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

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

https://ati-teas7science2025.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.

SAMPLE

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!

SAMPLE

Questions

SAMPLE

1. Which type of RNA carries the genetic information from DNA to the ribosome?

A. Messenger RNA

B. Ribosomal RNA

C. Transfer RNA

D. Small nuclear RNA

2. What is a key characteristic of combustion reactions?

A. They produce electricity

B. They usually involve the release of gases

C. They absorb energy from the surroundings

D. They require cold temperatures

3. Which element is represented by the symbol 'Ne'?

A. Neon

B. Kr

C. Xe

D. Ar

4. Antibodies (also known as immunoglobulins) are proteins produced by which type of cells?

A. T cells

B. Macrophages

C. B cells

D. Neutrophils

5. What does the law of independent assortment state?

A. Genes are inherited together

B. Alleles of different genes segregate independently during gamete formation

C. All genes are expressed equally

D. Only dominant traits are inherited

SAMPLE

6. Which element is represented by the symbol 'I' that is a halogen?

A. Xenon

B. Iodine

C. Krypton

D. Neon

7. Red blood cells, also referred to as erythrocytes, are responsible for transporting what in the blood?

A. Only carbon dioxide

B. Nutrients and hormones

C. Oxygen and carbon dioxide

D. Electrolytes and water

8. What is the primary function of the reticular activation system in the body?

A. Promoting digestion and absorption

B. Regulating body temperature

C. Keeping the body awake and alert

D. Facilitating hormonal balance

9. Which orbital is filled last in the electron configuration?

A. 4p

B. 5d

C. 6s

D. 7p

10. What is the chemical symbol for Cobalt?

A. Co

B. Ag

C. Au

D. P

SAMPLE

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. Which type of RNA carries the genetic information from DNA to the ribosome?

A. Messenger RNA

B. Ribosomal RNA

C. Transfer RNA

D. Small nuclear RNA

Messenger RNA carries the genetic information from DNA to the ribosome. This process begins when DNA is transcribed into messenger RNA in the nucleus of the cell. The mRNA then travels from the nucleus to the ribosome, where it serves as a template for protein synthesis. The ribosome reads the sequence of nucleotides in the mRNA and translates it into a specific sequence of amino acids, which are assembled into proteins. This essential role of messenger RNA in conveying the genetic instructions repurposes the information stored in DNA into functional proteins that carry out various tasks within the organism. Ribosomal RNA is a component of the ribosome itself, playing a structural and functional role in the process of translation but does not carry genetic information. Transfer RNA is responsible for bringing the appropriate amino acids to the ribosome during protein synthesis, but it does not carry genetic information from DNA. Small nuclear RNA is involved in the processing of pre-mRNA but is not involved in the direct transfer of genetic information from DNA to the ribosome.

2. What is a key characteristic of combustion reactions?

A. They produce electricity

B. They usually involve the release of gases

C. They absorb energy from the surroundings

D. They require cold temperatures

In combustion reactions, a key characteristic is that they typically involve the release of gases. During combustion, a fuel reacts with an oxidizing agent, commonly oxygen, resulting in the production of combustion products such as carbon dioxide and water vapor. This process is exothermic, meaning it releases energy in the form of heat and light, and often generates gases as a byproduct. The formation of these gaseous products is a defining feature of combustion, distinguishing it from other types of chemical reactions. Some combustion reactions can also produce solid or liquid residues, but the release of gaseous products is a common outcome as fuels burn in oxygen-rich environments. This characteristic is crucial in various applications, including engines, heaters, and power generation, where the gaseous emissions are integral to the overall process of energy production.

3. Which element is represented by the symbol 'Ne'?

A. Neon

B. Kr

C. Xe

D. Ar

The symbol 'Ne' represents the element Neon, which is a noble gas located in group 18 of the periodic table. Neon is known for its lack of reactivity due to its complete valence electron shell, resulting in negligible chemical interactions with other elements under standard conditions. It is typically recognized for its bright reddish-orange glow when used in neon lights, which plays a significant role in advertising signage. The other options represent different noble gases: Kr is the symbol for Krypton, Xe stands for Xenon, and Ar indicates Argon. Each of these elements has distinct properties and uses but do not correspond to the symbol 'Ne', which unequivocally identifies Neon. Understanding the periodic table and the symbols assigned to each element is essential in chemistry, as it helps in recognizing and distinguishing between various chemical substances.

SAMPLE

4. Antibodies (also known as immunoglobulins) are proteins produced by which type of cells?

A. T cells

B. Macrophages

C. B cells

D. Neutrophils

Antibodies, also known as immunoglobulins, are specifically produced by B cells, which are a type of white blood cell integral to the adaptive immune response. When B cells encounter an antigen, they can differentiate into plasma cells that synthesize and secrete large volumes of antibodies. These antibodies bind to antigens on pathogens, facilitating their neutralization and marking them for destruction by other immune cells. B cells play a critical role in the humoral immune response, which is responsible for targeting pathogens that are present outside of cells, such as bacteria and viruses. This ability to produce antibodies is a distinctive feature of B cells and is essential for the body's defense against infections. The production of antibodies is crucial not only for immediate defense but also for the development of immunological memory, which helps the body respond more effectively upon subsequent exposures to the same pathogens. In contrast, T cells are primarily involved in the cell-mediated immune response and do not produce antibodies; macrophages act as phagocytic cells that engulf and digest pathogens but do not produce antibodies; and neutrophils are the first responders to sites of infection, primarily engaging in the destruction of pathogens through phagocytosis and the release of enzymes, rather than antibody production.

