

SACE Stage 2 Nutrition Basics Practice Exam (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 source of energy for the body?**
 - A. Proteins**
 - B. Fats**
 - C. Carbohydrates**
 - D. Vitamins**
- 2. What is defined as a digestive system response to food that the body cannot properly digest?**
 - A. Food allergy**
 - B. Food intolerance**
 - C. Food sensitivity**
 - D. Food poisoning**
- 3. What distinguishes phospholipids from triglycerides?**
 - A. Phospholipids contain one fatty acid chain**
 - B. Phospholipids have a hydrophilic head**
 - C. Phospholipids are only found in fish oils**
 - D. Phospholipids are not found in cell membranes**
- 4. Which nutrient is essential for the production of hemoglobin?**
 - A. Calcium**
 - B. Iron**
 - C. Vitamin C**
 - D. Vitamin D**
- 5. Which fatty acid contains no double bonds?**
 - A. Monounsaturated fat**
 - B. Saturated fat**
 - C. Polyunsaturated fat**
 - D. Trans fat**

- 6. What is a key characteristic of how carbohydrates are digested?**
- A. They are chemically broken down by enzymes only in the mouth**
 - B. They are first absorbed in the stomach**
 - C. They are primarily broken down into simple sugars in the small intestine**
 - D. They remain unchanged until reaching the large intestine**
- 7. Glycogen is classified under which saccharide group?**
- A. Monosaccharide**
 - B. Polysaccharide**
 - C. Oligosaccharide**
 - D. Dissacharide**
- 8. How is salivary amylase involved in carbohydrate digestion?**
- A. It breaks down proteins into amino acids**
 - B. It breaks down starch into smaller saccharides**
 - C. It emulsifies fats for better absorption**
 - D. It activates lipase for fat digestion**
- 9. Which enzyme is specifically known for breaking down proteins?**
- A. Amylase**
 - B. Lipase**
 - C. Protease**
 - D. Peptidase**
- 10. What is a common symptom of lactose intolerance?**
- A. Nausea**
 - B. Weight gain**
 - C. Increased blood pressure**
 - D. Fatigue**

Answers

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

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Explanations

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1. What is the primary source of energy for the body?

- A. Proteins
- B. Fats
- C. Carbohydrates**
- D. Vitamins

The primary source of energy for the body is carbohydrates. When carbohydrates are consumed, they are broken down into glucose, which is then utilized by the body's cells for energy. This process is crucial because glucose serves as a quick and readily available energy source, especially for high-intensity activities and brain function. Carbohydrates are stored in the body as glycogen in the liver and muscles, which can be quickly mobilized when energy is needed. This is vital during exercise and times of increased demand, where the body needs energy readily at hand. While fats are also a significant source of energy, particularly during prolonged, low-intensity activities, carbohydrates are the body's preferred fuel source for immediate energy needs. Proteins play a minimal role in energy production under normal circumstances, as their primary function is for growth, repair, and maintenance of body tissues. Vitamins do not provide energy directly; instead, they assist in the processes that extract energy from macronutrients. Thus, carbohydrates are ultimately recognized as the body's main energy source.

2. What is defined as a digestive system response to food that the body cannot properly digest?

- A. Food allergy
- B. Food intolerance**
- C. Food sensitivity
- D. Food poisoning

Food intolerance is a digestive system response that occurs when the body struggles to properly digest certain substances found in food. This can manifest in various uncomfortable symptoms such as bloating, gas, diarrhea, or stomach cramps, which occur when someone consumes specific foods that their body is unable to break down effectively. Unlike food allergies, which involve an immune response to a particular food protein, food intolerances do not involve the immune system but rather a functional issue in digestion. Conditions like lactose intolerance, for instance, arise from the body's inability to produce enough of the enzyme lactase, leading to difficulties processing milk and dairy products. This distinction is crucial for understanding how different food-related health issues arise, emphasizing the digestive system's role in processing food intake.

