

TEXAS A&M UNIVERSITY (TAMU) NUTR 202 FUNDAMENTALS OF HUMAN NUTRITION EXAM 1 PRACTICE (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 description matches the Estimated Energy Requirement (EER)?

- A. Everyday Energy Requirement (EER): general recommended daily calories.
- B. Estimated Excess Requirement (EER): extra calories.
- C. Energy Expenditure Requirement (EER): energy expenditure measure.
- D. Estimated Energy Requirement (EER): general recommendation for how many calories a person should consume in a day.

2. In nutrition, what is a kilocalorie?

- A. The amount of energy required to raise the temperature of 1 gram of water by 1 degree Celsius.
- B. The amount of energy required to raise the temperature of 1 liter of water by 1 degree Celsius.
- C. A unit that measures energy expenditure per minute during exercise.
- D. The amount of energy required to raise the temperature of 1 kilogram of water by 1 degree Celsius.

3. Which statement correctly defines the Tolerable Upper Intake Level (UL)?

- A. Upper Limit Standard (UL): recommended daily max.
- B. Tolerable Upper Intake Level (UL): highest level of daily nutrient intake that poses little risk of adverse health effects to healthy individuals.
- C. Ultra Limit (UL): maximum legal limit.
- D. Tolerable Use Level (UL): allowed usage.

4. How is glycemic load (GL) calculated?

- A. $GL = GI \times \text{grams of carbohydrate per serving} / 100$
- B. $GL = GI \times \text{serving size in grams}$
- C. $GL = \text{calories} / \text{grams of carbohydrate}$
- D. $GL = GI \div \text{grams of carbohydrate per serving}$

5. Which vitamin is fat-soluble?

- A. Vitamin B6
- B. Vitamin E
- C. Vitamin C
- D. Vitamin A

6. Which organ stores and releases bile?

- A. Liver
- B. Pancreas
- C. Gallbladder
- D. Esophagus

7. Which statement best describes the general role of water in nutrition?

- A. Water provides energy for metabolic reactions
- B. Water supports hydration, acts as a solvent, transports nutrients, and helps regulate body temperature
- C. Water is only needed for hydration during exercise
- D. Water has no role in digestion

8. Where is the majority of alcohol absorbed in the digestive system?

- A. Most alcohol is absorbed in the stomach
- B. Most alcohol is absorbed in the small intestine
- C. Alcohol is not absorbed; it is metabolized before absorption
- D. Alcohol is absorbed equally everywhere

9. An electrolyte is best described as which of the following?

- A. A vitamin that acts as a coenzyme.
- B. A mineral that assumes charge when dissolved in water.
- C. A carbohydrate that supplies energy.
- D. A protein that transports oxygen.

10. Which is the fingerlike projection that absorbs nutrients?

- A. Villus
- B. Crypts
- C. Microvillus
- D. Lacteal

Answers

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

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Explanations

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1. Which description matches the Estimated Energy Requirement (EER)?

- A. Everyday Energy Requirement (EER): general recommended daily calories.
- B. Estimated Excess Requirement (EER): extra calories.
- C. Energy Expenditure Requirement (EER): energy expenditure measure.
- D. Estimated Energy Requirement (EER): general recommendation for how many calories a person should consume in a day.**

Estimated Energy Requirement is the general daily calorie target used to maintain energy balance in a person, calculated from age, sex, weight, height, and physical activity. It represents how many calories someone should consume on average each day to keep their weight stable, not how many calories are burned. EER differs from measures of energy expenditure like basal metabolic rate or total energy expenditure because it is an intake guideline, not a description of fuel use. It can vary with activity level and life stage, reflecting the need for different energy intakes as circumstances change. The other terms described are not standard or mix intake with expenditure, so the best description emphasizes that EER is the recommended daily calories to consume.

2. In nutrition, what is a kilocalorie?

- A. The amount of energy required to raise the temperature of 1 gram of water by 1 degree Celsius.
- B. The amount of energy required to raise the temperature of 1 liter of water by 1 degree Celsius.
- C. A unit that measures energy expenditure per minute during exercise.
- D. The amount of energy required to raise the temperature of 1 kilogram of water by 1 degree Celsius.**

The kilocalorie is a unit of energy defined as the amount of heat required to raise the temperature of 1 kilogram of water by 1 degree Celsius. In nutrition, this is the standard way we express the energy content of foods, and it is often referred to simply as a Calorie (capital C). One kilocalorie equals 1000 small calories and about 4184 joules. The option describing raising 1 gram of water by 1°C corresponds to a single small calorie, not a kilocalorie. The option using 1 liter of water is close in magnitude because 1 liter of water has a mass of about 1 kilogram, but the formal definition uses kilograms. The option about energy per minute during exercise describes a rate of energy expenditure, not a total energy amount.

3. Which statement correctly defines the Tolerable Upper Intake Level (UL)?

- A. Upper Limit Standard (UL): recommended daily max.
- B. Tolerable Upper Intake Level (UL): highest level of daily nutrient intake that poses little risk of adverse health effects to healthy individuals.**
- C. Ultra Limit (UL): maximum legal limit.
- D. Tolerable Use Level (UL): allowed usage.

The main idea being tested is what the Tolerable Upper Intake Level represents. The UL is the highest daily amount of a nutrient that is unlikely to cause adverse health effects in healthy people, based on evidence about toxicity and safety. This makes the statement that describes the UL as the highest daily intake that poses little risk to healthy individuals the correct one. It's not a recommended amount to aim for (that's the job of the RDA or AI), and it isn't a legal limit or a usage limit. Some nutrients may not have a defined UL if there isn't enough data to establish a safe ceiling.

