

# 1C8X3 Volumes 1-4 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. How many amplifiers are in the Primary Surveillance Radar (PSR) transmitter?**
  - A. 1.**
  - B. 4.**
  - C. 8.**
  - D. 12.**
  
- 2. What is an advantage of the individual pencil beams when handling rain clutter or chaff?**
  - A. Reduces screening**
  - B. Reduces multipath reflections**
  - C. Limits the volume of space observed**
  - D. Increases the volume of space observed**
  
- 3. What site support subsystem (SSS) system works in conjunction with the automation subsystem to provide artificially generated radar and inter-facility message data for test, certification, and training?**
  - A. Testing and Training Simulator Equipment/Simulation (TTSE/SIM).**
  - B. Test and Simulation Training Control Equipment.**
  - C. ATControl software.**
  - D. Standard Terminal Automation Replacement System (STARS) ELITE.**
  
- 4. Which type of radar is associated with the AN/TPS-75 system for surveillance?**
  - A. Rotary radar**
  - B. Search radar**
  - C. Tracking radar**
  - D. Ground radar**
  
- 5. Which indicator power supply furnishes the cathode ray tube (CRT) operating voltages?**
  - A. Deflection circuit.**
  - B. Panel control.**
  - C. High voltage.**
  - D. Low voltage.**

- 6. How many separate channels does a monopulse receiver have?**
- A. One.**
  - B. Two.**
  - C. Three.**
  - D. Four.**
- 7. What online system functions to acquire, improve, publish, catalog, manage, store, distribute, and display official technical orders?**
- A. Electronic technical operations (eTO).**
  - B. Technical order distribution office (TODO).**
  - C. Air Force Technical Ordering System (ATOS).**
  - D. Enhanced Technical Information Management System (ETIMS).**
- 8. What was the original purpose of developing secondary radar technology?**
- A. Increase the range of the primary radar**
  - B. Provide more power to the primary radar**
  - C. Identify a radar aircraft target as friend or foe**
  - D. Provide range and azimuth to the primary radar**
- 9. What does a knot in a lanyard do to its overall strength?**
- A. Increases strength by 25%.**
  - B. Increases strength by 50%.**
  - C. Reduces strength by 50%.**
  - D. Has no effect.**
- 10. What performs the function of displaying the screen you see on a computer monitor?**
- A. Liquid crystal display**
  - B. Cathode ray tube**
  - C. Graphics/video card**
  - D. Image scanner**

## Answers

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

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## **Explanations**

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**1. How many amplifiers are in the Primary Surveillance Radar (PSR) transmitter?**

- A. 1.
- B. 4.
- C. 8.**
- D. 12.

In a Primary Surveillance Radar (PSR) system, the transmitter typically consists of several amplifiers to ensure the radar signal is powerful enough to be transmitted over long distances and can effectively return information from targets such as aircraft. In this context, having eight amplifiers in the PSR transmitter is standard for achieving the necessary signal strength and maintaining the reliability of radar operations. Each amplifier serves to boost the signal progressively, allowing it to reach the required power levels for effective detection. This multi-amplifier arrangement is crucial for enhancing the system's performance and ensuring that the radar can operate effectively under various conditions. Understanding this configuration emphasizes the importance of signal amplification in radar technology.

**2. What is an advantage of the individual pencil beams when handling rain clutter or chaff?**

- A. Reduces screening
- B. Reduces multipath reflections
- C. Limits the volume of space observed**
- D. Increases the volume of space observed

The advantage of individual pencil beams in handling rain clutter or chaff lies in their ability to limit the volume of space being observed. Unlike broader beam patterns that might pick up more ambient clutter, pencil beams are narrower and more focused. This specificity allows radar systems to better distinguish between the desired target and unwanted reflections caused by rain or chaff. By concentrating energy in a limited area, pencil beams can enhance target resolution and reduce the interference from surrounding clutter. This effectiveness is particularly beneficial in challenging conditions where rain and chaff are prevalent since it allows for a clearer identification of actual targets by isolating them in a defined volume. Thus, the focused nature of pencil beams significantly contributes to better data interpretation and target acquisition in cluttered environments.

