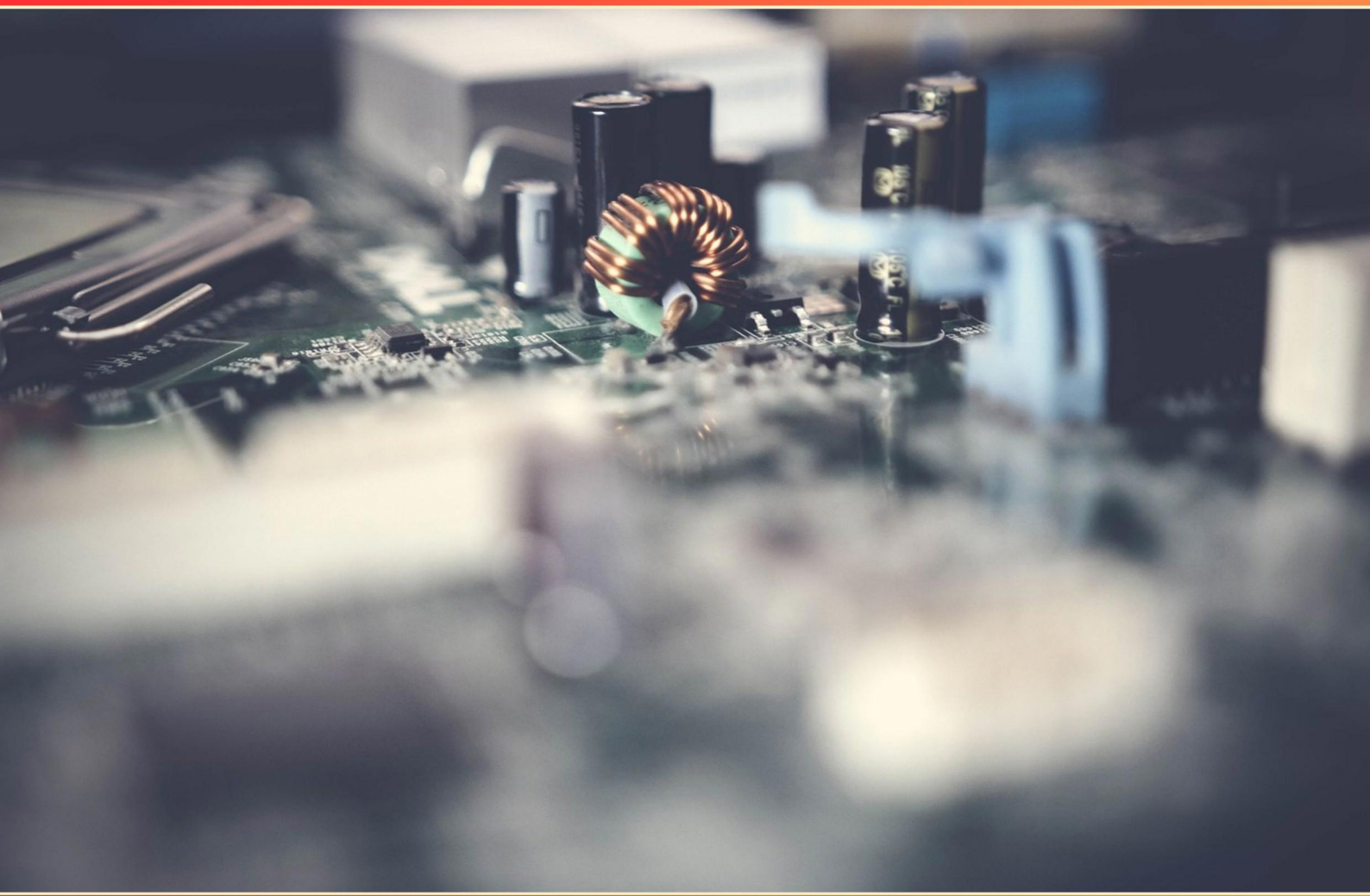
# ELECTRICAL COMPREHENSION DAA PRACTICE TEST (SAMPLE)

