

ORANGE STANDARDS OF LEARNING (SOL) PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE

<https://orangesol.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. Voltage is...

- A. The force, or potential difference, that causes the current to flow
- B. The amount of energy stored in a component
- C. The resistance of the circuit
- D. The rate of electrons flow

2. Which of the following is an example of a physical property?

- A. Density
- B. Reactivity With Acid
- C. Flammability
- D. Combustibility

3. Which term describes the property of being capable of being drawn out into a thin wire?

- A. Color
- B. Ductile
- C. Volume
- D. Hardness

4. Mutualism is defined as which of the following?

- A. One benefits and the other is harmed
- B. Neither benefits
- C. One benefits and one is unaffected
- D. Both benefit

5. Which term is the temperature at which a substance changes from a liquid to a gas?

- A. Freezing point
- B. Boiling point
- C. Melting point
- D. Absolute zero

6. Which term describes energy stored due to an object's position?

- A. Kinetic energy
- B. Radiation
- C. Conduction
- D. Potential energy

7. Which biome is known for very low rainfall?

- A. Grassland
- B. Desert
- C. Tundra
- D. Marine

8. Energy carried by light is known as

- A. Thermal Energy
- B. Radiant Energy
- C. Electrical Energy
- D. Neutralization

9. Which term describes the abbreviation or short representation of a chemical element?

- A. Atomic number
- B. Atomic mass
- C. Symbol
- D. Periodic table

10. Which statement correctly defines convection?

- A. Convection is transfer of heat through currents caused by difference in temperature, which cause difference in density (liquids and gases)
- B. Heat transfer by electromagnetic waves
- C. Heat transfer through direct contact
- D. Cooling by evaporation

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. Voltage is...

- A. The force, or potential difference, that causes the current to flow
- B. The amount of energy stored in a component
- C. The resistance of the circuit
- D. The rate of electrons flow

Voltage is the driving force that pushes charges to move through a circuit. It's the electric potential difference between two points, measured in volts, and it represents the energy per unit charge available to do work as charges move. When a complete loop exists, that potential difference pushes current to flow. Think of it like pressure in a water hose: the higher the pressure, the more water is pushed through the pipe. In circuits, higher voltage can push more current through a given path, but the actual current also depends on the resistance in the circuit, per Ohm's law ($I = V/R$). The energy stored in a component is a separate idea—it's about how much energy is stored at a moment (for example, in a capacitor), not what voltage itself is. And the rate of electrons flowing is the current, which is the effect produced by the voltage and the circuit's resistance, not the definition of voltage itself.

2. Which of the following is an example of a physical property?

- A. Density
- B. Reactivity With Acid
- C. Flammability
- D. Combustibility

Physical properties are characteristics you can observe or measure without changing the substance into something else. Density fits this because it describes how much mass is in a given volume and you determine it by measuring mass and volume, leaving the material itself unchanged. The other options describe chemical properties, which involve how a substance reacts to become different substances or how it behaves during burning. Reactivity with acid shows a chemical reaction that alters composition, while flammability and combustibility describe burning, which is a chemical change. So density is the example of a physical property.

3. Which term describes the property of being capable of being drawn out into a thin wire?

- A. Color
- B. Ductile
- C. Volume
- D. Hardness

Ductility is the ability of a material to undergo significant plastic deformation before breaking, which lets it be drawn into a thin wire. Metals like copper and gold are highly ductile, so they can be pulled into long, thin strands without snapping. This property comes from how their atoms slip past one another under tensile stress, allowing elongation rather than fracture. Color, volume, and hardness describe different characteristics: color is a visual property, volume is how much space something occupies, and hardness is resistance to scratching or indentation, not the ability to be stretched into wire. So the term that fits the description is ductility.

4. Mutualism is defined as which of the following?

- A. One benefits and the other is harmed
- B. Neither benefits
- C. One benefits and one is unaffected
- D. Both benefit**

Mutualism is a relationship in which both participants gain a benefit, improving each one's ability to survive or reproduce. In this kind of association, each species provides something the other needs. For example, flowering plants offer nectar and pollen to pollinators like bees, and bees help plants by transferring pollen between flowers. Another common example is the relationship between gut bacteria and their animal host: bacteria get a habitat and nutrients, while the host benefits from aided digestion and nutrient synthesis. Because both sides gain, mutualism fits this definition perfectly. If only one species benefits and the other is harmed, that's parasitism. If one species benefits while the other is unaffected, that's commensalism. If neither benefits, that's a neutral or non-beneficial interaction.

