

Test Bank for Respiratory Critical Care 1st Chang

Multiple Choice

1. What percentage of the thoracic volume change is achieved through diaphragmatic action when tidal breathing in the upright position?

- A. 25%
- B. 35%
- C. 50%
- D. 75%

Ans: C

2. The volume change that occurs as a result of thoracic expansion is an application of:

- A. Hook's law.
- B. Charles' law.
- C. Boyle's law.
- D. Poiseuille's law.

Ans: C

3. Normal exhalation is:

- A. passive.
- B. active, using the external intercostal muscles.
- C. active, using both the external intercostal and abdominal muscles.
- D. active, using the internal intercostal muscles.

Ans: A

4. Given a volume change of 500 mL with a pleural pressure change of 5 cm H₂O, what is the pulmonary compliance?

- A. 100 mL/cm H₂O
- B. 500 mL/cm H₂O
- C. 5 mL/cm H₂O
- D. 50 mL/cm H₂O

Ans: A

5. Which of the following is (are) a source of input power?

- I. Electricity
- II. Pneumatics

III. Spring tension

- A. I
- B. II
- C. I and II
- D. I, II, and III

Ans: C

6. The term *drive mechanism* best describes:

- A. the source of power for the ventilator.
- B. how the ventilator converts input power to work.
- C. the mechanism that controls the ventilator's drive mechanism.
- D. the physical signal measured and used as feedback to control the ventilator's output.

Ans: A

7. The term *control circuit* best describes:

- A. the source of power for the ventilator.
- B. how the ventilator converts input power to work.
- C. the mechanism that controls the ventilator's drive mechanism.
- D. the physical signal measured and used as feedback to control the ventilator's output.

Ans: A

8. The control variable is best described as a variable that:

- A. rises to a preset value and remains constant during inspiration.
- B. is measured and used to control the ventilator's output.
- C. initiates the start of inspiration.
- D. determines the end of inspiration.

Ans: B

9. Which of the following are possible control variables?

- I. Pressure
 - II. Flow
 - III. Volume
 - IV. Time
- A. I
 - B. I and II
 - C. I, II, and III
 - D. I, II, III, and IV

Ans: D

10. Which of the following best describes a limit variable?

- A. A variable that rises to a preset value and remains constant during inspiration
- B. A variable that is measured and used to control the ventilator's output
- C. A variable that initiates the start of inspiration
- D. A variable that determines the end of inspiration

Ans: A

11. Which of the following best describes a trigger variable?

- A. A variable that rises to a preset value and remains constant during inspiration
- B. A variable that is measured and used to control the ventilator's output
- C. A variable that initiates the start of inspiration
- D. A variable that determines the end of inspiration

Ans: C

12. Which of the following best describes a cycle variable?

- A. A variable that rises to a preset value and remains constant during inspiration
- B. A variable that is measured and used to control the ventilator's output
- C. A variable that initiates the start of inspiration
- D. A variable that determines the end of inspiration

Ans: D

13. Which of the following is the most common baseline variable?

- A. Pressure
- B. Flow
- C. Volume
- D. Time

Ans: A

14. Which of the following may be used as trigger variables?

- I. Pressure
- II. Flow
- III. Volume
- V. Time

- A. I
 - B. I and II
 - C. I, II, and III
 - D. I, II, III, and IV
- Ans: D

15. If during inspiration the pressure increases to a preset value and doesn't change until exhalation, the pressure is termed a:

- A. cycle variable.
- B. trigger variable.
- C. limit variable.
- D. baseline variable.

Ans: C

16. Volume can become a limit variable if:

- A. volume control is selected.
- B. pressure control is selected.
- C. flow control is selected.
- D. an inspiratory pause is used.

Ans: D

17. Which of the following trigger variables is based on the electrical activity of the diaphragm?

- A. Flow triggering
- B. Pressure triggering
- C. NAVA
- D. Time triggering

Ans: C

18. A ventilator initiating inspiration based upon a preset change in flow is referred to as being:

- A. flow cycled.
- B. flow triggered.
- C. flow limited
- D. None of these is correct.

Ans: B

19. The ventilator breath ending once time reaches a preset value best describes:

- A. time triggering.
- B. time limiting.
- C. time cycling.
- D. None of these is correct.

Ans: C

20. During spontaneous ventilation, elevated baseline pressure is termed:

- A. continuous positive airway pressure (CPAP).
- B. positive end-expiratory pressure (PEEP).
- C. the pressure limit.
- D. the pressure trigger.

Ans: A