Portage Learning A&P I Final Exam Practice (Sample)

Study Guide

Everything you need from our exam experts!

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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

1. What is the primary action of the sternohyoid muscle?

A. To elevate the hyoid bone

B. To depress the hyoid bone

C. To retract the hyoid bone

D. To stabilize the hyoid bone

2. What structure in the skin produces oil to protect the skin and hair from drying?

A. Sweat gland

B. Sebaceous gland

C. Hair follicle

D. Keratinocyte

3. What is the inflammation of the pleurae called?

A. Emphysema

B. Pleurisy

C. Pulmonary edema

D. Cystic Fibrosis

4. Which sphincter controls the exit of food from the stomach?

A. Cardiac sphincter

B. Pyloric sphincter

C. Esophageal sphincter

D. Anal sphincter

5. Which rib is known for not having a direct attachment to the sternum?

A. Rib 1

B. Rib 9

C. Rib 7

D. Rib 5

6. Which part of the body does the cervical plexus not innervate?

A. Neck

B. Thigh

C. Shoulders

D. Head

7. Which anatomical orientation term signifies "further from the origin of the body part"?

A. Medial

B. Distal

C. Proximal

D. Superficial

8. What are the two heads of the sternocleidomastoid muscle?

A. Sternal and Clavicular heads

B. Superior and Inferior heads

C. Medial and Lateral heads

D. Anterior and Posterior heads

9. Which process is responsible for bringing biomacromolecules into the cell?

A. Exocytosis

B. Endocytosis

C. Diffusion

D. Osmosis

10. Which of the following correctly lists the stages of digestion?

A. Ingestion, Digestion, Absorption, Assimilation, Excretion

B. Ingestion, Digestion, Absorption, Compaction, Defecation

C. Ingestion, Metabolism, Excretion, Absorption, Compaction

D. Ingestion, Digestion, Compaction, Assimilation, Excretion

Answers

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

Explanations

1. What is the primary action of the sternohyoid muscle?

A. To elevate the hyoid bone

B. To depress the hyoid bone

C. To retract the hyoid bone

D. To stabilize the hyoid bone

The primary action of the sternohyoid muscle is to depress the hyoid bone. This muscle is part of the infrahyoid group, which consists of muscles located beneath the hyoid bone. It originates from the sternum and attaches to the hyoid bone, and its contraction works to pull the hyoid bone downward. This action is important during various activities such as swallowing and speaking, as it helps to lower the hyoid and stabilize the position of the larynx. In the context of the other options, elevating the hyoid bone would involve muscles that work in the opposite manner, such as the digastric or mylohyoid muscles, which help lift the hyoid during swallowing. Retracting the hyoid would not specifically be a function of the sternohyoid, as its role is not in the horizontal movement of the bone, but rather in its vertical positioning. Stabilization of the hyoid can be considered a secondary outcome of the muscle's action, but the primary and most direct function remains its ability to depress the hyoid bone.

2. What structure in the skin produces oil to protect the skin and hair from drying?

A. Sweat gland

B. Sebaceous gland

C. Hair follicle

D. Keratinocyte

The sebaceous gland is responsible for producing oil, known as sebum, which plays a crucial role in protecting both the skin and hair from drying out. This oil helps to lubricate the skin and hair, maintaining moisture and preventing water loss. Sebum also has antimicrobial properties, which can help protect the skin from infections. The presence of sebaceous glands is particularly notable in areas rich in hair follicles, as they secrete their oil directly into the hair follicle. In contrast, sweat glands are primarily involved in thermoregulation and waste excretion through the secretion of sweat, rather than providing moisture to the skin and hair. Hair follicles are structures that house the hair but do not produce oil; they are involved in hair growth. Keratinocytes are the predominant cell type in the outer layer of skin and are responsible for the production of keratin, which contributes to the skin's barrier function but does not produce oil. Thus, the sebaceous gland is the correct answer, as it specifically provides the oil necessary to protect and moisturize the skin and hair.

