

6- A 41-year-old woman performs spirometry because she complains of dyspnea. She did not give a full effort on the first test and was asked by the laboratory technologist to repeat the test a second time. Which of the following changes in her spirometry would you expect to see if she makes a better effort on the second trial?

- A. Decreased vital capacity
- B. Flattening of the expiratory limb of the flow-volume loop
- C. Flattening on the inspiratory limb of the flow-volume loop
- D. Increased expiratory flow at end exhalation
- E. Increased peak expiratory flow rate

7- In peripheral capillaries, more oxygen can be unloaded from the blood to the tissues at a given P_{O_2} when:

- A. Blood temperature is reduced.
- B. P_{CO_2} is reduced.
- C. Blood pH is raised.
- D. Concentration of 2,3-DPG in the red cell is raised.
- E. Hydrogen ion concentration is reduced.

8- A patient with chronic pulmonary disease undergoes emergency surgery. Postoperatively, the arterial P_{O_2} , P_{CO_2} , and pH are 50 mm Hg, 50 mm Hg, and 7.20, respectively. How would the acid-base status be best described?

- A. Mixed respiratory and metabolic acidosis
- B. Uncompensated respiratory acidosis
- C. Fully compensated respiratory acidosis
- D. Uncompensated metabolic acidosis
- E. Fully compensated metabolic acidosis

9-Which of the following mechanisms of hypoxemia will prevent the arterial P_{O_2} reaching the expected level if the subject is given 100% oxygen to breathe?

- A. Hypoventilation
- B. Diffusion impairment
- C. Ventilation-perfusion inequality
- D. Shunt
- E. Residence at high altitude

10-In a normal person, doubling the diffusing capacity would be expected to:

- A. Increase arterial P_{O_2} during moderate exercise.
- B. Increase the uptake of halothane given during anesthesia.
- C. Decrease arterial P_{CO_2} during resting breathing.
- D. Increase resting oxygen uptake when the subject breathes air.
- E. Increase maximal oxygen uptake at extreme altitude.