

TEXAS A&M UNIVERSITY (TAMU) NUTR 320 UNDERSTANDING OBESITY - A SOCIAL AND SCIENTIFIC CHALLENGE EXAM 1 PRACTICE (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE

<https://tamu-nurt320exam1.examzify.com>



Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	15

SAMPLE

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

SAMPLE

- 1. Energy balance is defined as which of the following relationships?**
 - A. The relationship between energy intake and energy output
 - B. The combination of vitamin and mineral intake
 - C. The rate of ATP turnover
 - D. The rate of energy storage in tissue
- 2. Which BMI range defines Class 1 low risk?**
 - A. 28-32.9 BMI
 - B. 30-34.9 BMI
 - C. 25-29.9 BMI
 - D. 34-39.9 BMI
- 3. Which statement about BMI and age is noted in the material?**
 - A. On average older adults have more fat than young adults
 - B. BMI increases with age
 - C. BMI decreases with age
 - D. There is no age difference
- 4. One pair of chromosomes is the sex chromosomes.**
 - A. The sex chromosomes determine male or female and some other body characteristics
 - B. Autosomal chromosomes determine sex
 - C. There are no sex chromosomes in humans
 - D. Sex chromosomes are identical in all individuals
- 5. Which statement best describes dominant and recessive traits?**
 - A. Dominant traits never expressed
 - B. Recessive traits expressed only if both alleles recessive
 - C. If one allele is dominant, the trait cannot manifest
 - D. Dominant traits require two copies
- 6. Which BMI range defines Class 2 (moderate risk)?**
 - A. 40-49.9 BMI
 - B. 25-29.9 BMI
 - C. 35-39.9 BMI
 - D. 50+ BMI

- 7. DNA methylation modifies gene expression by which mechanism?**
- A. Recruits transcription factors to promote expression
 - B. Destroys DNA sequence
 - C. Adds a methyl group to DNA to modify gene expression
 - D. Translates DNA to protein
- 8. Anabolism refers to which process?**
- A. Breaking down molecules to release energy
 - B. Building larger molecules from smaller molecules, requiring energy
 - C. The transport of nutrients across membranes
 - D. The breakdown of fats to fatty acids
- 9. Which statement best reflects gender differences at equivalent BMI as described in the material?**
- A. Men have more fat than women at equal BMI
 - B. Women have more fat than men at equal BMI
 - C. Fat distribution is the same for both genders at equal BMI
 - D. Women have less fat than men at equal BMI
- 10. Which frame is described as inviting governmental action?**
- A. Systemic Frame
 - B. Individualized Frame
 - C. Community Frame
 - D. Organizational Frame

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. Energy balance is defined as which of the following relationships?

- A. The relationship between energy intake and energy output**
- B. The combination of vitamin and mineral intake
- C. The rate of ATP turnover
- D. The rate of energy storage in tissue

Energy balance is about comparing the energy you take in from food and drink with the energy you use through metabolism and activity. If intake matches output, your weight stays the same; if intake exceeds output, energy is stored (usually as fat) and you gain weight; if intake is less than output, stored energy is used and you lose weight. The other options describe different ideas—micronutrient intake, the rate at which the cell uses ATP, or how quickly energy is stored—none of which capture the overall balance between calories consumed and calories spent.

2. Which BMI range defines Class 1 low risk?

- A. 28-32.9 BMI
- B. 30-34.9 BMI**
- C. 25-29.9 BMI
- D. 34-39.9 BMI

Class I obesity is defined by a BMI of 30 to 34.9. This is the lowest obesity category, so it's seen as having relatively lower risk for obesity-related health problems than higher obesity classes, though higher risk than normal weight or overweight. Among the given ranges, the 30 to 34.9 window matches the official Class I definition, making it the correct selection. The 25 to 29.9 range is overweight, the 34 to 39.9 range is Class II obesity, and 28 to 32.9 does not align with the standard single-cutoff range for Class I.

3. Which statement about BMI and age is noted in the material?

- A. On average older adults have more fat than young adults
- B. BMI increases with age
- C. BMI decreases with age**
- D. There is no age difference

The main point is how BMI changes as people get older. In this material, BMI is described as decreasing with age. That aligns with patterns where total body mass, including lean tissue, tends to decline in many older adults due to aging processes, illness, or reduced appetite and activity. Even though fat can accumulate, the overall weight loss common in later life can lead to a lower BMI on average compared with younger adults. It's also worth noting that BMI is a rough measure and its interpretation can shift with aging, but the material emphasizes a downward trend in BMI with increasing age. The other statements don't fit that material's point: BMI rising with age would imply higher BMI in older adults, which contradicts the described trend; claiming no age difference would negate any age-related change; and saying older adults have more fat than young adults implies higher adiposity, which would generally correspond to a higher BMI, not the observed decrease.

