

13R Field Artillery Firefinder Radar Operator Certification Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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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

- 1. Do all radar systems have the capability to operate in both 90 degree and 360 degree modes?**
 - A. True**
 - B. False**
 - C. Only Advanced Systems**
 - D. Only Manual Systems**
- 2. What is the relationship between Firefinder systems and artillery response times?**
 - A. They delay response times**
 - B. They provide instant target location**
 - C. They require longer adjustments**
 - D. They complicate coordination**
- 3. What key feature distinguishes the AN/TPQ-36 from other radar systems?**
 - A. Its compact size**
 - B. Its ability to provide rapid, real-time targeting information**
 - C. Its dual-function capability**
 - D. Its extended operational range**
- 4. What is the primary function of a flat mask in artillery operations?**
 - A. Select one mask angle**
 - B. Improve range accuracy**
 - C. Provide cover for personnel**
 - D. Enhance radar signal clarity**
- 5. What principle is used to accurately pinpoint the source of fire in Firefinder operations?**
 - A. Direction finding**
 - B. Triangulation**
 - C. Radar reflection**
 - D. Thermal imaging**

- 6. How do Firefinder Radar systems contribute to force protection?**
- A. By reducing the need for artillery units**
 - B. By enhancing situational awareness**
 - C. By identifying and locating threats before they engage**
 - D. By coordinating artillery training**
- 7. Which radar system is equipped with an auto-leveling system?**
- A. Q-36**
 - B. Q-53**
 - C. AN/TPQ-37**
 - D. M120**
- 8. What is one outcome of the advancements in Firefinder technology within the military?**
- A. Less reliance on technology**
 - B. Decreased situational awareness**
 - C. More effective communication within artillery units**
 - D. Increased difficulty in operation**
- 9. How is Track Volume determined using the AN/TPQ-36?**
- A. High Mask Angle + Low Mask Angle**
 - B. Low Mask Angle - High Mask Angle - Vertical Scan**
 - C. Low Mask Angle + Vertical Scan**
 - D. High Mask Angle - Low Mask Angle + Vertical Scan**
- 10. The Central Antenna Assembly and Power Supply are both components of which system?**
- A. AN/TPQ-60**
 - B. AN/TPQ-50**
 - C. AN/TPQ-36**
 - D. AN/TPQ-40**

Answers

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

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Explanations

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1. Do all radar systems have the capability to operate in both 90 degree and 360 degree modes?

A. True

B. False

C. Only Advanced Systems

D. Only Manual Systems

Radar systems vary significantly in design and functionality, and not all of them are built to operate in both 90-degree and 360-degree modes. The capability to switch between these modes depends on the specific radar technology and its intended applications. While some advanced radar systems do provide the flexibility to operate in both modes, many basic systems are designed for either one or the other, limiting their operational versatility. In general, a radar that operates in 90-degree mode is typically focused on a specific sector, which can be advantageous for target tracking within that confined range. Conversely, 360-degree mode allows for a full scan of the surrounding environment but requires different mechanical setups and processing capabilities. Therefore, stating that all radar systems have this dual functionality is inaccurate, confirming that the answer is indeed false.

2. What is the relationship between Firefinder systems and artillery response times?

A. They delay response times

B. They provide instant target location

C. They require longer adjustments

D. They complicate coordination

Firefinder systems are specifically designed to enhance the artillery response times by providing immediate and accurate target location data. The technology utilized in Firefinder radar systems enables the rapid detection and tracking of incoming projectiles, which allows for timely identification of enemy positions. This quick processing of information facilitates a faster response from artillery units, as they can receive coordinates and other necessary targeting details almost instantly, leading to a more efficient and effective counter-battery fire. The relationship is crucial because, in a combat environment, the speed at which information can be gathered, processed, and acted upon directly impacts operational effectiveness. By minimizing the time between target detection and artillery response, Firefinder systems significantly improve the overall responsiveness of artillery units. This immediacy is vital in modern warfare, where delays can mean the difference between success and failure in engaging enemy threats.

