

DIVE EARTH SCIENCE QUARTERLY EXAM 1 PRACTICE (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
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. What phase change occurs when a gas turns into a liquid?**
 - A. Freezing
 - B. Evaporation
 - C. Condensation
 - D. Melting
- 2. What does the hydroplate theory describe?**
 - A. Formation of minerals
 - B. Subduction of tectonic plates
 - C. Separation of granitic crust across subcrustal water
 - D. Composition of the Earth's core
- 3. What is the region of Earth between the crust and core called?**
 - A. Crust
 - B. Core
 - C. Mantle
 - D. Lithosphere
- 4. What is the body of real things, events, and facts often referred to in science?**
 - A. Evidence
 - B. Truth
 - C. Reality
 - D. Knowledge
- 5. What concept proposes that the Earth and other planets orbit the Sun?**
 - A. Geocentrism
 - B. Heliocentrism
 - C. Cosmology
 - D. Astrology

- 6. Which term refers to a sedimentary particle formed by weathering, erosion, and transport?**
- A. Clastic
 - B. Organic
 - C. Biogenic
 - D. Inorganic
- 7. Which term refers to the study of weather and climate?**
- A. Geology
 - B. Meteorology
 - C. Climatology
 - D. Oceanography
- 8. Which process involves the breakdown of rocks into smaller particles due to environmental factors?**
- A. Metamorphism
 - B. Weathering
 - C. Crystallization
 - D. Diagenesis
- 9. What theory explains the movement of the Earth's outer shell and its effects like earthquakes and volcanoes?**
- A. Continental Drift
 - B. Plate Tectonics
 - C. Seafloor Spreading
 - D. Geosynclinal Theory
- 10. What term is used to describe solid material formed during a chemical reaction in water?**
- A. Precipitate
 - B. Igneous
 - C. Magma
 - D. Mineral

Answers

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

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Explanations

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1. What phase change occurs when a gas turns into a liquid?

- A. Freezing
- B. Evaporation
- C. Condensation**
- D. Melting

The phase change that occurs when a gas turns into a liquid is known as condensation. This process involves the cooling of gas particles, which decreases their energy, allowing them to come closer together and transition into the liquid state. A common example of this is when water vapor in the air cools and turns into liquid water, forming dew or fog. In contrast, freezing refers to the transformation of a liquid into a solid, which is a different process. Evaporation is the phase change where a liquid becomes a gas, and melting describes the change from solid to liquid. Therefore, condensation is the term that accurately describes the transition from gas to liquid.

2. What does the hydroplate theory describe?

- A. Formation of minerals
- B. Subduction of tectonic plates
- C. Separation of granitic crust across subcrustal water**
- D. Composition of the Earth's core

The hydroplate theory provides an explanation for the separation of granitic crust due to the presence of water trapped beneath the Earth's surface. This theory suggests that water was once stored beneath the crust in vast quantities, and as tectonic processes occurred, this water exerted pressure on the crustal plates. The separation of granitic crust is attributed to this high-pressure water, which played a significant role in the structural dynamics of the Earth's lithosphere. Proponents of the hydroplate theory argue that the sudden release of this subsurface water could lead to catastrophic geological changes, including the potential for flooding events and reformation of landmasses. This concept emphasizes the importance of water not just as a surface-level feature but as a significant factor influencing geological movements and crust formation. In contrast, the other options mentioned do not relate directly to the core principle of hydroplate theory. The formation of minerals pertains more to geological processes involving temperature and chemical reactions rather than the influence of subsurface water. The subduction of tectonic plates involves the movement of one tectonic plate beneath another, which doesn't specifically address the water interaction proposed by the hydroplate theory. Lastly, the composition of the Earth's core deals with the materials and processes occurring deep within the Earth, separate from the