4. One pair of chromosomes is the sex chromosomes.

- A. The sex chromosomes determine male or female and some other body characteristics
- B. Autosomal chromosomes determine sex
- C. There are no sex chromosomes in humans
- D. Sex chromosomes are identical in all individuals

Sex chromosomes are the pair that determine sex and carry genes that influence other traits. In humans, the combination XX typically leads to female development and XY leads to male development, with the Y chromosome providing key genes like SRY that kick off male differentiation. But these chromosomes also contain genes that affect various characteristics beyond sexual development, so they influence more than just sex. Autosomal chromosomes, by contrast, carry the majority of traits and do not determine sex. There are sex chromosomes in humans, and they are not identical in all individuals—males have XY while females have XX, with variation possible in some cases.

5. Which statement best describes dominant and recessive traits?

- A. Dominant traits never expressed
- B. Recessive traits expressed only if both alleles recessive
- C. If one allele is dominant, the trait cannot manifest
- D. Dominant traits require two copies

In Mendelian inheritance, a dominant allele can mask the effect of a recessive allele in a heterozygous individual, so the trait associated with the dominant allele is expressed when at least one copy is present. A recessive trait, however, only appears when both copies are the recessive form, because there is no dominant allele to mask it. This is why the statement that recessive traits are expressed only if both alleles are recessive best captures how these traits are expressed. The other ideas conflict with what we observe: a dominant trait can show up with just one dominant allele, a dominant trait does not inherently require two copies, and saying dominant traits are never expressed is simply incorrect.

6. Which BMI range defines Class 2 (moderate risk)?

- A. 40-49.9 BMI
- B. 25-29.9 BMI
- C. 35-39.9 BMI
- D. 50+ BMI

BMI categories show increasing health risk as weight rises. A BMI in the range of 35 to 39.9 falls into Class II obesity, which is described as moderate risk in this context. This level signals substantial excess body fat and a higher likelihood of obesity-related problems such as insulin resistance, hypertension, and cardiovascular concerns compared with Class I, but it isn't the highest risk category—that would be a BMI of 40 or higher. The 25–29.9 range is simply overweight, and 40+ represents Class III obesity with the greatest risk. Remember, BMI is an estimate and doesn't account for muscle vs. fat or fat distribution, but it's the standard cut used to define these obesity categories.

7. DNA methylation modifies gene expression by which mechanism?

- A. Recruits transcription factors to promote expression
- B. Destroys DNA sequence
- C. Adds a methyl group to DNA to modify gene expression**
- D. Translates DNA to protein

DNA methylation changes gene expression by adding a methyl group to cytosine bases, usually at CpG sites. This chemical tag doesn't alter the DNA sequence, but it affects how accessible the DNA is to the transcription machinery. Methyl groups can block transcription factor binding and recruit proteins that tighten chromatin, leading to reduced transcription of the gene. So methylation acts as a switch that can suppress expression rather than create new proteins or destroy DNA. The other ideas misstate the mechanism: methylation doesn't destroy the sequence, it doesn't translate DNA to protein, and it doesn't recruit factors to boost expression.

8. Anabolism refers to which process?

- A. Breaking down molecules to release energy
- B. Building larger molecules from smaller molecules, requiring energy**
- C. The transport of nutrients across membranes
- D. The breakdown of fats to fatty acids

Anabolism is the process of building larger, more complex molecules from smaller ones, and it requires energy input, usually in the form of ATP. This is how cells grow and synthesize essential components, such as proteins from amino acids, glycogen or lipids from simpler precursors, and nucleic acids from nucleotides. The key idea is synthesis that consumes energy to form new bonds and larger structures. Breaking down molecules to release energy describes catabolism, which provides energy and building blocks but is the opposite type of process. The transport of nutrients across membranes is a transport function, not a synthesis of bigger molecules. The breakdown of fats to fatty acids is a catabolic process called lipolysis, not an anabolic one.

9. Which statement best reflects gender differences at equivalent BMI as described in the material?

- A. Men have more fat than women at equal BMI
- B. Women have more fat than men at equal BMI
- C. Fat distribution is the same for both genders at equal BMI
- D. Women have less fat than men at equal BMI**

The main idea here is that BMI mixes fat and lean tissue into one number, so two people with the same BMI can have different amounts of fat. In the material's framing, the pattern described is that at equal BMI, women have less fat than men. This means the weight that men carry at the same BMI is drawn more from fat mass, while women, having less fat, show a smaller fat contribution for that same BMI. This helps illustrate why BMI alone can miss important differences in body composition between genders and why health implications can differ even when BMI is the same.

10. Which frame is described as inviting governmental action?

- A. Systemic Frame
- B. Individualized Frame**
- C. Community Frame
- D. Organizational Frame

Frames used to describe approaches to addressing obesity include systemic, individualized, community, and organizational, each shaping what kinds of actions are considered appropriate. When a frame invites governmental action, it centers on providing supports to individuals through public programs and resources designed to help them change behavior. The individualized frame emphasizes helping people directly, often through government-funded services, subsidies, education, and access to interventions that target the person. This focus on enabling individual change through public support naturally involves government involvement. The other frames prioritize different levels of action: systemic looks at broad structural and policy changes at society or systems level, community emphasizes local collaborations and neighborhood actions, and organizational focuses on changes within institutions. Those frames frame government action differently, often not by directly funding individualized supports, which is why the individualized frame is the best fit for inviting governmental action in this context.

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-nurt320exam1.examzify.com>

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

SAMPLE