Radar, Airfield, and Weather Systems (RAWS) CDC Volume 2 Practice Test (Sample)

Study Guide

BY EXAMZIFY

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. **What do you call the use of contiguous beams stacked in elevation?**

   A. Layered beam scanning

   B. Vertical stacking arrays

   C. Elevation sweep technique

   D. Stacked Beam radars

2. **How many permanent echoes are permitted by the advanced signal data processor (ASDP)?**

   A. 15

   B. 20

   C. 25

   D. 30

3. **When using a conical scan, what component of the return signal modulation is used by the radar system to maintain track in both azimuth and elevation?**

   A. Amplitude

   B. Delay

   C. Phase

   D. Frequency

4. **Which radar unit displays the corresponding radar information on a cathode ray tube (CRT)?**

   A. Indicator

   B. Raster

   C. Plan Position Indicator (PPI)

   D. A-scan

5. **Which statement is not an advantage of IFF/SIF equipment?**

   A. High reliability

   B. Only one mode is used for simplicity

   C. Resistance to spoofing

   D. Fast response times

6. The two most commonly used radar remoting configurations are

A. Cable/land lines and radio microwave links

B. Cable/land lines and satellite links

C. Wireless optical links and coaxial lines

D. Fiber optic links and radio relay

7. What part of the CRT is tapered and lined with a conductive graphite coating?

A. Aquadag

B. Anode

C. Cathode

D. Screen

8. Which scanning indicator is used to plot target data in polar coordinates?

A. A-scan

B. Raster

C. Plan Position Indicator (PPI)

D. Deflection

9. What SIF mode has a limit of 32 codes?

A. Mode 1

B. Mode 2

C. Mode 3A

D. Mode 4

10. To eliminate interrogator side-love suppression (ISLS), the ground radar site transmits the P2 signal in what radiating pattern?

A. Narrow beam

B. Directional

C. Unidirectional

D. Omnidirectional

Answers

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

Explanations

1. What do you call the use of contiguous beams stacked in elevation?

A. Layered beam scanning

B. Vertical stacking arrays

C. Elevation sweep technique

D. Stacked Beam radars

Stacked beam radars describe using multiple adjacent beams stacked in elevation to sample the airspace at different heights, forming a vertical profile of targets. This approach provides direct vertical resolution and a rapid, multi-height view without needing to tilt the antenna for each elevation. The other terms aren't the standard label for this method—layered beam scanning, vertical stacking arrays, or elevation sweep technique describe similar ideas loosely but do not match the established nomenclature as precisely as stacked beam radars.

2. How many permanent echoes are permitted by the advanced signal data processor (ASDP)?

A. 15

B. 20

C. 25

D. 30

Permanent echoes are fixed radar returns from terrain and man-made features that show up in every scan. The advanced signal data processor builds a permanent-echo table so these stationary reflections can be suppressed from weather returns, keeping the display clear of ground clutter. The system is designed to hold up to twenty-five permanent echoes in that table. When the table is full, new entries may replace older ones to maintain the limit, ensuring memory usage stays manageable while still filtering the common fixed clutter. Therefore, twenty-five is the correct limit.

3. When using a conical scan, what component of the return signal modulation is used by the radar system to maintain track in both azimuth and elevation?

A. Amplitude

B. Delay

C. Phase

D. Frequency

The phase of the modulation in the conically scanned return is what the radar uses to stay on target in both azimuth and elevation. When the beam describes a cone, the echo carries a modulation at the rotation rate, and how that modulation leads or lags behind the scan reference tells you where the target sits relative to the boresight. The phase angle encodes the directional error, so the system can drive the antenna in the appropriate two-axis correction to recenter on the target. Amplitude alone would only tell you how strong the return is, not which way to steer; delay or frequency don't provide the directional error needed for tracking.

4. Which radar unit displays the corresponding radar information on a cathode ray tube (CRT)?

A. Indicator

B. Raster

C. Plan Position Indicator (PPI)

D. A-scan

Indicator is the component that presents radar data on a cathode ray tube. In radar systems, the indicator takes the information from the receiver and translates it into a visual display on the CRT so the operator can interpret echoes, ranges, and bearings. The Plan Position Indicator is a specific type of display that can be shown on a CRT, and an A-scan is another style of display (amplitude vs range), but the question points to the general unit responsible for displaying radar information on the CRT, which is the indicator. The term raster refers to the scanning method of the CRT, not the display unit itself.

