Electrical Comprehension DAA 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

1. In a series circuit, if you add more resistors, the current decreases?

A. Current increases

B. Current decreases

C. Current stays the same

D. Current becomes negative

2. In a cell symbol, which terminal is positive?

A. Larger terminal

B. Smaller terminal

C. Both terminals the same size

D. The symbol does not indicate polarity

3. In parallel, each component experiences what relative to the cell?

A. The same voltage

B. The same current

C. The same resistance

D. The same power

4. In a parallel circuit, adding more branches generally causes the total current to

A. Increase

B. Decrease

C. Remain the same

D. Become negative

5. The unit of capacitance is the farad. Which option correctly names the unit?

A. Henry

B. Siemens

C. Farad

D. Volt

6. What is the unit of potential difference?

A. Ampere

B. Volt

C. Ohm

D. Watt

7. Which device temporarily breaks the circuit when opened?

A. Circuit

B. Switch

C. Battery

D. Resistor

8. What is the current when one coulomb flows past a point in one second?

A. One volt

B. One amp

C. One coulomb

D. One watt

9. Which symbol represents a resistor in circuit diagrams?

A. Open Switch Symbol

B. Transformer Symbol

C. Resistor Symbol

D. Thermistor Symbol

10. Which term describes a collection of two or more cells used to provide electrical energy?

A. Cell

B. Capacitor

C. Battery

D. Conductor

Answers

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

Explanations

1. In a series circuit, if you add more resistors, the current decreases?

A. Current increases

B. Current decreases

C. Current stays the same

D. Current becomes negative

In a series circuit, the total resistance increases when you add more resistors, because the resistances add up. With a fixed supply voltage, current is I = V / R_total, so as R_total goes up, the current goes down. The same current flows through all elements in a series circuit, but its magnitude is reduced as you add resistance. It won't become negative or stay the same just from adding resistors. So the current decreases.

2. In a cell symbol, which terminal is positive?

A. Larger terminal

B. Smaller terminal

C. Both terminals the same size

D. The symbol does not indicate polarity

In a cell symbol, the positive terminal is shown by the longer (larger) line. This convention uses the length difference to indicate polarity: the long line represents higher potential (positive), and the short line represents lower potential (negative). So the end with the longer line is the positive terminal. The symbol does indicate polarity, not the other way around, which is why the option describing the larger terminal as positive is the correct one.

3. In parallel, each component experiences what relative to the cell?

A. The same voltage

B. The same current

C. The same resistance

D. The same power

In parallel, all components share the same voltage from the cell. They're connected across the same two points, so the potential difference across every branch is identical. Because the voltage is the same for each component, the current in each branch follows I = V/R. That means currents can differ if the branch resistances differ. It also means the resistance values themselves aren't forced to be the same, and the power in each branch is P = V^2 / R (or P = VI), so different resistances can draw different powers even though the voltage is the same. So the key idea is that parallel components experience the same voltage, not necessarily the same current, resistance, or power.

4. In a parallel circuit, adding more branches generally causes the total current to

A. Increase

B. Decrease

C. Remain the same

D. Become negative

In a parallel circuit, currents add up. The voltage across every branch is the same, so each branch draws I = V/R. Adding another branch creates an extra path for current, giving an additional current I_new = V/R_new. Therefore the total current from the source becomes the sum of all branch currents, increasing as you add more branches (equivalently, the total resistance drops because 1/R_eq = sum of 1/R_i). It wouldn't go negative, and it wouldn't stay the same unless the new branch drew no current (an open circuit).

5. The unit of capacitance is the farad. Which option correctly names the unit?

A. Henry

B. Siemens

C. Farad

D. Volt

Capacitance is defined as charge per volt, so its unit is coulombs per volt. In SI, that unit is called the farad (symbol F). One farad means one coulomb of charge stored per volt of potential difference. The other options belong to different quantities: Henry is inductance, Siemens is conductance, and Volt is electric potential difference. So the unit for capacitance is the farad.

6. What is the unit of potential difference?

A. Ampere

B. Volt

C. Ohm

D. Watt

The unit for potential difference is the volt, which measures how much energy is transferred per unit charge as charges move between two points. One volt equals one joule per coulomb (V = J/C). This means a voltage of 9 volts would involve 9 joules of energy per coulomb of charge moved. The other listed quantities are different electrical quantities: current is measured in amperes, resistance in ohms, and power in watts. Since voltage is defined as energy per charge, the volt is the appropriate unit for potential difference.

7. Which device temporarily breaks the circuit when opened?

A. Circuit

B. Switch

C. Battery

D. Resistor

Opening a switch creates an open circuit by physically separating the conducting path. When the switch is opened, the circuit is interrupted, so current cannot flow from the power source to the load. The switch is the device designed to connect or disconnect the circuit, making/ breaking the current as needed. A circuit itself is just the loop; a battery provides energy to move electrons but doesn't inherently break the path when opened, and a resistor sits in the path to limit current rather than interrupt it on its own.

8. What is the current when one coulomb flows past a point in one second?

A. One volt

B. One amp

C. One coulomb

D. One watt

Current measures how much charge passes a point per unit time. It's defined as charge per second, with the unit ampere. So if one coulomb flows past a point in one second, that rate is 1 coulomb per second, which is 1 ampere. The volt is a measure of electrical potential difference, not flow rate. The watt is a unit of power (volts times amps). The coulomb is the amount of charge itself, not the rate at which it moves.

9. Which symbol represents a resistor in circuit diagrams?

A. Open Switch Symbol

B. Transformer Symbol

C. Resistor Symbol

D. Thermistor Symbol

In circuit diagrams, symbols are standardized so you can instantly recognize each component. The resistor is identified by its distinct resistor symbol, which is typically a zigzag line in US conventions or a simple rectangle in IEC standards. This shape is unique to resistors, so it clearly marks a component that provides resistance in the circuit. The other symbols correspond to different parts: an open switch shows a gap with a movable contact, indicating switching capability; a transformer symbol displays two inductors close together with a core, indicating magnetic coupling; a thermistor uses the basic resistor symbol but with extra meaning for temperature dependence, so it still isn't the plain resistor symbol itself. Therefore, the symbol that represents a resistor is the resistor symbol.

10. Which term describes a collection of two or more cells used to provide electrical energy?

A. Cell

B. Capacitor

C. Battery

D. Conductor

A battery is made up of two or more electrochemical cells connected together to provide electrical energy. The individual cell is the basic energy source that produces voltage through chemical reactions; when you link cells, you can increase the overall voltage or the current disponibilidade, forming a battery. A capacitor stores energy in an electric field and isn't composed of cells that generate energy, so it isn't described as a collection of cells. A conductor is simply a material that lets current flow and does not supply energy. That's why the term for a collection of two or more cells used to provide electrical energy is battery.

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://electricalcompdaa.examzify.com

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