

ASSESSMENT TECHNOLOGIES INSTITUTE (ATI) TEST OF ESSENTIAL ACADEMIC SKILLS (TEAS 7) SCIENCE 2026 PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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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 type of muscle tissue is under voluntary control?**
 - A. Smooth
 - B. Cardiac
 - C. Skeletal
 - D. Connective
- 2. Adipocytes maintain proper energy balance by storing calories in the form of what?**
 - A. Carbohydrates
 - B. Proteins
 - C. Lipids
 - D. Vitamins
- 3. What does the gallbladder do with bile?**
 - A. Stores it
 - B. Releases it into the small intestine
 - C. Mixes it with blood
 - D. Digests it
- 4. Where are the elements with the largest atomic radii found on the periodic table?**
 - A. Top right corner
 - B. Middle section
 - C. Bottom left corner
 - D. Top left corner
- 5. Protons and neutrons are primarily located in which part of the atom?**
 - A. Electron cloud
 - B. Nucleus
 - C. Outer shell
 - D. Energy levels

- 6. Which of the following describes the reason groups on the periodic table exhibit similar chemical properties?**
- A. They have the same atomic mass
 - B. They have the same amount of protons
 - C. They have the same amount of valence electrons
 - D. They occupy the same physical state
- 7. What is the term for a specialized structure within a cell?**
- A. Organelle
 - B. Membrane
 - C. Tissue
 - D. Matrix
- 8. When are endocytic vesicles formed?**
- A. When the plasma membrane surrounds a particle outside the cell
 - B. When the cell divides
 - C. When a molecule is broken down
 - D. When ions pass through cell membranes
- 9. What is the symbol for argon?**
- A. Ar
 - B. Krypton
 - C. Xenon
 - D. Iodine
- 10. Anions are best defined as:**
- A. Positively charged ions
 - B. Neutral ions formed by losing electrons
 - C. Negative ions formed by gaining electrons
 - D. Atoms with no charge

Answers

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

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Explanations

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1. Which type of muscle tissue is under voluntary control?

- A. Smooth
- B. Cardiac
- C. Skeletal**
- D. Connective

Skeletal muscle tissue is the type of muscle that is under voluntary control. This means that individuals can consciously control the movements of these muscles, which are typically attached to the bones and facilitate movement of the skeletal system. Skeletal muscles are striated in appearance due to their organized structure, which allows for precise and powerful contractions. This control is regulated through the somatic nervous system, allowing us to perform actions like walking, running, or lifting objects. The ability to control skeletal muscles voluntarily is crucial for a range of daily activities and motor functions. In contrast, smooth muscle tissue, found in the walls of hollow organs like the intestines and blood vessels, operates involuntarily and is controlled by the autonomic nervous system. Cardiac muscle, which makes up the heart, is also involuntary and self-regulating, meaning it contracts automatically without conscious control. Connective tissue, while important for support and structure in the body, does not have muscular properties and therefore does not exhibit control similar to the first three options.

2. Adipocytes maintain proper energy balance by storing calories in the form of what?

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

Adipocytes, or fat cells, primarily store energy in the form of lipids, which are substances that are insoluble in water and include fats and oils. When the body consumes more calories than it requires for immediate energy use, the surplus is converted into triglycerides, a type of lipid, and stored in adipocytes. This stored energy can later be mobilized and utilized when the body requires additional energy, particularly during periods of fasting or increased physical activity. Carbohydrates, proteins, and vitamins serve different roles in the body. Carbohydrates are typically utilized for immediate energy needs, while proteins are vital for building and repairing tissues. Vitamins are essential for various biochemical functions but do not serve as a direct form of energy storage. Understanding that lipids are the primary form in which energy is stored in adipose tissue highlights the crucial role of adipocytes in energy metabolism and overall homeostasis in the body.

3. What does the gallbladder do with bile?

- A. Stores it
- B. Releases it into the small intestine**
- C. Mixes it with blood
- D. Digests it

The gallbladder plays a crucial role in the digestion process by storing bile produced by the liver. When food, particularly fats, enters the small intestine, the gallbladder releases this stored bile. This bile helps emulsify dietary fats, breaking them down into smaller droplets, which enhances the action of digestive enzymes and promotes fat absorption in the small intestine. While the gallbladder does indeed store bile, its primary function, especially in relation to the timing of digestion, is to release it when needed. This release is triggered by the presence of fats in the small intestine, thereby facilitating the digestive process. The other options do not accurately describe the gallbladder's function; it does not mix bile with blood or digest it. Understanding this process highlights the importance of the gallbladder in efficiently managing the body's need for bile during digestion.

4. Where are the elements with the largest atomic radii found on the periodic table?

- A. Top right corner
- B. Middle section
- C. Bottom left corner**
- D. Top left corner

The elements with the largest atomic radii are found in the bottom left corner of the periodic table. This is because atomic radius generally increases as you move down a group (column) and decreases as you move from left to right across a period (row). As you descend the periodic table, additional electron shells are added to the atoms, which increases the distance between the nucleus and the outermost electrons, thus increasing the atomic radius. In the bottom left corner, we have elements like cesium and francium, which not only have more electron shells but also have weaker effective nuclear charge acting on those outer electrons, leading to larger atomic sizes. In contrast, elements located at the top right corner typically have the smallest atomic radii because they have fewer electron shells and a higher effective nuclear charge, which pulls the electrons closer to the nucleus. The middle section contains transition metals, which have varying radii, but generally, they do not reach the large sizes seen in the bottom left corner. The top left corner also exhibits relatively small radii when compared to the bottom left.

