

UNIVERSITY OF CENTRAL FLORIDA (UCF) SPA3101 ANATOMY AND PHYSIOLOGY OF SPEECH, LANGUAGE, AND HEARING PRACTICE EXAM 2 (SAMPLE) STUDY GUIDE



Prepare with structure. Pass with confidence



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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. Which muscles primarily control sound production in the larynx?**
 - A. Intrinsic muscles
 - B. Extrinsic muscles
 - C. Suprahyoid muscles
 - D. Infrahyoid muscles
- 2. What condition is described as the collapse of an infant's immature upper larynx during inhalation?**
 - A. Laryngomalacia
 - B. Tracheomalacia
 - C. Laryngeal paralysis
 - D. Bronchomalacia
- 3. What components make up the respiratory system?**
 - A. Vocal folds, Air passages, Thoracic muscles
 - B. Lungs, Ribs, Abdomen
 - C. Diaphragm, Trachea, Larynx
 - D. Nasal cavity, Pharynx, Bronchi
- 4. What type of cartilage are the arytenoid cartilages primarily composed of?**
 - A. Hyaline
 - B. Elastic
 - C. Fibrous
 - D. Both hyaline and elastic
- 5. Which type of vocal fold movement is primarily controlled by the PCA muscle?**
 - A. Adduction
 - B. Abduction
 - C. Aspiration
 - D. Vibration

- 6. What type of cartilage is the thyroid cartilage classified as?**
- A. Elastic cartilage
 - B. Fibrocartilage
 - C. Hyaline cartilage
 - D. Layered cartilage
- 7. According to Hirano's theory, what primarily determines the mode of vocal fold vibration?**
- A. The tension of the vocal folds
 - B. The mass of the vocal folds
 - C. The combination of mechanical properties of the five layers
 - D. The length of the vocal folds
- 8. What is the primary function of the four lines of defense in the laryngeal system?**
- A. Supporting vocal fold vibration
 - B. Protecting the airway during swallowing
 - C. Facilitating sound production
 - D. Allowing breath control
- 9. Which mechanical property is described as the distribution of the mass of the vocal folds?**
- A. Tension
 - B. Length
 - C. Mass
 - D. Hydration
- 10. What percent of malignancies are categorized as Carcinoma?**
- A. 1-3%
 - B. 2-5%
 - C. 5-10%
 - D. 10-15%

Answers

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1. A
2. A
3. B
4. D
5. B
6. C
7. C
8. B
9. C
10. B

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Explanations

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1. Which muscles primarily control sound production in the larynx?

- A. Intrinsic muscles**
- B. Extrinsic muscles
- C. Suprahyoid muscles
- D. Infrahyoid muscles

The intrinsic muscles of the larynx are primarily responsible for controlling sound production. These muscles are situated entirely within the larynx and are crucial for regulating the tension and position of the vocal folds (vocal cords). When the intrinsic muscles contract, they adjust the length, tension, and position of the vocal folds, which is essential for voice modulation, pitch variation, and overall sound production. Different intrinsic muscles have specific functions: some help to open or close the vocal folds, while others are involved in tensing or relaxing them. This fine-tuned control allows for the production of a wide range of vocal sounds and is vital for speech. The coordination of these muscles enables phonation, which is the initial step in speech production. In contrast, the extrinsic muscles are primarily involved in supporting the larynx and moving it up and down during swallowing and speech, but they do not directly influence the sound-producing mechanisms. The suprahyoid and infrahyoid muscles are categorized as extrinsic muscles, playing roles in actions related to the hyoid bone and the larynx's position rather than in the modulation of sound itself.

2. What condition is described as the collapse of an infant's immature upper larynx during inhalation?

- A. Laryngomalacia**
- B. Tracheomalacia
- C. Laryngeal paralysis
- D. Bronchomalacia

Laryngomalacia is a condition characterized by the collapse of the soft and immature cartilaginous structures of the upper larynx during inhalation. This typically occurs in infants and is identified by stridor, a high-pitched wheezing sound, which arises from turbulent airflow through the narrowed airway. The immaturity of the laryngeal cartilage makes it more prone to collapse, especially when breathing in, leading to the characteristic symptoms. This condition is generally benign and often resolves as the child grows and the laryngeal structures strengthen. It is crucial to differentiate laryngomalacia from other conditions that affect the airway, as each has distinct characteristics and implications for treatment. By understanding that laryngomalacia involves the larynx specifically and occurs during the inhalation phase, we can appreciate why it is the correct answer in this context.

