

GEARS END-OF-YEAR PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. How do rivers in Florida generally compare to rivers in other states?**
 - A. They are generally faster and narrower due to steeper gradients.
 - B. They flow primarily underground in Florida.
 - C. They are generally slower and wider due to flat topography and lower gradient of the land.
 - D. They are unaffected by rainfall.
- 2. What kind of weather changes do jet streams bring?**
 - A. Drier conditions
 - B. Storms and shifts in temperature
 - C. No noticeable impact
 - D. Stable weather
- 3. When heat is removed from a system, which may occur?**
 - A. The temperature may decrease, and the substance may change state
 - B. The temperature increases
 - C. The temperature may decrease, and the substance may change state
 - D. Only external pressure changes
- 4. Sound waves require a medium to travel and travel fastest in which type of material?**
 - A. Gas
 - B. Liquid
 - C. Solid
 - D. Vacuum
- 5. Deforestation changes which Earth spheres?**
 - A. Atmosphere only
 - B. Biosphere only
 - C. Atmosphere, hydrosphere, and geosphere
 - D. Cryosphere and hydrosphere

6. Which statement about warm ocean currents and coastal humidity is true?

- A. Warm currents decrease humidity
- B. Humidity depends only on air temperature
- C. Warm currents increase humidity
- D. They have no effect on humidity

7. The Sun is primarily composed of which elements?

- A. Hydrogen and Helium
- B. Oxygen and Carbon
- C. Hydrogen and Oxygen
- D. Carbon and Nitrogen

8. Which statement best describes convection?

- A. It transfers heat through direct contact.
- B. It transfers heat via the movement of a fluid due to density differences.
- C. It transfers heat by electromagnetic radiation.
- D. It requires a solid medium to work.

9. Deposition is best described as the process that

- A. Removes sediment from a river channel.
- B. Moves sediment to new locations.
- C. Lays down sediment that has been transported.
- D. Changes rock into sediment chemically.

10. An aquifer is best described as which of the following?

- A. A geological formation that can store and transmit water, often tapped for human use.
- B. A type of rock that resists erosion.
- C. A channel carved by water to transport sediment.
- D. A mountain formation with many caves.

Answers

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

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Explanations

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1. How do rivers in Florida generally compare to rivers in other states?

- A. They are generally faster and narrower due to steeper gradients.
- B. They flow primarily underground in Florida.
- C. They are generally slower and wider due to flat topography and lower gradient of the land.**
- D. They are unaffected by rainfall.

The speed and width of a river are set by the landscape it traverses. Florida sits on very flat, low-lying ground with only gentle slopes, so rivers there have low gradients. That low slope means the water loses energy slowly, moving more slowly and spreading out to form wide, meandering channels and broad floodplains. So, compared with rivers in states with mountains or steep terrain, Florida rivers are typically slower and wider. Rainfall also feeds these rivers and can raise their levels seasonally, so they aren't unaffected by precipitation. While some karst areas can cause sections to disappear into underground passages, the general pattern for Florida rivers remains slow and wide due to flat topography and low gradient.

2. What kind of weather changes do jet streams bring?

- A. Drier conditions
- B. Storms and shifts in temperature**
- C. No noticeable impact
- D. Stable weather

Jet streams are fast-moving ribbons of air high in the atmosphere that shape surface weather by steering storm systems and controlling how air masses with different temperatures move into a region. Because they separate cold polar air from warmer tropical air and ride around large-scale pressure systems, their path and speed determine where storms develop, move, and how quickly temperatures rise or fall. When the jet stream dips south, it often brings cooler air and can pull storms into lower latitudes, causing storms and noticeable temperature drops. When it bulges north, warm air from the south can surge in, leading to temperature shifts and changes in weather patterns. So the most accurate description is that jet streams bring storms and shifts in temperature, not that they cause dry, stable, or no noticeable impact weather.

3. When heat is removed from a system, which may occur?

- A. The temperature may decrease, and the substance may change state
- B. The temperature increases
- C. The temperature may decrease, and the substance may change state**
- D. Only external pressure changes

When heat is removed, the system loses energy, so its temperature tends to fall. If the temperature reaches a phase boundary, the substance can change state—for example, liquid water can freeze at 0°C, or water vapor can condense to liquid at 100°C (at a given pressure). During a phase change, the temperature can hover at the transition temperature until the change completes, and only then continue to drop as heat removal continues. External pressure changes aren't a guaranteed result of removing heat; they depend on how the system is confined or controlled. So removing heat can lead to a lower temperature, and it can also cause a change of state under the right conditions.

4. Sound waves require a medium to travel and travel fastest in which type of material?

- A. Gas
- B. Liquid
- C. Solid**
- D. Vacuum

Sound needs something to push against, and how fast it travels depends on how easily the disturbance can be transmitted through the material. The key factor is stiffness versus density: the stiffer and less dense a medium is, the quicker a compression or rarefaction can pass along. In a solid, the particles are tightly bound in a lattice, so the restoring forces are strong and vibrations propagate rapidly. That combination makes longitudinal waves move through solids much faster than through liquids or gases. In a vacuum there is no medium at all, so sound cannot travel. In liquids particles are less tightly bound than in solids, so the transmission is slower, and in gases the particles are far apart with weak interactions, leading to the slowest propagation. Typical speeds illustrate the idea: air is about a few hundred meters per second, water about a thousand or so, and solids like steel can reach several thousand meters per second. Therefore, the fastest travel is in a solid.

