TEST BANK

Chapter 1

Anatomy and Physiology of the Respiratory and Laryngeal Systems

Multiple Choice Questions

1. Where does the exchange of oxygen and carbon dioxide occur in the respiratory system?
    a. Larynx
    b. Alveolar Sacs
    c. Bronchi
    d. Pharynx
    e. Trachea
2. What is the airtight membrane that encases the lungs?
    a. Epithelium
    b. Mucous Membrane
    c. Alveolar Serum
    d. Saliva
    e. Visceral Pleura
3. What is a primary muscle of inhalation?
    a. Diaphragm
    b. Pectoralis
    c. Internal Intercostals
    d. Subclavius
    e. Internal Oblique
4. During inhalation alveolar pressure is
    a. Above atmospheric pressure
    b. Equal to atmospheric pressure
    c. Below atmospheric pressure
    d. Not related to atmospheric pressure
    e. Positive
5. What is the state of the respiratory system when alveolar pressure and atmospheric pressure are equal?
    a. Inspiratory reserve pressure
    b. Resting expiratory level
    c. End-expiratory level
    d. Expiratory reserve level
    e. Residual pressure
6. On balance vital capacity is
    a. 5000 ml
    b. 500 ml
    c. 1500 ml
    d. 2400 ml
    e. 1000 ml
7. What is alveolar pressure for conversational speech?
    a. 20 cm H_2O
    b. 50 cm H_2O
    c. 100 cm H_2O

    d. 10 cm H_2O
    e. 5 cm H_2O
8. What part of the nervous system is generally considered to control respiration?
    a. Midbrain
    b. Cerebellum
    c. Medulla Oblongata
    d. Cerebral cortex
    e. Pons
9. What function of the larynx facilitates exertion and excretion?
    a. Phonation
    b. Deglutition
    c. Fixation
    d. Respiration
    e. Articulation
10. What is the largest cartilage of the larynx that is fused arterially and opens posteriorly?
    a. Arytenoid
    b. Cricoid
    c. Epiglottis
    d. Corniculate
    e. Thyroid
11. The closing of the vocal folds.
    a. Adduction
    b. Phonation
    c. Abduction
    d. Resonance
    e. Articulation
12. The opening of the vocal folds.
    a. Articulation
    b. Phonation
    c. Abduction
    d. Resonance
    e. Articulation
13. What is immediately deep to the epithelium?
    a. Vocalis muscle
    b. Lamina Propria
    c. True folds
    d. Extracellular matrix
    e. Vocal process

14. What is the main and deepest muscle of the vocal folds?
    a. Vocalis
    b. Interarytenoid
    c. Cricothyroid
    d. Cricoarytenoid
    e. Posterior Cricoarytenoid
15. What muscle abducts the glottis?
    a. Vocalis

b. Interarytenoid
c. Cricothyroid
d. Cricoarytenoid
e. Posterior Cricoarytenoid

16. What muscle regulates longitudinal tension of the vocal folds and produces pitch changes?
    a. Vocalis
    b. Interarytenoid
    c. Cricothyroid
    d. Cricoarytenoid
    e. Posterior Cricoarytenoid
17. Who identified that as the speed of air flow through the glottis increases the air pressure within the glottis decreases?
    a. Van Den Berg
    b. Ferrand
    c. Jones
    d. Bernoulli
    e. Scherer
18. What is the minimum phonation threshold pressure for normal conversation speech?
    a. 3 – 8 cm H_2O
    b. 1 – 2 cm H_2O
    c. 8 – 12 cm H_2O
    d. 12 – 15 cm H_2O
    e. 20 – 25 cm H_2O
19. What is the psychological correlate to fundamental frequency?
    a. Articulation
    b. Phonation
    c. Duration
    d. Loudness
    e. Pitch
20. What laryngeal muscle elongates the vocal folds and stiffens the cover when contracted?
    a. Vocalis
    b. Posterior Cricoarytenoid
    c. Cricothyroid
    d. Interarytenoid
    e. Thyrohyoid
21. What is the primary force that increases and decreases loudness?
    a. Subglottal pressure
    b. Hydration pressure
    c. Phonation pressure
    d. Extrinsic laryngeal muscular pressure
    e. Fatigue pressure
22. What is the effect on phonation of the supralaryngeal cavities?
    a. Loudness
    b. Intensity
    c. Pitch
    d. Frequency
    e. Resonance

