CITRUS COUNTY - EXAM DESCRIPTIONS

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Awning Erection AE

Awning Erection Category-Class "AE": The scope of work of a Class "AE" specialty building contractor shall include and be limited to the fabrication, erection, and installation of awnings and canopies which become a permanent fixed part of building or structure, or which are self-supporting, and the pouring of such footings and slabs on grade as may be necessary and incidental thereto. A Class "AE" specialty building contractor may install such hardware as may be necessary and incidental to the extension and retraction of awnings and canopies. This category applies to awnings that are movable or retractable or the replacement of detachable cloth/synthetic cover material on existing frames. Electrical wiring incidental to the awning may be included in the contract for work but shall be subcontracted to a licensed electrical contractor. This category includes, but is not limited to, metal, canvas, and storm shutters. In order to be eligible to be certified as a Class "AE" specialty building contractor by the board, the applicant shall have at least three (3) years of practical experience in the category.

| Number of Questions | 50 |
|---|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Building Codes | 15 |
| Design, Plan Reading and Estimating | 8 |
| Awnings, Canopies, & Hurricane Shutters | 15 |
| Concrete and Reinforcement | 6 |
| Safety | 6 |

References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Fabric Awning and Canopy Building Code**, 2010. Industrial Fabrics Association International, Roseville, MN. https://www.ifai.com
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Hurricane Shutter Designs</u>. APA The Engineered Wood Association, 7011 S. 19th ST, Tacoma, WA 98466. Available at www.apawood.org Candidate's printed versions allowed if exam is open book.
- Study Guide for Residential Carpentry and Repair, 2nd edition, 2014. ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

Burglar & Fire Alarm Electrical 2020

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of intrusion detection, fire detection, and signaling systems.

| Number of Questions | 50 |
|----------------------|----------|
| Time allowed (hours) | 2 |
| | |
| Subject Area | # Quest. |

| General Electrical Knowledge | 5 |
|--|----|
| Fire & Intrusion Detection & Alarms | 24 |
| Power Supplies | 5 |
| Notification Appliances & Signaling Circuits | 5 |
| Grounding & Bonding | 4 |
| Raceways & Boxes | 3 |
| Conductors & Cables | 3 |
| Special Occupancies | 1 |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- Low Voltage Wiring: Security/Fire-Alarm Systems, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

Burglar & Fire Alarm Electrical 2023 (Spanish)

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of intrusion detection, fire detection, and signaling systems.

| Number of Questions | 50 |
|--|----------|
| Time allowed (hours) | 2 |
| | |
| Subject Area | # Quest. |
| Conductors & Cables | 3 |
| Fire & Intrusion Detection & Alarms | 24 |
| Grounding & Bonding | 4 |
| General Electrical Knowledge | 5 |
| Notification Appliances & Signaling Circuits | 5 |
| Power Supplies | 5 |
| Raceways & Boxes | 3 |
| Special Occupancies | 1 |
| | |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- Low Voltage Wiring: Security/Fire-Alarm Systems, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.
- NFPA 70 National Electrical Code 2023, 2023. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave.,

Woburn, MA 01801. Available at www.amazon.com.

Burglar Alarm Electrical 2017 (Spanish)

Tests a candidate's knowledge of the design, installation, maintenance, and alteration of burglar alarm circuits and equipment.

| Number of Questions | 50 |
|--|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Acoustical Installation | 10 |
| General Electrical Knowledge | 5 |
| Intrusion Detection | 17 |
| Notification Appliances & Signaling Circuits | 9 |
| Power Supplies | 5 |
| Supervisory Stations | 4 |

References

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- Low Voltage Wiring: Security/Fire-Alarm Systems, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.
- NFPA 70 National Electric Code 2017, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

Burglar Alarm Electrical 2020

Tests a candidate's knowledge of the design, installation, maintenance, and alteration of burglar alarm circuits and equipment.

| Number of Questions Time allowed (hours) | 50 2 |
|--|----------|
| Subject Area | # Quest. |
| Acoustical Installation | 10 |
| General Electrical Knowledge | 5 |
| Intrusion Detection | 17 |
| Notification Appliances & Signaling Circuits | 9 |
| Power Supplies | 5 |
| Supervisory Stations | 4 |

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- Low Voltage Wiring: Security/Fire-Alarm Systems, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.

- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- Understanding and Servicing Alarm Systems, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

Burglar Alarm Electrical 2020 (Spanish)

Tests a candidate's knowledge of the design, installation, maintenance, and alteration of burglar alarm circuits and equipment.

| Number of Questions Time allowed (hours) | 50 2 |
|--|----------|
| Subject Area | # Quest. |
| Acoustical Installation | 10 |
| General Electrical Knowledge | 5 |
| Intrusion Detection | 17 |
| Notification Appliances & Signaling Circuits | 9 |
| Power Supplies | 5 |
| Supervisory Stations | 4 |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- Low Voltage Wiring: Security/Fire-Alarm Systems, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

Business and Law, 2nd edition

Tests a candidate's knowledge of payroll taxes, workers' compensation, unemployment compensation, lien laws and other laws or subjects that will affect their daily operations as contractors.

*This exam uses the second edition of FLORIDA - NASCLA Contractors Guide to Business, Law and Project Management.

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| Business Organization | 4 |
| Licensing | 3 |
| Lien laws | 3 |
| Tax Laws | 6 |
| Safety OSHA | 4 |
| Labor Laws | 6 |
| Contract Management | 5 |

| Project Management | 5 |
|----------------------|---|
| Estimating & Bidding | 5 |
| Financial Management | 5 |
| Risk Management | 4 |

References

FLORIDA - NASCLA Contractors Guide to Business, Law and Project

Management, 2nd. NASCLA, 23309 N. 17th Drive, Building 1, Unit 110, Phoenix, AZ 85027.

Business Procedures, 2nd edition (Spanish)

Tests a candidate's knowledge of payroll taxes, workers' compensation, unemployment compensation, lien laws and other laws or subjects that will affect their daily operations as contractors.

| Number of Questions Time allowed (hours) | 75 3 |
|---|----------|
| Subject Area | # Quest. |
| Business Organization | 3 |
| Lien laws | 4 |
| Labor Laws | 8 |
| Tax Laws | 5 |
| Safety OSHA | 5 |
| Licensing | 3 |
| Contract Management | 10 |
| Project Management | 8 |
| Estimating & Bidding | 9 |
| Financial Management | 9 |
| Risk Management | 6 |
| Dade County Municipal Code - Chapter 10 | 5 |

References

- Dade County Municipal Code Chapter 10, 2015. Dade County Florida, FL. Available at www.municode.com/Library/FL/Miami_-_Dade_County. Candidate printed versions permitted in testing room if exam is open ...
- FLORIDA NASCLA Contractors Guide to Business, Law and Project Management, 2nd. NASCLA, 23309 N. 17th Drive, Building 1, Unit 110, Phoenix, AZ 85027.

Carpentry

Tests a candidate's knowledge of light and heavy carpentry, rough framing, trusses, sheathing, metal framing, paneling, trim, cabinetry, doors, windows, stairs, and incidental hardware

| 50 |
|----------|
| 3 |
| |
| # Quest. |
| 6 |
| 4 |
| 8 |
| 8 |
| 4 |
| 4 |
| |

| Cold-Formed Steel Framing | 5 | |
|---------------------------|---|--|
| Windows, Doors & Stairs | 4 | |
| Interior Trim | 2 | |
| Safety | 5 | |

References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2023 Building, 2023. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. https://shop.iccsafe.org/
- <u>Study Guide for Residential Carpentry and Repair, 2nd edition</u>, 2014.
 ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

Carpentry (Spanish)

Tests a candidate's knowledge of light and heavy carpentry, rough framing, trusses, sheathing, metal framing, paneling, trim, cabinetry, doors, windows, stairs, and incidental hardware

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| Cold-Formed Steel Framing | 5 |
| Exterior Finishing | 4 |
| Floor Systems | 4 |
| Interior Trim | 2 |
| Plan Reading & Estimating | 6 |
| Safety | 5 |
| Roof Framing | 8 |
| Thermal & Moisture Protection | 4 |
| Wall & Ceiling Framing | 8 |
| Windows, Doors & Stairs | 4 |

References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2023 Building, 2023. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. https://shop.iccsafe.org/
- <u>Study Guide for Residential Carpentry and Repair, 2nd edition</u>, 2014.
 ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

Carpentry 2023 (Spanish)

Tests a candidate's knowledge of light and heavy carpentry, rough framing, trusses, sheathing, metal framing, paneling, trim, cabinetry, doors, windows, stairs, and incidental hardware

| Number of Questions | 50 |
|---------------------------|-----------------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Cold-Formed Steel Framing | 5 |

| Exterior Finishing | 4 |
|-------------------------------|---|
| Floor Systems | 4 |
| Interior Trim | 2 |
| Plan Reading & Estimating | 6 |
| Safety | 5 |
| Roof Framing | 8 |
| Thermal & Moisture Protection | 4 |
| Wall & Ceiling Framing | 8 |
| Windows, Doors & Stairs | 4 |

