

TCC NUTRITION 101 PRACTICE TEST (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 is an example of choosing nutrient-dense foods for a meal?**
 - A. A can of soda
 - B. A spinach salad with colorful vegetables
 - C. A bag of chips
 - D. A chocolate bar
- 2. Which nutrient yields the most energy per gram?**
 - A. Carbohydrates
 - B. Vitamins
 - C. Proteins
 - D. Lipids
- 3. What is energy density?**
 - A. Calories per serving
 - B. Kilocalories per gram of food
 - C. Grams of fat per serving
 - D. Total energy per day
- 4. When we eat fiber, the microbiome produces _____ from the fiber digestion that can then reduce inflammation.**
 - A. Butyrate
 - B. Glucose
 - C. Acetate
 - D. Lactate
- 5. Which government agency regulates food labels in the United States?**
 - A. U.S. Food and Drug Administration (FDA)
 - B. United States Department of Agriculture (USDA)
 - C. Federal Trade Commission (FTC)
 - D. Centers for Disease Control and Prevention (CDC)

- 6. MyPlate guidance emphasizes that half the plate should be comprised of which category?**
- A. The plate should be loaded with fats and sugars only.
 - B. Half the plate should be vegetables and fruits.
 - C. The plate should be mostly grains with little protein.
 - D. The plate should be filled with protein only.
- 7. Which formula is commonly used to estimate basal metabolic rate (BMR) in adults?**
- A. Mifflin-St Jeor equation.
 - B. Cunningham equation.
 - C. Fried's formula.
 - D. Body surface area method.
- 8. Which statement describes nutrient density?**
- A. They describe foods that provide more calories than nutrients
 - B. They describe foods that deliver micronutrients relative to calories
 - C. They describe foods with no carbohydrates
 - D. They describe foods with zero fat
- 9. The immune system uses this amino acid as much as, or more so, than glucose for fuel:**
- A. Glutamine
 - B. Arginine
 - C. Leucine
 - D. Lysine
- 10. Proteins that act to speed up body processes are called**
- A. Hormones
 - B. Enzymes
 - C. Antibodies
 - D. Carbohydrates

Answers

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

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Explanations

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1. Which is an example of choosing nutrient-dense foods for a meal?

- A. A can of soda
- B. A spinach salad with colorful vegetables**
- C. A bag of chips
- D. A chocolate bar

Choosing nutrient-dense foods means selecting foods that deliver a lot of vitamins, minerals, and fiber relative to their calorie content. A spinach salad with colorful vegetables provides multiple vitamins (like vitamin A from leafy greens and vitamin C from peppers or tomatoes), minerals such as iron and potassium, and dietary fiber, along with various phytonutrients. This mix gives more essential nutrients per bite compared to other options, while typically staying lower in empty calories. In contrast, a can of soda mainly adds sugars and calories without meaningful micronutrients. A bag of chips and a chocolate bar supply energy from fats and sugars but offer relatively few vitamins, minerals, or fiber. So, the spinach salad stands out as the healthiest choice for a meal in terms of nutrient density.

2. Which nutrient yields the most energy per gram?

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

Energy density across macronutrients shows that lipids produce the most energy per gram. Lipids yield about 9 kilocalories per gram, which is higher than the roughly 4 kcal per gram provided by both carbohydrates and proteins. This higher energy yield comes from the chemical structure of fats, which contains many carbon-hydrogen bonds that release a lot of energy when oxidized during metabolism. Vitamins, in contrast, do not supply usable energy; they act as cofactors and helpers in metabolic processes rather than as calorie sources. So, among the options, fats deliver the greatest energy per gram.

3. What is energy density?

- A. Calories per serving
- B. Kilocalories per gram of food**
- C. Grams of fat per serving
- D. Total energy per day

Energy density describes how many calories are packed into a given weight of food, expressed as kilocalories per gram. This helps compare foods by how energy-rich they are per unit of weight, regardless of how much you decide to eat. For example, 100 g of watermelon has far fewer calories than 100 g of almonds, even if you eat similar portions, because water and fiber dilute the energy in the watermelon. That per-gram measure shows why some foods can fill you up with relatively few calories while others deliver a lot of energy in a small amount of food. Thus the statement that energy density is kilocalories per gram of food captures the definition precisely. Calories per serving depend on portion size, total energy per day sums daily intake, and grams of fat per serving measures a nutrient, not the energy density of the whole food.

4. When we eat fiber, the microbiome produces _____ from the fiber digestion that can then reduce inflammation.

- A. Butyrate
- B. Glucose**
- C. Acetate
- D. Lactate

Fiber fermentation by gut microbes yields short-chain fatty acids that help regulate inflammation. The key anti-inflammatory fatty acid produced from this process is butyrate. It serves as the main energy source for colon cells, supports a healthy gut barrier, and modulates immune signaling to reduce inflammatory responses. While acetate and propionate are also produced from fiber, butyrate has the strongest link to lowering inflammation in the gut. Glucose is not a direct product of fiber fermentation by the microbiome, and lactate is more of an intermediate than the primary anti-inflammatory mediator.

