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

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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.

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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!

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Questions

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1. The Vertical Interval is defined as which of the following?

A. The horizontal distance between unit and target.

B. The time difference between sighting and impact.

C. The difference in altitude between the unit (or observer) and the target or point of burst.

D. The angle of elevation to the target.

2. Why is it important to provide a complete mission data sheet to the guns?

A. It ensures all necessary information (target location, ammunition, fuze, charges, and corrections) is available for accurate firing.

B. It only lists the target location.

C. It is optional and rarely used.

D. It is used for ammunition resupply only.

3. Which option describes a firing chart's purpose?

A. A graphic representation of the Earth's surface used for determining distance and direction.

B. A weather forecast for artillery days.

C. A plan for movement of troops.

D. A diagram describing how to assemble the gun.

4. Chart Deflection is determined to the nearest what?

A. 10 mils

B. 5 mils

C. 1 mil

D. 0.1 mil

5. Elevation is a function of which variable?

A. Range

B. Elevation

C. Target Speed

D. Wind

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6. Gunner's quadrant is sent to the gun(s) as a special instruction when

A. During Training

B. When Firing Danger Close or Precision Fire Missions

C. For All Missions

D. When Target is in Range

7. Which factor does weather data influence when selecting fuzes?

A. Recoil forces

B. Some fuse timings depend on air density and temperature; meteorological data used to select appropriate fuzes and delays.

C. Weather data only affects visibility

D. Weather data is not used at all

8. How does the Fire Direction Center manage multiple targets in a single fire mission?

A. By firing at all targets with a single firing solution.

B. By delaying all targets until after the first is resolved.

C. By prioritizing targets, assigning a firing solution to each, and coordinating timing to prevent interference.

D. By letting each gun crew decide independently.

9. Which statement best describes the inclusion in the Message to Observer?

A. Time of Attack

B. Weather Data

C. Target Number

D. Unit to Fire

10. If the target elevation is 16 degrees, how many mils is that?

A. 282.4 Mils

B. 283.2 Mils

C. 290.0 Mils

D. 284.0 Mils

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Answers

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

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Explanations

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1. The Vertical Interval is defined as which of the following?

A. The horizontal distance between unit and target.

B. The time difference between sighting and impact.

C. The difference in altitude between the unit (or observer) and the target or point of burst.

D. The angle of elevation to the target.

The Vertical Interval is the height difference between the observer and the target or point of burst. This vertical separation affects how the projectile must fly to reach the target, influencing elevation settings and ballistic corrections. It's not about horizontal distance, flight time, or the line-of-sight angle itself—the latter is a separate measurement. So the altitude difference between your position and the target is what defines the vertical interval.

2. Why is it important to provide a complete mission data sheet to the guns?

A. It ensures all necessary information (target location, ammunition, fuze, charges, and corrections) is available for accurate firing.

B. It only lists the target location.

C. It is optional and rarely used.

D. It is used for ammunition resupply only.

Having a complete mission data sheet ensures every variable needed for accurate and safe fire is documented in one place. The sheet provides the target location so the gun crew knows where to aim. It also specifies the type of ammunition, because different projectiles have different ballistics, blast effects, and fuze options. The fuze setting and the charge are listed to determine when the round will arm, burst, or function, and how much propellant is used to reach the intended range. Corrections for conditions such as range, wind, temperature, and atmospheric pressure are included so the firing data can be adjusted to real-world effects rather than relying on assumptions. With all these elements in a single, coordinated document, the fire control team and gun crew share a single plan, reducing errors and enabling quick, accurate delivery of rounds. Focusing only on the target location misses the essential ammo, fuze, and charge details; labeling it optional ignores the safety and precision that come from having complete data; and treating it as only for resupply overlooks the ballistic and timing information necessary to actually hit the target.

3. Which option describes a firing chart's purpose?

A. A graphic representation of the Earth's surface used for determining distance and direction.

B. A weather forecast for artillery days.

C. A plan for movement of troops.

D. A diagram describing how to assemble the gun.

Firing charts serve as terrain-based planning references that let artillery crews calculate distance and direction to a target. They provide a graphic representation of the Earth's surface around the gun position, showing features, ranges, and lines of bearing so you can determine how far away a target is and which direction to fire. This distance-and-direction information is the essential purpose of a firing chart, helping to set azimuth and range for accurate shots. The other options don't fit because they describe weather forecasts, troop movement plans, or gun assembly instructions, none of which capture the chart's role in mapping the ground to guide fire.

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4. Chart Deflection is determined to the nearest what?

A. 10 mils

B. 5 mils

C. 1 mil

D. 0.1 mil

Chart deflection is read in mils, a standard angular unit used in fire-control plotting. The deflection on the chart is read from the deflection scale in the smallest practical division, which is one mil. The plotting tools, chart scale, and inherent measurement tolerances limit you to this level of precision; trying to measure to finer increments (like tenths of a mil) isn't reliable with typical chart readings, and using coarser steps (such as several mils) would degrade accuracy. In practice, recording deflection to the nearest 1 mil provides a consistent, usable value that translates well into aiming adjustments at range (for example, about a meter of lateral shift at 1,000 meters).