References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2023 Building, 2023. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. https://shop.iccsafe.org/
- <u>Study Guide for Residential Carpentry and Repair, 2nd edition</u>, 2014.
 ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

Concrete Contractor

The Concrete Contractor exam tests the candidate's knowledge of the properties, preparation, formwork, reinforcement, placement and the finishing of concrete, including materials, specialized installations and finishes, and concrete quality control and curing. This scope of work includes, but is not limited to concrete piers, foundations, walls, structures, slabs, curbs, sidewalks, and driveways. The scope of work excludes the installation of pool, spa, or hot tub decks; separate licensure is required. {Florida Administrative Code 61G4-15.032(B)(e)}

| Number of Questions | 50 |
|--------------------------------------|----------|
| Time allowed (hours) | 2 |
| | |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 6 |
| Properties of Concrete | 4 |
| Preparation for Placement | 6 |
| Reinforcement | 7 |
| Formwork | 7 |
| Placement & Finishing | 7 |
| Specialized Installations & Finishes | 3 |
| Quality Control & Curing | 5 |
| Safety | 5 |
| | |

- ACI 318 Building Code Requirements for Structural Concrete 2019, 2019. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333.
- Concrete Construction Level 1, 2021. ISBN: 978-0-13-686828-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0 136868282 https://provexam.com/bookstore/
- Concrete Construction Level 2, 2021. ISBN: 978-0-13-689832-0. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0 136898327 https://provexam.com/bookstore/.

Direct Burial Cable Television (CATV) Contractor 2017

A Direct Burial Cable Television (CATV) Contractor is an engineering contractor certified by this Board to trench, backfill, and restore paving and concrete block and cement work either incidental to or as a part of the work of installing, repairing, altering or adding to any system of underground cable in the public rights-of-way for the commercial transmission of television signals. Such contractor shall have a qualifying agent with experience and skill gained by at least two (2) years' practical work in this field and who has passed an examination approved by this Board. The scope of work of this classification shall be limited to that work directly involved in performing contract work underground for direct burial of cable for receiving and transmitting community antenna television signals. (Ord. No. 81-43, § 1, 4-21-81)

| Number of Questions Time allowed (hours) | 50 3 |
|---|----------|
| Subject Area | # Quest. |
| Concrete Materials, Methods & Placement | 12 |
| Communication Systems | 20 |
| FL DOT Utility Accommodation | 8 |
| Earthwork | 6 |
| Safety | 4 |

References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- FL DOT Utility Accommodation Manual, 2010. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. Available at www2.dot.state.fl.us/proceduraldocuments/procedures/bin/71002000 1/710020001.pdf. Candidate printed versions permitted in testing room if exam is open book.
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Study Guide for General Engineering, 3rd edition</u>, 2014. ISBN: 978-1-269-78657-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

Electrical Communication and Sound 2020

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of telephone, data, intercom, and CATV systems.

| Number of Questions Time allowed (hours) | 40 4 |
|---|----------|
| Subject Area | # Quest. |
| Communications Circuits | 10 |
| Community antenna television & radio | 6 |
| distribution systems | |
| General Electrical Knowledge | 3 |
| Network-powered broadband communication systems | 16 |
| Radio & Television Equipment | 5 |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Electrical Fire Alarm 2020

Tests a candidate's knowledge of the design, installation, maintenance, alteration, and testing of fire alarm circuits and equipment.

| Number of Questions | 50 |
|--|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| General Electrical Knowledge | 4 |
| Installation Requirements Electrical | 10 |
| Initiating Devices | 12 |
| Notification Appliances & Signaling Circuits | 13 |
| Systems Testing | 9 |
| Supervisory Stations | 2 |

References

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- Low Voltage Wiring: Security/Fire-Alarm Systems, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

Electrical Sign Contractor 2020

The scope of certification includes the structural fabrication including concrete foundation, erection, installation, alteration, repair, service and wiring of electrical signs and outline lighting. The scope of certification shall not include the provision of, or any electrical work beyond, the last disconnect mean or terminal points. However, a contractor certified under this section may provide the electrical entrance requirements for metering and main disconnect of remote billboards or signs which are independent of any structure or building and which require no more than twenty-five (25) kilowatts at two hundred fifty (250) volts maximum (61G6-7.001).