3. What is the inflammation of the pleurae called?

A. Emphysema

B. Pleurisy

C. Pulmonary edema

D. Cystic Fibrosis

The inflammation of the pleurae is referred to as pleurisy. This condition occurs when the pleurae, which are the two thin layers of tissue that line the lungs and chest cavity, become inflamed, often causing sharp chest pain that worsens with breathing or coughing. Pleurisy can result from various underlying conditions, including infections, autoimmune diseases, and other lung-related ailments. Emphysema, pulmonary edema, and cystic fibrosis are other respiratory conditions but are distinct from pleurisy. Emphysema refers to damage to the alveoli in the lungs, leading to breathing difficulties. Pulmonary edema involves fluid accumulation in the lung's air sacs, and cystic fibrosis is a genetic disorder that affects the lungs and digestive system by producing thick mucus. Each of these conditions has its own pathophysiology and symptoms, but none directly concern the inflammation of the pleurae.

4. Which sphincter controls the exit of food from the stomach?

A. Cardiac sphincter

B. Pyloric sphincter

C. Esophageal sphincter

D. Anal sphincter

The pyloric sphincter is responsible for controlling the passage of food from the stomach into the small intestine, specifically the duodenum. It is located at the distal end of the stomach and regulates the rate at which the partially digested food, known as chyme, exits the stomach. This sphincter ensures that the chyme does not enter the small intestine too rapidly, allowing for adequate mixing with digestive enzymes and absorption of nutrients. The function of the cardiac sphincter, which is located at the junction of the esophagus and the stomach, is to prevent the backflow of stomach contents into the esophagus. The esophageal sphincter facilitates the movement of food down into the stomach but does not control the exit from it. The anal sphincter, located at the end of the digestive tract, has a role in controlling defecation but does not relate to food exiting the stomach. Therefore, the pyloric sphincter's role is vital for the proper digestion and transition of food from the stomach into the next phase of digestion in the intestines.

5. Which rib is known for not having a direct attachment to the sternum?

A. Rib 1

B. Rib 9

C. Rib 7

D. Rib 5

Rib 9 is identified as a false rib, meaning it does not have a direct attachment to the sternum. Instead, it is connected to the costal cartilage of the rib above it (rib 8). This characteristic distinguishes false ribs from true ribs, which attach directly to the sternum through their own costal cartilage. True ribs include ribs 1 to 7, which connect directly and securely to the sternum. Rib 1, the first rib, is commonly associated with unique anatomical features such as being flat and broad, as well as having a direct connection to the sternum. Rib 7 is also part of the true ribs and has a direct attachment to the sternum. Rib 5, although it does not specifically have a unique characteristic that distinguishes it in this context, is also a true rib with direct attachment. Therefore, these options do not fit the criteria for the correct answer, which focuses on the rib's lack of direct attachment to the sternum.

6. Which part of the body does the cervical plexus not innervate?

A. Neck

B. Thigh

C. Shoulders

D. Head

The cervical plexus is a network of nerves that arises from the cervical spinal nerves, primarily innervating the muscles and skin of the neck, shoulders, and parts of the head. Specifically, it provides sensory innervation to areas such as the neck and shoulders and motor innervation to some of the neck muscles. In contrast, the thigh is innervated mainly by the lumbar plexus and part of the sacral plexus, which are different networks of nerves. The lumbar plexus provides innervation to the anterior and medial aspects of the thigh, including the quadriceps, while the sacral plexus contributes to the innervation of the posterior thigh and the lower extremities. Therefore, it is clear that the cervical plexus does not innervate the thigh. This distinction highlights the specific functional roles of different plexuses in the body and reinforces the understanding of peripheral nerve organization and innervation patterns.

