

NATURAL SCIENCE (NATS) 1525 PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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 abductee message concerns the identity and purpose of aliens?**
 - A. Moral injunctions
 - B. Identity and purpose of aliens
 - C. Chosen one
 - D. Apocalyptic messages
- 2. Which base pairs correctly pair in DNA?**
 - A. A-C and G-T
 - B. A-T and C-G
 - C. A-U and C-G
 - D. A-C and T-G
- 3. Which describes refraction?**
 - A. The bending of light as it passes from one medium to another.
 - B. Light bouncing off a surface.
 - C. Light absorption by a material.
 - D. Light emission by a heated object.
- 4. Which option is not listed as an answer to Fermi's paradox?**
 - A. They exist but have no communicated
 - B. They are advanced but not interested in communicating
 - C. They exist and are here
 - D. They do not exist (rare earth hypothesis)
- 5. The Moon Hoax mocked which scientist?**
 - A. Thomas Dick
 - B. John Herschel
 - C. Richard Bentley
 - D. Thomas Paine
- 6. Which atmospheric layer is most associated with weather and contains most of the atmospheric mass?**
 - A. Stratosphere
 - B. Troposphere
 - C. Mesosphere
 - D. Thermosphere

- 7. Which of the four general messages is associated with being the 'Chosen one'?**
- A. Moral injunctions
 - B. Identity and purpose of aliens
 - C. Apocalyptic messages
 - D. Chosen one
- 8. Which astronomer is associated with the belief that sunspots were people looking out of the Sun?**
- A. Galileo Galilei
 - B. Isaac Newton
 - C. William Herschel
 - D. Copernicus
- 9. Which astronomer developed the geo-heliocentric model with Earth at the center while other planets orbit the Sun?**
- A. Copernicus
 - B. Tycho Brahe
 - C. Ptolemy
 - D. Galileo
- 10. Which statement correctly describes the inputs and outputs of photosynthesis?**
- A. Inputs: nitrogen and water; Output: amino acids
 - B. Inputs: carbon dioxide and water; Output: glucose and oxygen
 - C. Inputs: methane and oxygen; Output: carbon dioxide and water
 - D. Inputs: glucose and oxygen; Output: carbon dioxide and water

Answers

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

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Explanations

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1. Which abductee message concerns the identity and purpose of aliens?

- A. Moral injunctions
- B. Identity and purpose of aliens**
- C. Chosen one
- D. Apocalyptic messages

Abductee messages come in several themes, and this question is asking which type is about who the beings are and what they want. The best answer is a message that lays out the identity and purpose of the aliens because it directly addresses the nature of the visitors and their goals. Other themes describe commands or rules the beings want humans to follow (moral injunctions), stories where the abductee is treated as especially chosen, or warnings of catastrophe (apocalyptic messages). While those can appear, only the identity-and-purpose type centers on revealing the beings themselves and why they are visiting, which is exactly what this question targets.

2. Which base pairs correctly pair in DNA?

- A. A-C and G-T
- B. A-T and C-G**
- C. A-U and C-G
- D. A-C and T-G

DNA base pairing follows specific rules: adenine pairs with thymine, and cytosine pairs with guanine. Adenine and thymine form two hydrogen bonds, while cytosine and guanine form three. This pairing preserves a uniform width of the DNA double helix and enables accurate replication. In RNA, uracil replaces thymine, so A-U occurs there, not in DNA. Therefore, the correct DNA pairings are adenine with thymine and cytosine with guanine.

3. Which describes refraction?

- A. The bending of light as it passes from one medium to another.**
- B. Light bouncing off a surface.
- C. Light absorption by a material.
- D. Light emission by a heated object.

Refraction is the bending of light as it moves from one medium into another with a different optical density, which changes its speed. When light crosses a boundary, it must slow down or speed up, and this change in speed makes its path tilt instead of continuing straight, following Snell's law. That's why a straw in water looks bent at the surface—the light is slowing as it enters the water and changes direction. The other possibilities describe different light behaviors: bouncing off a surface is reflection, not refraction; light absorption is when light energy is taken up by the material; and light emission is light produced by a hot object or other source.

4. Which option is not listed as an answer to Fermi's paradox?

- A. They exist but have no communicated
- B. They are advanced but not interested in communicating**
- C. They exist and are here
- D. They do not exist (rare earth hypothesis)

Fermi's paradox asks why, given the vast age and size of the universe, we have not observed clear evidence of extraterrestrial civilizations. The typical ways people try to resolve it fall into categories about existence or contact: civilizations may exist but haven't communicated or been detected yet, they may be here or have visited, or intelligent life may be extremely rare or nonexistent (the Rare Earth idea). The option describing civilizations as advanced but not interested in communicating is a motive-based stance rather than a straightforward explanatory category people usually list as a concrete resolution to the paradox. In standard discussions, the common resolutions center on existence with or without contact or nonexistence, rather than a behavioral stance about willingness to communicate. That's why this choice is the one that isn't typically listed as a canonical answer to Fermi's paradox, making it the best choice for this question.

