SCIENCE ORDER AND DESIGN TEST 1 PRACTICE (SAMPLE)

STUDY GUIDE

SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. The science of classification is called

A. Ecology

B. Taxonomy

C. Anatomy

D. Phylogeny

2. What term describes a group in which the independent variable is absent and used as a standard for comparison?

A. Experimental Groups

B. Control Group

C. Dependent Variable

D. Model

3. Which field studies plants and plant life?

A. Biology

B. Zoology

C. Physiology

D. Botany

4. What is the primary function of the circulatory system?

A. To transport nutrients, gases, and wastes throughout the body.

B. To regulate mood and balance hormones.

C. To filter blood and produce urine.

D. To transmit electrical impulses.

5. What is the driving force behind plate tectonics, and what landform features result from it?

A. Convection currents in the mantle; mountains, trenches, rift valleys, and earthquakes.

B. Magnetic field changes; volcanoes.

C. Solar energy; deserts and canyons.

D. Ocean currents; coral reefs.

6. Which term means combining nutrients with oxygen to make energy?

A. Cellular Respiration

B. Metabolism

C. Homeostasis

D. Flora

7. In ecosystems, what is the primary role of producers?

A. They convert chemical energy into food for themselves.

B. They convert sunlight into chemical energy through photosynthesis.

C. They decompose dead material.

D. They regulate predator populations.

8. Which term describes animals that are active during the day?

A. Nocturnal

B. Dormant

C. Diurnal

D. Arboreal

9. Which term is used for organisms that are active during daylight hours?

A. Nocturnal

B. Dormant

C. Arboreal

D. Diurnal

10. State the three main tenets of cell theory.

A. All living things are made of cells; cells are the basic units of life; cells can arise spontaneously.

B. All living things are made of cells; cells are the basic units of life; all cells come from preexisting cells.

C. Cells are the smallest organisms that cannot be divided.

D. The nucleus controls all cell activities in prokaryotes.

Answers

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

Explanations

1. The science of classification is called

A. Ecology

B. Taxonomy

C. Anatomy

D. Phylogeny

Classification in biology is the system of organizing living things into groups and giving them names, and that practice is called taxonomy. Taxonomy provides a standardized way to name organisms (binomial names) and to place them into a hierarchical framework such as domain, kingdom, phylum, class, order, family, genus, and species. This makes communication and study easier because everyone uses the same terms. Phylogeny is about the evolutionary relationships among organisms, while ecology studies how organisms interact with their environment, and anatomy focuses on the structure of organisms. So the science of classification is taxonomy.

2. What term describes a group in which the independent variable is absent and used as a standard for comparison?

A. Experimental Groups

B. Control Group

C. Dependent Variable

D. Model

A control group is the baseline condition without the manipulated variable, and it provides a standard for comparison. Because everything else is kept the same between the control and the experimental group, any difference in the measured outcome can be attributed to the independent variable. That allows researchers to determine what effect the variable has. The other terms don't fit because an experimental group receives the independent variable, the dependent variable is the outcome you measure, and a model is just a representation, not a group used for direct comparison in an experiment.

3. Which field studies plants and plant life?

A. Biology

B. Zoology

C. Physiology

D. Botany

Focus on the field devoted to studying plants. Botany is the branch of biology that investigates plant life, including their structure, growth, reproduction, physiology, ecology, and classification. Biology is the broader science of life, which includes plants among many other organisms, while zoology focuses on animals. Plant physiology is a sub-discipline that looks at how plants function, but the field that directly studies plants and plant life as a whole is botany.

4. What is the primary function of the circulatory system?

A. To transport nutrients, gases, and wastes throughout the body.

B. To regulate mood and balance hormones.

C. To filter blood and produce urine.

D. To transmit electrical impulses.

The circulatory system is primarily the body's delivery network. It moves blood through the heart and vessels so oxygen and nutrients can reach every cell and wastes like carbon dioxide can be carried away for disposal. Blood also ferries hormones and immune cells to their targets, helping regulate body functions and defend against illness. The other options point to different systems—endocrine factors regulate mood and hormones, the kidneys filter blood and make urine, and the nervous system transmits electrical impulses. So the main role is transporting nutrients, gases, and wastes throughout the body.