7. Which anatomical orientation term signifies "further from the origin of the body part"?

A. Medial

B. Distal

C. Proximal

D. Superficial

The term that signifies "further from the origin of the body part" is indeed distal. In anatomical terminology, "distal" is used to describe a position on a limb that is farther away from the trunk or the point of attachment, while "proximal" would indicate a position that is closer to the trunk or point of origin. For instance, when considering the limbs, the fingers are considered distal to the wrist, as they are further away from the body's center. In contrast, the shoulder is proximal to the elbow because it is closer to the torso. This distinction is crucial for accurately describing the locations of body parts relative to one another, which is fundamental in anatomy and understanding human physiology. The other terms provided do not convey the same meaning. "Medial" refers to a position that is closer to the midline of the body rather than relating to distance from the trunk. "Proximal" indicates something that is closer to the point of origin or attachment, which is opposite to distal. "Superficial" pertains to structures that are closer to the surface of the body, again not relating to distance from the trunk or origin point. Understanding these terms helps in effectively communicating anatomical locations and relationships.

8. What are the two heads of the sternocleidomastoid muscle?

A. Sternal and Clavicular heads

B. Superior and Inferior heads

C. Medial and Lateral heads

D. Anterior and Posterior heads

The correct choice identifies the two heads of the sternocleidomastoid muscle as the sternal and clavicular heads. This muscle, located in the neck, is divided into these two distinct origins. The sternal head originates from the manubrium of the sternum, while the clavicular head originates from the medial portion of the clavicle. Understanding the anatomy of this muscle is crucial, as it plays a significant role in head movement and stabilization. When both heads contract, they flex the neck forward; individually, the right head rotates the head to the left, and the left head rotates the head to the right. This division into sternal and clavicular heads is a key feature that helps identify the muscle's structure and function in anatomical discussions.

9. Which process is responsible for bringing biomacromolecules into the cell?

A. Exocytosis

B. Endocytosis

C. Diffusion

D. Osmosis

Endocytosis is the cellular process responsible for bringing biomacromolecules into the cell. This process involves the engulfing of external substances by the cell membrane, which then folds inward to form a vesicle that transports the materials into the cytoplasm. Endocytosis allows cells to uptake large molecules, such as proteins and polysaccharides, and even whole particles, which is essential for nutrient absorption and cellular signaling. In contrast, exocytosis is the process through which materials are expelled from the cell, typically involving the transport of vesicles that fuse with the plasma membrane to release their contents outside. Diffusion refers to the passive movement of molecules from an area of higher concentration to an area of lower concentration, which occurs for small, nonpolar molecules and does not involve vesicular transport. Osmosis specifically describes the movement of water molecules through a selectively permeable membrane and is not concerned with the transport of biomacromolecules. Therefore, endocytosis is the appropriate mechanism for the uptake of larger biomacromolecules into the cell.

10. Which of the following correctly lists the stages of digestion?

A. Ingestion, Digestion, Absorption, Assimilation, Excretion

B. Ingestion, Digestion, Absorption, Compaction, Defecation

C. Ingestion, Metabolism, Excretion, Absorption, Compaction

D. Ingestion, Digestion, Compaction, Assimilation, Excretion

The correct sequence of stages in the digestive process highlights the flow and transformation of food from entry into the body to the elimination of waste. Ingestion refers to the intake of food through the mouth. Digestion follows, which includes both mechanical and chemical breakdown of food into smaller components that can be absorbed. Next, the stage of Absorption occurs, where the nutrients from the digested food pass through the intestinal lining into the bloodstream to be used by the body. After absorption, Compaction takes place, in which the remaining waste material is dehydrated and compacted into feces in the large intestine. Finally, Defecation is the process of expelling the waste from the body. This sequence accurately represents the progression of food processing in the gastrointestinal system, emphasizing the correct order of these physiological activities. The inclusion of compaction specifically points to the preparation of waste for excretion, making it essential to understanding how the body handles undigested material.

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://portagelearningaandp1.examzify.com

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