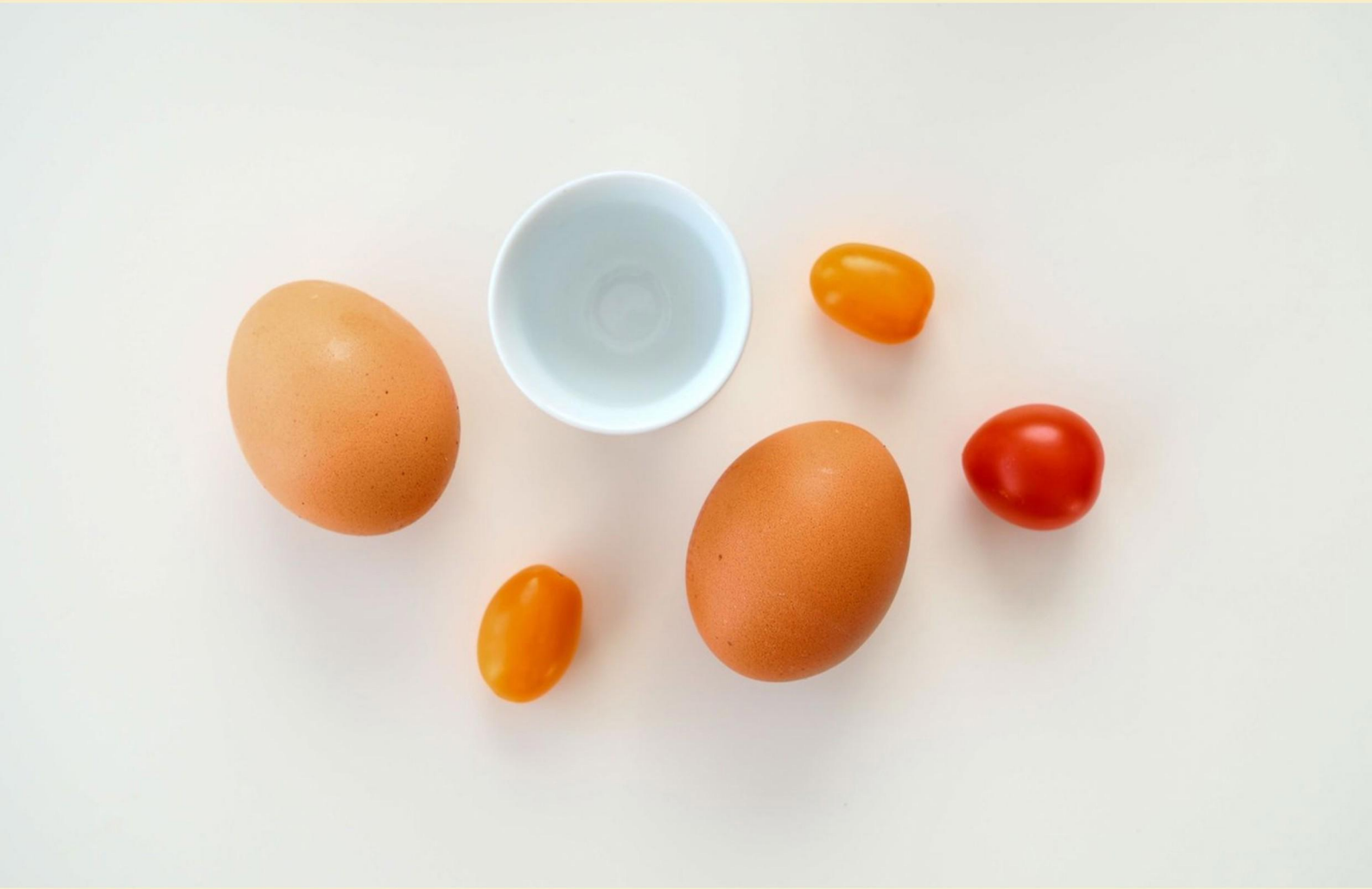
RUTGERS NUTRITION AND HEALTH EXAM 2 PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

https://rutgersnutritionhealth2.examzify.com

Table of Contents

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. After entering the bloodstream, chylomicrons travel to which tissues before delivering remnants to the liver?

