

NCFE EARTH SCIENCE PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

<https://ncfeearthscience.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	16

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. Which method is least likely to affect local hydrology during energy resource acquisition?**
 - A. shallow drilling for oil
 - B. water collection from aquifers
 - C. solar panel installation
 - D. natural gas extraction
- 2. What is the term for a large and destructive wave typically caused by underwater earthquakes?**
 - A. Tsunami
 - B. Typhoon
 - C. Hurricane
 - D. Seiche
- 3. What is the name of the boundary where two tectonic plates move apart?**
 - A. Convergent boundary
 - B. Divergent boundary
 - C. Transform boundary
 - D. Fault line
- 4. How does urbanization typically affect the risk of flooding in an area?**
 - A. Decreases risk of water pollution
 - B. Increases risk of flooding
 - C. Decreases need for natural resources
 - D. Reduces number of invasive species
- 5. Which renewable energy source is derived from wind?**
 - A. Solar energy
 - B. Wind energy
 - C. Hydro energy
 - D. Geothermal energy

- 6. What feature is described as a volcanic neck?**
- A. Lava flow
 - B. Crater
 - C. Pipe
 - D. Volcanic neck
- 7. If significant amounts of water are pumped from a region, what land feature is likely to develop?**
- A. delta
 - B. lake
 - C. desert
 - D. mountains
- 8. Which best describes kudzu?**
- A. A noncompetitive species
 - B. An invasive, nonnative species
 - C. An agent of erosion
 - D. An abiotic factor
- 9. What is the process called when physical forces break rock into smaller pieces without changing its chemical composition?**
- A. Differential weathering
 - B. Erosion
 - C. Chemical weathering
 - D. Mechanical weathering
- 10. Why is compaction important in the formation of sedimentary rocks?**
- A. It allows minerals to dissolve in water
 - B. It helps solidify sediments into rock
 - C. It prevents erosion of existing rocks
 - D. It introduces more organic material into soil

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. Which method is least likely to affect local hydrology during energy resource acquisition?

- A. shallow drilling for oil
- B. water collection from aquifers
- C. solar panel installation**
- D. natural gas extraction

The method that is least likely to affect local hydrology during energy resource acquisition is the installation of solar panels. Solar panel installation primarily involves placing photovoltaic systems on rooftops or on land without significant disruption to the existing soil structure or water flow. Unlike other methods that directly interact with water sources or require substantial alterations to the landscape, solar installations simply convert sunlight into electricity without extracting or consuming water. In contrast, shallow drilling for oil can alter groundwater levels and introduce contaminants, using water from aquifers for industrial purposes can deplete these vital resources, and natural gas extraction methods often involve hydraulic fracturing, which poses risks of water contamination and shifts in hydrological patterns due to the large amounts of water needed and the chemicals used in the process. Thus, solar panel installation presents a minimal intrusive impact on local water systems, making it the least disruptive method in terms of hydrology.

2. What is the term for a large and destructive wave typically caused by underwater earthquakes?

- A. Tsunami**
- B. Typhoon
- C. Hurricane
- D. Seiche

The term for a large and destructive wave typically caused by underwater earthquakes is "tsunami." Tsunamis are generated when there is a significant displacement of water, which can occur due to seismic activities like earthquakes, volcanic eruptions, or underwater landslides. When an earthquake occurs on the ocean floor, it can displace a massive volume of water, leading to waves that can travel across entire ocean basins at high speeds. As these waves approach shallower coastal areas, they slow down and increase in height, often resulting in devastating impacts on coastal communities. In contrast, other terms in the choices represent different natural phenomena. A typhoon is a type of tropical cyclone that occurs in the Northwest Pacific region, while a hurricane is a tropical cyclone occurring in the Atlantic and Northeast Pacific. Both are associated with high winds and rain but not with the large waves caused by seismic activity. A seiche refers to an oscillation of water in an enclosed space, such as a bay or lake, caused by differences in atmospheric pressure or strong winds, not by underwater earthquakes. Thus, the term "tsunami" uniquely describes the large waves associated with underwater seismic events, making it the correct choice.

