

Fire Control Specialist (13J) 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

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- 1. What element is adjusted for range in artillery?**
 - A. Elevation**
 - B. Azimuth**
 - C. Deflection**
 - D. Drift**

- 2. Who is responsible for all Fire Direction Center (FDC) operations?**
 - A. Fire Direction Officer**
 - B. Chief Fire Control Sergeant**
 - C. Field Artillery Officer**
 - D. Operations Officer**

- 3. What is the Training Circular for the Field Artillery Manual Cannon Gunnery?**
 - A. TC 3-09.81**
 - B. TC 3-09.91**
 - C. TC 3-08.81**
 - D. TC 3-10.81**

- 4. Which term describes the midpoint in a ballistic trajectory?**
 - A. Maximum range**
 - B. Apex**
 - C. Center of gravity**
 - D. Impact point**

- 5. On a target grid, what color indicates a minus sign " -"?**
 - A. Red**
 - B. Green**
 - C. Blue**
 - D. White**

- 6. What must always be announced during subsequent fire commands?**
- A. Wind direction**
 - B. Quadrant elevation**
 - C. Target range**
 - D. Firing mode**
- 7. What constitutes a line error for MET concerning temperature?**
- A. A slight increase or decrease in temperature**
 - B. Over 10°K change in temperature**
 - C. A severe increase or decrease (over 20°K) in temperature from line to line**
 - D. No significant temperature changes at all**
- 8. What is the definition of a firing chart?**
- A. A diagram of explosive dispersion**
 - B. A theoretical model of projectile motion**
 - C. A representation of the earth's surface for firing calculations**
 - D. A map showing environmental conditions**
- 9. What does the term “corrective measures” refer to in fire control?**
- A. Steps taken to enhance fire performance**
 - B. Adjustments made to correct errors**
 - C. Methods for improving communication**
 - D. Alternatives to standard firing procedures**
- 10. When is the time of flight announced to the observer?**
- A. Only during night operations**
 - B. When engaging moving targets or high-angle missions**
 - C. Only if requested by the observer**
 - D. At the beginning of each exercise session**

Answers

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

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Explanations

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1. What element is adjusted for range in artillery?

A. Elevation

B. Azimuth

C. Deflection

D. Drift

The element that is adjusted for range in artillery is elevation. Elevation refers to the vertical angle at which the artillery piece is aimed. By adjusting the elevation, artillery personnel can increase or decrease the range of fire, allowing the projectile to travel the appropriate distance to reach the target. Increasing the elevation typically increases the range because the projectile follows a higher, longer trajectory, while decreasing the elevation shortens the range. In contrast, azimuth pertains to the horizontal direction the artillery is pointing, ensuring the projectile is aimed accurately left or right. Deflection is related to adjustments made for wind effects and other factors that might affect the projectile's path as it travels to the target, but it does not directly influence distance. Drift refers to the natural tendency of a projectile to veer from its intended flight path due to various influences, but like deflection, it is secondary to the elevation in determining range. Hence, elevation remains the key adjustment for ensuring that artillery reaches the desired distance.

2. Who is responsible for all Fire Direction Center (FDC) operations?

A. Fire Direction Officer

B. Chief Fire Control Sergeant

C. Field Artillery Officer

D. Operations Officer

The Fire Direction Officer (FDO) is the individual responsible for overseeing all operations within the Fire Direction Center (FDC). This role entails the coordination of artillery firing missions, the calculation of firing data, and the management of the communication processes necessary for effective fire support. The FDO ensures that the artillery units can respond quickly and accurately to requests for fire support, making their leadership pivotal in combat scenarios. In this position, the FDO also plays a crucial part in the interpretation of the battlefield situation to make informed decisions about fire missions, which directly impacts the effectiveness of the unit's support capabilities. Their expertise helps to integrate various facets of artillery operations and ensures alignment with the broader tactical objectives of the unit. While other roles mentioned may have important functions within the artillery team, such as supervising specific crews or contributing to operational planning, they do not carry the overall responsibility for the FDC's operations as the Fire Direction Officer does.

