

PRAXIS EARTH AND SPACE SCIENCES: CONTENT KNOWLEDGE (5571 / 5572) PRACTICE TEST (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. Which statement defines a galaxy?

- A. A single star with its own planetary system.
- B. A huge group of stars, star systems, star clusters, dust, and gas bound together by gravity.
- C. A cloud of gas and dust in interstellar space.
- D. A small body orbiting a planet.

2. Which planet is furthest from the Sun?

- A. Venus
- B. Neptune
- C. Mercury
- D. Uranus

3. What are Cepheid variable stars?

- A. Stars that pulsate with period related to luminosity
- B. Stars that explode at end
- C. Binary systems with eclipses
- D. Stars with no variability

4. What term describes water occupying the pore spaces in subsurface rocks and soils?

- A. Groundwater
- B. Leachate
- C. Evaporation
- D. Percolation

5. What weather is typically associated with a low-pressure system?

- A. Clear skies and calm winds
- B. Humid, precipitation, cloudy, and warm
- C. Very hot and dry
- D. Snow and high winds

- 6. Which gas makes up the largest portion of Earth's atmosphere?**
- A. Nitrogen
 - B. Oxygen
 - C. Argon
 - D. Carbon dioxide
- 7. Which set of layers correctly describes the Moon's internal structure?**
- A. Mantle and Core only
 - B. Crust, Mantle, and Outer Core
 - C. Crust, Mantle, Core
 - D. Crust, Mantle and Outer Core
- 8. How is sedimentary rock formed?**
- A. By cooling magma
 - B. By sediments being compacted and cemented
 - C. By heat and pressure
 - D. By biological precipitation
- 9. On which date is the Sun at its southernmost position in the sky in the Northern Hemisphere?**
- A. June 21
 - B. March 21
 - C. December 22
 - D. September 23
- 10. Which statement best describes the Doppler effect?**
- A. It refers to the bending of light by gravity.
 - B. It is a change in the frequency of a wave when the source or observer is moving.
 - C. It describes the change in the speed of light in different media.
 - D. It is the polarization change of light.

Answers

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

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Explanations

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1. Which statement defines a galaxy?

- A. A single star with its own planetary system.
- B. A huge group of stars, star systems, star clusters, dust, and gas bound together by gravity.**
- C. A cloud of gas and dust in interstellar space.
- D. A small body orbiting a planet.

Galaxies are gravitationally bound systems that contain many stars plus other material such as star clusters, gas, and dust (and often dark matter). The statement matches this by describing a huge group of stars, star systems, star clusters, dust, and gas held together by gravity. That binding by gravity and the inclusion of multiple kinds of matter is what sets a galaxy apart from smaller structures. Think about why the other ideas don't fit: a single star with its own planetary system is just one star and its planets, not a massive, bound collection of many stars and interstellar material; a cloud of gas and dust is a nebula, not a galaxy; a small body orbiting a planet is a moon.

2. Which planet is furthest from the Sun?

- A. Venus
- B. Neptune**
- C. Mercury
- D. Uranus

Neptune is the farthest from the Sun among the planets listed. The distance of a planet from the Sun is determined by its orbital radius. Neptune sits about 30 astronomical units (AU) away on average, which is roughly 4.5 billion kilometers. In comparison, Uranus is around 19 AU, while Mercury and Venus are far closer at about 0.4 AU and 0.7 AU, respectively. Even though planets travel in elliptical orbits, Neptune's much larger average distance makes it the most distant from the Sun in these options.

3. What are Cepheid variable stars?

- A. Stars that pulsate with period related to luminosity**
- B. Stars that explode at end
- C. Binary systems with eclipses
- D. Stars with no variability

Cepheid variable stars are stars that pulsate in size and brightness in a regular cycle. The hallmark feature is the relation between how long the pulsation period lasts and how bright the star actually is: longer periods mean higher intrinsic luminosities. Because the intrinsic brightness can be inferred from the observed period, Cepheids serve as reliable standard candles to measure distances in space. This pulsation comes from changes in the star's outer layers' opacity, especially in zones where helium becomes ionized. When opacity rises, heat gets trapped and the outer layers expand; as the star expands and cools, helium recombines and opacity drops, causing contraction. This cycle repeats, producing a predictable, periodic brightness variation. Historically, the period-luminosity relation found for Cepheids allowed astronomers to gauge distances to nearby galaxies and anchor the cosmic distance ladder, leading to measurements of the expansion rate of the universe. They're not end-of-life explosions, which would describe supernovae, nor are they primarily defined by eclipsing in binary systems, and they do exhibit variability, so none of those other descriptions fit.