5. What is the driving force behind plate tectonics, and what landform features result from it?

A. Convection currents in the mantle; mountains, trenches, rift valleys, and earthquakes.

B. Magnetic field changes; volcanoes.

C. Solar energy; deserts and canyons.

D. Ocean currents; coral reefs.

Convection currents in the mantle drive plate tectonics. Heat from the Earth's interior makes mantle material rise, cool, and sink in a looping flow, and this slow churn drags the rigid tectonic plates that float on top. Where these plates interact, characteristic landforms appear: convergence pushes crust upward to form mountains, and at subduction zones a plate sinks beneath another to create trenches; divergence pulls plates apart to create rift valleys; and the friction and stress from moving plates release suddenly as earthquakes, especially along fault zones. Together, these processes produce mountains, trenches, rift valleys, and earthquakes.

6. Which term means combining nutrients with oxygen to make energy?

A. Cellular Respiration

B. Metabolism

C. Homeostasis

D. Flora

Combining nutrients with oxygen to make energy is cellular respiration. In this process, nutrients such as glucose are oxidized to release energy, with oxygen acting as the final electron acceptor in the electron transport chain. Through glycolysis, the citric acid cycle, and oxidative phosphorylation, most of the cell's ATP is produced, with carbon dioxide and water as byproducts. This energy-yielding sequence is what cellular respiration refers to, so it best fits the description. Metabolism is the broader set of all chemical reactions in the body; homeostasis is about maintaining stable internal conditions; flora refers to the microorganisms living in an environment.

7. In ecosystems, what is the primary role of producers?

A. They convert chemical energy into food for themselves.

B. They convert sunlight into chemical energy through photosynthesis.

C. They decompose dead material.

D. They regulate predator populations.

Producers are the organisms that start the flow of energy in every ecosystem by turning light energy into chemical energy stored in organic molecules. Through photosynthesis, they use sunlight, carbon dioxide, and water to build sugars, which then serve as food for themselves and as the energy source for all other living things. This makes them the base of the food web and the primary source of organic matter for other organisms. While decomposers break down dead material and predators influence populations, neither of those roles describes what producers do. So the correct idea is that producers capture sunlight and convert it into chemical energy through photosynthesis.

8. Which term describes animals that are active during the day?

A. Nocturnal

B. Dormant

C. Diurnal

D. Arboreal

Diurnal describes animals that are active during daylight hours. The term comes from the Latin diurnus, meaning daily or daytime. Diurnal creatures typically forage, mate, and move when the sun is up and rest at night, guided by circadian rhythms and cues from light. Examples include humans, many birds, and many primates. Nocturnal refers to being active at night (like owls and bats), dormant means in a state of reduced activity or metabolism (hibernation or estivation), and arboreal describes living in trees rather than indicating when an animal is active. So the best term for day-active animals is diurnal.

9. Which term is used for organisms that are active during daylight hours?

A. Nocturnal

B. Dormant

C. Arboreal

D. Diurnal

Activity patterns aligned with day-night cycles are what this is about. The term for organisms that are active during daylight hours is diurnal. Diurnal species function during the day, taking advantage of daylight for foraging, mating, and social interactions, and they typically rest at night. In contrast, nocturnal means active at night; dormant means inactive or in a paused state, often seasonally; arboreal simply describes living in trees, not when they are active.

10. State the three main tenets of cell theory.

A. All living things are made of cells; cells are the basic units of life; cells can arise spontaneously.

B. All living things are made of cells; cells are the basic units of life; all cells come from preexisting cells.

C. Cells are the smallest organisms that cannot be divided.

D. The nucleus controls all cell activities in prokaryotes.

Understanding cell theory means recognizing three statements that describe what cells are and how they arise. The best answer matches these ideas: all living things are made of cells; the cell is the basic unit of life because it carries out the essential processes of life and forms the structure of organisms; and all cells come from preexisting cells, meaning new cells are produced by division rather than appearing out of nowhere. This third point, derived from careful observations and experiments, dispels the old idea of spontaneous generation and is often tied to the saying Omnis cellula e cellula. The other options mix in incorrect ideas: spontaneous generation as a tenet contradicts well-established evidence; claiming cells are the smallest indivisible organisms ignores the fact that cells can be subdivided into organelles and that many organisms consist of many cells; and saying a nucleus controls all activities in prokaryotes is inaccurate since prokaryotes lack a true nucleus and have different regulatory mechanisms.

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://scienceorderdesign1.examzify.com

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