Rutgers Nutrition Practice Test (Sample)

Study Guide

BY EXAMZIFY

Everything you need from our exam experts!

Sample study guide. For the full version with hundreds of questions, visit:
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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.

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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!

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Questions

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1. What is the energy yield from fats?

A. 4 kcal/g

B. 7 kcal/g

C. 9 kcal/g

D. 6 kcal/g

2. What happens to ammonia formed from deamination in the liver?

A. Converted to cholesterol

B. Transformed into urea

C. Stored as fat

D. Used for protein synthesis

3. What is the major function of selenium in the body?

A. Acts as a hormone regulator

B. Acts as an antioxidant with Vitamin E

C. Is essential for calcium absorption

D. Contributes to fat storage

4. Bulimia nervosa is characterized by which of the following behaviors?

A. Binge eating followed by purging

B. Restricting food intake

C. Overeating without consequences

D. Chronic dieting

5. What deficiency disease results from a lack of niacin?

A. Pellagra

B. Scurvy

C. Beriberi

D. Macrocytic anemia

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6. What is the disease caused by Vitamin D deficiency in children?

A. Osteoporosis

B. Rickets

C. Scurvy

D. Beriberi

7. What does the term 'nutritional symbiosis' refer to?

A. A mutually beneficial relationship between different nutrients.

B. The process of cooking that enhances nutrient value.

C. A dietary strategy to lose weight effectively.

D. The absorption of nutrients in the gut alone.

8. True or false: Water intoxication can lead to hypernatremia.

A. True

B. False

C. Depends on individual factors

D. Only in severe cases

9. What is a common early sign of Vitamin C deficiency?

A. Night blindness

B. Bleeding gums

C. Diarrhea

D. Dermatitis

10. What organ serves as the major metabolic center of the body?

A. Heart

B. Liver

C. Kidney

D. Brain

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Answers

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

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Explanations

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1. What is the energy yield from fats?

A. 4 kcal/g

B. 7 kcal/g

C. 9 kcal/g

D. 6 kcal/g

The energy yield from fats is 9 kcal/g. This value represents the caloric density of fat as a macronutrient in the human diet. Fats are the most energy-dense of the three main macronutrients, which also include carbohydrates and proteins. This high energy yield is due to the high concentration of carbon and hydrogen atoms in fatty acids, which provide more energy when metabolized compared to carbohydrates and proteins. Carbohydrates yield about 4 kcal/g, while proteins also yield approximately 4 kcal/g. This significant difference in energy yield is why fats are utilized as an important energy source in both the diet and during extended physical activity or fasting states. Additionally, fats serve various essential functions in the body, including the absorption of fat-soluble vitamins and the provision of essential fatty acids.

2. What happens to ammonia formed from deamination in the liver?

A. Converted to cholesterol

B. Transformed into urea

C. Stored as fat

D. Used for protein synthesis

The process of deamination in the liver involves the removal of an amino group from amino acids, which results in the formation of ammonia. Ammonia is a toxic substance, so the body must efficiently process it to prevent harmful effects. In the liver, ammonia undergoes a conversion process called the urea cycle, where it is transformed into urea. Urea is far less toxic than ammonia and becomes soluble in water, allowing it to be transported safely in the bloodstream to the kidneys, where it is ultimately excreted in urine. This conversion not only detoxifies ammonia but also allows for the safe elimination of nitrogen waste from the body. In summary, the transformation of ammonia to urea is crucial for maintaining nitrogen balance and preventing toxicity, making this a pivotal metabolic function of the liver.

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3. What is the major function of selenium in the body?