3. What distinguishes phospholipids from triglycerides?

- A. Phospholipids contain one fatty acid chain
- B. Phospholipids have a hydrophilic head**
- C. Phospholipids are only found in fish oils
- D. Phospholipids are not found in cell membranes

Phospholipids are characterized by having a hydrophilic (water-attracting) head and two hydrophobic (water-repelling) fatty acid tails. This unique structure allows them to form bilayers, which are essential components of cell membranes. The hydrophilic head interacts with the aqueous environment both inside and outside the cell, while the hydrophobic tails face each other, away from water. This arrangement is crucial for the integrity and function of cellular membranes, facilitating the selective permeability that is vital for cellular processes. In contrast, triglycerides consist of one glycerol molecule bonded to three fatty acid chains, making them primarily a form of energy storage rather than structural components. While triglycerides are also lipids, they do not possess the unique dual nature of phospholipids that allows them to participate in membrane formation. The other choices either misrepresent the structure of phospholipids or incorrectly state their roles and locations in biological systems. Therefore, the presence of a hydrophilic head in phospholipids is what fundamentally differentiates them from triglycerides and explains their essential role in the formation of cell membranes.

4. Which nutrient is essential for the production of hemoglobin?

- A. Calcium
- B. Iron**
- C. Vitamin C
- D. Vitamin D

The correct answer is iron, as this nutrient plays a critical role in the formation of hemoglobin, which is the protein in red blood cells responsible for transporting oxygen throughout the body. Hemoglobin consists of heme groups that contain iron, and without adequate iron, the body cannot produce sufficient amounts of hemoglobin. This can lead to conditions such as anemia, characterized by a decreased ability of the blood to carry oxygen. In contrast, while calcium is vital for bone health and various bodily functions, it does not have a direct role in hemoglobin production. Vitamin C is important for enhancing the absorption of iron from plant sources and helps maintain healthy bodily functions, but it is not a component of hemoglobin itself. Vitamin D primarily supports bone health and assists in calcium metabolism, which is unrelated to hemoglobin synthesis. Understanding the specific roles of these nutrients clarifies why iron is essential for hemoglobin production.

5. Which fatty acid contains no double bonds?

- A. Monounsaturated fat
- B. Saturated fat**
- C. Polyunsaturated fat
- D. Trans fat

Saturated fat is characterized by the absence of double bonds between its carbon atoms. This means that all carbon atoms in the fatty acid chain are "saturated" with the maximum number of hydrogen atoms possible. As a result, saturated fats tend to be solid at room temperature and are commonly found in animal products, as well as some plant oils. In contrast, monounsaturated fats contain one double bond, while polyunsaturated fats contain two or more double bonds. Trans fats are artificially created through hydrogenation, which can lead to some trans configurations, but they also don't fit the definition of containing zero double bonds consistently in their structure. Thus, the defining characteristic of saturated fats is their lack of double bonds, distinguishing them from the other options.

6. What is a key characteristic of how carbohydrates are digested?

- A. They are chemically broken down by enzymes only in the mouth
- B. They are first absorbed in the stomach
- C. They are primarily broken down into simple sugars in the small intestine**
- D. They remain unchanged until reaching the large intestine

Carbohydrates are primarily broken down into simple sugars in the small intestine due to the action of specific enzymes that continue the digestion process initiated in the mouth. In the small intestine, pancreatic amylase contributes significantly to this breakdown by hydrolyzing complex carbohydrates into simpler sugars, such as maltose and ultimately glucose, which can then be absorbed into the bloodstream. The digestion process begins in the mouth where salivary amylase starts the breakdown of starches into simpler sugars. However, this initial digestion is only a part of the overall process. Once food passes into the stomach, carbohydrate digestion does not occur as effectively due to the acidic environment that inactivates salivary amylase. The small intestine is where the majority of carbohydrate digestion and absorption happens after the food has left the stomach. Simple sugars are then absorbed through the intestinal walls into the bloodstream, allowing the body to utilize these sugars as a vital source of energy. In contrast, carbohydrates do not remain unchanged until reaching the large intestine; they undergo significant chemical breakdown first. Additionally, they are not primarily absorbed in the stomach, as absorption is limited at that point. Overall, the majority of carbohydrate digestion and absorption is completed in the small intestine, making this the key characteristic of

