



## CONTRACTORS STATE LICENSE BOARD LICENSE EXAMINATION STUDY GUIDE



### ELECTRICAL (C-10)

#### Content of the Examination

The Electrical (C-10) Examination is divided into five major sections:

#### 1. Planning and Estimating (28%)

- Existing system evaluation
- Plan and specification interpretation
- Electrical calculations
- Code requirements
- Material selection
- Energy production and storage project planning (photovoltaic, wind, generators, batteries, capacitors)

#### 2. Rough Wiring (27%)

- System layout
- Clearance and accessibility requirements
- Raceway and panel installation
- Wire and equipment installation
- Grounding and bonding
- Energy production and storage rough wiring (photovoltaic, wind, generators, batteries, capacitors)

#### 3. Finish Wiring and Trim (11%)

- Finish device placement and installation
- Motor and equipment installation
- Wire and equipment labeling
- Trims and sealants
- Energy production and storage finish wiring (photovoltaic, wind, generators, batteries, capacitors)

#### 4. Startup, Troubleshooting, and Maintenance (16%)

- System energizing and testing
- Common electrical problems
- Location, repair, and replacement of inoperable electrical wires/components
- Selection and use of electrical testing equipment
- Energy production and storage system performance (photovoltaic, wind, generators, batteries, capacitors)

#### 5. Safety (18%)

- Lockout/tagout procedures
- Personal protective equipment (PPE)
- Tools/equipment
- Hazardous materials and job site environments

*\*Percentages are approximate\**

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#### Test Policy

This is a closed-book examination. No reference materials may be used during the examination.

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#### Test Strategy

This is a multiple-choice examination with four choices per question. Examination questions are written to provide only one BEST answer. Some questions require mathematical computation. A calculator will be provided.

There is no penalty for guessing. If you are unsure about a particular question, it is better to try to answer the question than to leave the question blank.

Plenty of time is provided to answer all examination questions, so be sure to read each question and its four choices completely and carefully before selecting the BEST possible answer to the question.

## Sample Questions

Below are three typical examination questions.  
The correct answer is marked with an asterisk (\*).

1. Which of the following applies to solar modules, metal frames, and metal mounting equipment on a roof-mounted PV system?
  - a. They must be weatherproof.
  - b. They must be wind resistant.
  - c. They must be anodized aluminum.
  - d. They must be bonded and grounded.\*
2. What criteria should be used when selecting a replacement for a defective branch circuit breaker?
  - a. The frame type, AIC rating, and ampacity\*
  - b. A circuit breaker with higher ampacity to allow for arcing
  - c. A circuit breaker with a higher AIC rating
  - d. The frame type, UL rating, and color
3. A contractor needs 13 receptacles that cost \$3.56 each plus sales tax of 7.25%. The supplier states that for every 10 receptacles that are purchased, the contractor will get one free of charge. What is the total cost of the receptacles?
  - a. \$42.02
  - b. \$42.72
  - c. \$45.82\*
  - d. \$49.66

*\*All questions are written and reviewed by licensed contractors who are actively working in the trade\**

## Resources

*Publisher information for reference books and code is provided below. Other sources for reference books may be found online.*

**California code books can be viewed online:**  
**[www.dgs.ca.gov/bsc](http://www.dgs.ca.gov/bsc)**

**2022 California Building Code.** California Code of Regulations, Title 24. International Code Council.  
PHONE: (800) 786-4452  
INTERNET: [www.iccsafe.org](http://www.iccsafe.org)

**2022 California Electrical Code.** California Code of Regulations, Title 24. BNI Publications, Inc.  
PHONE: (888) 264-2665  
INTERNET: [www.bnibooks.com](http://www.bnibooks.com)

**2022 California Energy Code.** California Code of Regulations, Title 24. International Code Council.  
PHONE: (800) 786-4452  
INTERNET: [www.iccsafe.org](http://www.iccsafe.org)

**2022 California Fire Code.** California Code of Regulations, Title 24. International Code Council.  
PHONE: (800) 786-4452  
INTERNET: [www.iccsafe.org](http://www.iccsafe.org)

**American Electricians' Handbook.** McGraw-Hill Professional.  
PHONE: (877) 833-5524  
INTERNET: [www.mhprofessional.com](http://www.mhprofessional.com)

**Photovoltaic Systems.** American Technical Publishers.  
PHONE: (800) 323-3471  
INTERNET: [www.atplearning.com](http://www.atplearning.com)

**State of California General Industry & Electrical Safety Orders (Cal/OSHA) and State of California Construction & Electrical Safety Orders (Cal/OSHA). 2024.** California Code of Regulations, Title 8. Mancomm.  
PHONE: (877) 626-2666  
INTERNET: [mancomm.com](http://mancomm.com)  
VIEW ONLINE:  
[www.dir.ca.gov/dosh/LawsAndRegulations.htm](http://www.dir.ca.gov/dosh/LawsAndRegulations.htm)

**Ugly's Electrical References.** Jones & Bartlett Learning.  
PHONE: (800) 832-0034  
INTERNET: [www.uglys.net](http://www.uglys.net)

*\*Publisher information is current as of 01/24\**