

ACSO Basic Electronic Warfare 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. The measurement of time that the transmitter is on during each cycle describes which term?**
 - A. Pulse Repetition Frequency (PRF)**
 - B. Pulse Repetition Interval (PRI)**
 - C. Rest Time**
 - D. Pulse Width (PW)**

- 2. "The degree of accuracy to which RADAR can measure range" is the definition of which of the following terms?**
 - A. Range Definition**
 - B. Maximum Unambiguous Range**
 - C. Maximum Detection Range**
 - D. Range Resolution**

- 3. Which term refers to intelligence concerning foreign technological developments applicable for military purposes?**
 - A. Operational Electronic Intelligence (OPELINT)**
 - B. Technical Electronic Intelligence (TECHELINT)**
 - C. Electronic Intelligence (ELINT)**
 - D. Communication Intelligence (COMINT)**

- 4. The division of EW that involves actions tasked by an operational commander to locate sources of electromagnetic energy is defined as which of the following?**
 - A. Electronic Warfare Support (ES)**
 - B. Signal Intelligence (SIGINT)**
 - C. Electronic Intelligence (ELINT)**
 - D. Communication Intelligence (COMINT)**

- 5. How long is chaff cut to optimize its performance?**
 - A. The wavelength of the target RADAR signal**
 - B. Twice the wavelength of the target RADAR signal**
 - C. Half the wavelength of the target RADAR signal**
 - D. One-quarter the wavelength of the target RADAR signal**

- 6. Two in-phase EM waves arriving at the same point via different paths describes which of the following terms?**
- A. Destructive interference**
 - B. Constructive interference**
 - C. Reflection**
 - D. Refraction**
- 7. What two effects are responsible for the attenuation of infrared radiation as it passes through the earth's atmosphere?**
- A. Absorption and Scattering**
 - B. Reflection and Diffraction**
 - C. Absorption and Diffraction**
 - D. Scintillation and Diffraction**
- 8. What type of guidance combines two or more techniques into one missile?**
- A. Command**
 - B. Hybrid**
 - C. Homing**
 - D. Navigation**
- 9. What defines the term "search radar"?**
- A. Radar that identifies friend or foe**
 - B. Radar that provides targeting information**
 - C. Radar used for detecting and tracking targets**
 - D. Radar that emits energy in a fixed direction**
- 10. What does Smart Noise do to make Electronic Jamming effective against Direct Threat RADAR?**
- A. Concentrates the noise in a narrow beam**
 - B. Modulates the noise in some fashion**
 - C. Adds power to overpower the target RADAR**
 - D. Reradiates the target RADAR to produce a stronger return**

Answers

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

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Explanations

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1. The measurement of time that the transmitter is on during each cycle describes which term?

- A. Pulse Repetition Frequency (PRF)**
- B. Pulse Repetition Interval (PRI)**
- C. Rest Time**
- D. Pulse Width (PW)**

The correct term to describe the measurement of time that the transmitter is on during each cycle is Pulse Width (PW). Pulse Width refers specifically to the duration of the individual pulse transmitted, which indicates how long the transmitter emits a signal before turning off. This is a critical parameter in electronic warfare and radar systems, as it affects the resolution, range, and overall effectiveness of the system. Pulse Repetition Frequency (PRF) refers to how many pulses are transmitted per second and does not measure the duration of a single pulse. Pulse Repetition Interval (PRI) is the time between the start of one pulse to the start of the next pulse, which includes both the pulse width and the time the transmitter is off. Rest time is not a standard term related to pulse measurements in this context. Each of these alternative terms describes different aspects of pulse transmission but does not specifically measure the duration of the pulse itself, which is definitively characterized by Pulse Width.

2. "The degree of accuracy to which RADAR can measure range" is the definition of which of the following terms?

- A. Range Definition**
- B. Maximum Unambiguous Range**
- C. Maximum Detection Range**
- D. Range Resolution**

The correct term that corresponds to "the degree of accuracy to which RADAR can measure range" is indeed Range Resolution. Range Resolution specifically refers to the ability of a radar system to distinguish between two targets that are close to each other in range. It is critical in determining how accurately the radar can measure the distance to a target. In the context of radar systems, range resolution is often influenced by the pulse width; shorter pulses can resolve objects that are closer together, while longer pulses may not be able to differentiate between them. This capability is vital for operations where precision is required, such as in tracking multiple objects or identifying targets in a dense environment. Other options provided do have relevance to radar systems but focus on different aspects. Maximum Unambiguous Range refers to the farthest distance at which a target can be detected without the risk of range ambiguity. Maximum Detection Range pertains to the longest distance at which a radar can detect a target reliably, regardless of other factors affecting resolution. Range Definition is not a commonly utilized term in radar terminology compared to Range Resolution, which directly addresses the measurement accuracy of range in question. Thus, the most accurate match for the definition provided in the question is Range Resolution.