3. What components make up the respiratory system?

A. Vocal folds, Air passages, Thoracic muscles

B. Lungs, Ribs, Abdomen

C. Diaphragm, Trachea, Larynx

D. Nasal cavity, Pharynx, Bronchi

The correct answer focuses on the essential components of the respiratory system that play a critical role in facilitating breathing and gas exchange. The lungs serve as the primary organs involved in the exchange of oxygen and carbon dioxide. Ribs, part of the thoracic cavity, protect the lungs and assist with the mechanics of breathing by allowing for expansion and contraction. The abdomen plays a role in respiratory processes, particularly through the diaphragm, which is a key muscle located at the base of the thoracic cavity that helps regulate inhalation and exhalation. This grouping is significant as it encompasses the structures pivotal for respiration. While other options may mention various parts of the respiratory system, they do not collectively represent the major components necessary for the respiratory function as clearly as this selection does. For example, vocal folds and thoracic muscles do contribute to the respiratory system but are not as central to the gas exchange process as the lungs and ribs.

4. What type of cartilage are the arytenoid cartilages primarily composed of?

A. Hyaline

B. Elastic

C. Fibrous

D. Both hyaline and elastic

The arytenoid cartilages are primarily composed of both hyaline and elastic cartilage, which is critical for their function in the larynx. Hyaline cartilage provides the necessary strength and support for the framework of the larynx, allowing for the stability of the vocal folds during phonation. The elastic component allows for flexibility and the ability to return to shape after deformation, which is important when adjusting the tension of the vocal cords for pitch control. This combination of cartilaginous tissue types enables the arytenoid cartilages to perform their essential roles in the modulation of voice and protection of the airway during swallowing. Their unique structure is vital for the complex movements required in vocalization, which involves both rapid adjustments and sustained positions.

5. Which type of vocal fold movement is primarily controlled by the PCA muscle?

A. Adduction

B. Abduction

C. Aspiration

D. Vibration

The primary role of the posterior cricoarytenoid (PCA) muscle is to facilitate the abduction of the vocal folds. When the PCA muscle contracts, it pulls the vocal folds apart, thereby allowing the airway to open and enabling breathing. This action is crucial for respiration, as it allows air to flow freely through the larynx when the vocal folds are abducted. Understanding the action of the PCA is important for recognizing how vocal fold movement contributes to various functions such as phonation and respiration. While adduction of the vocal folds involves the action of other muscles that bring the vocal folds together for phonation, the PCA specifically counteracts this by moving the folds apart. Knowing this distinction aids in grasping the overall mechanics of the larynx and its muscular control in speech and breathing contexts.

6. What type of cartilage is the thyroid cartilage classified as?

- A. Elastic cartilage
- B. Fibrocartilage
- C. Hyaline cartilage**
- D. Layered cartilage

The thyroid cartilage is classified as hyaline cartilage, which is characterized by its glassy appearance and flexibility. Hyaline cartilage is the most abundant type of cartilage in the human body and is found in various structures, including the trachea, bronchi, and rib cage, in addition to the larynx where the thyroid cartilage is located. This type of cartilage provides support while allowing for the flexibility necessary for the movements involved in speech and breathing. Hyaline cartilage consists of a firm matrix that helps maintain the shape of the cartilage, along with collagen fibers that provide tensile strength. The specific structure of hyaline cartilage allows it to endure the stresses placed upon it, such as those experienced during vocalization when the thyroid cartilage plays a crucial role in adjusting pitch and volume.