3. What is the region of Earth between the crust and core called?

- A. Crust
- B. Core
- C. Mantle**
- D. Lithosphere

The region of Earth located between the crust and the core is known as the mantle. The mantle is a thick layer of semi-solid rock that extends from just beneath the Earth's crust down to the outer core. It is important for several reasons: it plays a critical role in tectonic activity, including the movement of tectonic plates, and it facilitates the transfer of heat from the core to the crust. In contrast, the crust refers to the thin outer layer of the Earth where we live, and the core is the innermost layer, composed primarily of iron and nickel. The lithosphere, while consisting of the crust and the uppermost part of the mantle, is not defined as the region between the crust and core; it is instead a rigid layer that forms the tectonic plates within the upper mantle. The mantle's properties and behavior are essential in understanding geological processes, such as volcanism and earthquakes, which makes it a significant focus in the study of Earth science.

4. What is the body of real things, events, and facts often referred to in science?

- A. Evidence
- B. Truth**
- C. Reality
- D. Knowledge

The body of real things, events, and facts often referred to in science aligns most closely with the concept of "reality." In scientific inquiry, researchers seek to understand and describe the natural world based on observable phenomena. The objective is to create an accurate representation of what actually exists, which is encapsulated in the term "reality." This includes not just physical objects but also the processes, interactions, and relationships that occur in the universe. While evidence is crucial in science for supporting hypotheses and theories, it represents the data collected from observations rather than the actual phenomena themselves. Knowledge refers to the understanding and awareness gained from study or experience but is a product of interpreting reality and evidence rather than being the reality itself. Truth is often subjective and can vary based on individual beliefs; however, reality is considered an objective state of existence, which is foundational in the pursuit of scientific understanding.

5. What concept proposes that the Earth and other planets orbit the Sun?

- A. Geocentrism
- B. Heliocentrism**
- C. Cosmology
- D. Astrology

The concept that proposes that the Earth and other planets orbit the Sun is known as heliocentrism. This model revolutionized our understanding of the solar system by positioning the Sun at the center, with Earth and other planets revolving around it. This idea was primarily developed by scientists such as Nicolaus Copernicus in the 16th century and was later supported by the observations of astronomers like Galileo Galilei and Johannes Kepler. Heliocentrism introduced a more accurate model of our solar system as it explained the apparent retrograde motion of planets and allowed for a better understanding of the mechanics of planetary movements. Furthermore, it laid the foundational framework for modern astronomy and significantly altered scientific thought regarding the structure of our solar system and the universe. In contrast, geocentrism is the outdated belief that the Earth is at the center of the universe. Cosmology refers to the study of the universe's origin, evolution, and eventual fate but does not specifically address the arrangement of planets. Astrology, on the other hand, is a belief system that suggests that the positions of celestial bodies influence human affairs, but it does not provide a scientific framework for understanding planetary orbits.

6. Which term refers to a sedimentary particle formed by weathering, erosion, and transport?

- A. Clastic**
- B. Organic
- C. Biogenic
- D. Inorganic

The term that refers to a sedimentary particle formed by weathering, erosion, and transport is clastic. Clastic sediments are made up of fragments of pre-existing rocks and minerals that have been broken down through processes like physical weathering and then transported by natural forces such as water, wind, or ice. These fragments can vary in size, ranging from tiny clay particles to larger boulders. This term specifically highlights the process of formation that involves the breaking apart of rocks and minerals, which is a fundamental aspect of sedimentary geology. In sedimentary environments, clastic particles can accumulate over time, eventually becoming rock through compaction and cementation. In contrast, organic particles are derived from the remains of living organisms, biogenic materials specifically refer to sediments produced by biological processes, and inorganic particles pertain to mineral grains not influenced by biological activity. The distinction lies in the origin and composition of the particles, with clastic sediments being directly linked to the mechanical disintegration of rock materials.