- 3. Which term refers to intelligence concerning foreign technological developments applicable for military purposes?**
- A. Operational Electronic Intelligence (OPELINT)**
 - B. Technical Electronic Intelligence (TECHELINT)**
 - C. Electronic Intelligence (ELINT)**
 - D. Communication Intelligence (COMINT)**

The term that refers to intelligence concerning foreign technological developments applicable for military purposes is Technical Electronic Intelligence (TECHELINT). This area focuses specifically on the technical aspects of foreign military capabilities, including their systems, technologies, and operational methods. It encompasses the analysis and understanding of weapon systems, platforms, and operational concepts that could pose a threat or offer opportunities for military advantage. TECHELINT is integral to developing strategies and countermeasures as it informs decision-making and capability planning within military contexts. By assessing foreign technological advancements, military organizations can adapt and enhance their own technologies and tactics, ensuring preparedness in a rapidly evolving threat landscape. The other options describe different facets of electronic warfare and intelligence. Operational Electronic Intelligence (OPELINT) is more focused on the operational aspects and how systems are utilized in the field, while Electronic Intelligence (ELINT) relates specifically to the interception and analysis of non-communication signals emitted by foreign radar and weapons systems. Communication Intelligence (COMINT) deals with the interception and analysis of communications. While all these terms relate to intelligence and electronic warfare, they do not specifically target the evaluation of foreign technological developments in the same way as TECHELINT does.

- 4. The division of EW that involves actions tasked by an operational commander to locate sources of electromagnetic energy is defined as which of the following?**
- A. Electronic Warfare Support (ES)**
 - B. Signal Intelligence (SIGINT)**
 - C. Electronic Intelligence (ELINT)**
 - D. Communication Intelligence (COMINT)**

The division of electronic warfare that is concerned with actions directed by an operational commander to identify and locate sources of electromagnetic energy is known as Electronic Warfare Support, commonly abbreviated as ES. This category of EW focuses on gathering information about enemy electromagnetic emissions to enhance situational awareness and provide actionable intelligence. The primary goal of EW Support is to detect, intercept, and analyze electromagnetic signals in order to understand the capabilities and intentions of adversaries. While Signal Intelligence (SIGINT), Electronic Intelligence (ELINT), and Communication Intelligence (COMINT) all fall under broader categories of intelligence gathering, they do not specifically encapsulate the operational actions of locating sources of electromagnetic energy as described in the question. SIGINT encompasses a wider range of interception of signals, which includes both communications and non-communication signals. ELINT refers specifically to the collection and analysis of electronic emissions from radar and other systems, but it does not directly engage in the operational tasks assigned by a commander like ES does. COMINT is focused solely on gathering intelligence from communications, such as voice or data transmissions, and therefore, does not encapsulate the broader task of locating electromagnetic sources as effectively as Electronic Warfare Support. In summary, Electronic Warfare Support is specifically designed for operational commanders to effectively locate and exploit electromagnetic

5. How long is chaff cut to optimize its performance?

- A. The wavelength of the target RADAR signal**
- B. Twice the wavelength of the target RADAR signal**
- C. Half the wavelength of the target RADAR signal**
- D. One-quarter the wavelength of the target RADAR signal**

Chaff is designed to create false radar echoes effectively, confusing enemy radar systems. Its length is critical for this purpose; it needs to be specifically tuned to the wavelengths of the radar signals it aims to deceive. The optimal length for chaff is typically one-half the wavelength of the target radar signal. This design ensures that when chaff is deployed, it resonates effectively with the radar frequencies, leading to greater scattering and producing a stronger false return signal. This relationship between chaff length and radar wavelength is essential for maximizing the effectiveness of chaff as a countermeasure. Other lengths do not create as efficient a scattering effect for the target RADAR, which is why they are not optimal. Therefore, a cutting length of half the wavelength effectively increases the likelihood of overwhelming the radar system, successfully diverting attention away from the actual target.