3. What is the name of the boundary where two tectonic plates move apart?

- A. Convergent boundary
- B. Divergent boundary**
- C. Transform boundary
- D. Fault line

The boundary where two tectonic plates move apart is called a divergent boundary. At this type of boundary, the plates separate, leading to the formation of new oceanic crust as magma rises to the surface from below the Earth's crust. This process often creates mid-ocean ridges, which are underwater mountain ranges that arise from these tectonic activities. Additionally, as the plates move apart, volcanic activity can occur, contributing to the growth of new landforms. This mechanism is in contrast to convergent boundaries, where plates collide, and transform boundaries, where plates slide past each other, causing lateral movement. A fault line, while often related to tectonic activity, specifically refers to fractures in the Earth's crust where blocks of land have moved, which can occur at any type of boundary. Understanding these different plate interactions is crucial for comprehending geological phenomena such as earthquakes and volcanic eruptions.

4. How does urbanization typically affect the risk of flooding in an area?

- A. Decreases risk of water pollution
- B. Increases risk of flooding**
- C. Decreases need for natural resources
- D. Reduces number of invasive species

Urbanization typically increases the risk of flooding in an area due to several factors associated with the changes in land use and environmental management that accompany urban development. As cities expand, natural landscapes such as forests and wetlands, which can absorb rainfall and mitigate flood risks, are often replaced with impervious surfaces like roads, parking lots, and buildings. These surfaces prevent water from being absorbed into the ground, leading to increased surface runoff during storms. Consequently, the volume and speed of water flow into drainage systems and water bodies increase, elevating the likelihood and severity of flooding. Additionally, urban areas tend to have less effective drainage systems compared to natural environments. When rain falls on these impervious surfaces, the rapid accumulation of water can overwhelm stormwater drainage systems, causing them to back up and contribute to localized flooding. Furthermore, with urbanization often comes increased soil compaction, which further reduces the land's ability to absorb water. The combination of these factors results in an increased risk of flooding in urban areas compared to their rural counterparts where natural absorption processes are more intact. This understanding highlights the important connection between land use changes inherent in urbanization and the hydrological impacts that contribute to flooding events.

5. Which renewable energy source is derived from wind?

- A. Solar energy
- B. Wind energy**
- C. Hydro energy
- D. Geothermal energy

Wind energy is harnessed from the kinetic energy produced by the movement of air. Wind turbines convert the energy of moving air into electricity. This process involves using large blades that capture wind energy; as the wind moves these blades, they turn a rotor connected to a generator, which produces electrical power. Wind energy is classified as a renewable energy source since it relies on the natural and continuously occurring phenomenon of wind, which is generated by the uneven heating of the Earth's surface by the sun. Other renewable energy sources, such as solar energy, hydro energy, and geothermal energy, are derived from different natural processes: solar energy from sunlight, hydro energy from the flow of water, and geothermal energy from the Earth's internal heat. Each of these sources contributes to sustainable energy production, but only wind energy specifically comes from the movement of air, making it unique among the options presented.

6. What feature is described as a volcanic neck?

- A. Lava flow
- B. Crater
- C. Pipe
- D. Volcanic neck**

A volcanic neck, also known as a volcanic conduit, is the solidified remains of magma that once flowed through a volcanic vent. Over time, as the surrounding softer material erodes due to various geological processes such as wind and water erosion, the more resistant rock that makes up the volcanic neck is left standing prominently above the surrounding landscape. The distinct feature of a volcanic neck is its origin; it forms when magma is trapped in a volcanic pipe and cools and solidifies. Once the softer volcanic materials and ash have eroded away, what remains is the shape of the pipe, which can take on various forms but is generally a steep-sided column. The visibility of these structures provides valuable information about the volcanic activity that once occurred in the area. In contrast, a lava flow refers to the movement of molten rock during an eruption, a crater is the depression or hole that forms at the summit of a volcano after an eruption, and a pipe refers generally to a channel through which magma travels to the surface, which is similar to a volcanic neck but not solidified. Therefore, identifying a volcanic neck specifically points to both its formation and the geological processes that result in its prominent elevation above the surrounding terrain.