| Number of Questions | 40 |
|----------------------|----|
| Time allowed (hours) | 2 |

Subject Area

Quest.

| Basic Electricity & Wiring | 6 |
|-------------------------------------|----|
| Electrical Signs & Outline Lighting | 16 |
| Grounding & Bonding | 4 |
| Motors & Controls | 3 |
| Transformers | 3 |
| Wiring & Protection | 4 |
| Wiring Methods & Materials | 4 |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Elevator Electrical 2020

Elevator Specialty Electrical Contractor means the scope of certification includes and is limited to the electrical portion of the installation, repair, assembly, service and maintenance of elevators, conveyors, electrified dumbwaiters, escalators and moving sidewalks and all automatic and manual controls, signal systems and all other devices and manual controls, and electrical wiring appurtenant to the safe and efficient operation of such elevators. However, the scope of such certification shall not include work beyond the last disconnecting means or the terminal equipment adjacent to or in the elevator shaft or designated construction area. As regulated under Florida Statute, a person who has passed a competency examination as an Elevator Specialty Electrical Contractor may perform these or related tasks or may supervise persons in his employ in the execution of these tasks.

| Number of Questions | 50 |
|---------------------------------------|----------|
| Time allowed (hours) | 2 |
| | |
| Subject Area | # Quest. |
| Commercial Elevators & Lifts | 15 |
| Construction Elevators | 4 |
| Dumbwaiters | 3 |
| Emergency Service & Signaling Devices | 5 |
| Escalators | 5 |
| General Electrical Knowledge | 5 |
| Moving Walks | 3 |
| Residential Elevators & Lifts | 5 |
| Safety | 5 |
| | |

References

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- ASME A17.1-2013 Safety Code for Elevators and Escalators, 2013. ISBN: 9780791868577. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.
- ASME A17.3-11 Safety Code for Existing Elevators and Escalators, 2011. ISBN: 978-0-7918-3359-9. American Society of Mechanical

Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.

NFPA 70 - National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Elevator Installation and Maintenance Category Class "E" (2017)

Elevator Installation and Maintenance Category Class "E": The scope of work of a Class "E" specialty building contractor shall include and be limited to the construction, installation, maintenance, repair, alteration, and extension of elevators, dumbwaiters, escalators, or any vertical conveyance. In order to be eligible to be certified as a Class "E" specialty building contractor by the board, the applicant shall have at least four (4) years of practical experience in the category

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| Commercial Elevators & Lifts | 15 |
| Construction Elevators | 4 |
| Dumbwaiters | 3 |
| Emergency Service & Signaling Devices | 5 |
| Escalators | 5 |
| General Electrical Knowledge | 5 |
| Moving Walks | 3 |
| Residential Elevators & Lifts | 5 |
| Safety | 5 |
| | |

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- ASME A17.1-2019 Safety Code for Elevators and Escalators, 2019. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.
- ASME A17.3 2020 Safety Code for Existing Elevators and Escalators, 2020. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.
- ASME A17.5-11 Elevator and escalator electrical equipment, 2011. ISBN: 978-1-55436-757-3. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.
- Code of Federal Regulations, Title 29, Labor, Pt. 1926, Revised as of July 1, 2019, 2019. National Archives and Records Administration, College Park, MD. https://www.govinfo.gov/content/pkg/CFR-2020title29-vol8/pdf/CFR-2020-title29-vol8.pdf
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- NFPA 70 National Electric Code 2017, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA

Elevator Installation and Maintenance Category Class "E" (2020)

Elevator Installation and Maintenance Category Class "E": The scope of work of a Class "E" specialty building contractor shall include and be limited to the construction, installation, maintenance, repair, alteration, and extension of elevators, dumbwaiters, escalators, or any vertical conveyance. In order to be eligible to be certified as a Class "E" specialty building contractor by the board, the applicant shall have at least four (4) years of practical experience in the category

| Number of Questions | 50 |
|---------------------------------------|----------|
| Time allowed (hours) | 2 |
| | |
| Subject Area | # Quest. |
| Commercial Elevators & Lifts | 15 |
| Construction Elevators | 4 |
| Dumbwaiters | 3 |
| Emergency Service & Signaling Devices | 5 |
| Escalators | 5 |
| General Electrical Knowledge | 5 |
| Moving Walks | 3 |
| Residential Elevators & Lifts | 5 |
| Safety | 5 |
| | |