3. What key feature distinguishes the AN/TPQ-36 from other radar systems?

A. Its compact size

B. Its ability to provide rapid, real-time targeting information

C. Its dual-function capability

D. Its extended operational range

The key feature that distinguishes the AN/TPQ-36 from other radar systems is its ability to provide rapid, real-time targeting information. This capability is crucial in field artillery operations, as it allows for immediate identification and tracking of incoming threats, such as mortars, rockets, and artillery rounds. The radar system employs sophisticated technology to quickly detect projectile launch points and offer accurate data for counter-battery fire or other responses, significantly enhancing situational awareness and responsiveness on the battlefield. This feature sets the AN/TPQ-36 apart from other systems that may prioritize detection or surveillance but do not deliver the same level of immediacy in targeting information. The emphasis on real-time data helps units react swiftly to incoming fire, thereby improving overall effectiveness in combat scenarios.

4. What is the primary function of a flat mask in artillery operations?

A. Select one mask angle

B. Improve range accuracy

C. Provide cover for personnel

D. Enhance radar signal clarity

The primary function of a flat mask in artillery operations is to select one mask angle. In the context of radar systems, flat masks are used to determine the area that should be excluded from radar coverage. This is crucial for minimizing the radar's exposure to potential interference from terrain or other obstacles, therefore ensuring that the radar maintains accuracy in detecting enemy projectiles or other targets. This function directly supports the effective operation of radar systems by optimizing their performance in complex environments, allowing operators to focus on specific sectors for surveillance without interference or clutter from reflected signals caused by nearby terrain features. Improving range accuracy, providing cover for personnel, or enhancing radar signal clarity are not primary functions associated with flat masks. Instead, they relate to other aspects of artillery operations or radar technology. Understanding the purpose of flat masks in selecting mask angles is essential for effective radar operation and maximizing the radar's utility in field operations.

5. What principle is used to accurately pinpoint the source of fire in Firefinder operations?

- A. Direction finding**
- B. Triangulation**
- C. Radar reflection**
- D. Thermal imaging**

Triangulation is the principle used in Firefinder operations to accurately determine the source of fire. This technique involves measuring angles from two or more fixed points to locate a specific position. In the context of radar, triangulation helps in determining the coordinates of a target by utilizing signals received from the radar system. When artillery is fired, the Firefinder radar tracks the projectile's trajectory, and by using the data collected from the angles of incoming signals, it can calculate the precise origin of that fire. The effectiveness of triangulation lies in its ability to combine multiple data points to yield an accurate location, taking advantage of the radar's range and direction capabilities. This principle is crucial for providing timely and accurate targeting information to artillery units, facilitating an efficient response to hostile threats. In contrast, direction finding alone focuses on determining the direction of signals rather than their source. Radar reflection pertains to the bouncing of radar waves but does not specifically relate to determining location. Thermal imaging, while useful in identifying heat signatures, is not a technique used in Firefinder operations to locate the source of fire. Understanding triangulation allows artillery operators to effectively engage targets and enhance their operational effectiveness.

6. How do Firefinder Radar systems contribute to force protection?

- A. By reducing the need for artillery units**
- B. By enhancing situational awareness**
- C. By identifying and locating threats before they engage**
- D. By coordinating artillery training**

Firefinder Radar systems play a crucial role in force protection by identifying and locating threats before they engage friendly forces. This capability allows military units to anticipate and respond to potential threats effectively, enhancing overall safety and operational effectiveness. The radar detects incoming projectiles, such as enemy artillery shells or mortars, and determines their origin, which provides vital information to commanders for decision-making and counter-battery fire. By identifying these threats early, Firefinder Radar systems allow forces to take proactive measures to safeguard personnel and assets, ultimately contributing to a stronger defensive posture. The benefits of this early warning capability extend to reducing casualties, preserving combat power, and enabling timely responses to enemy actions, thereby reinforcing the overall mission success and force protection strategy.

