GLOBAL EMERGENCY MEDICAL REGISTRY

2019 Advanced Practice Paramedic Educational Objectives Sample Questions

Following are a few sample questions, based on the APP Objectives that one can expect on an APP exam process.

1. You are attempting resuscitation of an infant or child with severe symptomatic bradycardia and no evidence of vagal etiology. The bradycardia persists despite establishment of an effective airway, oxygenation, and ventilation. Which of the following is the first drug you should administer?
   a. Atropine
   b. Dopamine
   c. Adenosine
   d. Epinephrine

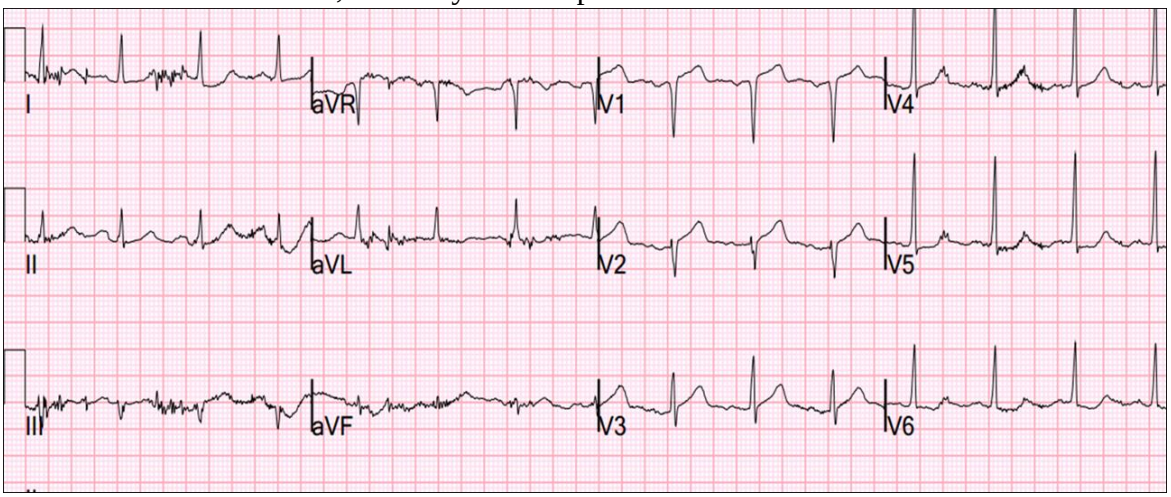
2. You are participating in the elective intubation of a 4-year-old child with respiratory failure. You must select the appropriate size of uncuffed tracheal tube. Which of the following sizes is most appropriate for an average 4-year-old?
   a. 3mm tube
   b. 4mm tube
   c. 5mm tube
   d. 6mm tube

3. If you took a drug that inhibited the reabsorption of Na+ in the proximal tubule (PCT), you would:
   a. Have an increased urine output
   b. Have a decreased urine output
   c. Have a decreased plasma [bilirubin] and become jaundiced
   d. Have decreased absorption of fats and have grey-white feces

4. Which of the following endocrine disorders may result in dyslipidemia:
   a. Polycystic Ovary Syndrome
   b. Metabolic Syndrome
   c. Diabetes
   d. All of the above

5. Your patient opens her eyes, pulls her hand away when pinched, and speaks only in garbled/incomprehensible sounds. What is her Glasgow Coma Scale (GCS) score?
   a. 5
   b. 7
   c. 9
   d. 10

6. In the 12 lead ECG below, what is your interpretation?



   a. STEMI Inferior
   b. STEMI Anterior
   c. STEMI Septal
   d. Aberrantly conducted ECG

7. Your 56 year old patient with the rhythm below is unresponsive with the following vitals: Respiratory Rate = 22, SpO2 = 90% on room air, EtCO2 = 40mmHg with normal waveform, Temperature = 38^0C, BP = 88/60, Heart Rate = 100, AVPU = Unresponsive. Your next treatment should include all of the following EXCEPT?

   a. Airway management and oxygenation
   b. Vascular access and fluid resuscitation as required.
   c. Amiodarone
   d. Consider hyperkalemia, type IA medication toxicity, or reperfusion arrhythmias.