A. Bone, heart, and adipose tissue

B. Brain and muscles

C. Bone, heart, adipose tissue, and then liver

D. Lungs

2. Using the Mifflin–St Jeor equation, what is the approximate BMR for a male who weighs 70 kg, is 175 cm tall, and is 25 years old?

A. 1500 kcal/day

B. 1600 kcal/day

C. 1674 kcal/day

D. 1800 kcal/day

3. Which fatty acid is the primary omega-6 fatty acid?

A. Linoleic acid

B. Linolenic acid

C. Arachidonic acid

D. Palmitic acid

4. Eating the RDA amount of protein results in which nitrogen status?

A. Nitrogen balanced

B. Positive nitrogen balance

C. Negative nitrogen balance

D. Nitrogen imbalance

5. Identify the major digestive enzymes and where they act.

A. Proteases digest carbohydrates in the mouth; amylase digests fats in the pancreas; lipase digests proteins in the stomach.

B. Amylase in the mouth and pancreas digests carbohydrates; proteases (pepsin in stomach; trypsin and chymotrypsin in small intestine) digest proteins; lipase digests fats.

C. Lactase is the main enzyme for fats; amylase in the liver; proteases in the pancreas.

D. Amylase digests fats; proteases digest carbohydrates; lipase digests proteins.

6. After a meal rich in amino acids, what happens to protein metabolism?

A. Protein breakdown decreases and synthesis increases somewhat

B. Protein breakdown increases

C. Protein synthesis stops

D. No change occurs

7. Which cells become foam cells after taking up LDL in arterial walls?

A. Endothelial cells

B. Platelets

C. Smooth muscle cells

D. Macrophages

8. Name the three main coronary arteries.

A. Right coronary artery, posterior descending artery, and left marginal artery

B. Right coronary artery, left anterior descending (LAD) artery, and circumflex artery

C. Aorta, pulmonary artery, and superior mesenteric artery

D. Renal arteries, hepatic artery, and splenic artery

9. Why is arachidonic acid described as a 'Dr. Jekyll and Mr. Hyde' fatty acid?

A. Because it is only beneficial

B. Because it is only harmful

C. Because it can participate in both pro-inflammatory and potentially beneficial signaling

D. Because it is not found in the brain

10. How is vitamin B12 absorbed, and who is at higher risk of deficiency?

A. B12 is absorbed in the ileum with intrinsic factor; higher risk in older adults and those with pernicious anemia or vegan diets.

B. B12 absorbed in the stomach without intrinsic factor.

C. B12 absorbed in the colon; risk in athletes.

D. B12 absorbed in the jejunum with pancreatic enzymes; risk in older adults.

Answers

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

Explanations

1. After entering the bloodstream, chylomicrons travel to which tissues before delivering remnants to the liver?

A. Bone, heart, and adipose tissue

B. Brain and muscles

C. Bone, heart, adipose tissue, and then liver

D. Lungs

After a fat-containing meal, chylomicrons enter the bloodstream and travel to tissues that have lipoprotein lipase on their capillary beds. The primary sites where they unload triglycerides are adipose tissue, which stores fatty acids, and cardiac/skeletal muscle, which uses fatty acids for energy. Once most of the triglycerides are delivered, the chylomicron remnant is taken up by the liver via apoE receptors. So the sequence is delivery to heart (muscle) and adipose tissue first, then the remnants return to or are delivered to the liver.

2. Using the Mifflin–St Jeor equation, what is the approximate BMR for a male who weighs 70 kg, is 175 cm tall, and is 25 years old?