A. Acts as a hormone regulator

B. Acts as an antioxidant with Vitamin E

C. Is essential for calcium absorption

D. Contributes to fat storage

Selenium plays a critical role in the body primarily as an antioxidant, particularly in conjunction with Vitamin E. Together, they help to protect cells from oxidative damage caused by free radicals, which can lead to various chronic diseases and aging. Selenium is a component of certain enzymes known as selenoproteins, which include glutathione peroxidase, an important antioxidant enzyme. This enzyme helps to neutralize peroxide and prevents damage to cell membranes and other structures, enhancing overall cellular health. The importance of selenium in antioxidant defense is particularly evident in its relationship with Vitamin E. While Vitamin E directly protects cell membranes from oxidative stress, selenium supports this action and ensures the regeneration of Vitamin E after it neutralizes free radicals. This synergistic relationship between selenium and Vitamin E is crucial for maintaining the body's oxidative balance and promoting health. In contrast, hormonal regulation, calcium absorption, and fat storage are functions attributed to other vitamins or minerals, making them less relevant in the context of selenium's major role in the body.

4. Bulimia nervosa is characterized by which of the following behaviors?

A. Binge eating followed by purging

B. Restricting food intake

C. Overeating without consequences

D. Chronic dieting

Bulimia nervosa is primarily defined by a cycle of binge eating followed by compensatory behaviors aimed at preventing weight gain. This typically involves purging, which can include self-induced vomiting, excessive exercise, or the misuse of laxatives. The binge-eating episodes are often characterized by consuming large amounts of food in a short period, during which the individual feels a lack of control over their eating behavior. This cycle can lead to significant physical and psychological distress. Individuals with bulimia nervosa may experience preoccupation with body shape and weight, contributing to feelings of shame and guilt following binge episodes. Therefore, the correct answer highlights the hallmark behavior of bulimia nervosa that differentiates it from other eating disorders, such as anorexia nervosa or binge-eating disorder, which do not include the purging aspect following binge eating.

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5. What deficiency disease results from a lack of niacin?

A. Pellagra

B. Scurvy

C. Beriberi

D. Macrocytic anemia

Pellagra is the deficiency disease that results from a lack of niacin, also known as vitamin B3. Niacin plays a critical role in various metabolic processes in the body, particularly in the conversion of carbohydrates, fats, and proteins into energy. It is also essential for the synthesis of DNA and the functioning of the nervous system. The symptoms of pellagra are often referred to as the "three D's": dermatitis, diarrhea, and dementia. These symptoms arise due to weakened cellular processes related to energy metabolism and skin health, which are directly affected by niacin deficiency. In historical contexts, pellagra was prevalent among populations with diets low in niacin and tryptophan (an amino acid that the body can convert to niacin), particularly in areas where corn was a staple food without proper preparation methods that enhance niacin bioavailability. Understanding the distinct symptoms and biochemical roles of niacin clarifies why pellagra is specifically linked to this deficiency, while the other conditions listed are caused by deficiencies of other nutrients. For instance, scurvy results from a lack of vitamin C, beriberi is caused by a deficiency in thiamine (vitamin B1), and macrocytic anemia is typically linked to a deficiency in vitamin

6. What is the disease caused by Vitamin D deficiency in children?

A. Osteoporosis

B. Rickets

C. Scurvy

D. Beriberi

Vitamin D deficiency in children leads to rickets, a disease characterized by the softening and weakening of bones. This condition results from inadequate mineralization of the bone matrix, primarily due to insufficient calcium and phosphate levels. Vitamin D plays a crucial role in promoting the absorption of calcium and phosphorus from the diet, which are essential for maintaining healthy bone structure. When children do not receive adequate Vitamin D, either through diet, sunlight exposure, or supplementation, the growth plates of their bones may not mineralize properly, leading to deformities and a higher susceptibility to fractures. In contrast, osteoporosis is typically associated with aging or hormonal changes and primarily affects older adults rather than children. Scurvy is caused by a deficiency in Vitamin C and leads to symptoms such as bleeding gums and joint pain. Beriberi, resulting from a deficiency in Vitamin B1 (thiamine), affects the cardiovascular and nervous systems. Thus, rickets is uniquely linked to Vitamin D deficiency in children.

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7. What does the term 'nutritional symbiosis' refer to?