7. If significant amounts of water are pumped from a region, what land feature is likely to develop?

- A. delta
- B. lake
- C. desert**
- D. mountains

When significant amounts of water are pumped from a region, the most likely land feature to develop is a desert. This is because the removal of water can lead to a reduction in soil moisture and vegetation cover, making the environment drier. Over time, if the water table declines due to extensive pumping and there is insufficient precipitation to replenish it, the area becomes increasingly arid. In arid regions, the lack of water can hinder plant growth, leading to a desert landscape characterized by sandy or rocky terrain with little to no vegetation. This process can transform previously fertile land into desert through desertification, where sustained drought conditions and human activity, like pumping groundwater, exacerbate the situation. The other options, such as a delta or lake, typically require the presence of substantial water bodies or deposition processes that would not occur in a water-scarce environment. Mountains are geological formations that do not form as a result of water extraction but rather through tectonic processes. Thus, pumping large amounts of water is most closely associated with the formation of a desert landscape.

8. Which best describes kudzu?

- A. A noncompetitive species
- B. An invasive, nonnative species**
- C. An agent of erosion
- D. An abiotic factor

Kudzu is best described as an invasive, nonnative species. This classification reflects its origin and behavior in ecosystems where it has been introduced, particularly in the southeastern United States. Kudzu was originally brought from Asia to the United States for erosion control and as an ornamental plant. However, it quickly spread beyond intended areas, often outcompeting native vegetation and disrupting local ecosystems. Being nonnative means that kudzu is not originally from the region where it has become widespread, and its invasive nature signifies that it has the potential to cause environmental harm by dominating landscapes, altering habitats, and reducing biodiversity. This aggressive growth can lead to significant ecological consequences, which is why understanding its role as an invasive species is essential for effective environmental management and conservation efforts. The other options do not accurately capture the essence of kudzu. While kudzu can contribute to erosion in some contexts due to its rapid growth and tendency to overrun areas, it is primarily recognized as an invasive species causing ecological disruption. Additionally, it is a living organism, not an abiotic factor, which refers to non-living chemical and physical components of the environment.

9. What is the process called when physical forces break rock into smaller pieces without changing its chemical composition?

- A. Differential weathering
- B. Erosion
- C. Chemical weathering
- D. Mechanical weathering**

The process in question is known as mechanical weathering. This refers to the physical breakdown of rocks into smaller fragments without altering their chemical structure. Various physical forces, such as freezing and thawing, abrasion, and pressure releases, contribute to this type of weathering. For example, when water seeps into cracks in rocks and freezes, the expansion of ice can cause the rock to fracture and break apart.

Mechanical weathering is essential in shaping landscapes and is often one of the first steps in the larger geological processes of erosion and transportation. While erosion involves the movement of those broken pieces, mechanical weathering purely focuses on the fragmentation without any chemical transformation. This is what distinguishes it from processes like chemical weathering, where the mineral composition of the rock changes due to chemical reactions. Thus, the term accurately captures the essence of the processes involved in breaking down rock physically without altering its chemistry.

10. Why is compaction important in the formation of sedimentary rocks?

- A. It allows minerals to dissolve in water
- B. It helps solidify sediments into rock**
- C. It prevents erosion of existing rocks
- D. It introduces more organic material into soil

Compaction is a crucial process in the formation of sedimentary rocks because it reduces the volume of sediment layers and encourages the bonding of those layers into a solid mass. When sediments accumulate over time, they are subject to pressure from the layers above. This pressure compresses the particles closer together, expelling pore water and air trapped between the grains. As the sediments are compacted, they become more tightly interlocked, which significantly contributes to the transformation of loose sediment into solid rock. This process is key to the lithification of sedimentary layers, allowing them to become stable and durable geological formations. This understanding highlights that while other processes and factors also play a role in geology, the primary function of compaction in forming sedimentary rock is its ability to facilitate the solidification of sediments through physical pressure.

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://ncfeeearthscience.examzify.com>

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

SAMPLE