7. Glycogen is classified under which saccharide group?

- A. Monosaccharide**
- B. Polysaccharide**
- C. Oligosaccharide**
- D. Dissacharide**

Glycogen is classified as a polysaccharide because it is composed of long chains of glucose units linked together through glycosidic bonds. Polysaccharides are defined as carbohydrates formed by the polymerization of multiple monosaccharides—typically containing more than ten sugar units. Glycogen serves as a significant energy storage form in animals, primarily found in the liver and muscle tissues, and can be hydrolyzed to release glucose when energy is required. In contrast, monosaccharides are the simplest form of carbohydrates and cannot be hydrolyzed into simpler sugars. Oligosaccharides consist of 2 to 10 monosaccharide units, while disaccharides contain exactly two monosaccharide units connected by a glycosidic bond. Glycogen exceeds the structure of all these categories, aligning it clearly within the polysaccharide classification.

8. How is salivary amylase involved in carbohydrate digestion?

- A. It breaks down proteins into amino acids**
- B. It breaks down starch into smaller saccharides**
- C. It emulsifies fats for better absorption**
- D. It activates lipase for fat digestion**

Salivary amylase plays a crucial role in carbohydrate digestion by breaking down starch, which is a polysaccharide, into smaller saccharides, specifically maltose and dextrins. This enzyme is produced by the salivary glands and is present in saliva, making it the first digestive enzyme to act on carbohydrates as food enters the mouth. When food is chewed, salivary amylase begins the chemical process of digestion while mixing with the food. This breakdown is essential because it transforms complex carbohydrates into simpler sugars that can be absorbed more readily later in the digestive tract. As starch is hydrolyzed into smaller chains, it provides a quicker source of glucose to the body, which is vital for energy. This function of salivary amylase highlights its importance at the very beginning of the digestive process, setting the stage for further enzymatic action in the stomach and small intestine, where additional digestion of carbohydrates continues.

9. Which enzyme is specifically known for breaking down proteins?

- A. Amylase**
- B. Lipase**
- C. Protease**
- D. Peptidase**

Protease is the enzyme specifically responsible for breaking down proteins into smaller peptides or amino acids. This enzymatic activity is crucial for digestion, particularly in the stomach and small intestine, where proteins from food are transformed into absorbable units. Protease initiates this process by cleaving the peptide bonds that link amino acids together in protein chains. In the digestive system, protease's function is essential because it ensures that dietary proteins are sufficiently broken down, allowing the body to absorb the individual amino acids necessary for various bodily functions, including tissue repair, enzyme production, and hormone synthesis. This breakdown process is a vital aspect of protein metabolism and plays a significant role in overall nutrition. Understanding the role of protease highlights its importance in the digestion process, facilitating the use of dietary proteins by the body. Other enzymes, such as amylase and lipase, are responsible for carbohydrate and fat breakdown, respectively, but they do not contribute to protein digestion. Thus, recognizing protease as the enzyme dedicated to protein degradation underscores its unique and critical role in nutrition.

10. What is a common symptom of lactose intolerance?

- A. Nausea**
- B. Weight gain**
- C. Increased blood pressure**
- D. Fatigue**

A common symptom of lactose intolerance is nausea, which occurs as a result of the body's inability to properly digest lactose, the sugar found in milk and dairy products. When individuals with lactose intolerance consume dairy, the undigested lactose ferments in the gut, leading to various gastrointestinal symptoms, including nausea, cramping, bloating, diarrhea, and gas. The body lacks sufficient amounts of lactase, the enzyme responsible for breaking down lactose. This enzyme deficiency means that lactose passes undigested through the gut, triggering discomfort and symptoms like nausea shortly after consumption of dairy products. Understanding the physiological response that accompanies lactose intolerance helps clarify why nausea is a prevalent complaint among those affected by this condition.

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://sacestage2nutritionbasics.examzify.com>

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