GET WIRED 102 INTRODUCTION TO THE BASIC INSTALLATION OF LIGHTING FIXTURES AND BRANCH CIRCUITS PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

https://getwired102.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. Connectors marked CO-ALR are suitable for use with aluminum, copper, or copper-clad conductors. Conductors not marked are for copper conductors only.

A. AL/CU

B. .CO-ALR

C. CO-ALR

D. AL-CU

2. Arc fault protection is required for ___.

A. Outdoor outlets

B. Bedroom circuits

C. Kitchen circuits

D. Laundry room circuits

3. The current in a parallel circuit splits among branches based on each branch's resistance; lower resistance draws more current.

A. False

B. It depends on voltage

C. Depends on conductance

D. True

4. A frequent step in solving combination circuits is which of the following?

A. redrawing

B. simplifying

C. reconnecting

D. reversing

5. Should you always match a fluorescent lamp's wattage and type designation to the ballast in the luminaire?

A. True

B. False

C. Only for wattage

D. Only for ballast types

SAMPLE

6. A two-branch parallel circuit has 2A of current in one branch and 3A in the other branch. Which branch is considered to have the larger load?

A. 2 A branch

B. 3 A branch

C. Both have equal load

D. No load

7. What does the acronym GFCI stand for?

A. Ground-Fault Circuit Interrupter

B. Grounded-Fault Circuit Interface

C. Ground Flow Circuit Interrupter

D. Ground Fault Current Interrupter

8. Feed-through GFCI receptacles allow 20 amp wiring to 15 amp devices downstream.

A. 20 amp wiring to 15 amp devices downstream

B. 15 amp wiring to 20 amp devices downstream

C. 120V to 240V

D. No current downstream

9. Two identical resistors of 40 Ω each are connected in parallel. What is the total resistance?

A. 40 Ω

B. 20 Ω

C. 80 Ω

D. 10 Ω

10. Small appliance receptacle outlets __ required to be included in the 3 volt-ampere per square foot load calculation.

A. Are not

B. Are required

C. Are optional

D. Not defined

SAMPLE

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. Connectors marked CO-ALR are suitable for use with aluminum, copper, or copper-clad conductors. Conductors not marked are for copper conductors only.

A. AL/CU

B. .CO-ALR

C. CO-ALR

D. AL-CU

Markings on connectors tell you which conductors they can safely terminate. CO-ALR means copper-aluminum rated, which indicates compatibility with copper, aluminum, and copper-clad conductors. This matters because aluminum conductors require special compatibility to create a secure, long-lasting connection, and copper-clad conductors are effectively copper-coated; including them ensures safe termination across all common conductor types. So the designation CO-ALR is the only one that clearly signals suitability for all three conductor types, making it the best choice.

2. Arc fault protection is required for ___.

A. Outdoor outlets

B. Bedroom circuits

C. Kitchen circuits

D. Laundry room circuits

Arc fault protection helps prevent fires by detecting the signature signs of arcing faults and instantly interrupting the circuit. In dwelling units, AFCI protection is required on most branch circuits that supply outlets in living spaces, with bedrooms specifically called out because arcing faults in sleeping areas can go unnoticed and still ignite a fire while people are asleep. That makes bedroom circuits the place where arc fault protection is mandated. Outdoor outlets are typically protected for shock hazards by GFCI, and kitchen and laundry areas have other protective requirements related to moisture and general safety. So the emphasis for arc fault protection in standard practice is on bedroom circuits.

3. The current in a parallel circuit splits among branches based on each branch's resistance; lower resistance draws more current.

A. False

B. It depends on voltage

C. Depends on conductance

D. True

In a parallel circuit, the currents split according to each branch's resistance because the voltage across every branch is the same. The current through a branch is I = V/R, so when the branch resistance is lower, the current in that branch is higher. That means the path with the smaller resistance takes more of the total current. For example, with a fixed supply voltage, a branch of 3 ohms draws more current than a branch of 6 ohms, given by I = V/3 and I = V/6, respectively. The total current is the sum of the branch currents, so the branch with the lower resistance clearly carries more current. This holds true as long as the voltage across all branches remains constant (ideal source and negligible wiring resistance).

SAMPLE

4. A frequent step in solving combination circuits is which of the following?

A. redrawing

B. simplifying

C. reconnecting

D. reversing

Redrawing a circuit is a frequent step because it makes the connections clear and lets you reorganize the diagram without changing what it does. When you redraw, you can group items, line up components into apparent series or parallel paths, and expose relationships that aren't obvious in the original layout. This clarity is what makes subsequent simplifications straightforward, since you can more easily apply Boolean rules and reduce the circuit to a simpler form. Other options don't fit as the common initial move: simplifying is typically the next step after the diagram is readied; reconnecting would imply altering the circuit's connections, which changes the behavior; reversing isn't a standard or meaningful operation in circuit analysis.

5. Should you always match a fluorescent lamp's wattage and type designation to the ballast in the luminaire?

A. True

B. False

C. Only for wattage

D. Only for ballast types

Fluorescent ballasts are designed to limit current and provide the starting voltage for a specific lamp type and wattage. Because the lamp's electrical requirements—how much current it draws and how it starts—depend on its wattage and type designation, the ballast must be matched to those exact specifications. When you use a lamp that isn't listed as compatible, the system can run improperly: it may not start, flicker, operate at reduced efficiency, shorten lamp life, or even overheat the ballast. That's why you should always select a lamp whose wattage and type designation are listed as compatible with the ballast in the luminaire. Some ballasts are labeled as multi type, but you still need to verify the specific compatible lamp types and wattages according to the ballast listing.

6. A two-branch parallel circuit has 2A of current in one branch and 3A in the other branch. Which branch is considered to have the larger load?

A. 2 A branch

B. 3 A branch

C. Both have equal load

D. No load

In a parallel circuit, both branches share the same supply voltage. The load on each branch is what draws current at that voltage. With the voltage fixed, the branch that draws more current must have a smaller impedance, meaning a larger load. Since one branch carries 3 A and the other 2 A, the branch with 3 A has the larger load. This also aligns with power: for the same voltage, higher current means higher power ($P = V \times I$), so the 3 A branch is the larger load.

SAMPLE

7. What does the acronym GFCI stand for?

A. Ground-Fault Circuit Interrupter

B. Grounded-Fault Circuit Interface

C. Ground Flow Circuit Interrupter

D. Ground Fault Current Interrupter

GFCI stands for Ground-Fault Circuit Interrupter. This is a safety device that watches the current returning on the neutral and compares it to the current going through the hot conductor. If any current leaks to ground—meaning the two do not match by more than a few milliamps—the device quickly interrupts the circuit to protect a person from electric shock. It's especially important in wet or damp locations like bathrooms, kitchens, outdoors, and unfinished basements. The correct term matches the standard naming exactly: Ground-Fault Circuit Interrupter. The other options aren't used in practice—the word Interface implies a different kind of connection rather than a rapid power-cut mechanism; Ground Flow isn't a correct engineering term here; and Grounded-Fault Current Interrupter changes the meaning by using "Grounded" and shifts the phrasing away from the established name.

8. Feed-through GFCI receptacles allow 20 amp wiring to 15 amp devices downstream.

A. 20 amp wiring to 15 amp devices downstream

B. 15 amp wiring to 20 amp devices downstream

C. 120V to 240V

D. No current downstream

Feed-through GFCI receptacles are designed to protect outlets that are connected beyond the device. On a 20-amp circuit, you can run downstream outlets that are 15-amp rated, with the GFCI providing protection to those outlets through its load terminals. The GFCI monitors current flow and trips if it detects a fault, but it doesn't prevent the downstream outlets from being powered by the 20-amp feeder as long as the total load stays within the circuit's 20-amp limit. This is why 20-amp wiring can feed 15-amp devices downstream and still be GFCI-protected. The other options don't fit: a 15-amp feeder isn't intended to reliably supply 20-amp devices, the system is typically 120 volts, not 240, and there will be current downstream whenever devices plugged in draw power.

9. Two identical resistors of 40 Ω each are connected in parallel. What is the total resistance?

A. 40 Ω

B. 20 Ω

C. 80 Ω

D. 10 Ω

In parallel, currents have separate paths and the total resistance is found from 1/R_eq = 1/R1 + 1/R2. When the resistors are identical, this simplifies to R_eq = R/2. With each resistor at 40 Ω, the total resistance is 20 Ω. This reflects the idea that adding parallel paths reduces overall resistance, increasing the total current capability. If they were in series, the total would be higher than either resistor; with more parallel paths, the total would drop further. So the total resistance is 20 Ω.

SAMPLE

10. Small appliance receptacle outlets __ required to be included in the 3 volt-ampere per square foot load calculation.

A. Are not

B. Are required

C. Are optional

D. Not defined

The main idea here is how small-appliance receptacle outlets fit into the general lighting load estimate. The 3 VA per square foot rule is a rough way to size the general lighting load, but small-appliance receptacles are treated as a separate, fixed-load category that is added to the total. Because the code allows you to either include those receptacle outlets in the 3 VA/ft^2 calculation or keep them as their own separate load and add it later, they are optional to include in the 3 VA/ft^2 estimate. In practice, engineers often calculate the small-appliance load (typically 1500 VA per circuit) separately and then add it to the general lighting load, but the 3 VA/ft^2 step itself does not mandate counting SABCs there. So the correct choice reflects that flexibility.

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://getwired102.examzify.com

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

SAMPLE