8. Your patient is a 15 year old male, approximately 70kg, who fell from a height of 33 feet (10m). On exam you find pupils are midline and nonreactive, occiput of head has large area of hematoma and laceration, no JVD, trachea appears midline, lungs = decreased sounds bilaterally, RR = 40 and shallow, EtCO2 = 35 mmHg with normal waveform, extensive trauma (hematoma, abrasion, laceration) visible to posterior chest and back, abdomen = unremarkable, Pulse = 130, BP = 60/40 (MAP 47), obvious bilateral leg fractures. You begin ventilating the patient with a BVM and prepare to intubate; the intubation is successful and you set a ventilation strategy with a rate of 16 breaths per minute, approximately 750ml volume, and a PEEP of 5 cmH2O. After 2 minutes, the patient's EtCO2 decreases rapidly and rapid deterioration occurs. What is the likely cause of his deterioration?
   a. Air-trapping due to inadequate exhalation
   b. Elevated plateau pressures exacerbating barotrauma and ARDS
   c. Severe Acidosis from failure to compensate for pre-existing metabolic acidosis
   d. Positive Pressure Ventilation caused decreased venous return

9. In the patient using their normal negative pressure ventilation physiology, the Hering-Breuer reflex is responsible for which of the following actions?
   a. Inhibits expiration to prevent excess carbon dioxide elimination
   b. Terminates inhalation to prevent overexpansion of the lungs
   c. Controlling voluntary breathing through the cerebral cortex
   d. Influencing the rate of respirations per minute

10. The normal value range for Potassium (K+) in humans (www.nbme.org/PDF/SubjectExams/LabReferenceValues.pdf):
    a. 2.5-4.0 mEq/L
    b. 3.5-4.5 mEq/L
    c. 3.5-5.0 mEq/L
    d. 3.0-5.5 mEq/L

11. Your patient septic shock patient has a pH = 7.2, HCO_3 = 9, CO2 = 30 mmHg; based on these values, you would consider the patient to be experiencing:
    a. Metabolic Acidosis
    b. Respiratory Acidosis
    c. Metabolic Alkalosis
    d. Respiratory Alkalosis

12. Early anticipation of difficulties with advanced airway management should include an evaluation of which of the following:
    a. Anatomic factors
    b. Time constraints
    c. Physiologic condition
    d. All of the above

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Answers:

1. D
2. C
   [*Tracheal Tube Size (inner diameter in mm) = (Age in years/4) + 4*]
3. A
4. D
5. D
6. C
   (There is STE in V1 and V2, and ST depression in I, aVL, V5, and V6. Is it normal variant STE? Or is it anterior STEMI? ST depression in the lateral leads should not be seen in normal variant STE. Because of this ST depression, STEMI should be diagnosed until proven otherwise, and the STE equation should not be used; if it were used, with STE60V3 = 2, QTc = 412ms, RAV4 = 20mm, the value would be 20.18 {less than 23.4 would indicate normal variant}. The equation is falsely negative because most of the ischemia is in the septum, not the anterior wall, so that STE in V3 is not high and R-wave amplitude in V4 is not affected.)
7. C
   (Wide complex tachycardia treated as VT has a long history of poor outcomes; this is not new information, the initial study in this area of inquiry was "Treatment of "slow VT" may induce asystole"; McLean, et al; Ann Emerg Med, 2000. When the rhythm is wide and less than 150, it is very unlikely to be VT and when less than 130 is NOT V-Tach)
8. D
9. B
10. C
11. A
    (Answer: pH is low, HCO3 is low, CO2 is low but inconsequential)
12. D