

SOAR ACADEMY 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. In a dataset with $n=50$, standard deviation 8. If you add a data point at 24, how does the mean shift? Original mean is 50.
 - A. New mean ≈ 50.49 ; increases by about 0.49
 - B. New mean ≈ 51.00 ; increases by about 1.00
 - C. New mean ≈ 49.49 ; decreases by about 0.51
 - D. New mean ≈ 48.50 ; decreases by about 1.50
2. What is the perimeter of a rectangle with length 8 and width 3?
 - A. 28
 - B. 22
 - C. 24
 - D. 26
3. Identify the logical flaw in the argument: 'If we allow this policy, we will inevitably become paradise.'
 - A. Ad hominem
 - B. Straw man
 - C. Slippery-slope style unfounded claim
 - D. Circular reasoning
4. If you are asked to write a persuasive brief, what should you emphasize?
 - A. A collection of unrelated facts.
 - B. The main argument you want the reader to accept.
 - C. The opposing viewpoint without support.
 - D. A detailed description of methodology.
5. On retaking the SOAR Academy Practice Exam, which metric should you focus on to measure improvement?
 - A. Overall score, section mastery, time per question, and accuracy improvements.
 - B. Number of questions attempted only.
 - C. Speed only.
 - D. Guessing rate.

6. Which term describes the literal meaning of a word?
- A. Denotation.
 - B. Connotation.
 - C. Ambiguity.
 - D. Metaphor.
7. Which device has GAS ID feature to identify chemical names from a gas sample?
- A. QRAE
 - B. ToxiRAE
 - C. PID (VOC)
 - D. MiniRAE 3000
8. If you have \$50 and must choose between a book or a movie ticket, and you choose the book, what is the opportunity cost?
- A. The price of the book
 - B. The remaining money
 - C. The value of the foregone alternative
 - D. The movie ticket
9. What is the primary function of the Sensit Gas detector?
- A. Finds location of gas leaks
 - B. Measures oxygen levels
 - C. Detects water vapor
 - D. Detects carbon dioxide only
10. If two coins are flipped, the probability of getting at least one head is?
- A. $\frac{3}{4}$
 - B. $\frac{1}{4}$
 - C. $\frac{1}{2}$
 - D. 0

Answers

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

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Explanations

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1. In a dataset with $n=50$, standard deviation 8. If you add a data point at 24, how does the mean shift? Original mean is 50.

- A. New mean ≈ 50.49 ; increases by about 0.49
- B. New mean ≈ 51.00 ; increases by about 1.00
- C. New mean ≈ 49.49 ; decreases by about 0.51
- D. New mean ≈ 48.50 ; decreases by about 1.50

When you add a new data point, the mean becomes $(n \cdot \mu + x) / (n + 1)$, so the shift is $(x - \mu) / (n + 1)$. Here, the original mean μ is 50, n is 50, and the new point x is 24. The shift is $(24 - 50) / 51 = -26/51 \approx -0.5098$. The new mean is $50 + (-0.5098) \approx 49.49$. So the mean decreases by about 0.51, moving to approximately 49.49. The standard deviation doesn't affect the mean shift.

2. What is the perimeter of a rectangle with length 8 and width 3?

- A. 28
- B. 22
- C. 24
- D. 26

The concept to use is that the perimeter of a rectangle is twice the sum of its length and width. So $P = 2 \times (L + W)$. With a length of 8 and a width of 3, you get $P = 2 \times (8 + 3) = 2 \times 11 = 22$. The number 24 would be the area ($L \times W$), not the perimeter. The other options don't follow the standard perimeter calculation.

3. Identify the logical flaw in the argument: 'If we allow this policy, we will inevitably become paradise.'

- A. Ad hominem
- B. Straw man
- C. Slippery-slope style unfounded claim
- D. Circular reasoning

The idea being tested is a slippery-slope unfounded claim. It argues that allowing the policy will inevitably lead to a perfect outcome—paradise—without providing evidence that each step in that chain will happen or that such inevitability is warranted. The flaw is the leap from a single action to an extreme, highly favorable result, and assuming certainty without proving how intermediate steps occur or could be prevented. In solid reasoning, you'd need to show how each step follows and what factors could alter the trajectory; here none of that support is offered, so the claim rests on wishful thinking rather than evidence. This isn't about attacking someone, misrepresenting their view, or appealing to a circular justification—the essence is the unfounded, inevitable progression implied by the policy.

4. If you are asked to write a persuasive brief, what should you emphasize?

- A. A collection of unrelated facts.
- B. The main argument you want the reader to accept.**
- C. The opposing viewpoint without support.
- D. A detailed description of methodology.

