Explain what will happen using terms he uses regularly

20. A 45-year-old woman who sustained a subarachnoid hemorrhage 18 hours ago develops a severe headache and becomes unresponsive. Which of the following is the most likely cause of this patient's change in mental status?

- A. Cerebral edema
- B. Cerebral vasospasm
- C. Hypertensive encephalopathy
- D. Second subarachnoid hemorrhage

Answers

- 1. D
- 2. E
- 3. A
- 4. C
- 5. C
- 6. B
- 7. D
- 8. B
- 9. E
- 10. A
- 11. E
- 12. C
- 13. D
- 14. B
- 15. C
- 16. A
- 17. C
- 18. A
- 19. D
- 20. D