



Respiratory System

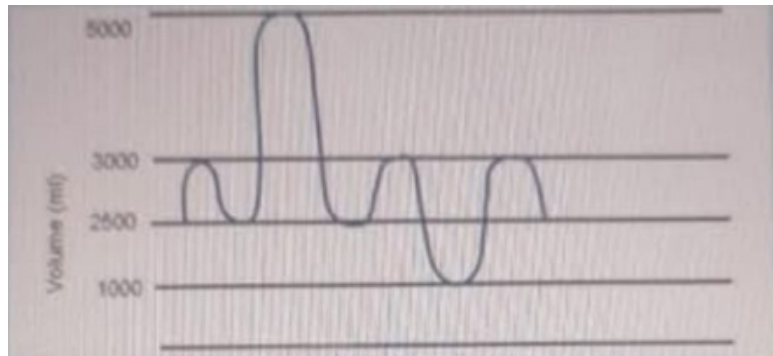
past papers

- Subject : physiology
- By : Farah & Mais



1. From the shown figure, how much is the vital capacity?

- a. 4 Liter
- b. 2 Liter
- c. 3 Liter
- d. 5 Liter
- e. 1 Liter



Answer: a

2. Regarding bronchial asthma, all the following statements are true EXCEPT

- a. During the attack, FEV_{1.0}/FVC is \leq 80%
- b. Bronchodilators can be given to asthmatic patients
- c. Different stimuli can trigger the attack.
- d. Cough suppressants are highly indicated during the attack
- e. Patients might be allergic to pollens

Answer: a

3. in advanced COPD, choose the correct statements

- a. Lung compliance is low
- b. Arterial PO₂ is above normal levels
- c. Inspiration becomes passive
- d. FEV₁ is less than predicted
- e. Expiration becomes passive

Answer: D

4. Place the following steps for normal inhalation in order. 1) decrease in intrapleural pressure to 754 mmHg (from -4 mmHg to -6 mmHg). 2) flow of air from higher to lower pressure (inhalation) 3) lung size increases 4) decrease in intra-alveolar pressure to 759 mmHg (-1 mmHg). 5) contraction of the diaphragm & external intercostals muscles.

- a. 5, 1, 3, 4, 2
- b. 5, 2, 3, 4, 1
- c. 1, 3, 4, 5, 2
- d. 1, 2, 3, 4, 5
- e. 5, 4, 3, 2, 1

Answer: a

5. In a normal person breathing room air at sea level during mild exercise. Which of the following statements are true?

- a. P₅₀ decreases
- b. O₂ extraction ratio in the extraction muscles increases above 25%
- c. HbO₂ dissociation curve is shifted to the left
- d. ABGs becomes grossly abnormal
- e. This person is hyperventilating during training.

Answer: b? according to gpt

6. At Mount Everest:

- a. During inspiration, alveolar pressure equals atmospheric pressure**
- b. P_{O2} remains lower than P_{N2} in the outside air**
- c. % of O₂ becomes less than 21%.**
- d. Atmospheric pressure is the same as the sea level value.**
- e. Nobody can climb at to this level even with help of oxygen tank**

Answer: b

7. Regarding positive pressure breathing, all the following are true EXCEPT:

- a. This pattern of breathing is seen only during exercise**
- b. We make outside pressure less than inside (alveolar) pressure**
- c. It is used when diaphragm is paralyzed.**
- d. It is artificial pattern of breathing (not physiological), performed using ventilator.**
- e. It is needed in case of ARDS**

Answer : b

8.Regarding lung diseases, one of the following is true

- a. Pulmonary vascular lung diseases are least common in clinical Practice**
- b. in pulmonary fibrosis, FEV1.0/FVC is always below normal**
- c. Obstructive lung diseases are extremely rare in clinical practice**
- d. Increase in the diameter of the airways by 10% results in a decrease in dirway resistance by 10% too.**
- e. Pulmonary fibrosis is an example of increase airway resistance.**

Answer:A

9. Under normal conditions, and regarding blood gases, choose the CORRECT statement:

- a. Arterial PCO₂ is more than arterial PO₂.**
- b. CO₂ diffuses easier than O₂**
- c. Most of the CO₂ transported in the blood is in its dissolved form**
- d. Most of the O₂ in blood is in its dissolved form**
- e. O₂ is diffusion-limited**

Answer: b

10. regarding surfactant, one of the following statements is FALSE:

- a. Is produced by the mother and given to embryo's (through the placenta).**
- b. Is decreased in premature infants.**
- c. It decreases surface tension forces of the lung**
- d. It decreases collapsing forces of the lung.**
- e. Can be given inhaled for premature babies**

Answer: a