5. Which government agency regulates food labels in the United States?

- A. U.S. Food and Drug Administration (FDA)**
- B. United States Department of Agriculture (USDA)
- C. Federal Trade Commission (FTC)
- D. Centers for Disease Control and Prevention (CDC)

In the United States, the agency that regulates most food labels is the FDA. This agency sets the rules for what must appear on packaged foods, including the Nutrition Facts panel, ingredient list, allergen declarations, and serving sizes. These labeling requirements help consumers compare products and make informed choices. For meat, poultry, and certain egg products, labeling is handled by the USDA's Food Safety and Inspection Service, which is why those items follow different labeling rules. The FTC isn't responsible for how foods are labeled (it handles advertising claims), and the CDC focuses on public health rather than label regulation.

6. MyPlate guidance emphasizes that half the plate should be comprised of which category?

- A. The plate should be loaded with fats and sugars only.
- B. Half the plate should be vegetables and fruits.**
- C. The plate should be mostly grains with little protein.
- D. The plate should be filled with protein only.

Half the plate should be vegetables and fruits. This reflects MyPlate's emphasis on plant foods that provide fiber, vitamins, and minerals. A variety of vegetables, especially colorful ones, helps with fullness and nutrient intake, while fruits add vitamins and natural sweetness. The remaining portion is typically split between whole grains and lean protein, with a side of dairy, creating a balanced meal. The other approaches don't fit because they center fats and sugars, or place too much emphasis on grains with little protein, or on protein only, which misses the balance MyPlate promotes.

7. Which formula is commonly used to estimate basal metabolic rate (BMR) in adults?

- A. Mifflin-St Jeor equation.**
- B. Cunningham equation.
- C. Fried's formula.
- D. Body surface area method.

Estimating resting energy expenditure helps determine how many calories a person needs at rest, which guides daily energy targets. The Mifflin-St Jeor equation is the most commonly used in adults because it was developed with modern populations and tends to be accurate across a wide range of body sizes and ages using simple inputs: weight, height, age, and sex. The formula gives two versions: for men, BMR is 10 times weight plus 6.25 times height minus 5 times age plus 5; for women, it's the same components but minus 161 instead of plus 5. This balance of factors closely mirrors how metabolic rate changes with body size and aging, making it a standard choice in clinical and nutrition practice. Other methods, like the Cunningham equation which uses fat-free mass, can be more precise for lean individuals but require body composition data; methods based on body surface area or older, less accurate formulas don't align as well with typical adult energy needs. That's why Mifflin-St Jeor is the best-fitting choice for estimating BMR in adults.

8. Which statement describes nutrient density?

- A. They describe foods that provide more calories than nutrients
- B. They describe foods that deliver micronutrients relative to calories**
- C. They describe foods with no carbohydrates
- D. They describe foods with zero fat

Nutrient density describes how many vitamins and minerals you get for a given amount of energy. Foods that are nutrient-dense deliver a lot of micronutrients relative to their calories, meaning you get more nutrients per calorie. This is useful for meeting daily vitamin and mineral needs without consuming a lot of extra calories. For example, leafy greens or colorful vegetables provide substantial micronutrients without a large calorie load. The idea isn't that a nutrient-dense food must have no carbohydrates or no fat; fats and carbohydrates can be part of nutrient-dense foods, as long as the micronutrient content per calorie is high. In contrast, foods that are high in calories but low in nutrients offer fewer micronutrients per calorie.

9. The immune system uses this amino acid as much as, or more so, than glucose for fuel:

- A. Glutamine**
- B. Arginine
- C. Leucine
- D. Lysine

Glutamine acts as a major fuel for immune cells. When the immune system is activated, lymphocytes and macrophages take up a lot of glutamine and use it through glutaminolysis to feed the TCA cycle (via conversion to alpha-ketoglutarate), supporting both energy production and the biosynthesis needs of rapidly dividing cells. It also supplies nitrogen for making nucleotides and helps maintain redox balance, which are all crucial during an immune response. While glucose is still important, the demand for glutamine increases enough that it becomes a key energy source for immune cells, sometimes rivaling or surpassing glucose in this context. Arginine has important roles in signaling and nitric oxide production, but not as the primary fuel. Leucine and lysine are essential for protein synthesis and other functions, but they aren't used by immune cells to the same extent as glutamine for energy during activation.

10. Proteins that act to speed up body processes are called

- A. Hormones
- B. Enzymes**
- C. Antibodies
- D. Carbohydrates

Enzymes are proteins that act as catalysts to speed up chemical reactions in the body. They do this by lowering the activation energy, the energy barrier a reaction must overcome, so reactions occur more rapidly at body temperature. Each enzyme has a specific shape with an active site that binds a matching substrate, giving it precision in which reactions it can accelerate. This catalytic role is why they control the rate of many metabolic processes, from digestion to energy production. Hormones are signaling molecules that regulate activities between organs, not direct catalysts. Antibodies are immune system proteins that recognize and neutralize foreign invaders. Carbohydrates are energy-containing molecules or structural components, not catalysts.

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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://tccnutrition101.examzify.com>

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

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