

FDC GENERAL KNOWLEDGE FOR FIRE CONTROL SPECIALIST (13J) PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

**VISIT US ONLINE FOR
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. Which elements are involved in selecting fuse and charge for a given target?**
 - A. Elevation, deflection, fuse, and charge.
 - B. Color of the map.
 - C. News headlines.
 - D. Availability of ammo.
- 2. Which statement correctly differentiates azimuth from deflection?**
 - A. Azimuth is the horizontal angle from a reference direction to the line to an observed or designated point; Deflection is the horizontal clockwise angle from the line of fire to the line to a designated aiming point, with the vertex at the sight.
 - B. Azimuth is the vertical angle; Deflection is the vertical angle.
 - C. Azimuth is the distance to the target; Deflection is the angle between lines.
 - D. Azimuth and Deflection are the same angle.
- 3. How does the FDC ensure synchronization of fire across multiple units?**
 - A. By using a common TOT, standardized call signs, and coordinated firing sequences.
 - B. Through independent timing per unit.
 - C. By relying on weather data alone.
 - D. By doubling the number of rounds fired.
- 4. RALS stands for?**
 - A. Left Add, Right Subtract
 - B. Left Subtract, Right Add
 - C. Right Add, Left Subtract
 - D. Right Subtract, Left Add
- 5. On precision fire missions, the probable error in range is announced to the observer when it is greater than?**
 - A. 15 Meters
 - B. 25 Meters
 - C. 40 Meters
 - D. 60 Meters

- 6. Define 'time-sensitive target' and how the FDC handles it.**
- A. A target needing immediate action; processed as an urgent call for fire with rapid computation and execution.
 - B. A target that can wait hours.
 - C. An unknown target with no requirement.
 - D. A target moved but not urgent.
- 7. Which factor most directly supports rapid execution of urgent fires for time-sensitive targets?**
- A. Slower data processing
 - B. Urgent call for fire with rapid computation and execution
 - C. Delaying action to confirm with all units
 - D. Firing without data
- 8. What is the evolution of the FDC computer and its impact on accuracy?**
- A. From manual/mechanical to electronic/digital systems; modernization improves speed, data storage, and precision.
 - B. It has always been electronic since inception.
 - C. It became less accurate over time.
 - D. It did not affect accuracy.
- 9. How is mission data verified before posting to guns?**
- A. Only by the gun crew.
 - B. Through cross-checking with the observer, map plots, and fire mission sequencing to ensure consistency.
 - C. Random check by a passerby.
 - D. By counting rounds fired previously.
- 10. What is time of flight (TOF) and why is it important in fire direction?**
- A. TOF is the time to reload; it determines rate of fire.
 - B. TOF is the time from firing to impact; it affects aiming corrections, lead for moving targets, and synchronization with other fires.
 - C. TOF is the time to compute corrections; it determines accuracy.
 - D. TOF is the time from impact to observation; it determines after-action reporting.

Answers

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

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Explanations

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1. Which elements are involved in selecting fuse and charge for a given target?

- A. Elevation, deflection, fuse, and charge.**
- B. Color of the map.
- C. News headlines.
- D. Availability of ammo.

Fuse and charge are chosen as part of the firing solution that begins with aiming the gun. You first determine the target's position in space by setting elevation (the vertical angle) and deflection (the horizontal aim) so the round reaches the intended range and line of fire. Once you have that aiming solution, you select the fuse setting and the propellant charge to match the range, target height, and desired detonation effect (for example, an airburst, delayed fuzing, or impact). The fuse controls when the round detonates, and the charge controls how far and with what velocity the round travels to reach the target, so they must be coordinated with the elevation and deflection. Choices like map color, headlines, or ammo availability don't influence the timing and detonation plan, so they're not part of the fuse and charge decision.

2. Which statement correctly differentiates azimuth from deflection?

- A. Azimuth is the horizontal angle from a reference direction to the line to an observed or designated point; Deflection is the horizontal clockwise angle from the line of fire to the line to a designated aiming point, with the vertex at the sight.**
- B. Azimuth is the vertical angle; Deflection is the vertical angle.
- C. Azimuth is the distance to the target; Deflection is the angle between lines.
- D. Azimuth and Deflection are the same angle.