5. Protons and neutrons are primarily located in which part of the atom?

- A. Electron cloud
- B. Nucleus**
- C. Outer shell
- D. Energy levels

Protons and neutrons are found primarily in the nucleus of the atom. The nucleus is a dense core at the center of the atom that contains these particles, which are collectively known as nucleons. Protons carry a positive charge, while neutrons have no charge. This central nucleus is crucial for defining an atom's identity and its mass, as protons contribute to the element's atomic number, while neutrons contribute to the atomic mass. In contrast, the electron cloud surrounds the nucleus and contains electrons, which are much lighter and negatively charged. The outer shell and energy levels refer to the regions where electrons are located and indicate the distribution of these negatively charged subatomic particles as they occupy specific energy states around the nucleus. The distinction between the nucleus and the electron cloud is essential for understanding atomic structure and behavior.

6. Which of the following describes the reason groups on the periodic table exhibit similar chemical properties?

- A. They have the same atomic mass
- B. They have the same amount of protons
- C. They have the same amount of valence electrons**
- D. They occupy the same physical state

The reason groups on the periodic table exhibit similar chemical properties is that they have the same amount of valence electrons. Valence electrons are the electrons in the outermost shell of an atom and play a critical role in determining how an atom interacts with others during chemical reactions. Atoms within the same group (or column) of the periodic table share the same number of valence electrons, leading them to have similar reactivity and chemical behavior. For example, elements in Group 1, such as lithium and potassium, have one valence electron, which makes them highly reactive metals that readily lose that electron. Similarly, Group 17 elements, known as halogens, have seven valence electrons and tend to gain one electron to achieve a stable electron configuration. This commonality in valence electron configuration is the fundamental reason behind the similar chemical properties observed in elements within the same group. Other options, such as atomic mass, the number of protons, or physical states, do not account for the consistent chemical reactivity across a group, as they either vary widely or do not directly influence the chemical bonding and interactions of the elements.

7. What is the term for a specialized structure within a cell?

- A. Organelle**
- B. Membrane
- C. Tissue
- D. Matrix

An organelle refers to a specialized structure within a cell that has a specific function. Organelles play various roles in cellular processes, such as energy production, protein synthesis, and waste management. Examples of organelles include the nucleus, mitochondria, and endoplasmic reticulum, each contributing to the overall function and maintenance of the cell. The term 'membrane' refers to the protective barrier that surrounds and contains the contents of a cell, regulating what enters and exits, but it does not refer to a specialized structure within the cell itself. 'Tissue' is a collection of similar cells that work together to perform a specific function in an organism, and is a higher level of organization beyond the cellular level. 'Matrix' generally refers to the material or tissue in which more specialized structures are embedded, but it does not specifically denote a structure within a cell. Hence, organelle is the precise terminology for the context of the question.

8. When are endocytic vesicles formed?

- A. When the plasma membrane surrounds a particle outside the cell
- B. When the cell divides
- C. When a molecule is broken down
- D. When ions pass through cell membranes

Endocytic vesicles are formed when the plasma membrane surrounds a particle outside the cell, a process known as endocytosis. This mechanism allows cells to take in external substances by enclosing them within a membrane-bound vesicle. The plasma membrane invaginates, or folds inward, around the material, which can include nutrients, signaling molecules, or other particles. Once the membrane surrounds the particle, it pinches off to form an endocytic vesicle, allowing the substance to be brought into the cell for various purposes such as nutrient uptake or receptor-mediated signaling. The other choices do not accurately describe the formation of endocytic vesicles. Cell division involves processes that do not directly relate to the uptake of external material. The breakdown of a molecule pertains more to degradation processes within the cell, such as those carried out by lysosomes, rather than the formation of vesicles for uptake. Lastly, the movement of ions through cell membranes typically involves channel proteins or transporters and does not involve vesicle formation.

9. What is the symbol for argon?

- A. Ar
- B. Krypton
- C. Xenon
- D. Iodine

The symbol for argon is Ar. Argon is a noble gas found in Group 18 of the periodic table. Each element is represented by a unique one- or two-letter chemical symbol, derived from its English or Latin name. For argon, the symbol "Ar" comes from the first two letters of its name. In contrast, krypton, xenon, and iodine are distinct elements with their own symbols: Kr, Xe, and I, respectively. Each of these elements belongs to different groups and has different properties compared to argon. Understanding the periodic table and the corresponding symbols is crucial for identifying elements and their characteristics in chemistry.

10. Anions are best defined as:

- A. Positively charged ions
- B. Neutral ions formed by losing electrons
- C. Negative ions formed by gaining electrons
- D. Atoms with no charge

Anions are accurately described as negative ions that are formed by the gain of electrons. When an atom gains one or more electrons, it acquires a negative charge due to the imbalance between the number of protons (which are positively charged) and the number of electrons (which are negatively charged). This electron gain transforms the atom into an anion, making it negatively charged. For example, when a chlorine atom gains an electron, it becomes a chloride ion, which is an anion with a negative charge of -1. In the context of the other explanations, positively charged ions are referred to as cations. Neutral ions, on the other hand, would not be classified as anions since they have no net charge. Similarly, an atom with no charge cannot be defined as an anion because it does not involve the gain or loss of electrons to create a charged particle. Thus, the definition of anions aligns perfectly with the idea that these ions are specifically formed by the gain of electrons, leading to a negative charge.

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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