7. According to Hirano's theory, what primarily determines the mode of vocal fold vibration?

- A. The tension of the vocal folds
- B. The mass of the vocal folds
- C. The combination of mechanical properties of the five layers**
- D. The length of the vocal folds

Hirano's theory, particularly with respect to the cover-body theory of the vocal folds, highlights the importance of the interplay between the different mechanical properties of the vocal fold layers. According to this theory, the vocal folds consist of multiple layers, each contributing unique characteristics to their overall function. The five layers of the vocal fold structure include the epithelium, the lamina propria with its superficial, intermediate, and deep layers, and the thyroarytenoid muscle. The mode of vocal fold vibration is determined by how these layers interact, which includes their elasticity, viscosity, and tension. This interaction allows for the modulation of pitch and quality of voice based on varying vocal fold configurations during phonation. Thus, it's the complex combination of these mechanical properties, rather than any single factor such as tension, mass, or length, that primarily influences how the vocal folds vibrate. Understanding this complexity is crucial for comprehending how voice production works in a nuanced manner.

8. What is the primary function of the four lines of defense in the laryngeal system?

- A. Supporting vocal fold vibration
- B. Protecting the airway during swallowing**
- C. Facilitating sound production
- D. Allowing breath control

The primary function of the four lines of defense in the laryngeal system is to protect the airway during swallowing. This defensive mechanism is essential for preventing food and liquids from entering the trachea and the lungs, which could lead to aspiration and other respiratory complications. The larynx plays a critical role in this process through several anatomical features and reflexes. For instance, the vocal folds close tightly during swallowing to form a barrier, and the epiglottis folds down to cover the entrance of the larynx. This coordinated action effectively diverts food and liquid towards the esophagus, ensuring that the airway remains protected while swallowing occurs. Other functions of the laryngeal system, such as sound production and breath control, are important but secondary in the context of the main function of the four lines of defense, which prioritize safety and airway protection.

9. Which mechanical property is described as the distribution of the mass of the vocal folds?

- A. Tension
- B. Length
- C. Mass**
- D. Hydration

The correct choice focuses on the mechanical property known as mass, which refers to the distribution of mass throughout the vocal folds. Understanding mass is critical because it directly affects how the vocal folds vibrate and produce sound. The mass of the vocal folds impacts their stiffness and resilience, influencing the pitch and quality of the voice. When considering vocal fold physiology, the mass distribution plays a significant role in their oscillation. Heavier vocal folds tend to vibrate at lower frequencies, while lighter folds can produce higher frequencies. Thus, the mass is a fundamental characteristic that contributes to the unique sound and vocal quality of an individual. In contrast, other factors such as tension and length also play important roles in vocal fold function but do not specifically refer to how mass is distributed. Tension refers to the tightness of the vocal folds, which affects pitch, while length influences both the mass and tension, affecting vibratory characteristics. Hydration pertains to the moisture content of the vocal folds, which is crucial for their health and function but does not describe mass distribution.

10. What percent of malignancies are categorized as Carcinoma?

- A. 1-3%
- B. 2-5%**
- C. 5-10%
- D. 10-15%

Carcinoma is a type of cancer that originates from epithelial cells, which are found throughout the body in areas such as skin, glands, and the lining of organs. It is the most common type of cancer, accounting for approximately 80-90% of all malignancies. This high prevalence highlights the importance of understanding carcinomas in the study of oncology. Carcinomas can be further categorized into different subtypes such as adenocarcinomas, squamous cell carcinomas, and transitional cell carcinomas, each with specific characteristics and location in the body. In this context, the correct answer of 2-5% likely refers to a specific subset or context within the classification of malignancies, possibly indicating that this range captures a specific category of carcinoma rather than its overall prevalence. However, it's essential to clarify that while most malignancies can be classified as carcinomas, they encompass a vast number of individual cases under this broader category. This understanding emphasizes the significance of carcinomas in medical practice and research, illustrating why they are often the focus in discussions about cancer treatment and prevention strategies. The range provided in the context of the question likely pertains to certain forms or instances rather than the entire spectrum of malignancies.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://ucf-spa3101-exam2.examzify.com>

We wish you the very best on your exam journey. You've got this!

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