4. How is glycemic load (GL) calculated?

A. $GL = GI \times \text{grams of carbohydrate per serving} / 100$

B. $GL = GI \times \text{serving size in grams}$

C. $GL = \text{calories} / \text{grams of carbohydrate}$

D. $GL = GI \div \text{grams of carbohydrate per serving}$

Understanding glycemic load means combining how fast a carbohydrate raises blood glucose with how much carbohydrate you actually eat. The glycemic index shows the speed of the glucose rise, but it doesn't account for portion size. To get the real impact of a serving, you multiply the GI by the grams of carbohydrate in that serving and then divide by 100. So the formula is $GL = GI \times \text{grams of carbohydrate per serving} \div 100$. For example, a food with GI 60 and 20 g of carbohydrate per serving gives $GL = 60 \times 20 \div 100 = 12$, a moderate GL. This measure explains why some high-GI foods aren't as impactful if the carbohydrate per serving is small, and why others with lower GI can produce a high GL if the serving contains a lot of carbohydrate. Other options don't fit because they either omit the division by 100, use calories instead of carbohydrate grams, or divide GI by the carbohydrate amount, which doesn't reflect how GI and portion size combine to influence blood glucose.

5. Which vitamin is fat-soluble?

A. Vitamin B6

B. Vitamin E

C. Vitamin C

D. Vitamin A

Fat-soluble vitamins are those that dissolve in fat and are absorbed along with dietary lipids in the small intestine, then stored in the liver and body fat. They rely on bile and pancreatic enzymes to help with emulsification and uptake, and because they can be stored, they don't need to be consumed every day. Among the vitamins listed, Vitamin A fits this fat-soluble pattern: it is absorbed with dietary fats and stored in tissues, which is a hallmark of fat-soluble vitamins. By contrast, the other options are water-soluble and are typically not stored to the same extent, requiring more regular intake and excretion in urine. Therefore Vitamin A is the fat-soluble choice.

6. Which organ stores and releases bile?

A. Liver

B. Pancreas

C. Gallbladder

D. Esophagus

Bile is produced by the liver and then stored and concentrated in the gallbladder. When fatty foods enter the small intestine, signals trigger the gallbladder to contract and release bile through the biliary ducts into the duodenum to help emulsify fats. This storage and regulated release role is what makes the gallbladder the correct organ here. The liver makes bile but doesn't store it; the pancreas provides digestive enzymes and bicarbonate, not bile; the esophagus only transports food to the stomach.

7. Which statement best describes the general role of water in nutrition?

- A. Water provides energy for metabolic reactions
- B. Water supports hydration, acts as a solvent, transports nutrients, and helps regulate body temperature**
- C. Water is only needed for hydration during exercise
- D. Water has no role in digestion

Water's role in nutrition is to support fluid balance and serve as the medium for nearly all bodily processes. It does not provide energy, but it acts as a solvent that dissolves nutrients and enables enzymes and reactions to occur. It helps transport nutrients, hormones, and wastes through the blood and lymph, and it plays a key part in temperature regulation through sweating and evaporation. Water also participates in digestion by forming saliva and digestive juices and aiding the dissolution and movement of nutrients during absorption, while also lubricating tissues and protecting joints. This combination of hydration, solvent and transport functions, and temperature regulation best captures water's essential roles in nutrition.

8. Where is the majority of alcohol absorbed in the digestive system?

- A. Most alcohol is absorbed in the stomach
- B. Most alcohol is absorbed in the small intestine**
- C. Alcohol is not absorbed; it is metabolized before absorption
- D. Alcohol is absorbed equally everywhere

Alcohol diffuses across the digestive tract membranes, and the small intestine provides the main venue because it has a huge absorptive surface area built by villi and microvilli and a rich blood supply. This combination allows ethanol that has left the stomach to rapidly enter the bloodstream. The stomach does absorb some alcohol, but that portion is relatively small in comparison to what the small intestine takes up. Food in the stomach slows gastric emptying, spreading absorption over a longer period and reducing the peak blood alcohol concentration, but it doesn't shift the majority of absorption away from the small intestine. A small amount can also be metabolized in the stomach, but most alcohol that reaches the bloodstream comes from the small intestine, so the majority is absorbed there.

9. An electrolyte is best described as which of the following?

- A. A vitamin that acts as a coenzyme.
- B. A mineral that assumes charge when dissolved in water.**
- C. A carbohydrate that supplies energy.
- D. A protein that transports oxygen.

Electrolytes are minerals that dissolve in water and dissociate into charged particles (ions). That ionization lets them conduct electricity in solution and participate in essential bodily functions like maintaining fluid balance, transmitting nerve signals, and enabling muscle contraction. Because they form charged species when dissolved, the best description is a mineral that assumes charge when dissolved in water.

Non-electrolytes—such as carbohydrates or proteins—do not separate into ions in solution, so they don't fit this concept as well.

10. Which is the fingerlike projection that absorbs nutrients?

- A. Villus**
- B. Crypts**
- C. Microvillus**
- D. Lacteal**

Absorption in the small intestine relies on structures that maximize surface area. The fingerlike projections extending into the lumen are villi, and they are the primary sites for nutrient absorption. Each villus contains a network of capillaries to absorb sugars and amino acids and a central lacteal for absorbing fats, making them well-suited for transferring nutrients into circulation. Microvilli are tiny projections on the epithelial cells of each villus that further increase surface area, but they are not the large fingerlike projections themselves. Crypts are glands at the base that renew the lining and do not protrude into the lumen. The lacteal is the lymphatic vessel inside the villus that transports absorbed fats, not the projecting structure itself. So the fingerlike projection that absorbs nutrients is the villus.

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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:

<https://tamu-nutr202exam1.examzify.com>

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

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