The main idea is that azimuth and deflection describe horizontal angles in aiming, but from different reference frames. Azimuth is the horizontal angle from a fixed reference direction (like true or magnetic north) to the line to the observed point, using the reference direction as the vertex. Deflection is the horizontal clockwise angle from the line of fire to the line to a designated aiming point, with the vertex at the sight, representing the adjustment you must make to bring the gun onto target. This distinction makes the described statement the best: it correctly defines azimuth as the reference-to-target horizontal angle, and deflection as the gun-line-to-designated-point horizontal angle with the vertex at the sight. The other options misstate the nature of these angles: azimuth is not a vertical angle, nor is it a distance, and they are not the same angle.

3. How does the FDC ensure synchronization of fire across multiple units?

- A. By using a common TOT, standardized call signs, and coordinated firing sequences.
- B. Through independent timing per unit.
- C. By relying on weather data alone.
- D. By doubling the number of rounds fired.

Synchronization across multiple units hinges on a single, shared timing and clear commands. The Fire Direction Center issues a common time on target so every unit fires so their rounds arrive together, even though their distances to the target differ. Standardized call signs remove ambiguity in who's being commanded and what is being fired, ensuring all units hear the same orders in the same way. Coordinated firing sequences tie the actions of all units together, lining up fuse settings, rates of fire, and the exact moment of release so the volleys synchronize at the target. Weather data and ballistic calculations support planning, but without the fixed time on target and unified commands, timing would drift. Merely increasing the number of rounds doesn't achieve synchronization and could waste ammunition or cause fratricide.

4. RALS stands for?

- A. Left Add, Right Subtract
- B. Left Subtract, Right Add
- C. Right Add, Left Subtract
- D. Right Subtract, Left Add

This question tests the sign convention used for aiming adjustments in firing data. RALS stands for Right Add, Left Subtract. That means when you adjust the sight or reticle to move the impact to the right, you "add" a correction to the right; when you move the sight to the left, you "subtract" a correction to the left. This provides a consistent rule for applying windage or lateral corrections. The pairing Right Add and Left Subtract is the correct one because it aligns with how adjustments are recorded and interpreted on sights and ballistic data. The other pairings would flip the signs and would lead to applying corrections in the opposite direction.

5. On precision fire missions, the probable error in range is announced to the observer when it is greater than?

- A. 15 Meters
- B. 25 Meters
- C. 40 Meters
- D. 60 Meters

In precision fire missions, range accuracy is described by the probable error in range, which is a statistical estimate of how far the actual impact range could deviate from the intended range. When this dispersion grows beyond a practical limit, the observer is informed so they know the data's reliability and can take corrective action. The threshold used is 25 meters. If the probable error in range exceeds 25 meters, the observer is told so they can re-check the range, adjust fire data, or request a fresh range fix to maintain the desired accuracy. This value is chosen because it represents a practical limit where the spread becomes significant enough to affect hit probability, prompting corrective measures without over-flagging minor fluctuations. The other values are not the standard cutoff designations for this practice, because they either would be too small to be useful or too large to provide timely guidance for precision adjustments.

6. Define 'time-sensitive target' and how the FDC handles it.

- A. A target needing immediate action; processed as an urgent call for fire with rapid computation and execution.
- B. A target that can wait hours.
- C. An unknown target with no requirement.
- D. A target moved but not urgent.

Time-sensitive targets are those that must be engaged immediately to prevent the threat from continuing or escaping. In the FDC, this means elevating the target to urgent priority and accelerating the entire fire-support process. The FDC rapidly validates the situation and computes the firing solution with minimal delay, then quickly transmits the data to the gun crew so rounds can be fired as soon as possible. The emphasis is on speed and accuracy under time pressure, using streamlined procedures and, when available, preplanned data to shorten the path from target identification to impact. This differs from targets described as able to wait hours, unknown with no requirement, or moved but not urgent, which do not capture the need for immediate action.