5. Deforestation changes which Earth spheres?

- A. Atmosphere only
- B. Biosphere only
- C. Atmosphere, hydrosphere, and geosphere**
- D. Cryosphere and hydrosphere

Deforestation disrupts how air, water, and land interact, altering flows among Earth's major spheres. When forests are cleared, the atmosphere is affected first: trees normally take up carbon dioxide and release water vapor through transpiration. With fewer trees, CO₂ can accumulate in the air, contributing to warming and changing weather and climate patterns. The local energy balance also shifts, since bare land reflects and absorbs heat differently than forested land, further impacting the atmosphere. The hydrosphere feels the impact as rainfall patterns and soil moisture change. Without the protective cover of trees, rainfall runs off the surface more quickly, increasing soil erosion and delivering more sediment and nutrients into rivers and lakes. This changes water quality, sediment load, and the availability of fresh water downstream, and can alter evaporation and precipitation dynamics in the region. In the geosphere, soil structure and fertility decline as roots are removed and erosion intensifies. Loss of organic matter and topsoil lowers land productivity and can trigger landslides or shifts in landforms over time, demonstrating how surface vegetation ties into the stability and composition of the underlying earth. Cryosphere effects are not the primary outcome of deforestation; the main changes occur across the atmosphere, hydrosphere, and geosphere, with climate-driven influences potentially reaching frozen regions more indirectly over longer timescales.

6. Which statement about warm ocean currents and coastal humidity is true?

- A. Warm currents decrease humidity
- B. Humidity depends only on air temperature
- C. Warm currents increase humidity**
- D. They have no effect on humidity

Warm ocean currents transfer heat to the air above them, increasing evaporation from the sea surface. With the water staying warm, more water vapor rises into the near coastal air, boosting the amount of moisture there. That extra water vapor raises humidity in those coastal areas. Humidity isn't decided by air temperature alone—warmer air can hold more moisture, but adding moisture from the ocean raises the actual humidity. So the presence of warm currents tends to increase coastal humidity.

7. The Sun is primarily composed of which elements?

A. Hydrogen and Helium

B. Oxygen and Carbon

C. Hydrogen and Oxygen

D. Carbon and Nitrogen

The Sun is dominated by hydrogen and helium. Most of the Sun's mass comes from these two light elements, a legacy of the gas that formed the Sun from the early universe, which was overwhelmingly hydrogen and helium with only tiny amounts of heavier elements. In the Sun's interior, hydrogen nuclei fuse into helium to power the star, but this fusion affects only a small portion of the total mass, so the overall composition stays mainly hydrogen and helium. The heavier elements—like oxygen, carbon, and nitrogen—are present, but in much smaller amounts. That's why hydrogen and helium is the best description of what the Sun is primarily made of, while the other options describe elements that are present only in trace amounts.

8. Which statement best describes convection?

A. It transfers heat through direct contact.

B. It transfers heat via the movement of a fluid due to density differences.

C. It transfers heat by electromagnetic radiation.

D. It requires a solid medium to work.

Convection occurs when heat is transferred by the movement of a fluid that changes density with temperature. When part of the fluid is heated, it becomes less dense and rises; cooler fluid, being denser, sinks, creating a continuous loop. This circulation carries heat with the moving fluid—as seen in warm air rising to heat a room, or in boiling water where hot fluid rises and cooler fluid moves downward. Convection requires a fluid (liquids or gases) and relies on the fluid's motion, not just contact between particles. By contrast, heat moving through direct contact is conduction, and heat moving as waves through space is radiation, which can occur without a medium. So the description that heat transfer happens via the movement of a fluid due to density differences best captures convection.

9. Deposition is best described as the process that

A. Removes sediment from a river channel.

B. Moves sediment to new locations.

C. Lays down sediment that has been transported.

D. Changes rock into sediment chemically.

Deposition is the process by which sediment that has been moved by wind, water, or ice settles out and is laid down in a new location. This happens when the energy of the transporting medium decreases—streams slow, rivers enter a lake or ocean, wind loses speed, or ice drops its load. As a result, particles settle and accumulate, forming features like river deltas, beaches, dunes, or floodplains. It is not removing sediment from a channel (that's erosion) nor moving sediment to new locations without settling (that's transport), and it isn't a chemical change converting rock to sediment (that's chemical weathering). Deposition marks the laying down of material that has been transported.

10. An aquifer is best described as which of the following?

- A. A geological formation that can store and transmit water, often tapped for human use.
- B. A type of rock that resists erosion.
- C. A channel carved by water to transport sediment.
- D. A mountain formation with many caves.

An aquifer is a body of permeable rock or sediment that stores groundwater and allows it to move through its pore spaces or fractures. This storage-and-transmission property is what makes aquifers useful sources of water, since water from precipitation percolates down, fills the spaces, and can be tapped by wells or springs. The other descriptions don't capture this combination: a rock that resists erosion isn't about storing or transmitting water; a channel carved by water describes surface flow, not underground storage; and a mountain with caves points to karst features, which may involve caves but not the essential groundwater-realm storage and movement.

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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://gearsendofyear.examzify.com>

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

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