A. 1500 kcal/day

B. 1600 kcal/day

C. 1674 kcal/day

D. 1800 kcal/day

The calculation uses the Mifflin–St Jeor equation for men: BMR = 10 × weight (kg) + 6.25 × height (cm) − 5 × age (years) + 5. Plugging in 70 kg, 175 cm, and 25 years: - 10 × 70 = 700 - 6.25 × 175 = 1093.75 - 5 × 25 = 125, so −125 - +5 at the end Total = 700 + 1093.75 − 125 + 5 = 1673.75 kcal/day, about 1674 kcal/day. So the best choice is the one around 1674 kcal/day.

3. Which fatty acid is the primary omega-6 fatty acid?

A. Linoleic acid

B. Linolenic acid

C. Arachidonic acid

D. Palmitic acid

Linoleic acid is the primary omega-6 fatty acid. It is an essential fatty acid in the omega-6 family, meaning the body cannot make it and it must be obtained from the diet. Its structure is 18 carbons with two double bonds (18:2, n-6), and it serves as the main dietary source of omega-6 fats and a precursor to other omega-6 compounds. Linolenic acid, in contrast, is an omega-3 fatty acid (18:3, n-3). Arachidonic acid is a longer omega-6 fatty acid derived from linoleic acid, not the primary dietary omega-6. Palmitic acid is a saturated fatty acid (16:0) and is not an omega-6.

4. Eating the RDA amount of protein results in which nitrogen status?

A. Nitrogen balanced

B. Positive nitrogen balance

C. Negative nitrogen balance

D. Nitrogen imbalance

Nitrogen balance is the key idea here: your body's nitrogen comes from dietary protein, and it's lost mainly in urine as urea, plus some from sweat and feces. When the nitrogen you take in matches what you lose, you're in nitrogen balance — no net gain or loss of body protein. The RDA for protein is set to keep healthy adults in that balanced state, roughly 0.8 g of protein per kilogram of body weight per day. So eating the RDA amount provides just enough protein to replace the nitrogen lost, maintaining equilibrium. If you consumed more protein than you lose, you'd have a positive nitrogen balance (as in growth or muscle building). If you consumed less, or if losses were higher due to illness or stress, you'd have a negative nitrogen balance. Nitrogen imbalance isn't a normal steady state in healthy adults. So, eating the RDA amount of protein results in nitrogen balanced.

5. Identify the major digestive enzymes and where they act.

A. Proteases digest carbohydrates in the mouth; amylase digests fats in the pancreas; lipase digests proteins in the stomach.

B. Amylase in the mouth and pancreas digests carbohydrates; proteases (pepsin in stomach; trypsin and chymotrypsin in small intestine) digest proteins; lipase digests fats.

C. Lactase is the main enzyme for fats; amylase in the liver; proteases in the pancreas.

D. Amylase digests fats; proteases digest carbohydrates; lipase digests proteins.

Understanding how the major digestive enzymes work across the digestive tract helps explain why this option is correct. Carbohydrates are first targeted by amylase, which starts in the mouth from the saliva and then continues in the small intestine with pancreatic amylase, breaking down starches into simpler sugars. Proteins are digested by proteases in two key places: pepsin in the stomach begins protein breakdown in the acidic environment, and in the small intestine the pancreatic proteases trypsin and chymotrypsin finish the job, producing peptides that are further digested by other enzymes. Fats are mainly digested by lipase in the small intestine, with bile salts helping to emulsify fats and allow lipase to access triglycerides effectively. This pattern—amylase for carbohydrates in the mouth and pancreas, proteases (pepsin in the stomach and trypsin/chymotrypsin in the small intestine) for proteins, and lipase for fats—matches the statement described.

6. After a meal rich in amino acids, what happens to protein metabolism?

A. Protein breakdown decreases and synthesis increases somewhat

B. Protein breakdown increases

C. Protein synthesis stops

D. No change occurs

After a meal rich in amino acids, the body shifts into an anabolic, fed state where building new proteins is favored. The sudden rise in amino acids stimulates protein synthesis in tissues like skeletal muscle, providing the substrates and signaling that drive translation and growth. At the same time, insulin released in response to the meal further promotes synthesis and also suppresses proteolysis, reducing the breakdown of existing proteins. Because synthesis is increased and breakdown is decreased, the net protein balance moves toward gain, though the rise in synthesis is not infinite—it's a partial, positive shift. This is why the correct view is that protein breakdown decreases and synthesis increases somewhat.