7. Which term refers to the study of weather and climate?

- A. Geology
- B. Meteorology**
- C. Climatology
- D. Oceanography

The term that refers to the study of weather and climate is meteorology. Meteorology encompasses the science of the atmosphere, focusing specifically on understanding and predicting weather patterns, atmospheric phenomena, and the short-term variations in climate. Meteorologists investigate various elements such as temperature, humidity, wind, and atmospheric pressure to explain current weather conditions and forecast future weather events. While climatology, another valid field related to weather and climate, deals more with long-term climate patterns and trends over extended periods, meteorology is specifically concerned with short-term weather phenomena. Geology refers to the study of the solid Earth, its rocks, and the processes that shape it, while oceanography focuses on the study of the oceans and their components. Thus, meteorology is the correct term for the study of weather and climate, highlighting its focus on immediate atmospheric conditions and trends.

8. Which process involves the breakdown of rocks into smaller particles due to environmental factors?

- A. Metamorphism
- B. Weathering**
- C. Crystallization
- D. Diagenesis

Weathering is the process that breaks down rocks into smaller particles as a result of environmental factors. This process can occur via physical mechanisms, such as freeze-thaw cycles, where water infiltrates cracks in rocks, freezes, expands, and eventually causes the rock to fracture. Chemical weathering also plays a significant role, where minerals in the rock react with water, acids, or other substances, leading to the alteration of the rock's composition and structure. Unlike metamorphism, which involves changes in the mineral structure and composition of rocks due to heat and pressure deep within the Earth's crust, weathering does not require such conditions. Crystallization refers to the formation of solid crystalline structures from a liquid or gas, which is unrelated to the breakdown of rocks. Diagenesis involves changes that occur in sediment after it has been deposited, but these changes are not primarily focused on the breakdown of existing rock materials, making weathering distinctly appropriate for this question.

9. What theory explains the movement of the Earth's outer shell and its effects like earthquakes and volcanoes?

- A. Continental Drift
- B. Plate Tectonics**
- C. Seafloor Spreading
- D. Geosynclinal Theory

Plate tectonics is the theory that explains the movement of the Earth's outer shell, known as the lithosphere, which is segmented into several large and rigid plates. These tectonic plates float on the semi-fluid asthenosphere beneath them. The interactions and movements of these plates are responsible for various geological phenomena, including earthquakes, volcanic activity, mountain building, and oceanic trench formation. The theory of plate tectonics synthesizes earlier ideas such as continental drift and seafloor spreading, providing a comprehensive framework for understanding how the continents and ocean floors have changed over geological time. This movement occurs due to a combination of forces including mantle convection, slab pull, and ridge push. As plates interact—either colliding, separating, or sliding past one another—they can cause significant geophysical events like earthquakes, which result from the sudden release of energy along fault lines, and volcanoes, which can form at divergent boundaries or at convergent boundaries where one plate subducts beneath another. In contrast, continental drift primarily focused on the idea that continents move independently and was an early precursor to plate tectonics. Seafloor spreading pertains specifically to the formation and movement of the ocean floors, whereas geosynclinal theory was an earlier concept that attempted to explain

10. What term is used to describe solid material formed during a chemical reaction in water?

A. Precipitate

B. Igneous

C. Magma

D. Mineral

The term used to describe solid material formed during a chemical reaction in water is "precipitate." When two or more soluble substances react in a solution, they can create insoluble products that aggregate and settle out of the solution. This process is known as precipitation. The solid that forms as a result of this reaction is referred to as a precipitate. In contrast, igneous refers to rocks that are formed from the cooling and solidification of magma or lava, so it is not directly related to chemical reactions in water. Magma itself is the molten rock beneath the Earth's surface and is not a product formed from a chemical reaction in water. Lastly, while minerals are naturally occurring inorganic solids with a specific chemical composition and crystal structure, not all minerals are formed from reactions involving water, and they do not specifically refer to the solid created in a chemical reaction. Thus, "precipitate" accurately captures the concept of a solid formed during such a reaction.

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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://diveearthsciquarterly1.examzify.com>

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

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