At the heart of a persuasive brief is presenting a single, clear claim that you want the reader to accept, and then building the case around that claim. Everything in the brief should push toward that main argument—your strongest reasons, evidence, and logical reasoning—so the reader is guided step by step to the desired conclusion. You may acknowledge counterarguments to show you've considered them, but you address them in a way that reinforces your main point, not by spraying in unrelated material. A collection of unrelated facts would just distract from the thesis, and a detailed description of methodology isn't what persuades a reader to accept your position. The focus should be on making the central argument compelling and well-supported.

5. On retaking the SOAR Academy Practice Exam, which metric should you focus on to measure improvement?

- A. Overall score, section mastery, time per question, and accuracy improvements.**
- B. Number of questions attempted only.
- C. Speed only.
- D. Guessing rate.

Measuring improvement requires looking at multiple aspects of performance, not just one number. Focusing on overall score, section mastery, time per question, and accuracy improvements together gives a complete view: overall score shows general progress, section mastery reveals gains in specific areas, time per question tracks pacing and efficiency, and accuracy improvements show that your understanding is translating into correct answers. Relying on a single metric can be misleading—for example, you might try to answer faster or attempt more questions without actually improving correctness, or a lower guessing rate might not reflect true mastery if accuracy hasn't improved.

6. Which term describes the literal meaning of a word?

- A. Denotation.**
- B. Connotation.
- C. Ambiguity.
- D. Metaphor.

Denotation is the literal meaning of a word—the explicit reference you'd find in a dictionary. It captures what the word denotes in the most direct, factual sense, without any subjective feelings, associations, or broader implications. This is why it's the best answer when you're asked for the plain, everyday meaning of a word. Connotation, in contrast, involves the ideas, emotions, or cultural baggage that a word evokes beyond its literal sense. Ambiguity refers to having more than one possible meaning, which can affect interpretation but isn't itself the literal definition. Metaphor is a figure of speech that describes something by saying it is something else, illustrating meaning beyond the literal.

7. Which device has GAS ID feature to identify chemical names from a gas sample?

- A. QRAE
- B. ToxiRAE
- C. PID (VOC)

D. MiniRAE 3000

Gas ID is a library-based feature for identifying specific chemicals from the VOC signal produced by a PID. It works by comparing the detected VOC response to a built-in database of known compounds and returning the most likely chemical names along with their approximate concentrations. The MiniRAE 3000 is designed as a PID-based VOC monitor and offers this Gas ID capability, making it possible to identify unfamiliar vapors in the field rather than just measuring their presence or concentration. The other devices listed are primarily gas monitors or toxic-gas detectors that may include a PID option for sensing VOCs but do not typically provide the Gas ID naming feature. So, the device that provides identification of chemical names from a gas sample is the MiniRAE 3000.

8. If you have \$50 and must choose between a book or a movie ticket, and you choose the book, what is the opportunity cost?

- A. The price of the book
- B. The remaining money
- C. The value of the foregone alternative

D. The movie ticket

Opportunity cost is the value of the next best alternative you give up when you make a choice. Here, buying the book means you give up the movie ticket, which would have provided you its own value or enjoyment. The opportunity cost is that foregone value—the movie ticket. The price of the book is just the amount you spend, and the remaining money is what's left, not the value you sacrificed. The movie ticket is the alternative you didn't take, so it represents the opportunity cost.

9. What is the primary function of the Sensit Gas detector?

- A. Finds location of gas leaks**
- B. Measures oxygen levels
- C. Detects water vapor
- D. Detects carbon dioxide only

Locating gas leaks is what this kind of detector is built to do. The Sensit Gas Detector acts as a sniffer for combustible gases, signaling and guiding you toward the source as you sweep a space. This helps you quickly identify where a leak is coming from so it can be fixed, improving safety. It's not primarily used to measure oxygen levels, detect water vapor, or monitor carbon dioxide alone—those are functions of other types of meters. So the best answer is that its main job is to find where gas leaks are occurring.

10. If two coins are flipped, the probability of getting at least one head is?

A. $\frac{3}{4}$

B. $\frac{1}{4}$

C. $\frac{1}{2}$

D. 0

The key idea is to use a complement: find the probability of the opposite event and subtract from one. Flipping two fair coins gives four equally likely outcomes: both heads, head then tails, tails then head, and both tails. Only one of these has no heads, so there are three outcomes that include at least one head. Therefore, the probability is three out of four, or three quarters.

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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://soaracademy.examzify.com>

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

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