5. Elevation is a function of which variable?

A. Range

B. Elevation

C. Target Speed

D. Wind

Elevation is the vertical angle you must aim at to hit a target at a certain distance. The distance to the target, or range, directly determines how high the bullet must rise to counter gravity over its flight time. As range increases, the needed elevation increases to make sure the projectile reaches the target along its ballistic path. Wind mainly affects horizontal drift and timing of impact, while target speed influences how you lead the shot; neither sets the primary vertical angle the way range does. So the variable that elevation depends on is the range.

6. Gunner's quadrant is sent to the gun(s) as a special instruction when

A. During Training

B. When Firing Danger Close or Precision Fire Missions

C. For All Missions

D. When Target is in Range

Gunner's quadrant is a special instruction used when firing requires tight control and safety near friendly forces or when precision is essential. In Danger Close or Precision Fire Missions, the observer or fire direction center issues this quadrant to the gun crews to constrain aiming to a specific part of the firing envelope and to align corrections with the observer's intent. This helps ensure rounds land in the intended area and minimizes risk to nearby personnel and assets. It isn't used as a routine or universal directive, nor is it triggered simply because a target is within range or just during training.

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7. Which factor does weather data influence when selecting fuzes?

A. Recoil forces

B. Some fuse timings depend on air density and temperature; meteorological data used to select appropriate fuzes and delays.

C. Weather data only affects visibility

D. Weather data is not used at all

Weather can change how long a fuse takes to operate because many fuzes rely on a delay element whose performance shifts with air density and temperature. Air density, which varies with temperature and altitude, affects the rate at which the delay mechanism progresses, while temperature can alter the burn rate of delay charges and the behavior of electronic timing circuits. Because of this, meteorological data is used to select the appropriate fuze type and delay to ensure the round detonates at the intended point along its trajectory. In practice, fuze settings are tied to weather conditions so the timing aligns with the ballistic path, reducing the chance of arming too early or too late. Recoil forces come from the weapon's mechanics, not weather data; weather doesn't simply limit its influence to visibility; and weather data is indeed used to inform fuze selection, making the other statements incorrect.

8. How does the Fire Direction Center manage multiple targets in a single fire mission?

A. By firing at all targets with a single firing solution.

B. By delaying all targets until after the first is resolved.

C. By prioritizing targets, assigning a firing solution to each, and coordinating timing to prevent interference.

D. By letting each gun crew decide independently.

Handling multiple targets in a single fire mission requires centralized coordination to ensure each target is engaged effectively without fires interfering. The Fire Direction Center analyzes the engagement, sets target priorities, and assigns a distinct firing solution for each target. It also coordinates timing so those fires arrive in a way that prevents interference, whether delivering them simultaneously within a controlled window or in a carefully sequenced sequence. This centralized control avoids independent decisions by individual gun crews, which can lead to overlapping fires, missed targets, or safety hazards. A single firing solution for all targets won't account for their different locations, delaying all targets wastes time, and letting crews decide independently undermines coordination and safety. So, prioritizing targets, giving each a firing solution, and synchronizing the engagements is the correct approach to maximize effectiveness and safety.

9. Which statement best describes the inclusion in the Message to Observer?

A. Time of Attack

B. Weather Data

C. Target Number

D. Unit to Fire

The important idea here is that the Message to Observer carries a unique target reference so everyone stays synchronized on what's being engaged. The Target Number serves as that identifier, linking the observer's report and the firing unit to the exact target in the fire plan. This lets the observer, the Fire Direction Center, and the battery know exactly which target is being talked about, even if there are multiple targets in the area. Other items like Time of Attack, Weather Data, or Unit to Fire aren't the primary identifiers used in the Message to Observer. Time of Attack relates to when fires should occur, weather data is handled separately for ballistics, and the unit to fire is about who executes the fire rather than identifying the target in the observer's report.

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10. If the target elevation is 16 degrees, how many mils is that?

A. 282.4 Mils

B. 283.2 Mils

C. 290.0 Mils

D. 284.0 Mils

In gunnery, elevations are often read in mils because mils give a fine, linear measure across distance. A circle is divided into 6400 mils, so conversion is mils ≈ degrees × (6400/360) ≈ degrees × 17.777… For 16 degrees, the precise conversion is 16 × 17.777… ≈ 284.4 mils. However, many field calculations use a common approximation of 1 degree ≈ 17.7 mils, which gives 16 × 17.7 = 283.2 mils. The given answer uses that practical approximation, so 16 degrees is about 283.2 mils.

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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://fdcgenknowledge13j.examzify.com

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

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