7. Which radar system is equipped with an auto-leveling system?

A. Q-36

B. Q-53

C. AN/TPQ-37

D. M120

The Q-53 radar system is equipped with an auto-leveling system, which is a significant feature that contributes to its effectiveness in field operations. The auto-leveling functionality allows the radar to automatically adjust its position to maintain level, regardless of the terrain. This ensures accurate target detection and tracking by optimizing the radar's operational configuration. This feature is particularly beneficial in dynamic combat environments where rapid relocation is required, as it reduces the time needed for manual leveling. The improved accuracy and efficiency due to the auto-leveling system enable the Q-53 to quickly and accurately estimate the location of incoming threats, essential for timely artillery response and battlefield awareness. In contrast, the other radar systems listed either do not have this auto-leveling capability or are designed with different operational focuses that do not prioritize this feature as part of their basic functionality. Thus, the Q-53's integration of an auto-leveling system stands out as a crucial element that enhances its performance in artillery fire support roles.

8. What is one outcome of the advancements in Firefinder technology within the military?

A. Less reliance on technology

B. Decreased situational awareness

C. More effective communication within artillery units

D. Increased difficulty in operation

Advancements in Firefinder technology have significantly enhanced the capabilities of artillery units, particularly in improving communication. Modern Firefinder systems enable more rapid and accurate detection of incoming threats, such as enemy artillery fire, which allows for better coordination among units. This integrated communication ensures that artillery operators can efficiently share real-time data about enemy positions and incoming fire, leading to a more coordinated response. As a result, artillery units can achieve greater effectiveness in their operations, ultimately enhancing overall combat readiness and response time. This technological progression fosters a collaborative environment where units can operate more effectively in joint missions, making communication not just beneficial, but essential for operational success.

9. How is Track Volume determined using the AN/TPQ-36?

- A. High Mask Angle + Low Mask Angle**
- B. Low Mask Angle - High Mask Angle - Vertical Scan**
- C. Low Mask Angle + Vertical Scan**
- D. High Mask Angle - Low Mask Angle + Vertical Scan**

Track Volume is a crucial measure in radar operations that denotes the three-dimensional space in which targets can be detected. The AN/TPQ-36 radar system includes specific parameters that contribute to the calculation of Track Volume. The calculation takes into account the Low Mask Angle and the High Mask Angle, which define the vertical limits of the radar's scanning capabilities. By subtracting the High Mask Angle from the Low Mask Angle, you determine the net vertical coverage that the radar has for tracking objects. This establishes the vertical component of the Track Volume. Additionally, incorporating the Vertical Scan into the equation enhances the understanding of the radar's operational range in terms of both elevation and distance. Thus, the full combination provides the necessary parameters to determine the complete Track Volume effectively. This formulation is essential for operators to ensure optimal radar performance and target acquisition, as it identifies the exact area where radar tracking is feasible. Understanding this calculation allows operators to maximize the effectiveness of their radar systems during operations.

10. The Central Antenna Assembly and Power Supply are both components of which system?

- A. AN/TPQ-60**
- B. AN/TPQ-50**
- C. AN/TPQ-36**
- D. AN/TPQ-40**

The Central Antenna Assembly and Power Supply are critical components of the AN/TPQ-50 system. This radar system is designed for counter-battery targeting and fire support operations. The Central Antenna Assembly is responsible for detecting incoming projectiles and providing crucial radar data, while the Power Supply ensures that the system operates efficiently and seamlessly. The AN/TPQ-50 incorporates advanced technology that enhances accuracy and responsiveness in detecting and tracking artillery fire. By integrating these components, the AN/TPQ-50 achieves improved operational capabilities compared to earlier models. This focus on precision makes it an essential asset for field artillery operations, where timely and accurate information is vital for mission success.

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://13rfieldartilleryfirefinderradarop.examzify.com>

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