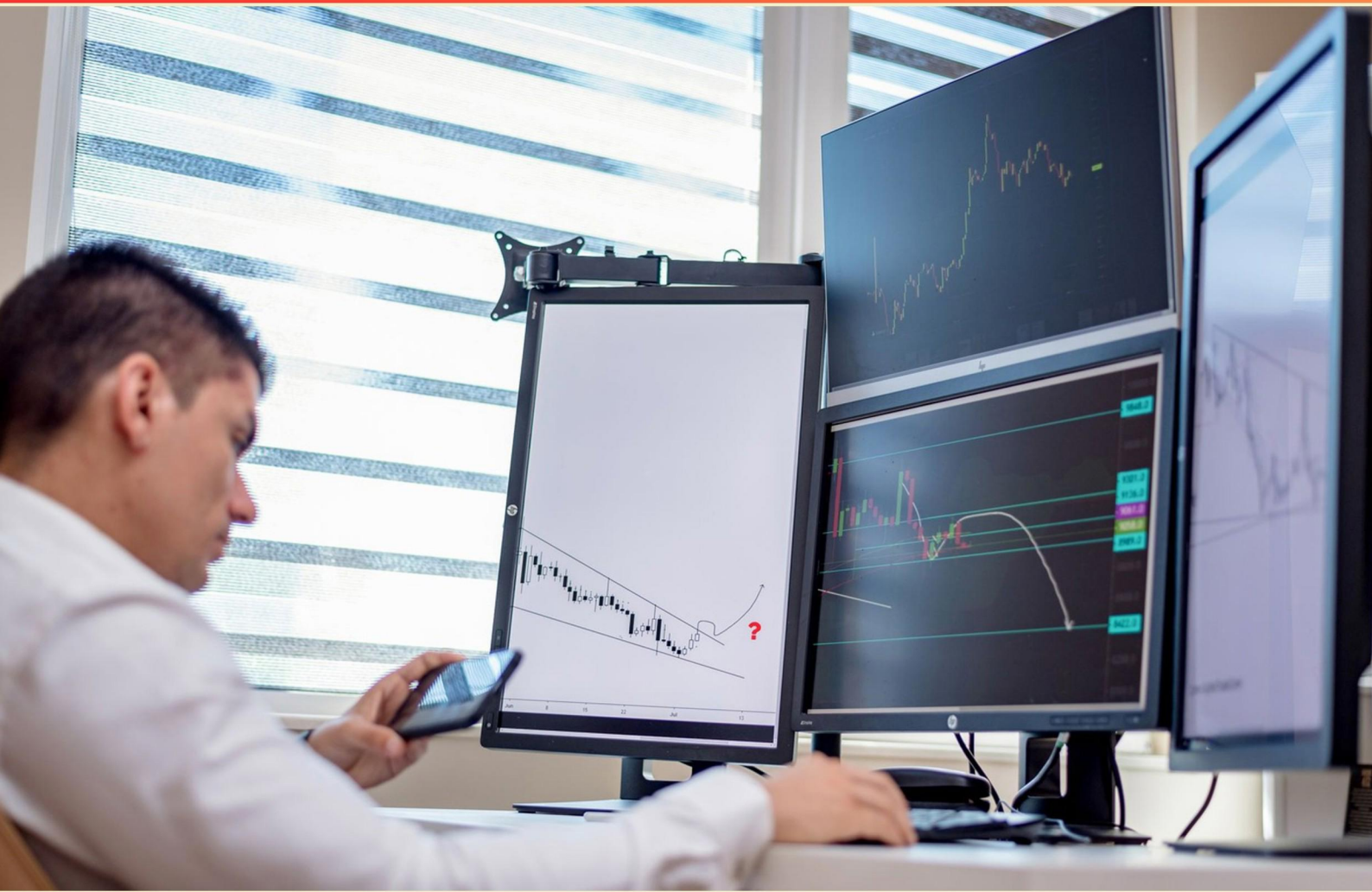


INFORMATION SYSTEMS TECHNICIAN SECOND CLASS (IT2) ADVANCEMENT PRACTICE EXAM (SAMPLE)

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.