5. Which statement is not an advantage of IFF/SIF equipment?

A. High reliability

B. Only one mode is used for simplicity

C. Resistance to spoofing

D. Fast response times

IFF/SIF systems rely on rapid, reliable replies to radar interrogations to identify friendly aircraft. A big strength of these systems is the ability to operate in multiple modes, each serving different needs—civilian air traffic control, mission-specific identification, and secure identification to prevent spoofing. Having many modes allows controllers and operators to choose the appropriate level of detail and security for the situation, and it supports interoperability across different networks and countries. The notion that using only one mode would keep things simple misses the point: it would limit compatibility with civilian procedures, reduce flexibility for various missions, and weaken security against spoofing. In contrast, high reliability, resistance to spoofing, and fast response times are all enhanced by the multi-mode design and the robust interrogation/response process.

6. The two most commonly used radar remoting configurations are

A. Cable/land lines and radio microwave links

B. Cable/land lines and satellite links

C. Wireless optical links and coaxial lines

D. Fiber optic links and radio relay

Radar remoting transfers data from a remote radar site to a central processing location, and the two most common ways to do this are through cable/land lines and radio microwave links. Cable/land lines provide a stable, high-bandwidth path where lines can be laid or leased, making them economical for moderate distances with predictable performance and good security. Radio microwave links offer flexible, long-distance connectivity where laying cable isn't practical, using line-of-sight paths to carry data at high rates, though they require proper alignment and can be affected by weather. Satellite links exist but add latency and cost, making them less typical for routine radar data transport. Other options like wireless optical links or coaxial lines have limitations—weather sensitivity and alignment issues for free-space optics, and distance/bandwidth constraints for coax—while fiber is widely used today, the traditional pairing most commonly seen is land lines and microwave links.

7. What part of the CRT is tapered and lined with a conductive graphite coating?

A. Aquadag

B. Anode

C. Cathode

D. Screen

In a CRT, the inner surface of the tube, especially the tapered funnel area, is coated with a conductive graphite material called Aquadag. This coating provides a uniform electrical path along the inside of the tube, draining away static charges and helping to shape and stabilize the electric field that directs the electron beam. By keeping the potential along the inner surface well-defined, it aids beam focusing and deflection accuracy. The other parts mentioned—anode, cathode, and screen—serve different roles. The anode is the high-voltage plate that attracts electrons; the cathode is the heated emitter of electrons; and the screen is the phosphor-coated front face that displays the image. None of these are the tapered, graphite-coated region described.

8. Which scanning indicator is used to plot target data in polar coordinates?

A. A-scan

B. Raster

C. Plan Position Indicator (PPI)

D. Deflection

Radars plot range and bearing on a circular display, using distance from the center for how far away a target is and the angle around the circle for its direction. The Plan Position Indicator is built for that, showing targets as blips around a circular screen with range outward from the center and bearing around the circumference, i.e., polar coordinates (range, bearing). A-scan, by contrast, presents range versus time on a vertical trace and doesn't convey azimuth. Raster displays use a rectangular scanning format, not a circular polar plot. Deflection refers to how the display beam moves, not to plotting in polar coordinates. So the indicator that plots target data in polar coordinates is the Plan Position Indicator.

9. What SIF mode has a limit of 32 codes?

A. Mode 1

B. Mode 2

C. Mode 3A

D. Mode 4

In this SIF context, how many distinct identification codes a mode can use is determined by how its code field is defined. Mode 1 uses a 5-bit identification field, which yields 2^5, or 32 possible codes. That small, fixed set is exactly why Mode 1 has a limit of 32 codes. The other modes work with different schemes: Mode 3A uses a four-digit octal code, giving a much larger range of civilian ATC identifiers; Mode 4 is a secure, cryptographic mode with codes that change and aren't bound to a fixed small set; Mode 2 uses its own scheme with a different capacity. So Mode 1 is the one with the 32-code limit.

10. To eliminate interrogator side-love suppression (ISLS), the ground radar site transmits the P2 signal in what radiating pattern?

A. Narrow beam

B. Directional

C. Unidirectional

D. Omnidirectional

Interrogator Side-Lobe Suppression (ISLS) is about avoiding energy that could be picked up from the transmitter's side directions and cause false or suppressed responses in transponders. Transmitting the P2 signal omnidirectionally means the energy is radiated evenly in all azimuth directions, removing any favored direction. This uniform pattern prevents strong side-lobe indications in particular directions from influencing transponder responses, which helps ensure reliable interrogation across the entire surrounding airspace. If the P2 were concentrated in a narrow beam or directed pattern, side-lobes in other directions could become problematic and degrade ISLS performance.

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://rawscdcvol2.examzify.com

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