3. What is the Training Circular for the Field Artillery Manual Cannon Gunnery?

- A. TC 3-09.81**
- B. TC 3-09.91
- C. TC 3-08.81
- D. TC 3-10.81

The Training Circular for the Field Artillery Manual Cannon Gunnery is TC 3-09.81. This document provides critical guidelines and procedures for the operation and training related to cannon gunnery, focusing on enhancing the effectiveness of artillery units in combat operations. It covers topics such as gun positioning, fire control, and safety measures, which are essential for ensuring accuracy and efficiency during firing operations. Understanding the correct designation, TC 3-09.81, is vital for military personnel involved in artillery training, as it serves as a reference point for the standards and techniques required for effective gunnery. This knowledge ensures that personnel are well-equipped with the necessary information to succeed in their roles, ultimately contributing to mission success in the field.

4. Which term describes the midpoint in a ballistic trajectory?

- A. Maximum range
- B. Apex**
- C. Center of gravity
- D. Impact point

The term that describes the midpoint in a ballistic trajectory is apex. The apex refers to the highest point in the trajectory of a projectile, where it reaches its maximum altitude before beginning to descend towards its impact point. At this point, the vertical velocity of the projectile is zero, and the forces acting on it due to gravity are beginning to pull it downwards. Understanding the significance of the apex is crucial in fire control as it determines the optimal point during the projectile's flight for assessing the effects of gravity and air resistance. This knowledge aids in predicting where the projectile will land and in making necessary adjustments for accurate targeting. The other terms do not accurately describe the midpoint in the trajectory. Maximum range refers to the furthest horizontal distance a projectile can travel; center of gravity relates to the point in an object where its mass is evenly distributed; and impact point is the location where the projectile eventually lands, all of which are distinct from the apex of the trajectory.

5. On a target grid, what color indicates a minus sign " - " ?

- A. Red
- B. Green
- C. Blue**
- D. White

On a target grid, the color that indicates a minus sign " - " is blue. This coding system is essential for distinguishing between negative and positive values on charts and maps used in fire control. Blue consistently signifies negative values, allowing operators and specialists to quickly identify and assess data related to their target's position, elevation, or other pertinent metrics. Using color coding in target grids helps enhance clarity and reduces the chance of misinterpretation during critical missions. This approach ensures that the individuals involved can process information efficiently, particularly in high-pressure situations where accurate readings are vital for mission success.

6. What must always be announced during subsequent fire commands?

- A. Wind direction**
- B. Quadrant elevation**
- C. Target range**
- D. Firing mode**

During subsequent fire commands, quadrant elevation must always be announced because it plays a critical role in ensuring the accuracy and effectiveness of artillery fire. Quadrant elevation refers to the angle at which the weapon must be elevated to accurately hit a target at a specific distance. This parameter is essential for adjusting the artillery piece correctly based on the target's range and the impact of various environmental factors. Announcing quadrant elevation during subsequent commands maintains consistency and communication among crew members. It allows everyone involved in the firing process to understand and follow the necessary calculations and adjustments, thereby increasing the likelihood of achieving a successful shot. This focus on quadrant elevation helps in managing the artillery's trajectory with precision, accommodating changes in conditions such as distance and terrain, which might affect the fired round's path. Those other options, while they may be important considerations in the overall firing process, do not mandate the same level of consistency and immediate relevance that quadrant elevation does in subsequent commands.