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. What term defines a frequency that is an integer multiple of a smaller basic frequency?**
 - A. Harmonic
 - B. Period
 - C. Wavelength
 - D. Amplitude
- 2. Wireless communications were first introduced to the battlefield in which conflict?**
 - A. World War I
 - B. World War II
 - C. American Civil War
 - D. Korean War
- 3. What is the purpose of regulatory domains and channel planning in Wi-Fi?**
 - A. Regulatory domains define allowed frequencies and power rules
 - B. Channel planning ensures non-overlapping channels
 - C. Power settings determine regulatory compliance
 - D. Regulatory domains impose country-specific rules and channel planning reduces interference
- 4. Which of the following is a physical security control used to restrict access to IT equipment?**
 - A. Password policy
 - B. Antivirus software
 - C. Intrusion detection system
 - D. Access control badges and doors
- 5. In differentiating IDS and IPS, which statement is correct?**
 - A. IPS only logs anomalies
 - B. IDS blocks threats; IPS only monitors.
 - C. IDS monitors and alerts; IPS can actively block.
 - D. Both never block

- 6. Which sequence accurately orders the RMF steps from start to finish?**
- A. Categorize; Implement; Select; Assess; Authorize; Monitor
 - B. Categorize; Implement; Select; Assess; Authorize; Monitor
 - C. Categorize the information system; Select security controls; Implement and/or ensure/ apply controls; Assess controls; Authorize system operation; Monitor security state
 - D. Categorize; Select; Assess; Implement; Authorize; Monitor
- 7. The mid-1800s use of literal ciphers was primarily by which group?**
- A. Military personnel
 - B. Journalists
 - C. Politicians
 - D. Teachers
- 8. Which sequence represents the standard problem-solving model used for network issues?**
- A. Identify problem, establish a theory, test theory, plan and implement fix, verify, document.
 - B. Identify problem, plan and implement fix, establish a theory, test theory, verify, document.
 - C. Gather symptoms, identify problem, implement fix, verify, document.
 - D. Define problem, gather data, implement solution, verify, document.
- 9. The frequency of a sound is referred to as what?**
- A. Pitch
 - B. Intensity
 - C. Loudness
 - D. Quality
- 10. An antenna with electrical length equal to half the wavelength is called what?**
- A. Quarter-wave
 - B. Half-wave
 - C. Full-wave
 - D. Dipole

Answers

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

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Explanations

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1. What term defines a frequency that is an integer multiple of a smaller basic frequency?

- A. Harmonic**
- B. Period
- C. Wavelength
- D. Amplitude

When a frequency is an integer multiple of a smaller base frequency, that frequency is called a harmonic. The base frequency, or fundamental, sets the starting point, and the harmonics occur at integer multiples like 2x, 3x, and so on. This idea is central to how periodic signals are analyzed and synthesized; Fourier analysis shows any periodic waveform can be decomposed into harmonics at those integer-multiple frequencies. In music, what you hear as overtones are harmonics of the fundamental note. The other terms don't describe this relationship: period is the time for one cycle (the reciprocal of frequency), wavelength is the spatial distance between peaks (dependent on propagation speed and frequency), and amplitude is the signal's height, not the multiple relationship.

2. Wireless communications were first introduced to the battlefield in which conflict?

- A. World War I**
- B. World War II
- C. American Civil War
- D. Korean War

Wireless communications on the battlefield first became practical during World War I. Armies started using radio transmitters and receivers to send orders, coordinate artillery, and relay information between headquarters and frontline units without relying on wired telegraph lines or visual signaling. Earlier conflicts, such as the American Civil War, relied on wired telegraphs and other non-radio methods, so wireless radios weren't yet part of battlefield communications. World War II and later conflicts expanded and refined this capability, but the initial introduction occurs in World War I.

3. What is the purpose of regulatory domains and channel planning in Wi-Fi?

- A. Regulatory domains define allowed frequencies and power rules
- B. Channel planning ensures non-overlapping channels
- C. Power settings determine regulatory compliance
- D. Regulatory domains impose country-specific rules and channel planning reduces interference**

The main idea is that Wi Fi must operate within legal limits for the country and also be designed to minimize interference with other networks. Regulatory domains set the country-specific rules for what frequencies can be used and how much power can be transmitted. Channel planning is the practical process of choosing which channels your access points use to avoid overlapping and interference, especially when multiple APs are deployed in the same area. Together, they ensure compliant operation and better network performance. For example, the chosen channels in a dense environment are planned to be non-overlapping where possible, while the device's regulatory domain ensures you're using only the allowed bands and power levels.

4. Which of the following is a physical security control used to restrict access to IT equipment?

- A. Password policy
- B. Antivirus software
- C. Intrusion detection system
- D. Access control badges and doors**

This question centers on physical security controls—measures that restrict direct, physical access to IT equipment. Using access control badges and doors is a prime example: it physically gates who can enter the areas or cabinets where servers, switches, and other hardware reside, helping prevent tampering, theft, or accidental damage by unauthorized people. The other options protect systems in different ways but do not stop someone from reaching the hardware itself: a password policy governs how users authenticate to systems, not how to keep them out of the equipment area; antivirus software defends against malware on software levels; and an intrusion detection system watches for suspicious activity but doesn't physically block access to the equipment. So the badge-and-door approach is the correct example of a physical security control that restricts access to IT equipment.