## STUDY GUIDE



## SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

**VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE**

https://electricalcompdaa.examzify.com

**Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.**

**ALL RIGHTS RESERVED.**

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

# 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 ..... 15


SAMPLE

# 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.

SAMPLE

# 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!

SAMPLE

# Questions

SAMPLE

**1. When two lamps are added in series, what happens to the total resistance?**

A. Decreases

B. Increases

C. Stays the same

D. Fluctuates

**2. In a parallel circuit, the potential difference is the same across all branches?**

A. Current

B. Resistance

C. Potential difference

D. Power

**3. Which statement correctly represents Ohm's Law relating voltage, current, and resistance?**

A. I = V / R

B. V = IR

C. R = I / V

D. P = VI

**4. What provides the potential difference needed to move charges in a circuit?**

A. Switches

B. Resistors

C. Cells and batteries

D. Diodes

**5. A thermistor is a sensor device; it converts temperature changes into changes in what electrical property?**

A. Current

B. Resistance

C. Capacitance

D. Inductance

SAMPLE

**6. What term describes a device that provides electrical energy and can consist of multiple cells?**

A. Buzzer

B. Capacitor

C. Cell

D. Battery

**7. Which component is a two-terminal resistor used to control current and can adjust lamp brightness or speed?**

A. Resistor

B. Variable Resistor

C. Thermistor

D. Transformer

**8. Which symbol represents a transformer in circuit diagrams?**

A. Thermistor Symbol

B. Transformer Symbol

C. Resistor Symbol

D. Open Switch Symbol

**9. What is the equation for charge in terms of current and time?**

A. Charge × Time

B. Charge × Voltage

C. Voltage × Time

D. Current × Time

**10. What is the unit of resistance?**

A. Volt

B. Ohm

C. Ampere

D. Watt

SAMPLE

# Answers

SAMPLE

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

SAMPLE

# Explanations

SAMPLE

## 1. When two lamps are added in series, what happens to the total resistance?

A. Decreases

B. Increases

C. Stays the same

D. Fluctuates

*When components are in series, the same current flows through each one, and the resistances simply add together. The total resistance seen by the power source is the sum of the individual resistances: R_total = R1 + R2. Adding another lamp adds another resistance in the path, so the overall opposition to current increases. With a fixed supply voltage, the current is I = V / R_total, so as R_total goes up, the current decreases. In short, placing two lamps in series raises the total resistance.*

## 2. In a parallel circuit, the potential difference is the same across all branches?

A. Current

B. Resistance

C. Potential difference

D. Power

*Potential difference remains the same across all branches in a parallel circuit. This happens because each branch is connected directly across the same two points of the supply, so every branch experiences the same voltage. Current can vary from one branch to another because it depends on each branch's resistance (I = V/R). With the same voltage but different resistances, the branch currents differ. Resistance can also differ between branches, so there isn't a single resistance value shared by all branches. And power in each branch depends on both the voltage and the branch current (P = VI or P = V^2/R); with the voltage the same but different currents or resistances, each branch can have a different power. So the unique quantity that is identical across all branches in a parallel circuit is the potential difference.*

## 3. Which statement correctly represents Ohm's Law relating voltage, current, and resistance?

A. I = V / R

B. V = IR

C. R = I / V

D. P = VI

*Voltage, current, and resistance are linked by a simple rule: the voltage across a conductor equals the current through it multiplied by its resistance. In symbols, V = IR. This form cleanly shows how each quantity affects the others: if you know the current and the resistance, you can find the voltage; if you know voltage and resistance, you can find the current. Units line up nicely: volts come from multiplying amperes by ohms (1 V = 1 A × 1 Ω). For example, 2 A flowing through a 5 Ω resistor produces 10 V. Rearrangements like I = V/R or R = V/I express the same relationship from different starting quantities, but the direct statement relating all three quantities is V = IR. P = VI is a separate relation that gives electrical power, not the three-variable Ohm's law itself.*

SAMPLE

## 4. What provides the potential difference needed to move charges in a circuit?

A. Switches

B. Resistors

C. Cells and batteries

D. Diodes

*Charges in a circuit are driven when there is a potential difference between two points, and that push comes from energy sources. Cells and batteries convert chemical energy into electrical energy, creating a higher electric potential at one terminal and a lower potential at the other. This difference moves charges through the circuit, producing current. Other components don't supply this drive. A switch just opens or closes the path; it doesn't add energy. A resistor uses the available voltage to produce current and drops part of the voltage according to I = V/R, but it doesn't generate the push. A diode controls the direction of current when forward-biased, but again it doesn't provide the energy it merely shapes flow once a voltage exists. So the device that provides the potential difference needed to move charges is the cell or battery.*

