

Aircraft Electronics Technician Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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Table of Contents

Copyright 1

Table of Contents 2

Introduction 3

How to Use This Guide 4

Questions 5

Answers 8

Explanations 10

Next Steps 16

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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 action should never be done with hazardous materials at a jobsite?**
 - A. Pour hazardous materials down the drain**
 - B. Store hazardous materials in a closed container**
 - C. Wear gloves when handling**
 - D. Use approved waste containers**

- 2. Which term describes methods of tool control and accountability such as shadow box, tether, chit system, tool inventories, and related practices?**
 - A. Instrument Tracking**
 - B. Tool Control and Management**
 - C. Asset Control System**
 - D. Equipment Accountability**

- 3. What information must waterproof container labels include?**
 - A. Substance name and trade name, manufacturer, hazards, and date**
 - B. Only the substance name**
 - C. The price and supplier contact**
 - D. The color and shape of the container**

- 4. What is the short-hand method of expressing a number as a value between 1 and 10 multiplied by a power of ten?**
 - A. Decimal Notation**
 - B. Binary Notation**
 - C. Exponential Notation**
 - D. Scientific Notation**

- 5. Which electrical characteristic defines opposition to AC flow produced by coils and capacitors?**
 - A. Resistance**
 - B. Inductance**
 - C. Impedance**
 - D. Reactance**

- 6. What is another term used interchangeably with demodulation?**
- A. Demodulation**
 - B. High-pass**
 - C. Detection**
 - D. Tuning Circuit**
- 7. Electrostatic Damage includes total catastrophic failure, delayed failure, and degradation to the circuit.**
- A. Electrostatic Field**
 - B. Mechanical Failure**
 - C. Thermal Expansion**
 - D. Electrostatic Damage**
- 8. Substances that function to protect surfaces.**
- A. Coatings**
 - B. Solvents**
 - C. Caustic Solutions**
 - D. Hazardous Liquids**
- 9. Which law relates voltage, current, and resistance in an electrical circuit?**
- A. Ohm's Law**
 - B. Coulomb's Law**
 - C. Faraday's Law**
 - D. Kirchhoff's Law**
- 10. Contains a combination of series and parallel circuits?**
- A. Complex Circuits**
 - B. Series Circuits**
 - C. Parallel Circuits**
 - D. Hybrid Circuits**

Answers

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

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Explanations

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1. What action should never be done with hazardous materials at a jobsite?

- A. Pour hazardous materials down the drain**
- B. Store hazardous materials in a closed container**
- C. Wear gloves when handling**
- D. Use approved waste containers**

Pouring hazardous materials down the drain should never be done. Hazardous substances can contaminate water supplies, harm aquatic life, and pose health risks to workers and the public. Many materials are toxic, corrosive, or reactive and require special disposal procedures and labeling under environmental and safety regulations. Drains and sewer systems aren't designed to handle such waste, and improper disposal can lead to leaks, spills, or chemical reactions. Proper practices on a jobsite include keeping hazardous materials in closed containers to prevent leaks and exposure, wearing gloves to protect skin when handling them, and using approved waste containers for disposal to ensure correct labeling, containment, and eventual lawful disposal.

2. Which term describes methods of tool control and accountability such as shadow box, tether, chit system, tool inventories, and related practices?

- A. Instrument Tracking**
- B. Tool Control and Management**
- C. Asset Control System**
- D. Equipment Accountability**

Tool control and accountability is the practice of keeping tools secure and ensuring they are accounted for before, during, and after use. The methods described—shadow boxes to quickly spot missing items, tethering tools to keep them from being misplaced, chit systems to record checkouts and returns, and regular tool inventories—are exactly the combination of physical control and record-keeping that defines this approach. This term explicitly covers both preventing tool loss and verifying tool presence, which is why it's the best fit. The other terms refer to broader or different concepts, such as tracking instruments, generic asset management, or equipment rather than tools, and don't capture the specialized methods shown.

3. What information must waterproof container labels include?

- A. Substance name and trade name, manufacturer, hazards, and date**
- B. Only the substance name**
- C. The price and supplier contact**
- D. The color and shape of the container**

Clear, durable labeling is about identifying the substance and providing essential safety details, even in wet or cluttered conditions. The best answer includes the substance name and trade name if different, the manufacturer, the hazards, and a date. The substance name or product identifier tells you exactly what's inside. The trade name helps with recognition in real-world use. The manufacturer information lets you trace the source or obtain safety data if needed. The hazards tell you what risks the material poses and what precautions to take (PPE, handling, ventilation, etc.). The date helps with tracking the container for safety, inventory, and any perform-to-date information. Other options don't meet these safety needs. A label that only lists the name doesn't convey the risks or where it came from. Price and supplier contact aren't needed for safe handling. The color and shape of the container aren't reliable identifiers and don't communicate hazards or provenance.