5. What does the law of independent assortment state?

A. Genes are inherited together

B. Alleles of different genes segregate independently during gamete formation

C. All genes are expressed equally

D. Only dominant traits are inherited

The law of independent assortment, formulated by Gregor Mendel, states that alleles of different genes segregate independently during the formation of gametes. This means that the inheritance of one trait will not affect the inheritance of another trait, as long as the genes are located on different chromosomes or far apart on the same chromosome. This principle is integral to understanding how traits are passed from one generation to the next, as it allows for the combination of alleles in various ways, contributing to genetic diversity. The focus on the independence of allele segregation is foundational in genetics, particularly in predicting the outcome of genetic crosses. This principle explains why a plant that is tall (dominant) can produce offspring that are both tall and short if it carries the allele for shortness (recessive) independently of other traits it may carry. In contrast, the other options emphasize different aspects of inheritance. The idea that genes are inherited together suggests linkage, which contradicts the law of independent assortment. The statement that all genes are expressed equally does not pertain to the mechanisms of inheritance but rather to gene expression and regulation. Lastly, the claim that only dominant traits are inherited is misleading, as both dominant and recessive traits can be passed on to the next generation.

SAMPLE

6. Which element is represented by the symbol 'I' that is a halogen?

A. Xenon

B. Iodine

C. Krypton

D. Neon

The element represented by the symbol 'I' is iodine, which is a member of the halogen group in the periodic table. Halogens are known for their reactivity and are found in Group 17 (or VIIA) of the periodic table. Iodine is a non-metal element that exhibits typical properties of halogens, such as forming salts when it reacts with metals. Iodine is unique among the halogens due to its relatively higher molecular weight and the fact that it can exist in a gaseous form or as a solid at room temperature, often appearing as a dark purple or nearly black solid. When heated, iodine sublimates to form a violet gas. In contrast, the other elements listed do not belong to the halogen group. Xenon, krypton, and neon are all noble gases found in Group 18 of the periodic table, characterized by their lack of reactivity and stable electron configurations. Noble gases generally do not participate in chemical bonding in the way that halogens do. Thus, the choice of iodine accurately reflects both its elemental designation and its classification as a halogen.

7. Red blood cells, also referred to as erythrocytes, are responsible for transporting what in the blood?

A. Only carbon dioxide

B. Nutrients and hormones

C. Oxygen and carbon dioxide

D. Electrolytes and water

Red blood cells, or erythrocytes, play a crucial role in the circulatory system by transporting gases in the blood, primarily oxygen and carbon dioxide. These cells contain hemoglobin, a protein that binds to oxygen in the lungs and carries it to tissues throughout the body. Once the oxygen is delivered to the tissues, hemoglobin binds to carbon dioxide (a waste product of metabolism) in those tissues and transports it back to the lungs for exhalation. This dual function of transporting both oxygen and carbon dioxide is what makes red blood cells vital for maintaining the body's respiratory and metabolic processes. While nutrients and hormones, electrolytes, and water are important components of blood, they are primarily carried by plasma and other cellular components, not specifically by red blood cells. Therefore, the selection of the option that states red blood cells are responsible for transporting both oxygen and carbon dioxide accurately reflects their key physiological role in the body.

SAMPLE

8. What is the primary function of the reticular activation system in the body?

A. Promoting digestion and absorption

B. Regulating body temperature

C. Keeping the body awake and alert

D. Facilitating hormonal balance

The primary function of the reticular activating system (RAS) is to keep the body awake and alert. This system is a network of neurons located in the brainstem that plays a crucial role in arousal, consciousness, and attention. It acts as a filter for sensory information, determining what information is important and should be relayed to higher brain centers for processing. By regulating the level of alertness, the RAS enables us to respond appropriately to our environment and stay focused on tasks. Additionally, the reticular activating system influences the sleep-wake cycle, contributing to states of wakefulness by promoting arousal in response to stimuli. It is involved in maintaining awareness and attention, making it essential for cognitive functioning and the ability to interact with the world around us. The other options refer to functions governed by different systems or mechanisms in the body. For example, digestion and absorption are primarily managed by the gastrointestinal system, body temperature regulation involves the hypothalamus and various physiological processes, and hormonal balance is overseen by the endocrine system. Each of these systems carries out distinct roles that do not directly relate to the primary function of the reticular activating system.

9. Which orbital is filled last in the electron configuration?

A. 4p

B. 5d

C. 6s

D. 7p

The last orbital to be filled in the electron configuration is the 6s orbital. This is due to the Nature of the Aufbau principle, which states that electrons occupy the lowest energy orbitals first before they fill higher energy levels. The order of filling orbitals follows the sequence dictated by their increasing energy levels. In the case of the 6s orbital, it is filled before the 5d and 7p orbitals because, despite being in higher principal energy levels, the s orbitals generally have lower energy than the d and p orbitals in the same principal energy level. The 4p, 5d, and 7p orbitals are higher in energy compared to the 6s, which is why the 6s orbital is the last to be filled before moving to the next levels. As a result, when constructing electron configurations, you would complete the filling of the 6s orbital before moving to the 5d or 7p orbitals, confirming that it is indeed the last one to receive electrons as the atomic number increases.

10. What is the chemical symbol for Cobalt?

A. Co

B. Ag

C. Au

D. P

Cobalt is a transition metal that belongs to group 9 of the periodic table and has an atomic number of 27. The chemical symbol for cobalt is derived from its name, and it is represented as "Co." This abbreviation is standard in the field of chemistry and allows for a concise identification of the element in chemical equations and discussions. The other symbols listed are also representations of different elements: "Ag" stands for silver, "Au" represents gold, and "P" is the symbol for phosphorus. Each of these elements has its unique properties and atomic characteristics, but they do not correspond to cobalt. Understanding these distinctions is vital in the study of chemistry and helps in recognizing various elements by their chemical symbols.

SAMPLE

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://ati-teas7science2025.examzify.com

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

SAMPLE