7. Which factor most directly supports rapid execution of urgent fires for time-sensitive targets?

- A. Slower data processing
- B. Urgent call for fire with rapid computation and execution
- C. Delaying action to confirm with all units
- D. Firing without data

The ability to act quickly on time-sensitive targets hinges on speeding up the data-to-fire loop. When a target requires immediate action, the best approach is an urgent call for fire paired with rapid computation and execution. This means quickly analyzing the target with streamlined data, producing a fire solution fast, and delivering the mission to the gun line without unnecessary hold-ups. It keeps the focus on speed while still applying essential targeting information so rounds land where intended, which is crucial for protecting assets or neutralizing threats that won't wait. Slower data processing slows everything down, undermining timeliness. Delaying action to confirm with all units introduces avoidable lag that can let the target escape or cause damage. Firing without data sacrifices accuracy and safety, increasing the risk of mis-fire or collateral damage.

8. What is the evolution of the FDC computer and its impact on accuracy?

- A. From manual/mechanical to electronic/digital systems; modernization improves speed, data storage, and precision.
- B. It has always been electronic since inception.
- C. It became less accurate over time.
- D. It did not affect accuracy.

Transitioning from manual and mechanical computing to electronic and digital FDC systems drastically boosts accuracy by speeding calculations, enabling richer data storage, and delivering more precise results. In the era of manual calculation, everything hinged on human speed and diligence, which introduced delays and arithmetic errors. Mechanical devices improved efficiency but were limited in capacity and flexibility, constraining the complexity of ballistic models that could be used in real time. Modern electronic/digital computers handle large datasets, run sophisticated ballistic calculations quickly, and store firing data accurately for repeated use. This combination reduces transcription and calculation mistakes, supports timely updates as conditions change, and allows for more precise targeting adjustments, all of which raise the overall accuracy of fire missions. The statement that it has always been electronic is not accurate because early systems relied on manual or mechanical computing. The claim that accuracy didn't change or that accuracy worsened over time also doesn't fit, since the move to electronic systems is specifically about improving precision and reliability.

9. How is mission data verified before posting to guns?

- A. Only by the gun crew.
- B. Through cross-checking with the observer, map plots, and fire mission sequencing to ensure consistency.**
- C. Random check by a passerby.
- D. By counting rounds fired previously.

The main idea is that mission data must be verified using multiple independent checks before it's posted to the guns. This verification involves cross-checking with the observer to confirm the target and instructions, validating coordinates and geometry on map plots to ensure the target location and gun line are correct, and reviewing the fire mission sequence to confirm the order, timing, and spacing of rounds. This multi-source confirmation catches inconsistencies and errors, keeps the target accurate, and safeguards friendly forces by ensuring the guns receive the right data for the right target. Relying only on the gun crew, a random passerby, or simply counting rounds fired previously doesn't provide the comprehensive validation needed to ensure a safe and effective fire mission.

10. What is time of flight (TOF) and why is it important in fire direction?

- A. TOF is the time to reload; it determines rate of fire.
- B. TOF is the time from firing to impact; it affects aiming corrections, lead for moving targets, and synchronization with other fires.**
- C. TOF is the time to compute corrections; it determines accuracy.
- D. TOF is the time from impact to observation; it determines after-action reporting.

Time of flight is the interval between when a round is fired and when it reaches the target. That flight time matters in fire direction because you must predict where the target will be when the round arrives, not where it is at the moment of firing. This is why you lead moving targets and adjust aiming points based on how long the round will be in the air. TOF also drives coordination with other fires and sensors—the timing has to line up so multiple rounds or effects hit the target together or in a planned sequence. Longer TOF means more time for the target to move and for conditions like wind to change the projectile's path, so you factor those ballistic corrections into your aim. The other options describe unrelated aspects (reload timing, correcting time, or post-impact observation) and don't define what TOF measures.

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://fdcgenknowledge13j.examzify.com>

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

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