5. The Moon Hoax mocked which scientist?

- A. Thomas Dick**
- B. John Herschel
- C. Richard Bentley
- D. Thomas Paine

The Moon Hoax hinges on the authority of a famous astronomer to sell unbelievable claims. It presented a series of sensational reports as if they came from John Herschel, suggesting he had observed life on the Moon. By attributing these fantastical observations to a well-known scientist, the hoax aimed to make the ideas sound credible and poke fun at how easily sensational claims can be dressed up with scientific prestige. So the figure being mocked is John Herschel, whose name was used to give the Moon-folk stories an air of real astronomy. The other names aren't connected to this hoax in the same way, so they don't fit the claim.

6. Which atmospheric layer is most associated with weather and contains most of the atmospheric mass?

- A. Stratosphere
- B. Troposphere**
- C. Mesosphere
- D. Thermosphere

Weather is produced in the lowest part of the atmosphere, where the air is densest and most of the water vapor resides. This layer contains about 80% of the atmospheric mass, so it's the region where most air dynamics occur. The temperature in this layer generally falls with height, which makes warm air rise, cool, condense into clouds, and drive storms and winds. Above it, the higher layers are thinner and have less mass, and their temperature profiles lead to more stable conditions with little vertical mixing, so weather systems don't form there. That combination of being the mass-rich, weather-active region is why this layer is the one most associated with weather.

7. Which of the four general messages is associated with being the 'Chosen one'?

- A. Moral injunctions
- B. Identity and purpose of aliens
- C. Apocalyptic messages
- D. Chosen one**

The idea being tested is identity and purpose. Being the "Chosen one" centers on a character being singled out for a special destiny and understanding who they are and why they exist to fulfill a mission. This personal sense of fate drives the narrative as the character discovers their unique role and the powers or responsibilities that come with it. Moral injunctions focus on rules to follow, apocalyptic messages warn about end-time events, and a focus on aliens' identity and purpose centers on extraterrestrial beings rather than a human protagonist's destined path. So the message of identity and purpose best fits the concept of the Chosen one.

8. Which astronomer is associated with the belief that sunspots were people looking out of the Sun?

- A. Galileo Galilei
- B. Isaac Newton
- C. William Herschel**
- D. Copernicus

Sunspots have long sparked imaginative explanations before the physics was understood. William Herschel is the one historically linked to the idea that sunspots are openings or holes in the Sun, through which people on or inside the Sun could look out. He pictured the Sun as something like a hollow world with interior inhabitants, and the dark spots as windows or openings allowing a view to the outside. This view matters because it shows how early astronomers tried to interpret unfamiliar observations with the concepts they had at the time. Today we know sunspots are not holes but cooler, magnetically active regions on the Sun's surface. Herschel's idea reflects the imaginative reasoning of the period and his actual work on sunspots and planetary discovery.

9. Which astronomer developed the geo-heliocentric model with Earth at the center while other planets orbit the Sun?

- A. Copernicus
- B. Tycho Brahe**
- C. Ptolemy
- D. Galileo

The main idea being tested is a hybrid model where Earth stays at the center, the Sun (and Moon) orbit the Earth, and the other planets orbit the Sun. This geo-heliocentric arrangement was proposed by Tycho Brahe as a compromise between geocentric and heliocentric ideas, aiming to preserve a central Earth while still accounting for the observed planetary motions with a sun-centered system for the outer planets. It fits the description because Brahe developed this specific system, blending Earth-centered physics with solar-centered planetary orbits. His precise observations provided the data later used by Kepler to derive elliptical orbits, moving astronomy beyond both pure geocentric and pure heliocentric models.

10. Which statement correctly describes the inputs and outputs of photosynthesis?

- A. Inputs: nitrogen and water; Output: amino acids
- B. Inputs: carbon dioxide and water; Output: glucose and oxygen**
- C. Inputs: methane and oxygen; Output: carbon dioxide and water
- D. Inputs: glucose and oxygen; Output: carbon dioxide and water

Photosynthesis uses light energy to build carbohydrate from simple inorganic molecules. In plants, carbon dioxide from the air and water taken up by the roots are combined in the chloroplasts to produce glucose, with oxygen released as a byproduct. The overall simplified equation is $6 \text{ CO}_2 + 6 \text{ H}_2\text{O} + \text{light energy} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{ O}_2$. This shows clearly that the inputs are carbon dioxide and water and the outputs are glucose and oxygen. The other descriptions don't fit photosynthesis: one describes amino acid formation from nitrogen and water, which isn't the main product of photosynthesis; another resembles combustion of methane; and another mirrors respiration, where glucose and oxygen are consumed to produce carbon dioxide and water.

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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://nats1525.examzify.com>

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

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