References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americanelectricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html
- ASME A17.1-2019 Safety Code for Elevators and Escalators, 2019. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.
- ASME A17.3 2020 Safety Code for Existing Elevators and Escalators, 2020. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.
- ASME A17.5-11 Elevator and escalator electrical equipment, 2011. ISBN: 978-1-55436-757-3. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.
- <u>Code of Federal Regulations, Title 29 Labor Pt 1926 Revised as of July</u>
 <u>1, 2016</u>, 2016. ISBN: 978-1354237915. National Archives and Records Administration, College Park, MD. https://bookstore.gpo.gov
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Journeyman Burglar Alarm 2017

Journeyman shall mean any person who possesses the required skill, knowledge, and experience as evidenced by three (3) years' proven experience in the trade or craft, or education equivalent thereto, or a combination thereof, but not more than one-half (1/2) of such experience may be education equivalent, and who has passed an examination in his or her particular trade or craft and possesses a valid certificate of competency as a journeyman in such trade or craft. There shall be at least one (1) journeyman for every three (3) trainees on each construction or installation job site for which a permit is required. and which involves a trade in which journeymen are required and certified. It shall be the responsibility of the employing contractor, and the qualifying agent, to provide journeymen on each job site in accordance with this section, and failure to do so shall be a violation of this chapter, subject to the penalties provided herein, and provided under Section 1-5 of this Code. A journeyman may only work in the employ of a contractor holding a certificate of competency in the field in which the journeyman is certified. Journeymen shall be required in the electrical, plumbing, and mechanical trades. Journeymen are required to earn continuing education credit during each term the personal certificate of competency is valid as established in this chapter and as required by the board through written rules or regulations commencing October 1, 1995.

| Number of Questions Time allowed (hours) | 50 2 |
|--|----------|
| Subject Area | # Quest. |
| General Electrical Knowledge | 6 |
| Intrusion Detection | 6 |
| Acoustical Installation | 18 |
| Notification Appliances & Signaling Circuits | 13 |
| Power Supplies | 5 |
| Supervisory Stations | 2 |

References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americanelectricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html
- Low Voltage Wiring: Security/Fire-Alarm Systems, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

Journeyman Burglar Alarm 2020

Journeyman shall mean any person who possesses the required skill, knowledge, and experience as evidenced by three (3) years' proven experience in the trade or craft, or education equivalent thereto, or a combination thereof, but not more than one-half (1/2) of such experience may be education equivalent, and who has passed an examination in his or her particular trade or craft and possesses a valid certificate of competency as a journeyman in such trade or craft. There shall be at least one (1) journeyman for every three (3) trainees on each construction or installation job site for which a permit is required, and which involves a trade in which journeymen are required and certified. It shall be the responsibility of the employing contractor, and the qualifying agent, to provide journeymen on each job site in accordance with this section, and failure to do so shall be a violation of this chapter, subject to the penalties provided herein, and provided under Section 1-5 of this Code. A journeyman may only work in the employ of a contractor holding a certificate of competency in the field in which the journeyman is certified. Journeymen shall be required in the electrical, plumbing, and mechanical trades. Journeymen are required to earn continuing education credit during each term the personal certificate of competency is valid as established in this chapter and as required by the board through written rules or regulations commencing October 1, 1995.

| Number of Questions Time allowed (hours) | 50 2 |
|--|----------|
| Subject Area | # Quest. |
| General Electrical Knowledge | 6 |
| Intrusion Detection | 6 |
| Acoustical Installation | 18 |
| Notification Appliances & Signaling Circuits | 13 |
| Power Supplies | 5 |
| Supervisory Stations | 2 |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- Low Voltage Wiring: Security/Fire-Alarm Systems, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- Understanding and Servicing Alarm Systems, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

Journeyman Electrician 2014

A Journeyman Electrician is qualified and tested to perform work in the electrical trades while employed by a Master Electrician.

| Number of Questions | 70 |
|--|----------|
| Time allowed (hours) | 3 |
| | |
| Subject Area | # Quest. |
| General Electrical Theory & Principles | 9 |
| Plan Reading | 4 |
| Wiring & Protection | 14 |
| Wiring Methods & Materials | 22 |
| Motors & Controls | 3 |
| Equipment for General Use | 6 |
| Special Occupancies | 2 |
| Special Equipment | 3 |
| Special Conditions | 3 |
| Communication Systems | 4 |
| | |

References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americanelectricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Journeyman Electrician 2017 (Spanish)

A Journeyman Electrician is qualified and tested to perform work in the electrical trades while employed by a Master Electrician.

| Number of Questions | 70 |
|--|----------|
| Time allowed (hours) | 3 |
| | |
| