

UNIVERSITY OF CENTRAL FLORIDA (UCF) ZOO3733C HUMAN ANATOMY PRACTICE TEST 4 (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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 vein contributes to the indirect drainage of the stomach through the portal vein?**
 - A. Left gastroepiploic vein
 - B. Right gastroepiploic vein
 - C. Inferior mesenteric vein
 - D. Superior mesenteric vein
- 2. What is the primary substance produced by delta cells in the pancreas?**
 - A. Insulin
 - B. Glucagon
 - C. Somatostatin
 - D. Pancreatic amylase
- 3. What is a hiatal hernia?**
 - A. An abnormality of the gallbladder
 - B. Protrusion of part of the stomach into the mediastinum
 - C. A type of heart failure
 - D. A digestive system infection
- 4. Which nerve is responsible for autonomic control of multiple digestive organs?**
 - A. Phrenic nerve
 - B. Vagus nerve
 - C. Sciatic nerve
 - D. Accessory nerve
- 5. What does the anastomosis between the blood vessels indicate in terms of blood supply?**
 - A. It provides redundancy in case of obstruction
 - B. It increases blood pressure
 - C. It reduces blood supply requirements
 - D. It is used for lymphatic drainage

6. Which nerve provides parasympathetic innervation to the stomach?

- A. Vagus nerve
- B. Thoracic splanchnic nerve
- C. Pelvic splanchnic nerve
- D. Phrenic nerve

7. Which vein does the right gastroepiploic vein go into?

- A. Inferior mesenteric vein
- B. Superior mesenteric vein
- C. Splenic vein
- D. Portal vein

8. Which sphincter is responsible for preventing air from entering the esophagus?

- A. Lower Esophageal Sphincter (LES)
- B. Upper Esophageal Sphincter (UES)
- C. Pyloric Sphincter
- D. Pharyngoesophageal Sphincter

9. How can severe vomiting affect blood pH?

- A. It leads to metabolic acidosis
- B. It causes respiratory alkalosis
- C. It may result in metabolic alkalosis
- D. It has no effect on blood pH

10. What is the only part of the GI tract that is essential for life?

- A. Colon
- B. Stomach
- C. Esophagus
- D. GI tract

Answers

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

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Explanations

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1. Which vein contributes to the indirect drainage of the stomach through the portal vein?

- A. Left gastroepiploic vein**
- B. Right gastroepiploic vein
- C. Inferior mesenteric vein
- D. Superior mesenteric vein

The left gastroepiploic vein plays a significant role in the venous drainage of the stomach, specifically in what is known as indirect drainage through the portal vein. This vein drains blood from the greater curvature of the stomach and ultimately empties into the splenic vein. The splenic vein then merges with the superior mesenteric vein to form the portal vein, which is responsible for transporting blood from the gastrointestinal tract and spleen to the liver for processing. Understanding the anatomy of the venous system related to gastric drainage is crucial. The left gastroepiploic vein's course and drainage route underscore its contribution to the portal circulation, thereby connecting the stomach's venous drainage to the liver's metabolic functions. In contrast, the right gastroepiploic vein and the mesenteric veins have different drainage paths and typically do not contribute directly to the portal vein like the left gastroepiploic vein does. This emphasizes the unique role that the left gastroepiploic vein plays in the context of gastric venous drainage.

2. What is the primary substance produced by delta cells in the pancreas?

- A. Insulin
- B. Glucagon
- C. Somatostatin**
- D. Pancreatic amylase

The primary substance produced by delta cells in the pancreas is somatostatin. Delta cells are one of the types of endocrine cells found in the islets of Langerhans within the pancreas. Somatostatin plays a crucial role in regulating various physiological processes in the body. Specifically, it inhibits the release of several hormones, including insulin and glucagon, thereby serving as a regulator of glucose metabolism. By balancing the actions of other hormones, somatostatin helps maintain homeostasis within the endocrine system. In contrast, insulin and glucagon are produced by beta and alpha cells, respectively, and are primarily involved in controlling blood sugar levels. Pancreatic amylase is an enzyme secreted by the pancreas that aids in the digestion of carbohydrates, but it is not produced by delta cells. The specific role of somatostatin underscores its importance in the overall function of the pancreas and endocrine regulation.

3. What is a hiatal hernia?

- A. An abnormality of the gallbladder
- B. Protrusion of part of the stomach into the mediastinum**
- C. A type of heart failure
- D. A digestive system infection

A hiatal hernia occurs when a portion of the stomach bulges through the diaphragm into the mediastinum, the central compartment of the thoracic cavity. This anatomical alteration allows the stomach to extend above the diaphragm instead of remaining fully in the abdominal cavity, which can lead to various symptoms, such as gastroesophageal reflux disease (GERD), chest pain, or difficulty swallowing. Understanding the structure of the diaphragm is essential, as it serves as a muscular barrier between the thoracic cavity and the abdominal cavity. In a hiatal hernia, this barrier is compromised, allowing stomach contents to potentially flow back into the esophagus, contributing to the discomfort typically associated with this condition. This condition can be classified into two types: sliding hiatal hernias and paraesophageal hiatal hernias, each with distinctive characteristics and implications for treatment. The other options describe conditions unrelated to hiatal hernias, as they pertain to different anatomical structures or diseases entirely. Therefore, the definition and implications of a hiatal hernia are best captured in the description of the protrusion of part of the stomach into the mediastinum.

4. Which nerve is responsible for autonomic control of multiple digestive organs?

- A. Phrenic nerve
- B. Vagus nerve**
- C. Sciatic nerve
- D. Accessory nerve

The vagus nerve is the primary component of the parasympathetic nervous system and plays a crucial role in regulating autonomic functions of multiple digestive organs. It extends from the brainstem down through the neck and thorax to the abdomen, innervating various organs, including the heart, lungs, and digestive tract. In the digestive system, the vagus nerve facilitates processes such as peristalsis (the movement of food through the intestines), the secretion of digestive enzymes, and the regulation of gut motility. Its extensive innervation allows it to influence a range of digestive functions, making it essential for maintaining the overall homeostasis and efficiency of the digestive process. This is particularly important after eating when the body enters a state that promotes digestion and absorption of nutrients.

5. What does the anastomosis between the blood vessels indicate in terms of blood supply?

- A. It provides redundancy in case of obstruction**
- B. It increases blood pressure
- C. It reduces blood supply requirements
- D. It is used for lymphatic drainage

The anastomosis between blood vessels serves an important role in ensuring that tissues receive adequate blood supply even if one of the pathways becomes obstructed. This network of connections allows blood to flow through alternative routes, effectively providing redundancy. This is crucial in maintaining perfusion to vital organs and tissues, particularly when one vessel is compromised due to injury, clogging, or disease. The presence of anastomoses thus enhances the resilience of the circulatory system, ensuring that biological tissues are not deprived of oxygen and nutrients during such events.

6. Which nerve provides parasympathetic innervation to the stomach?

- A. Vagus nerve**
- B. Thoracic splanchnic nerve
- C. Pelvic splanchnic nerve
- D. Phrenic nerve

The vagus nerve is indeed responsible for providing parasympathetic innervation to the stomach. This nerve, also known as cranial nerve X, plays a critical role in the autonomic regulation of the digestive system. It provides fibers that synapse in the wall of the stomach and stimulate digestive functions such as increasing gastric secretions and promoting peristalsis, which aids in the movement of food through the gastrointestinal tract. The vagus nerve originates in the brainstem and has extensive pathways that influence various organs, including the heart, lungs, and digestive tract. Its action in the stomach enhances motility and supports the digestive processes, allowing for efficient breakdown and absorption of nutrients. Other nerves mentioned do not provide parasympathetic innervation to the stomach. The thoracic splanchnic nerve mainly transmits sympathetic fibers, and the pelvic splanchnic nerve innervates structures in the lower part of the body rather than the stomach. The phrenic nerve is responsible for diaphragm innervation and does not play a role in the autonomic control of the stomach. Therefore, the vagus nerve is the correct choice as it is the primary parasympathetic nerve influencing stomach function.

7. Which vein does the right gastroepiploic vein go into?

- A. Inferior mesenteric vein
- B. Superior mesenteric vein**
- C. Splenic vein
- D. Portal vein

The right gastroepiploic vein plays a significant role in the vascular system of the digestive tract by collecting blood from the greater curvature of the stomach and the adjacent regions of the intestine. This vein specifically drains into the superior mesenteric vein, which is responsible for collecting blood from the small intestine and parts of the large intestine. The superior mesenteric vein is crucial as it merges with the splenic vein to form the hepatic portal vein. This pathway directs blood to the liver for processing before it reaches the systemic circulation. Understanding the specific drainage patterns of venous structures in the gastrointestinal system is essential for comprehending the relationships between various organs and their vascular supply.

8. Which sphincter is responsible for preventing air from entering the esophagus?

- A. Lower Esophageal Sphincter (LES)
- B. Upper Esophageal Sphincter (UES)**
- C. Pyloric Sphincter
- D. Pharyngoesophageal Sphincter

The upper esophageal sphincter (UES) plays a critical role in preventing air from entering the esophagus. This muscular ring is located at the junction of the pharynx and the esophagus. Its primary function is to maintain closure of the esophagus during phases of breathing and swallowing, ensuring that food and liquid can pass safely from the throat to the stomach without allowing air to enter the esophagus. The UES relaxes during swallowing to allow food to pass, but it closes tightly to prevent the aspiration of air. The lower esophageal sphincter (LES), on the other hand, is responsible for preventing the backflow of stomach contents into the esophagus, not addressing air passage. The pyloric sphincter regulates the passage of partially digested food from the stomach to the small intestine and is not involved with air management in the esophagus. Similarly, the pharyngoesophageal sphincter is not a recognized term in the discussion of esophageal anatomy or function related to air prevention. Understanding the specific roles of each sphincter is essential, particularly in the context of swallowing mechanics and the maintenance of esophageal health.

9. How can severe vomiting affect blood pH?

- A. It leads to metabolic acidosis
- B. It causes respiratory alkalosis
- C. It may result in metabolic alkalosis**
- D. It has no effect on blood pH

Severe vomiting can lead to metabolic alkalosis due to the loss of stomach acid, which contains hydrochloric acid (HCl). When vomiting occurs, the body expels not only food but also gastric juice, which is rich in acids. This loss of acids results in a decrease in hydrogen ion concentration in the bloodstream, which raises the pH level of the blood, creating a more alkaline environment. Additionally, prolonged vomiting can lead to electrolyte imbalances, particularly a loss of potassium and chloride ions, which can further contribute to metabolic alkalosis. The body attempts to compensate for these changes, but the direct loss of acidic contents from the stomach is the primary cause of the elevated blood pH associated with severe vomiting. In this context, if the body is losing more acid than it can compensate for, the result is a significant increase in blood pH, thus confirming that severe vomiting may indeed result in metabolic alkalosis.

10. What is the only part of the GI tract that is essential for life?

- A. Colon
- B. Stomach
- C. Esophagus
- D. GI tract**

The gastrointestinal (GI) tract is a crucial system for digestion and nutrient absorption, but there are components of it that are not strictly essential for survival. Among the various parts, the colon, stomach, and esophagus each play significant roles in processing and moving food, but none of them are indispensable for life in the same way that the overall functionality of the entire GI tract is. The other options—colon, stomach, and esophagus—are important for digestion, absorption of nutrients, and the proper elimination of waste. However, medical advancements such as tube feeding or surgical alternatives can allow individuals to survive without these specific organs if necessary. For instance, someone can live without a stomach (gastrectomy) or have a colostomy if the colon is ailing. The GI tract as a whole is essential for life because it encompasses all these vital functions, and without any component involved in digestion, nutrient absorption, or waste elimination, sustaining life becomes challenging. Thus, recognizing the GI tract collectively as essential highlights the importance of the entire system rather than focusing on a singular organ.

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:

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

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