7. Which cells become foam cells after taking up LDL in arterial walls?

A. Endothelial cells

B. Platelets

C. Smooth muscle cells

D. Macrophages

Foam cells come from macrophages that ingest modified LDL in the arterial wall. When macrophages encounter LDL that has been altered (often oxidized) during inflammation and atherogenesis, they take it up through scavenger receptors. Unlike normal cells, macrophages don't downregulate cholesterol uptake the way other cells might, so they accumulate cholesterol esters inside lipid droplets. This buildup gives the macrophages a foamy, lipid-laden appearance under the microscope and helps form the fatty streaks that initiate atherosclerotic plaques. Endothelial cells line the vessel lining and aren't the lipid-laden foam cells; platelets aren't known for accumulating lipids to become foam cells; smooth muscle cells can become lipid-laden to some extent, but the classic and most characteristic foam cells in arterial walls are macrophages.

8. Name the three main coronary arteries.

A. Right coronary artery, posterior descending artery, and left marginal artery

B. Right coronary artery, left anterior descending (LAD) artery, and circumflex artery

C. Aorta, pulmonary artery, and superior mesenteric artery

D. Renal arteries, hepatic artery, and splenic artery

The main coronary arteries are the right coronary artery, the left anterior descending artery, and the circumflex artery. The left coronary artery quickly divides into the LAD and the circumflex, and together with the RCA they supply the heart muscle. The posterior descending artery is typically a branch of the RCA (or sometimes the circumflex), so it isn't counted as one of the primary trunks. The other vessels listed (aorta, pulmonary artery, and the renal/hepatic/splenic arteries) are not coronary arteries.

9. Why is arachidonic acid described as a 'Dr. Jekyll and Mr. Hyde' fatty acid?

A. Because it is only beneficial

B. Because it is only harmful

C. Because it can participate in both pro-inflammatory and potentially beneficial signaling

D. Because it is not found in the brain

Arachidonic acid acts as a double-edged signaling molecule, because it serves as a substrate for enzymes that generate a range of signaling molecules with opposite effects. When released from membrane phospholipids, it can be converted by cyclooxygenases into prostaglandins and thromboxanes that promote inflammation, pain, and fever, and by lipoxygenases into leukotrienes that recruit immune cells. At the same time, other AA-derived mediators, including certain lipoxins and other pro-resolving molecules, help to dampen inflammation and promote healing. The outcome depends on the cellular context, enzyme activity, and the balance of pathways active at a given time. In the brain, arachidonic acid is part of normal neuronal signaling, and its metabolites can participate in both promoting and resolving inflammatory processes. So its role is not purely harmful or purely beneficial, which is why it's described as a Dr. Jekyll and Mr. Hyde fatty acid.

10. How is vitamin B12 absorbed, and who is at higher risk of deficiency?

A. B12 is absorbed in the ileum with intrinsic factor; higher risk in older adults and those with pernicious anemia or vegan diets.

B. B12 absorbed in the stomach without intrinsic factor.

C. B12 absorbed in the colon; risk in athletes.

D. B12 absorbed in the jejunum with pancreatic enzymes; risk in older adults.

Vitamin B12 absorption relies on intrinsic factor produced in the stomach. The B12-IF complex travels to the ileum, where it binds to receptors and is absorbed. This is why deficiency risk is higher when intrinsic factor is absent or reduced—such as in pernicious anemia or gastric atrophy common in older adults. Vegan diets also raise risk because B12 is mainly found in animal products. The other options mistake where absorption occurs or omit the essential role of intrinsic factor.

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://rutgersnutritionhealth2.examzify.com

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