



CONTRACTORS STATE LICENSE BOARD LICENSE EXAMINATION STUDY GUIDE



SIGN (C-45)

Content of the Examination

The Sign (C-45) Examination is divided into five major sections:

1. Planning and Estimation (29%)

- Sign criteria and codes
- Plans and specifications
- Sign engineering and design
- Sign component selection
- Electrical requirements
- Material and equipment estimation

2. Sign Design and Fabrication (21%)

- Sign patterns
- Sign face fabrication
- Channel and reverse channel letters
- Sign cabinet fabrication
- Sign assembly
- Fluorescent, LED, and HID fabrication
- Neon design and fabrication

3. Sign Installation (22%)

- Prewiring of sign electrical components
- Excavation and concrete
- Pole and monument sign installation
- Building sign installation
- Electrical connections

4. Testing, Maintenance, Troubleshooting, Repair and Replacement of Signs and Sign Components (13%)

- Sign testing and troubleshooting
- Sign maintenance

5. Safety (15%)

- Electrical hazards
- Personal protective equipment
- Cal/OSHA safety requirements
- Hazardous materials
- Working with cranes and ladders

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. What is the advantage of using aluminum instead of sheet metal to fabricate channel letters?
 - a. It is less costly.
 - b. It is easier to paint.
 - c. It is more corrosion resistant.
 - d. It is UL approved.

2. Which screw has the greater shaft diameter?
 - a. #6
 - b. 3/16"
 - c. #10
 - d. 1/4'

3. A contractor is required to run 197 feet of EMT to the location of the sign. How many pieces of EMT will be required?
 - a. 15
 - b. 19
 - c. 20
 - d. 25

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.bsc.ca.gov*

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

2016 California Energy Code. California Code of Regulations, Title 24. International Code Council.
PHONE: (800) 786-4452
INTERNET: www.iccsafe.org

CalDAG 2013: An Interpretive Manual and Checklist. California Disabled Accessibility Guidebook. International Code Council.
PHONE: (800) 786-4452
INTERNET: www.iccsafe.org

Neon Installation Guide. Northeast States Sign Association.
PHONE: (800) 216-7446
INTERNET: www.neoninstallationguide.com

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

Underwriters Laboratories (UL) 48: Standard for Electric Signs. Comm 2000.
PHONE: (888) 853-3503
INTERNET: www.comm-2000.com

Underwriters Laboratories (UL) 2161: Standard for Neon Transformers and Power Supplies. Comm 2000.
PHONE: (888) 853-3503
INTERNET: www.comm-2000.com

Publisher information is current as of 1/17