## 5. A thermistor is a sensor device; it converts temperature changes into changes in what electrical property?

A. Current

B. Resistance

C. Capacitance

D. Inductance

*Thermistors are temperature-sensitive resistors, so the key thing that changes with temperature is resistance. As temperature varies, the material's resistance shifts significantly, and that change is what the sensor outputs. In practice you often place the thermistor in a circuit like a voltage divider and monitor the voltage; that voltage tracks the thermistor's changing resistance, giving you a temperature reading. There are two common types: NTC, where resistance decreases as temperature rises, and PTC, where resistance increases with temperature. Capacitance and inductance don't describe how a thermistor responds to temperature, so they aren't the sensor's output. The current in the circuit depends on the applied voltage and the resistance, but the intrinsic property that the thermistor converts temperature into is resistance.*

## 6. What term describes a device that provides electrical energy and can consist of multiple cells?

A. Buzzer

B. Capacitor

C. Cell

D. Battery

*Think about what each term represents in terms of energy sources. A cell is the basic energy-producing unit that generates a small voltage. When you connect multiple cells together, you create a device that can supply a higher voltage or greater capacity; that assembled unit is called a battery. A capacitor stores energy temporarily and releases it in bursts, not as a steady chemical energy source. A buzzer uses electrical energy to produce sound rather than serving as the energy source itself. So, the term for a device that provides electrical energy and can consist of multiple cells is battery.*

SAMPLE

## 7. Which component is a two-terminal resistor used to control current and can adjust lamp brightness or speed?

A. Resistor

B. Variable Resistor

C. Thermistor

D. Transformer

*Controlling current by changing resistance is what a variable resistor does. Because it has two terminals, it can be wired in series with a lamp or motor, and you can turn its knob to change the resistance. Increasing the resistance lowers the current, dimming the lamp or slowing the motor, while decreasing the resistance raises the current and increases brightness or speed. A fixed resistor stays at one value and cannot adjust the current, so it can't tune brightness or speed. A thermistor changes resistance based on temperature, not by user adjustment, so it isn't suitable for direct, manual control of brightness or speed. A transformer alters voltage and current through magnetic coupling and isn't used as a simple, adjustable current limiter. So the best choice is the variable resistor.*

## 8. Which symbol represents a transformer in circuit diagrams?

A. Thermistor Symbol

B. Transformer Symbol

C. Resistor Symbol

D. Open Switch Symbol

*A transformer is shown with two coil symbols placed near each other and a core between them. That core between the windings represents the magnetic coupling that lets energy transfer from one winding to the other. In diagrams this two-winding-with-a-core depiction instantly signals the transformer's function, unlike other symbols. A resistor is drawn as a zigzag or rectangle, a thermistor resembles a resistor with a special mark, and an open switch shows two separated contacts. So, the symbol with two inductive windings and a core uniquely represents a transformer.*

## 9. What is the equation for charge in terms of current and time?

A. Charge × Time

B. Charge × Voltage

C. Voltage × Time

D. Current × Time

*Charge is the amount of electric charge that has flowed, while current is the rate at which charge flows. Since current is the rate of change of charge, $I = dQ/dt$, we can write $dQ = I\,dt$ and integrate. If the current is constant, this becomes $Q = I\,t$. So the charge is the product of current and time. In units, amperes times seconds equal coulombs. The other expressions don't describe charge: multiplying charge by time would give a quantity with unusual units, and multiplying charge by voltage yields energy ($E = QV$). Voltage times time isn't a standard quantity either. The correct relation is $Q = I\,t$.*

SAMPLE

## 10. What is the unit of resistance?

A. Volt

B. Ohm

C. Ampere

D. Watt

*Resistance is the property that opposes the flow of current. Its unit is the ohm, symbolized by Ω. By Ohm's law, R = V / I, so one ohm is the resistance between two points where a constant potential difference of one volt would produce a current of one ampere. Volt is the unit of electric potential difference, ampere is the unit of current, and watt is the unit of power—these describe other aspects of circuits, not the opposition to current itself. So the unit of resistance is the ohm.*

SAMPLE

# 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!

SAMPLE