23. What subcortical region appears to be important in coordinating respiration, vocal fold adduction, and laryngeal tension?
    a. Vagus nerve
    b. Cerebellum
    c. Periaquaductal Gray
    d. Pons
    e. Medulla Oblongata
24. What laryngeal nerve triggers the cough reflex?
    a. Superior Laryngeal Internal Branch
    b. Recurrent Laryngeal
    c. Superior Laryngeal External Branch
    d. Accessory Nerve
    e. Pharyngeal Nerve
25. What register is best for conversational speech?
    a. Modal
    b. Pulse
    c. Cash
    d. Falsetto
    e. Pitch

Matching Questions

_____1. Traps particles of dust and bacteria	A. Quiet respiration
_____2. Controls quiet respiration	B. Average length of female vocal folds
_____3. 10%: 90%	C. Modal register
_____4. Shield shaped cartilage	D. Mucous membrane
_____5. 11mm to 15mm	E. Medulla Oblongata
_____6. Pulse	F. Innervates the internal laryngeal muscles
_____7. Recurrent Laryngeal Nerve	G. Thyroid cartilage
_____8. Intensity	H. Register
_____9. 40%:60%	I. Speech respiration
_____10. Best for conversation	J. Glottal fry

True/False Questions

1. The digestive and endocrine systems do not influence voice production.

2. The alveolar sacs are a part of the tracheobronchial tree.

3. Exhalation is primarily the result of muscle recoil.

4. In order to inhale the thoracic cavity must contract.

5. During respiration alveolar pressure and atmospheric pressure are inversely related.

6. Lung volumes and capacities are measured in units of milliters (ml) or liters (l).

7. The time ratio for inhalation and exhalation for speech is 40%:60%.

8. Speech respiration is controlled by the medulla oblongata.

9. Phonation is the sound produced by the vibrating vocal folds.

10. The vallecula is the space between the vocal folds.

11. The ventricular folds are inferior to the true folds.

12. The superficial layer of the lamina Propria is also known as Reinke's space.

13. The inverse of vocal fold stiffness is vocal fold compliance.

14. Bernoulli authored the myoelastic-aerodynamic theory of phonation.

15. Anything that interferes with the mucosal wave can produce a dysphonia.

16. If the sub glottal pressure is doubled, intensity will double as well.

17. Resonance produces the quality of the voice.

18. The neurologic connections for the vagus nerve are located in the nucleus ambiguous.

19. The cough reflex is triggered by the recurrent laryngeal nerve.

20. Glottal fry is a loudness correlate in the voice.

21. The modal register in males ranges from 75Hz to 450Hz.

22. There are a total of seven laryngeal cartilages.

23. Van Den Berg developed the Aerodynamic-Myoelastic Theory of phonation.

24. The corniculate cartilages are essential to phonation.

25. The laryngeal cough is communicative and phonation is not communicative.

5. A supraglottic laryngectomy procedure is performed when the cancer occurs on the cricoid cartilage.

6. Stoma care can be taught by the speech-language pathologist or an attending nurse.

7. Olfaction is not lost after a laryngectomy.

8. The laryngectomee is unable to maintain pre-surgical upper body strength.

9. The artificial larynx does not rely on the patient's respiratory system.

10. The TEP has become widely accepted as a choice for voice restoration.

Short Answer Questions

1. Summarize the various causes of laryngeal cancer.

2. What are the steps that are followed in therapy to teach the inhalation and injection methods for esophageal speech?

3. What are the various surgical techniques for laryngeal cancer?

4. Why is the TEP therapy program considered a good program? What are the basic components of the program?

5. What are the various support groups for the laryngeal cancer patient?

ANSWER KEY

CHAPTER 1
KEY

Matching	True/False	Multiple Choice
1. D	1. F	1. B
2. E	2. T	2. E
3. I	3. T	3. A
4. G	4. F	4. C
5. B	5. T	5. B
6. H	6. T	6. A
7. F	7. F	7. D
8. J	8. F	8. C
9. A	9. T	9. C
10. C	10. F	10. E
	11. F	11. A
	12. T	12. C
	13. T	13. B
	14. F	14. A
	15. T	15. E
	16. F	16. C

	17. T	17.D
	18. T	18. A
	19. F	19. E
	20. F	20. C
		21. A
		22. E
		23. C
		24.A
		25. A

Short Answer Key:

1. List the components of the respiratory system.

Refer to pages 1-12, Table 1.1, and Figures 1.1-1.5.

2. Describe the similarities and differences between quiet respiration and respiration for speech.

Refer to pages 14-15 and Table 1.3.

3. Describe the myoelastic-aerodynamic theory of phonation.

Refer to pages 45-46 and Figure 1.28.

4. Describe the essential cortical components of the central nervous system that contribute to and control phonation.

Refer to pages 52-59 and Tables 1.10, 1.33, 1.34, and 1.35.

5. Describe the differences between and among modal, pulse, and loft register.

Refer to pages 59-61 and Table 1.11.