A. A mutually beneficial relationship between different nutrients.

B. The process of cooking that enhances nutrient value.

C. A dietary strategy to lose weight effectively.

D. The absorption of nutrients in the gut alone.

The term 'nutritional symbiosis' refers to a mutually beneficial relationship between different nutrients. This concept reflects how various nutrients can interact with each other and enhance each other's absorption and effectiveness in the body. For instance, certain vitamins and minerals may work together to improve nutritional outcomes; for example, vitamin D enhances calcium absorption, while vitamin C can improve iron absorption from plant sources. Understanding nutritional symbiosis is crucial in nutrition science, as it emphasizes the importance of a balanced and varied diet where different food components complement and amplify each other's benefits for optimal health. In contrast, the other choices do not accurately capture the essence of nutritional symbiosis. The process of cooking that enhances nutrient value pertains more to food preparation methods than to the interactions between nutrients themselves. A dietary strategy for effective weight loss focuses on calorie control and food selection rather than on nutrient interactions. Lastly, the absorption of nutrients in the gut alone implies a solitary process rather than a synergistic relationship that nutritional symbiosis entails.

8. True or false: Water intoxication can lead to hypernatremia.

A. True

B. False

C. Depends on individual factors

D. Only in severe cases

Water intoxication refers to a condition that occurs when there is an excessive intake of water, leading to a dilution of electrolytes in the body, particularly sodium. This can result in a condition known as hyponatremia, where sodium levels in the blood become abnormally low. In hypernatremia, the opposite occurs: there is a high concentration of sodium in the blood, typically due to dehydration or inadequate fluid intake relative to sodium intake. Therefore, water intoxication, characterized by an excess of water, does not lead to hypernatremia, as it dilutes sodium rather than concentrating it. Understanding the relationship between fluid balance and sodium levels is essential for recognizing how conditions like water intoxication affect electrolyte levels. This form of metabolic disturbance emphasizes the importance of maintaining a balance between fluid intake and electrolyte levels for optimal health.

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9. What is a common early sign of Vitamin C deficiency?

A. Night blindness

B. Bleeding gums

C. Diarrhea

D. Dermatitis

Bleeding gums is a common early sign of Vitamin C deficiency, which is also known as scurvy. Vitamin C, or ascorbic acid, plays a crucial role in the synthesis of collagen, an important protein that helps maintain the integrity of various tissues in the body, including the gums. When there is a deficiency in vitamin C, the collagen produced is weaker, leading to weakened blood vessels and an increase in bleeding, which is often observed in the gums as they become inflamed and prone to bleeding during normal brushing or flossing. While other signs of Vitamin C deficiency can include issues like night blindness, dermatitis, or diarrhea, these are not typically the earliest manifestations. Night blindness is more related to Vitamin A deficiency, dermatitis may arise from various causes not strictly limited to vitamin deficiencies, and diarrhea is a non-specific symptom that can be linked to many other health issues. Thus, bleeding gums stands out as a classic and recognizable early indicator of Vitamin C deficiency.

10. What organ serves as the major metabolic center of the body?

A. Heart

B. Liver

C. Kidney

D. Brain

The liver serves as the major metabolic center of the body due to its critical roles in numerous metabolic processes. It is involved in the regulation of carbohydrate, fat, and protein metabolism, making it essential for maintaining overall metabolic homeostasis. One of its key functions is gluconeogenesis, where the liver produces glucose from non-carbohydrate sources, which is vital for maintaining blood glucose levels during fasting or low carbohydrate intake. Additionally, the liver is responsible for the metabolism of fats, converting them into fatty acids and molecules that can be used for energy. The liver also plays a crucial role in protein metabolism, including the synthesis of albumin and clotting factors. It helps to process and detoxify various substances, including drugs and alcohol, transforming them into less harmful compounds for excretion. Furthermore, the liver stores essential nutrients, such as vitamins and minerals, and regulates their release into the bloodstream as required, further emphasizing its role as a metabolic hub in the body.

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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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