



## CONTRACTORS STATE LICENSE BOARD LICENSE EXAMINATION STUDY GUIDE



### LOW VOLTAGE (C-7)

#### Content of the Examination

The Low Voltage (C-7) Examination is divided into six major sections:

#### 1. Job Planning and Design (21%)

- Interpret plans and specifications
- Plan wire routes and equipment locations
- Compliance with codes and industry standards
- Knowledge of impact on other trades
- Integration of new and existing infrastructure

#### 2. Material Selection and Estimation (15%)

- Knowledge of materials and their applications
- Knowledge of tools and equipment and their applications
- Estimate project costs and prepare for proposals

#### 3. Wire/Cable Installation and Termination (15%)

- Layout, install and support pathways
- Knowledge of tools and methods of termination
- Placement and termination of wires/cables
- Knowledge of labeling schemes for wires/cables

#### 4. Component Installation (18%)

- Install equipment room components
- Install satellite, CCTV, telephone, data, instrumentation, battery (backup), audio video, and fiber optic systems

#### 5. Testing, Troubleshooting, and Repair (16%)

- Tools and methods used to test, troubleshoot, and repair/replace
- Project closeout

#### 6. Safety (15%)

- Cal/OSHA regulations
- Identification of job site hazards
- Safe work practices

*\*Percentages are approximate\**

#### Test Site Policy

This is a closed-book examination. No reference materials may be used during the examination. All materials brought to the examination site must be left in an unmonitored area at your own risk.

#### 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 underlined.

1. Which device is used to store an electrical charge?
  - a. Resistor
  - b. Diode
  - c. Capacitor
  - d. Rectifier
2. What wire should be used to cross-connect a standard telephone connection?
  - a. 18 AWG stranded
  - b. 18 AWG solid
  - c. 24 AWG stranded
  - d. 24 AWG solid
3. What type of jack should be used on a Cat 6 cable installation?
  - a. RJ-11
  - b. RJ-14
  - c. RJ-21
  - d. RJ-45

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

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## 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.bsc.ca.gov](http://www.bsc.ca.gov)***

**2016 California Building Code.** California Code of Regulations, Title 24. International Code Council.  
PHONE: (800) 786-4452  
INTERNET: [www.iccsafe.org](http://www.iccsafe.org)

**2016 California Electrical Code.** California Code of Regulations, Title 24. BNI Publications, Inc.  
PHONE: (888) 264-2665  
INTERNET: [www.bni-books.com](http://www.bni-books.com)

### ***BICSI: Residential Network Cabling.***

The McGraw-Hill Companies.  
PHONE: (877) 833-5524  
INTERNET: [www.mhprofessional.com](http://www.mhprofessional.com)

### ***BICSI: Telecommunications Distribution Methods Manual (TDMM). (11<sup>th</sup> edition)*** BICSI.

PHONE: (800) 242-7405  
INTERNET: [www.bicsi.org](http://www.bicsi.org)

### ***Home Satellite TV Installation and Troubleshooting Manual.*** Frank Baylin.

Baylin Publications.

*\*No longer available from the publisher; however, it can be found online\**

### ***State of California General Industry & Electrical Safety Orders (Cal/OSHA) and State of California Construction & Electrical Safety Orders (Cal/OSHA). 2015.*** California Code of Regulations, Title 8. Mancomm.

PHONE: (877) 626-2666  
INTERNET: [www.mancomm.com](http://www.mancomm.com)

### ***TIA/EIA Telecommunications and Building Wiring Standards.***

Telecommunications Industry Association.  
Global Engineering Documents.  
PHONE: (800) 447-2273  
INTERNET: [www.global.ihs.com](http://www.global.ihs.com)

*\*Publisher information is current as of 12/16\**