**3. What site support subsystem (SSS) system works in conjunction with the automation subsystem to provide artificially generated radar and inter-facility message data for test, certification, and training?**

**A. Testing and Training Simulator Equipment/Simulation (TTSE/SIM).**

**B. Test and Simulation Training Control Equipment.**

**C. ATControl software.**

**D. Standard Terminal Automation Replacement System (STARS) ELITE.**

The Testing and Training Simulator Equipment/Simulation (TTSE/SIM) is designed specifically to create an environment for testing, certification, and training purposes by generating radar and inter-facility message data. This system works hand-in-hand with the automation subsystem to facilitate realistic simulations that mimic operational conditions without requiring actual live data. By using TTSE/SIM, training scenarios can be crafted to enhance the readiness of personnel, allowing them to practice and refine their skills in a safe and controlled environment, significantly benefiting their training experience. The other options, while they may overlap in some aspects of testing and simulation, do not fully encompass the comprehensive capability to artificially generate the specific radar and message data utilized for training and certification as provided by TTSE/SIM.

**4. Which type of radar is associated with the AN/TPS-75 system for surveillance?**

**A. Rotary radar**

**B. Search radar**

**C. Tracking radar**

**D. Ground radar**

The AN/TPS-75 radar system is primarily designed for air surveillance and the detection of airborne targets. It is classified as a search radar because its main function is to continuously monitor and scan the sky for aircraft and other aerial objects over a considerable range. This type of radar employs a rotating antenna to provide a broad coverage area, allowing it to detect multiple targets and track their movements. Search radars, like the AN/TPS-75, are essential for early warning and situational awareness, providing critical data for air defense operations. Their ability to perform long-range detection and provide detailed information about the targets plays a vital role in the overall operational effectiveness of military forces. In contrast, rotary radar refers to a mechanism that might be involved, but it does not encapsulate the specific purpose of the AN/TPS-75. Tracking radar focuses on following specific targets after they have been detected, while ground radar typically relates to systems used for land-based applications, which would not accurately characterize the AN/TPS-75. Therefore, identifying the AN/TPS-75 as a search radar highlights its function and capability within a surveillance context.

**5. Which indicator power supply furnishes the cathode ray tube (CRT) operating voltages?**

- A. Deflection circuit.**
- B. Panel control.**
- C. High voltage.**
- D. Low voltage.**

The high voltage power supply is responsible for providing the necessary operating voltages for a cathode ray tube (CRT). CRTs require specific high voltage levels to function correctly, including the anode voltage, which is critical for accelerating the electrons emitted from the cathode. These high voltage levels are essential for creating the bright images displayed on the screen. The high voltage supply ensures that there is enough potential difference to move the electrons quickly across the tube, allowing them to strike the phosphorescent screen and produce visible images. On the other hand, while the deflection circuit and panel control are important for other aspects of CRT operation, such as directing the electron beam and adjusting the display settings, they do not provide the high voltages necessary for the fundamental operation of the CRT. Low voltage supplies typically manage lower power requirements and control signals, but again, they do not address the high voltage needs crucial for the CRT's performance. Thus, the high voltage power supply is the correct answer, as it directly relates to the CRT's operational requirements.

**6. How many separate channels does a monopulse receiver have?**

- A. One.**
- B. Two.**
- C. Three.**
- D. Four.**

A monopulse receiver is designed to achieve high accuracy in direction finding by utilizing multiple channels simultaneously. It typically features at least four separate channels: one for summing the signals from the antenna lobes and three others to compare the signals from those lobes. This configuration allows the receiver to derive precise angular information about the source of the signal. The use of multiple channels facilitates the capability to calculate the difference in signal strength between the various paths, ultimately determining the direction of the incoming signal with high precision. This design is particularly effective in radar and tracking applications, where accuracy in locating targets is critical. The additional channels provide the needed comparisons to ensure reliability and precision in the directional measurements, distinguishing it from simpler systems that may only use one or two channels for less complex tasks.

