## Critical Care Paramedic (EMS421) Exam sample:

1. Which of the following is an important upper airway structure?

A. carina

B. bronchus

C. larynx

D. alveoli

Ans: C

2. Which of the following anatomic structures located in the nose can be a significant source of epistaxis?

A. Mcburney's point

B. circle of Willis

C. Kisselbach's plexus

D. Broca's area

Ans: C

3. The most common cause of airway obstruction in the unconscious patient is:

A. the tongue.

B. the epiglottitis.

C. the peritonsillar abscess.

D. laryngeal trauma.

Ans: A

4. Which anatomical area describes the portion of the pharynx that is inferior to the epiglottis?

A. nasopharynx

B. oropharynx

C. posterior pharynx

D. hypopharynx

Ans: D

5. The structures of the larynx include the epiglottis, the vallecula, and the:

A. turbinates.

B. hyoid bone.

C. thyroid cartilage.

D. manubrium.

Ans: C

6. Each alveoli is in contact with the pulmonary capillary. This is referred to as:

A. the alveolar–arterial gradient.

B. the pulmonary capillary membrane.

C. the alveolar capillary membrane.

D. the alveolar bed.

Ans: C

7. Which of the following most closely represents the normal pressure in the pulmonary artery?

A. 10/5 mm Hg

B. 20/10 mm Hg

C. 25/10 mm Hg

D. 30/15 mm Hg

Ans: C

8. While caring for a critical patient with profound hypoxia, you recall that changes in the V/Q ratio is one of the most common causes of hypoxemia. Which of the following best describes the V/Q ratio?

A. a marker for inflammation when a blood clot may be present

B. a measure of the coaguability of the pulmonary blood flow

C. a measurement of how much blood flow must be present at the alveolar capillary membrane for perfusion to take place

D. a serologic measurement of pulmonary injury

Ans: C

9. Your team is preparing to intubate a pediatric patient. As you prepare, you recall that some anatomic differences are evident in pediatric patients. Which of the following is indicative of such a difference?

A. The pediatric airway is higher and narrower.

B. The pediatric epiglottis is smaller and more rigid.

C. Nasal congestion in infants may result in respiratory distress.

D. The larger occiput in pediatric patients may cause hyperextension of the neck, making it difficult to visualize the larynx.

Ans: C

13. Obstructive disease states result in difficulty moving air out of the lungs. Examples of obstructive diseases include asthma, cystic fibrosis, chronic obstructive pulmonary disease (COPD), and:

A. pneumonia.

B. acute respiratory distress syndrome (ARDS).

C. bronchiectasis.

D. pulmonary embolism.

Ans: C

14. Because adequate oxygenation is essential to the life and metabolism of every cell in the body, it is important to identify the cause of any hypoxia. Which of the following is one of the four categories of hypoxia?

A. hypothermic hypoxia

B. hypovolemic hypoxia

C. hypercarbic hypoxia

D. anemic hypoxia

Ans: D

15. \_\_\_\_\_\_\_ is/are medical direction(s) obtained by approved standing orders or protocols.

A. Open medical control

B. Online medical control

C. Off-line medical control

D. Written orders

Ans: C

16. A \_\_\_\_\_\_\_-minute ground transport is considered the minimum for which air medical transport may be faster than ground transport.

A. 15

B. 30

C. 45

D. 60

Ans: B

17. One of the earliest effects of hypoxia is:

A. impaired judgment.

B. combative behavior.

C. unresponsiveness.

D. respiratory failure.

Ans: A

18. Late findings consistent with increasing intracranial pressure (ICP) are:

A. decreased blood pressure and tachycardia.

B. elevated blood pressure and bradycardia.

C. a narrowing pulse pressure and abnormal respirations.

D. fixed and dilated pupils.

Ans: B

19. You are preparing to transport a critical patient who is being mechanically ventilated. As part of your patient assessment, you note that the most recent arterial blood gas (ABG) results were: pH, 7.44; PaO2, 78 mm Hg; PaCO2, 43 mm Hg; and SaO2, 98 mm Hg. Which of the following is an indicator of the effectiveness of ventilation?

A. pH

B. PaO2

C. PaCO2

D. SaO2

Ans: C

20. Which of the following statements most accurately describes serum CO2 levels?

A. They reflect an indirect measurement of fluid status.

B. The normal range is approximately 15 to 25 mEq/L.

C. They reflect the amount of circulating bicarbonate (HCO3–).

D. They reflect cellular anaerobic metabolism.

Ans: C