Practice Questions Ch 11: (Respiratory Physiology) Updated 10/2/22

1. Which of the following statements about intrapulmonary and intrapleural pressure is true?
   A. The intrapulmonary pressure is always below atmospheric.
   B. The intrapleural pressure is always greater than the intrapulmonary pressure.
   C. The intrapulmonary pressure is greater than the intrapleural pressure.
   D. the intrapleural pressure equals the atmospheric pressure.

2. Hemoglobin's affinity for oxygen is decreased under
   A. acidosis.
   B. exposure to carbon monoxide.
   C. acclimatization to high altitude.
   D. increased body temperature.
   E. All of these.

3. Hypoventilation can cause
   A. metabolic acidosis.
   B. respiratory acidosis.
   C. metabolic alkalosis.
   D. respiratory alkalosis.

4. The chemoreceptors in the medulla are directly stimulated by decreased
   A. pH of arterial blood.
   B. pH of venous blood.
   C. pH of CSF in the brain.
   D. arterial O_2
   E. arterial CO_2
   F. Both A & C

5. The medulla will stimulate increased minute ventilation (respiratory rate and depth) if
   A. blood pH drops after hypoventilation.
   B. blood pH drops after hyperventilation.
   C. blood pH increases after hypoventilation.
   D. blood pH increases after hyperventilation

6. Which of the statements about partial pressure of carbon dioxide is true?
   A. It is higher in the alveoli than in the pulmonary arteries.
   B. It is higher in the systemic arteries than in the tissues.
   C. It is higher in the systemic veins than in the systemic arteries.
   D. It is higher in the pulmonary veins than in the pulmonary arteries.

7. The conducting zone contains all of the following EXCEPT
   A. the primary bronchi.
   B. the larynx.
   C. the terminal bronchioles.
   D. the respiratory bronchioles.

8. Inhalation and accumulation of particles less than 6 mm (rock, glass, or coal dust) in size, over a long period of time, can eventually cause
   A. asthma.
   B. emphysema.
   C. cystic fibrosis.
   D. pulmonary fibrosis.

9. During inspiration,
   A. alveolar pressure exceeds atmospheric pressure.
   B. transpulmonary pressure increases.
   C. the diaphragm relaxes.
   D. intrapulmonary pressure is below atmospheric pressure.

10. Formation of which type of hemoglobin occurs from inhaling carbon monoxide gas.

A. Methemoglobin
B. Carboxyhemoglobin
C. Hemoglobin F
D. Hemoglobin A
E. Hemoglobin S

11. The tendency of the lungs to return to their initial size after stretching is

A. compliance.
B. recoil.
C. surface tension.
D. None of the choices are correct.

12. What condition is marked by an accumulation of protein-rich fluid in the lungs due to permeability changes triggered by the inflammatory response to systemic infection?

A. emphysema
B. chronic obstructive pulmonary disease (COPD)
C. pulmonary fibrosis
D. pneumothorax
E. acute respiratory distress syndrome (ARDS)

13 Formation of which type of hemoglobin occurs from drinking nitrate-contaminated water.

A. Methemoglobin
B. Carboxyhemoglobin
C. Hemoglobin F
D. Hemoglobin A
E. Hemoglobin S

14. Quiet inspiration will ____ thoracic and lung volume and _____ intrapulmonary pressure.

A. increase, increase
B. increase, decrease
C. decrease, increase
D. decrease, decrease

15. Quiet exhalation will ____ thoracic and lung volume and _____ intrapulmonary pressure.

A. increase, increase
B. increase, decrease
C. decrease, increase
D. decrease, decrease

Ch 11. Answers:

1. C
2. E
3. B
4. C
5. A
6. C
7. D
8. D
9. D
10. B
11. B
12. E
13. A
14. B
15. C

How did you do?