

INFRARED TRAINING CENTER LEVEL 1 PRACTICE EXAM (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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

<https://infraredtrainingcenterlevel1.examzify.com>



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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. Is a 13mm lens on an SUAS camera telephoto or wide angle?**
 - A. Telephoto
 - B. Wide Angle
 - C. Normal
 - D. Fisheye
- 2. Which energy type involves atomic nuclei and changes within the nucleus?**
 - A. Nuclear
 - B. Electrical
 - C. Chemical
 - D. Thermal
- 3. What lens is recommended for the camera in the described infrared survey?**
 - A. 9mm
 - B. 28mm
 - C. 50mm
 - D. 19mm
- 4. How does sandblasting a smooth, shiny metal surface affect the emissivity of that surface?**
 - A. Reduces it
 - B. Has no effect
 - C. Raises it
 - D. Makes it zero
- 5. For solar panel inspections, which phrasing correctly states the minimum irradiance requirement?**
 - A. A minimum of 1000 W/m²
 - B. A minimum of 400 W/m²
 - C. A minimum of 600 W/m²
 - D. A minimum of 800 W/m²

- 6. Which of the following is a basic unit of energy?**
- A. Joules
 - B. Lumens
 - C. Candela
 - D. Seconds
- 7. Infrared thermography identifies outliers by detecting differences in temperature.**
- A. Humidity
 - B. Temperature
 - C. Color
 - D. Pressure
- 8. Which energy type involves the energy of motion and position of macroscopic objects?**
- A. Nuclear
 - B. Electrical
 - C. Chemical
 - D. Mechanical
- 9. Reflected apparent temperature refers to energy sources that could be reflected into the camera.**
- A. The true temperature of the object
 - B. All sources of energy that could be reflected into the camera
 - C. The ambient temperature
 - D. The camera's internal temperature
- 10. Which option involves completing an online assessment to renew certification?**
- A. Take online test
 - B. Attend Certification Course
 - C. Attend Inframation Conference
 - D. Submit White Paper(s)

Answers

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

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Explanations

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1. Is a 13mm lens on an SUAS camera telephoto or wide angle?

- A. Telephoto
- B. Wide Angle**
- C. Normal
- D. Fisheye

Short focal lengths yield a wider field of view, capturing more of the scene in a single frame. A 13mm lens is at the lower end of the focal length range, so it provides a broad perspective rather than magnifying distant subjects. Telephoto lenses have long focal lengths and narrow the view, while normal lenses sit in the middle and fisheye involves extreme distortion. On common SUAS cameras, 13mm is best described as wide-angle.

2. Which energy type involves atomic nuclei and changes within the nucleus?

- A. Nuclear**
- B. Electrical
- C. Chemical
- D. Thermal

Nuclear energy refers to energy stored in and released from atomic nuclei, through changes inside the nucleus such as fission or fusion. In fission, a heavy nucleus splits into smaller nuclei, releasing a large amount of energy; in fusion, light nuclei join to form heavier ones, also releasing energy. These processes involve the strong nuclear force and mass-energy conversion, which is why the energy comes from the nucleus itself. This distinguishes it from electrical energy, which comes from moving charges; chemical energy, which arises from bonds between atoms and electrons; and thermal energy, which relates to the random motion of particles and temperature.

3. What lens is recommended for the camera in the described infrared survey?

- A. 9mm
- B. 28mm
- C. 50mm
- D. 19mm**

Maximizing area coverage per frame is essential in an infrared survey. A wider field of view lets you capture more ground in each shot, speeding the survey and reducing the number of images you need to collect. Among the options, the widest-angle lens provides the broadest view while keeping the image usable for infrared measurements. Ultra-wide options can introduce distortion and edge softness that hurt accuracy, while lenses with longer focal lengths cover less area per shot and require more images to cover the same region. So the lens that offers the broadest coverage among the choices is the best fit for efficient, effective infrared surveying.

4. How does sandblasting a smooth, shiny metal surface affect the emissivity of that surface?

- A. Reduces it
- B. Has no effect
- C. Raises it**
- D. Makes it zero

Emissivity describes how efficiently a surface radiates infrared energy compared to a perfect blackbody. A smooth, shiny metal reflects most of the IR, so its absorptivity—and thus emissivity—are low. Sandblasting roughens the surface, creating microfacets and pits that trap light and reduce specular reflection. With more of the incident IR energy absorbed, the surface behaves more like a blackbody, so emissivity increases. It won't become zero, and the texturing does have an effect, so raising emissivity is the best description.