5. Which term is the temperature at which a substance changes from a liquid to a gas?

- A. Freezing point
- B. Boiling point**
- C. Melting point
- D. Absolute zero

When a liquid changes into a gas, the temperature at which this happens is called the boiling point. This occurs when the liquid's vapor pressure rises to reach the surrounding pressure, so enough energy is available to overcome intermolecular forces throughout the liquid and create vapor bubbles. At standard atmospheric pressure, for example, water boils at 100°C, but the exact boiling point depends on the external pressure. This is different from the freezing point, which is the temperature at which a liquid becomes a solid, and from the melting point, which is the temperature at which a solid becomes a liquid. Absolute zero is the lowest possible temperature, 0 Kelvin, where molecular motion is minimal.

6. Which term describes energy stored due to an object's position?

- A. Kinetic energy
- B. Radiation
- C. Conduction
- D. Potential energy**

Potential energy is energy stored due to an object's position. This energy exists because of where the object is in a force field or how it's configured—like a lifted object that has gravity acting on it or a compressed spring that can push back. When the object moves or the configuration changes, that stored energy can be converted into motion, such as the object falling or the spring driving a mechanism. In contrast, kinetic energy is the energy of motion itself, radiation refers to energy carried by waves, and conduction describes a method of transferring heat between substances rather than energy stored by position.

7. Which biome is known for very low rainfall?

- A. Grassland
- B. Desert**
- C. Tundra
- D. Marine

Biomes are shaped by climate, especially how much rainfall they receive. Very low rainfall creates arid conditions where water is scarce and evaporation is high, which is the desert. In deserts, rainfall is rare and unreliable, so life there adapts to conserve water, with sparse vegetation like cacti and hardy shrubs and animals that endure long dry periods. Grasslands have more rain and support grasses and larger herbivores; tundra is cold with low precipitation but a brief growing season and permafrost, and marine is a saltwater environment rather than a land biome. So the biome known for very low rainfall is the desert.

8. Energy carried by light is known as

- A. Thermal Energy
- B. Radiant Energy**
- C. Electrical Energy
- D. Neutralization

Light carries energy in the form of radiant energy—the energy carried by electromagnetic waves such as visible light. This distinguishes radiant energy from thermal energy, which is related to the temperature and random motion of particles in a substance; light's energy can travel and be transferred without heating, and when it is absorbed it can become heat, or be transformed into electrical or chemical energy in devices and processes. Electrical energy, in contrast, is the energy of moving electric charges, and neutralization is a chemical concept, not a type of energy carried by light.

9. Which term describes the abbreviation or short representation of a chemical element?

- A. Atomic number
- B. Atomic mass
- C. Symbol**
- D. Periodic table

In chemistry, each element has a one- or two-letter symbol that serves as its short representation. This symbol is used in formulas and reactions to stand for the element without writing its full name. For example, hydrogen is H, oxygen is O, sodium is Na, and iron is Fe. The symbol is the concise shorthand that identifies the element in calculations and equations. The other terms refer to different ideas: the atomic number is the number of protons, which identifies the element numerically; the atomic mass is the average mass of its atoms; and the periodic table is the chart that organizes all elements. Therefore, the term that describes the abbreviation or short representation of a chemical element is the symbol.

10. Which statement correctly defines convection?

- A. Convection is transfer of heat through currents caused by difference in temperature, which cause difference in density (liquids and gases)
- B. Heat transfer by electromagnetic waves**
- C. Heat transfer through direct contact
- D. Cooling by evaporation

Convection is heat transfer through the movement of a fluid, driven by temperature differences that change the fluid's density. When part of a fluid gets warmer, it becomes lighter and rises, while cooler, denser fluid sinks to take its place. This creates circulating currents that transport heat, as seen in warm air rising in a room or water boiling in a pot where loops of motion form. This is different from radiation, which transfers heat via electromagnetic waves, without any physical medium moving. It's also distinct from conduction, which happens through direct contact between substances, and from evaporation-related cooling, which involves a phase change.

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://orangesol.examzify.com>

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

SAMPLE