4. What is the short-hand method of expressing a number as a value between 1 and 10 multiplied by a power of ten?

- A. Decimal Notation**
- B. Binary Notation**
- C. Exponential Notation**
- D. Scientific Notation**

This is scientific notation: a number written as a value between 1 and 10 times a power of ten. The idea is to place the decimal so there is a single nonzero digit to the left of it, then attach the appropriate power of ten. This makes it easy to compare magnitudes and perform quick arithmetic by adjusting the exponent while keeping the significant digits the same. For example, 0.0036 becomes 3.6×10^{-3} , and 680,000 becomes 6.8×10^5 . Decimal notation shows every digit in place; binary notation uses base-2; exponential notation can refer to expressions like a^n rather than a mantissa with a ten-based exponent. The described method precisely matches scientific notation.

5. Which electrical characteristic defines opposition to AC flow produced by coils and capacitors?

- A. Resistance**
- B. Inductance**
- C. Impedance**
- D. Reactance**

In AC circuits, opposition to current comes in two parts: resistance and reactance. The term that describes the opposition created specifically by energy-storing elements like coils (inductors) and capacitors is reactance. Inductive reactance grows with frequency ($X_L = 2\pi fL$), while capacitive reactance falls as frequency rises ($X_C = 1/(2\pi fC)$). The overall opposition to AC in a circuit is impedance, which combines resistance (the real part) and reactance (the imaginary part). Since the question focuses on the opposition produced by coils and capacitors, reactance is the correct concept.

6. What is another term used interchangeably with demodulation?

- A. Demodulation**
- B. High-pass**
- C. Detection**
- D. Tuning Circuit**

Demodulation and detection refer to the same job: recovering the original information from the carrier. In a receiver, the detector stage pulls out the modulating signal from the modulated wave, so this process is commonly called detection. For AM, an envelope detector is a classic example of this, while FM uses a discriminator or other detector to recover the frequency changes that carry the information. The other terms describe filtering or tuning functions, not the actual information recovery.

7. Electrostatic Damage includes total catastrophic failure, delayed failure, and degradation to the circuit.

- A. Electrostatic Field**
- B. Mechanical Failure**
- C. Thermal Expansion**
- D. Electrostatic Damage**

Electrostatic damage refers to harm caused by electrostatic discharge, which can injure electronic components in several ways. An ESD event can cause immediate, total catastrophic failure by destroying a junction or interconnect. It can also produce latent damage that isn't visible right away but may lead to failure later under normal operating conditions. Additionally, it can cause degradation of the circuit, such as shifts in electrical characteristics or increased leakage, over time. Because the statement describes damage caused by electrostatic events in all these forms, it best matches the concept of electrostatic damage. The other options describe conditions or failure modes that aren't the damage caused by electrostatic discharge: an electrostatic field is a condition related to static charge, not the damage itself; mechanical failure and thermal expansion are different failure mechanisms not specific to electrostatic damage.

8. Substances that function to protect surfaces.

A. Coatings

B. Solvents

C. Caustic Solutions

D. Hazardous Liquids

Protective coatings create a barrier that shields surfaces from environmental attack. When you apply a coating like paint, primer, or sealant, you lay down a continuous film that blocks moisture, chemicals, and wear from reaching the underlying material. In aircraft maintenance, coatings protect metal and composite skins from corrosion, weathering, and abrasion, helping to extend service life and maintain appearance. Solvents aren't protective by themselves—they're used to clean, dissolve, or thin coatings and typically evaporate away. Caustic solutions are corrosive and would damage surfaces rather than guard them. Hazardous liquids pose safety risks and can cause harm to materials depending on their properties.

9. Which law relates voltage, current, and resistance in an electrical circuit?

A. Ohm's Law

B. Coulomb's Law

C. Faraday's Law

D. Kirchhoff's Law

Understanding how voltage, current, and resistance relate is essential for analyzing circuits. Ohm's Law describes this relationship: voltage equals current times resistance ($V = I \times R$). It shows that the current flowing through a conductor depends on how much voltage drives it and how much the conductor resists the flow. Because it ties all three quantities together, you can determine any one if you know the other two. For example, doubling the voltage while leaving resistance the same doubles the current; increasing resistance with constant voltage cuts the current in proportion. In aircraft electrical systems, this proportional relationship helps engineers size wires, fuses, and components so they carry the correct current without overheating. The other laws mentioned—Coulomb's Law (forces between charges), Faraday's Law (emf induced by changing magnetic flux), and Kirchhoff's Laws (conservation of current and energy around circuits)—describe related electrical phenomena, but they do not directly express the simple V, I, R relationship for a linear resistor.

10. Contains a combination of series and parallel circuits?

A. Complex Circuits

B. Series Circuits

C. Parallel Circuits

D. Hybrid Circuits

A circuit that contains a mix of series and parallel connections is a complex (mixed) circuit. When you have parts of the network where components are in series—sharing the same current—and other parts where components are in parallel—sharing the same voltage—you’re dealing with more than one type of connection in the same diagram. That requires applying both series and parallel reduction steps in combination, working from the inside out or by using equivalent resistance calculations step by step until you reach a single equivalent value. This distinction matters because purely series circuits have the same current everywhere, and purely parallel circuits have the same voltage across every branch. A mixed circuit doesn’t fit neatly into either category because it exhibits both behaviors in different sections. While some texts use the term hybrid, the label used here is complex circuits to reflect that mixed configuration.

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://aircraftelectronicstech.examzify.com>

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

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