6. Two in-phase EM waves arriving at the same point via different paths describes which of the following terms?

- A. Destructive interference**
- B. Constructive interference**
- C. Reflection**
- D. Refraction**

When two electromagnetic (EM) waves arrive at the same point in phase, meaning their peaks and troughs align, they interact in a manner known as constructive interference. This phenomenon occurs when the amplitudes of the waves add together, resulting in a new wave with a greater amplitude than either of the individual waves. In the case of constructive interference, the energy of the combined wave is increased, which can lead to a stronger signal or a more pronounced effect in the context of electronic warfare and other applications. This is an important principle in various fields, including telecommunications, optics, and electronic warfare, where understanding how waves superimpose can significantly affect performance and system design. Understanding the conditions under which constructive interference occurs is essential for optimizing systems that rely on wave propagation, allowing for efficient signal transmission and reception.

7. What two effects are responsible for the attenuation of infrared radiation as it passes through the earth's atmosphere?

- A. Absorption and Scattering**
- B. Reflection and Diffraction**
- C. Absorption and Diffraction**
- D. Scintillation and Diffraction**

The attenuation of infrared radiation as it passes through the earth's atmosphere is primarily influenced by absorption and scattering. Absorption occurs when molecules in the atmosphere, such as water vapor, carbon dioxide, and other gases, take in the energy of the infrared radiation. This process reduces the intensity of the infrared waves as they travel through the atmosphere, effectively diminishing their strength by converting some of that energy into heat. Scattering refers to the redirection of infrared radiation when it encounters small particles or droplets in the atmosphere. This scattering can cause the radiation to diffuse in various directions, resulting in a decrease in the direct transmission of the radiation. Both of these processes—absorption and scattering—are key in determining how much infrared radiation can reach the surface of the Earth and how it is perceived in infrared sensing applications. In contrast, reflection and diffraction do not primarily contribute to the attenuation of infrared radiation in this context, and scintillation, while relevant in other forms of wave propagation (like radio waves), is not applicable to the infrared spectrum in the same way. Thus, absorption and scattering are the correct effects to consider for this phenomenon.

8. What type of guidance combines two or more techniques into one missile?

- A. Command**
- B. Hybrid**
- C. Homing**
- D. Navigation**

The correct choice, hybrid guidance, refers to a missile guidance system that integrates two or more guidance techniques to enhance the effectiveness and performance of the missile. This approach allows the missile to leverage the strengths of various guidance methods, such as combining the precision of command guidance with the adaptability of homing guidance. For instance, a hybrid system may utilize command guidance for initial trajectory corrections while also switching to homing guidance as it approaches the target, allowing it to accurately strike moving or evasive targets. This versatility significantly improves target acquisition and hits probability, especially in complex environments where threats may change rapidly. The other guidance types mentioned have distinct characteristics. Command guidance relies on external control, usually from a ground or aerial operator, affecting the missile's flight path in real time without integrating other techniques. Homing guidance, on the other hand, utilizes onboard sensors to actively seek out the target, resulting in a fundamentally different operational methodology. Navigation guidance primarily focuses on waypoints and pre-programmed paths, which does not incorporate the adaptive nature that hybrid systems offer.

9. What defines the term "search radar"?

- A. Radar that identifies friend or foe**
- B. Radar that provides targeting information**
- C. Radar used for detecting and tracking targets**
- D. Radar that emits energy in a fixed direction**

The term "search radar" specifically refers to systems designed for the detection and tracking of targets, such as aircraft, ships, or missiles. This type of radar scans a designated area by emitting radio waves and analyzing the return signals reflected from any objects in that space. Its primary function is to locate potential threats or targets without needing prior information about their exact position. Search radar differs from other radar types in that it is primarily focused on wide-area surveillance and initial detection, rather than just identifying friendly or hostile forces or providing precision targeting data. While it plays a crucial role in situational awareness and threat assessment, its key characteristic is the ability to detect and track multiple targets across a broad area, which is what makes it essential in military applications and air defense systems.

10. What does Smart Noise do to make Electronic Jamming effective against Direct Threat RADAR?

- A. Concentrates the noise in a narrow beam**
- B. Modulates the noise in some fashion**
- C. Adds power to overpower the target RADAR**
- D. Reradiates the target RADAR to produce a stronger return**

Smart Noise is designed to enhance the effectiveness of electronic jamming against direct threat radar by employing modulation techniques that optimize the jamming signals. By modulating the noise, Smart Noise can effectively match the characteristics of the radar signals it aims to disrupt. This modulation can alter the frequency or phase of the emitted noise, making it more difficult for the target radar to distinguish between the jamming noise and the legitimate signals it is trying to receive. This method allows the jamming to be more adaptive and deceptive, thereby increasing the chances of successful interference with the radar's ability to track or target. The sophistication of Smart Noise modulation makes it a powerful tool in electronic warfare, enabling it to exploit vulnerabilities in the radar's detection system effectively.

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://acsobasicelectronicwarfare.examzify.com>

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

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