4. What term describes water occupying the pore spaces in subsurface rocks and soils?

- A. Groundwater**
- B. Leachate
- C. Evaporation
- D. Percolation

Groundwater is the water that fills all the pore spaces in subsurface rocks and soils, creating the saturated zone beneath the surface. This is the water stored in the ground, which lies below the unsaturated vadose zone and is capped by the water table. Among the options, groundwater best fits the description because it specifically refers to the water occupying those pore spaces below the surface. Leachate is contaminated water that has percolated through material, evaporation is the process of water turning into vapor at the surface, and percolation describes the movement of water through soil rather than the water itself occupying pore spaces.

5. What weather is typically associated with a low-pressure system?

- A. Clear skies and calm winds
- B. Humid, precipitation, cloudy, and warm**
- C. Very hot and dry
- D. Snow and high winds

Low-pressure systems push air upward. As air rises, it cools and moisture condenses, forming clouds and bringing precipitation. That rising, moist air also tends to create unsettled conditions and higher humidity. So the typical weather is clouds with rain or precipitation and a muggy, warm feel, which matches the option describing humid, precipitation, cloudy, and warm. In contrast, clear skies and calm winds point to high pressure with sinking air; very hot and dry and snow with high winds are not the general pattern for a low-pressure system.

6. Which gas makes up the largest portion of Earth's atmosphere?

- A. Nitrogen**
- B. Oxygen
- C. Argon
- D. Carbon dioxide

The main idea is understanding what the atmosphere is mainly made of. Nitrogen dominates Earth's air. About 78 percent of the atmosphere is nitrogen gas (N₂), which is why it makes up the largest portion. The next most abundant gas is oxygen, around 21 percent, while argon and carbon dioxide are present only in trace amounts. These proportions are typical near the surface, though they can vary slightly with altitude and location; nitrogen remains the biggest component overall.

7. Which set of layers correctly describes the Moon's internal structure?

- A. Mantle and Core only
- B. Crust, Mantle, and Outer Core
- C. Crust, Mantle, Core**
- D. Crust, Mantle and Outer Core

The Moon's structure is described by three main layers: a rocky outer crust, a silicate mantle beneath it, and a metallic core at the center. This simple three-layer model matches how scientists typically summarize the Moon's interior, capturing the essential distinction between the crust, mantle, and core. While there is evidence the core may be small and partly molten (and could have inner and outer parts), the standard description used at this level lists crust, mantle, and core without specifying separate outer-core or inner-core layers. The other options either omit the crust or imply an outer-core-only structure, which doesn't align with the common three-layer description.

8. How is sedimentary rock formed?

- A. By cooling magma
- B. By sediments being compacted and cemented**
- C. By heat and pressure
- D. By biological precipitation

Sedimentary rocks form from sediments that are deposited and then turned into rock through lithification. When particles weather from existing rocks or remain from once-living organisms settle out of water or air, they accumulate in layers. Over time, burial increases pressure, squeezing the grains together (compaction), and minerals dissolved in groundwater precipitate between the grains, binding them into a solid rock (cementation). This combination of compaction and cementation is what makes the loose sediment into a coherent rock. Other rock types come from different processes: igneous rocks form when magma or lava cools and hardens; metamorphic rocks form when existing rocks are altered by heat and pressure without melting. Biological or chemical precipitation can contribute to some sedimentary rocks, but the general formation method described here—layers of sediment becoming compacted and cemented—is the defining process.

9. On which date is the Sun at its southernmost position in the sky in the Northern Hemisphere?

- A. June 21
- B. March 21
- C. December 22**
- D. September 23

Earth's tilt and its orbit around the Sun make the Sun's path in the sky change with the seasons. The Sun reaches its southernmost position for observers in the Northern Hemisphere at the winter solstice. This is when the tilt (about 23.5 degrees) carries the Sun lowest in the sky at noon, producing the shortest day of the year. That moment occurs around late December, commonly cited as December 22. After this date, the Sun climbs higher in the sky each day and days start to lengthen. For context, the summer solstice happens around June 21 when the Sun is at its northernmost point in the sky, and the equinoxes around March 21 and September 23 mark times when the Sun is directly above the equator, giving roughly equal day and night. Hence December 22 best matches the Sun's southernmost position in the Northern Hemisphere.

10. Which statement best describes the Doppler effect?

- A. It refers to the bending of light by gravity.
- B. It is a change in the frequency of a wave when the source or observer is moving.**
- C. It describes the change in the speed of light in different media.
- D. It is the polarization change of light.

The Doppler effect describes how motion between a wave source and an observer changes the frequency of the wave. When the source and observer move toward each other, waves get compressed and the observed frequency increases (higher pitch for sound, blue shift for light). When they move apart, waves stretch out and the observed frequency decreases (lower pitch for sound, red shift for light). This principle applies to both sound and light, though the outcomes look a bit different in each case. The statement about a change in frequency when the source or observer is moving captures this idea most accurately. The other statements describe different phenomena: bending of light by gravity is gravitational lensing, changes in light speed with media relate to refractive index, and polarization refers to the orientation of the light wave rather than its frequency.

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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://praxis5571and5572.examzify.com>

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

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