7. What constitutes a line error for MET concerning temperature?

- A. A slight increase or decrease in temperature**
- B. Over 10°K change in temperature**
- C. A severe increase or decrease (over 20°K) in temperature from line to line**
- D. No significant temperature changes at all**

The concept of a line error in the context of MET (Meteorological) data concerning temperature is carefully defined to ensure accuracy in fire control operations. A severe increase or decrease in temperature, specifically over 20°K from one data point to another, is indicative of a significant change that could affect ballistic calculations and overall targeting. Understanding why this threshold is established is essential. When the temperature changes dramatically within a short range, it can alter the performance of munitions, affect projectile trajectories, and ultimately impact the effectiveness of firing solutions. Hence, categories of temperature changes are set, where anything above this threshold necessitates recalibrations or re-analysis of data to maintain accuracy in operations. The other options either describe minor variations, which are generally considered acceptable within operational tolerances, or suggest no significant changes, which do not present a risk of error necessary to consider for adjustments in firing solutions. Therefore, the focus on a change over 20°K as a line error is crucial for effective fire control and reflects the importance of precision in military operations.

8. What is the definition of a firing chart?

- A. A diagram of explosive dispersion
- B. A theoretical model of projectile motion
- C. A representation of the earth's surface for firing calculations**
- D. A map showing environmental conditions

A firing chart is primarily defined as a representation of the earth's surface that aids in firing calculations. It provides essential geographical information, such as terrain features, elevations, and positions of targets, all of which are critical for accurate targeting and effective artillery or missile operations. By utilizing a firing chart, fire control specialists can assess how different terrain elements will impact projectile trajectories and ensure precise calculations for the placement of munitions. This accuracy is vital for missions involving indirect fire, where the firing units might not have a direct line of sight to the target. The other options detail concepts related to firing but do not capture the complete purpose of a firing chart. For example, while a diagram of explosive dispersion illustrates how explosions spread after a detonation, it does not serve the broader purpose of calculating firing angles and impacts based on the surface representation. Similarly, a theoretical model of projectile motion may provide insights into how projectiles behave in flight but lacks the practical application of evaluating actual terrain and conditions needed for effective fire support. Finally, a map showing environmental conditions, while useful for general situational awareness, does not specifically focus on the spatial representation needed for precise firing calculations. Thus, the identification of option C as the definition of a firing chart is accurate,

9. What does the term “corrective measures” refer to in fire control?

- A. Steps taken to enhance fire performance
- B. Adjustments made to correct errors**
- C. Methods for improving communication
- D. Alternatives to standard firing procedures

The term “corrective measures” in fire control specifically refers to adjustments made to correct errors during operations. This is crucial in ensuring that any mistakes or inaccuracies in targeting, calculations, or procedures are addressed promptly to maintain operational effectiveness and safety. Corrective measures can include recalibrating equipment, reassessing target coordinates, or modifying firing approaches to rectify any identified issues that may compromise the success of the mission. Understanding this concept is vital, as it underlines the importance of accuracy and accountability in fire control operations. By implementing corrective measures efficiently, fire control specialists can significantly reduce the likelihood of errors resulting in unintended consequences, ensuring that missions are conducted with precision.

10. When is the time of flight announced to the observer?

- A. Only during night operations**
- B. When engaging moving targets or high-angle missions**
- C. Only if requested by the observer**
- D. At the beginning of each exercise session**

The announcement of the time of flight to the observer is crucial, particularly when engaging moving targets or conducting high-angle missions. In these scenarios, the precision and timing of artillery strikes are of utmost importance, as the position of moving targets may change rapidly and the trajectory for high-angle fire requires specific timing for effective engagement. By providing the time of flight information during these operations, the observer can make better informed decisions regarding target acquisition and the timing of any necessary adjustments to the engagement vector. In contrast, the other options do not accurately reflect the critical need for announcing time of flight. The notion of limiting this only to night operations or requiring a request from the observer undermines the necessity of ensuring effective communication between artillery teams and observers for successful engagements. Additionally, announcing time of flight at the beginning of each exercise session does not pertain specifically to the operational demands of engaging targets, as timing can vary significantly between exercises and types of ordnance used.

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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://firecontrolspecialist.examzify.com>

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

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