5. In differentiating IDS and IPS, which statement is correct?

- A. IPS only logs anomalies
- B. IDS blocks threats; IPS only monitors.
- C. IDS monitors and alerts; IPS can actively block.**
- D. Both never block

The difference being tested is how the systems handle traffic: one is a monitoring and alerting tool, the other sits in line and can actively block traffic. An IDS watches network traffic, analyzes it for suspicious activity, and raises alerts or logs incidents for administrators to respond to. It does not intervene to stop traffic by itself. An IPS, on the other hand, is placed inline on the data path and can automatically block or drop traffic it identifies as malicious, acting in real time to prevent intrusions. This is why the statement that IDS monitors and alerts while IPS can actively block is the best answer. The other options mischaracterize the roles: an IPS is not limited to logging-only and can block; an IDS does not block traffic; and the idea that neither system blocks traffic is incorrect because the defining feature of an IPS is its ability to block.

6. Which sequence accurately orders the RMF steps from start to finish?

- A. Categorize; Implement; Select; Assess; Authorize; Monitor
- B. Categorize; Implement; Select; Assess; Authorize; Monitor
- C. Categorize the information system; Select security controls; Implement and/or ensure/ apply controls; Assess controls; Authorize system operation; Monitor security state**
- D. Categorize; Select; Assess; Implement; Authorize; Monitor

Understanding the order of the RMF steps is essential. You begin by categorizing the information system to determine the potential impact on operations, assets, and individuals. Once you know the required protection level, you select the security controls that meet those requirements. After choosing controls, you implement or apply them within the system. With the controls in place, you assess their effectiveness to verify proper implementation and adequacy. Based on the assessment, you obtain authorization to operate the system. Finally, you engage in continuous monitoring to track the security state and detect changes, feeding updates back into the process as needed. This sequence reflects why the other arrangements don't fit: control selection depends on the system's impact categorization; controls must be in place before you can assess them; authorization relies on a validated assessment; and monitoring is ongoing, not a one-time final step.

7. The mid-1800s use of literal ciphers was primarily by which group?

A. Military personnel

B. Journalists

C. Politicians

D. Teachers

In the mid-1800s, securing communications was a pressing need for those in armed forces, so literal ciphers—simple substitution schemes that transform letters to conceal messages—were used mainly by military personnel to protect orders and reconnaissance reports during campaigns. The military faced direct risks of interception across battlelines and telegraph or courier channels, making practical, repeatable encryption essential for maintaining secrecy. Journalists, politicians, and teachers did not rely on this kind of encryption as a standard practice in that era, so the primary, most consistent users were military forces.

8. Which sequence represents the standard problem-solving model used for network issues?

A. Identify problem, establish a theory, test theory, plan and implement fix, verify, document.

B. Identify problem, plan and implement fix, establish a theory, test theory, verify, document.

C. Gather symptoms, identify problem, implement fix, verify, document.

D. Define problem, gather data, implement solution, verify, document.

A structured troubleshooting approach starts by identifying the problem, then forming a theory about probable causes, testing that theory, planning and implementing a fix, verifying the result, and finally documenting what was done. This order matters because you confirm what you think is causing the issue before making changes, which reduces unnecessary or wrong fixes and helps prevent introducing new problems. By testing the theory, you build evidence that the chosen solution actually targets the real cause. After implementing the fix, you verify that the network services are back to normal and that no new issues appeared. Documentation captures what was found and what was done so future issues can be resolved faster and consistently. Other sequences either skip the theory stage, jump to fixes without verification, or omit the final documentation, which can lead to guessing, incomplete resolution, or repeated problems.

9. The frequency of a sound is referred to as what?

A. Pitch

B. Intensity

C. Loudness

D. Quality

The frequency of a sound is what determines its pitch. Frequency is how often a sound wave repeats each second, measured in hertz, and our ears interpret that rate as how high or low the tone sounds. A higher frequency produces a higher-pitched sound, while a lower frequency yields a lower-pitched one. That's why pitch is the best term for describing frequency. The other terms describe different aspects: intensity is about how much energy the sound carries (often related to loudness), loudness is the perceived strength of the sound, and quality (timbre) is the color or character of the tone that lets us distinguish different sounds even when they have the same pitch and loudness.

10. An antenna with electrical length equal to half the wavelength is called what?

A. Quarter-wave

B. Half-wave

C. Full-wave

D. Dipole

An antenna that is one-half of a wavelength long forms a standing-wave current distribution with a maximum at the center and zeros at the ends. This resonance makes it an efficient radiator, and when fed in the middle, it behaves as a half-wave dipole with a practical input impedance (around 70–75 ohms in free space) and a broad pattern perpendicular to its axis. Because its electrical length is exactly one-half of a wavelength, the proper name for this type of antenna is a half-wave antenna.

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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://it2advancement.examzify.com>

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

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