5. For solar panel inspections, which phrasing correctly states the minimum irradiance requirement?

- A. A minimum of 1000 W/m²
- B. A minimum of 400 W/m²
- C. A minimum of 600 W/m²**
- D. A minimum of 800 W/m²

When inspecting solar panels, you need enough light to bring the modules into a representative operating state so that electrical output and heat patterns are meaningful. The minimum around 600 W/m² strikes a balance: it's high enough to produce detectable current and temperature differences for reliable measurements, yet low enough to be achievable under typical field conditions, not just at peak sun. If irradiance were much lower, say around 400 W/m², the electrical signal becomes weak and thermal contrasts can be overwhelmed by ambient conditions, making it hard to distinguish real issues from normal variation. Higher levels, such as 800–1000 W/m², would work, but they're not the minimum requirement—the question focuses on the smallest level that still yields reliable results.

6. Which of the following is a basic unit of energy?

- A. Joules**
- B. Lumens
- C. Candela
- D. Seconds

Energy is measured in joules in the SI system. A joule is the amount of energy transferred when a force of one newton moves an object one meter in the direction of the force. The other terms describe different quantities: lumens measure light output, candela measures light intensity, and seconds measure time. So, among these options, joules is the unit used for energy.

7. Infrared thermography identifies outliers by detecting differences in temperature.

- A. Humidity
- B. Temperature**
- C. Color
- D. Pressure

Infrared thermography relies on measuring the heat emitted by surfaces. The camera translates infrared energy into a temperature map, so each pixel represents a temperature value. Outliers show up as regions that are noticeably hotter or cooler than their surroundings, making temperature the key factor for identifying anomalies. Humidity isn't what the camera directly measures, color is just a visual representation of temperature data, and pressure isn't what infrared thermography detects.

8. Which energy type involves the energy of motion and position of macroscopic objects?

- A. Nuclear
- B. Electrical
- C. Chemical
- D. Mechanical**

Mechanical energy is the energy tied to the motion and position of large-scale objects. It includes kinetic energy, the energy of motion ($\frac{1}{2} m v^2$), and potential energy, the energy of position in a gravitational or elastic field (like mgh for height or $\frac{1}{2} k x^2$ for a stretched spring). Imagine a roller coaster car: as it climbs, its kinetic energy drops while its potential energy rises; as it descends, energy shifts back to motion. In an ideal, frictionless system, the total mechanical energy remains constant because energy simply converts between kinetic and potential forms. This differs from nuclear energy (changes in the atomic nucleus), chemical energy (stored in chemical bonds), or electrical energy (related to moving or stored charges), which describe other physical mechanisms.

9. Reflected apparent temperature refers to energy sources that could be reflected into the camera.

- A. The true temperature of the object
- B. All sources of energy that could be reflected into the camera**
- C. The ambient temperature
- D. The camera's internal temperature

Reflected apparent temperature comes from the energy in the environment that can reflect off the object's surface into the camera. In infrared imaging, what the camera records is a mix of emitted energy from the object and reflected energy from surrounding sources (sun, heaters, machinery, ambient room radiance, etc.), plus some contribution from the camera itself. The "reflected" part is best described by all energy sources in the scene that could be reflected toward the camera, not just the object's own temperature, not only ambient temperature, and not the camera's internal heat. So the correct idea is that reflected apparent temperature represents the influence of every external energy source that could be reflected into the camera.

10. Which option involves completing an online assessment to renew certification?

A. Take online test

B. Attend Certification Course

C. Attend Inframation Conference

D. Submit White Paper(s)

Completing an online assessment is the method used to renew certification because it directly verifies your current knowledge and skills in a standardized, remote format. This fits the renewal goal of confirming you still meet the required competency level without needing to attend in person. The other options are learning or contribution activities—taking a certification course, attending a conference, or submitting white papers—that don't by themselves serve as the formal assessment needed for recertification. So, taking the online test is the option that aligns with the renewal process.

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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://infraredtrainingcenterlevel1.examzify.com>

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

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