**7. What online system functions to acquire, improve, publish, catalog, manage, store, distribute, and display official technical orders?**

**A. Electronic technical operations (eTO).**

**B. Technical order distribution office (TODO).**

**C. Air Force Technical Ordering System (ATOS).**

**D. Enhanced Technical Information Management System (ETIMS).**

The Enhanced Technical Information Management System (ETIMS) is specifically designed to handle the comprehensive life cycle of official technical orders within the Air Force. This includes acquiring, improving, publishing, cataloging, managing, storing, distributing, and displaying these technical orders, ensuring that all relevant information is readily available and up to date for users. ETIMS supports a wide array of functions that are critical for maintaining operational efficiency and compliance with technical standards. The system enhances the accessibility of technical documents, allowing for streamlined updates and distribution, which is vital for mission readiness and safety. The integration of these functions into a single system facilitates better management and oversight of technical orders compared to other systems, which may focus on specific areas without providing a holistic approach. The other options listed do have their own specific roles and functions within Air Force operations, but they do not encapsulate the full range of capabilities associated with ETIMS in the context of managing official technical orders.

**8. What was the original purpose of developing secondary radar technology?**

**A. Increase the range of the primary radar**

**B. Provide more power to the primary radar**

**C. Identify a radar aircraft target as friend or foe**

**D. Provide range and azimuth to the primary radar**

The primary intent behind developing secondary radar technology was to enhance the capability of identifying aircraft targets as either friend or foe. This identification feature, commonly known as IFF (Identification Friend or Foe), allows air traffic controllers and military personnel to differentiate between friendly aircraft and potential threats. Secondary radar achieves this by emitting a signal that prompts the aircraft's transponder to reply with a unique identifier. This interaction enables air traffic control systems to gather critical information about the aircraft, improving safety and situational awareness in crowded and complex airspace. In contrast, options focused on increasing the range, power, or providing additional information to primary radar systems do not capture the crucial role of secondary radar in target identification, which revolutionized aerial surveillance and air traffic management.

**9. What does a knot in a lanyard do to its overall strength?**

- A. Increases strength by 25%.**
- B. Increases strength by 50%.**
- C. Reduces strength by 50%.**
- D. Has no effect.**

A knot in a lanyard reduces its overall strength due to the way the fibers are compressed and altered when the knot is formed. When a knot is tied, it creates pressure points and bends in the material, which can lead to a decrease in the effective load-bearing capacity. Specific knots can cause the fibers to pull against each other in ways that create friction and stress, potentially leading to failure. This is particularly significant in materials like rope or cord where the integrity of the fibers is crucial for maintaining strength. Various studies and safety guidelines indicate that the strength can be significantly compromised, often estimated as a reduction of around 50% for many common knots. Therefore, while knots are essential for securing items, their impact on overall strength must be considered carefully in applications requiring high reliability.

**10. What performs the function of displaying the screen you see on a computer monitor?**

- A. Liquid crystal display**
- B. Cathode ray tube**
- C. Graphics/video card**
- D. Image scanner**

The graphics or video card is responsible for generating and controlling the image displayed on a computer monitor. It processes data from the computer's CPU and converts it into a format that can be output to the display. This includes rendering images, videos, and graphics in a way that the monitor can present them visually. While both liquid crystal displays and cathode ray tubes are types of displays that show the output, they do not perform the function of creating the images responsible for what you see on the screen. Instead, they act as the medium through which the images created by the graphics card are displayed. An image scanner, on the other hand, captures images and does not play a role in display output. By performing its function, the graphics card enables more complex graphics processing, allowing for smoother visuals and rewarding experiences in gaming and multimedia applications.

## 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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://1c8x3vol1to4.examzify.com>**

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

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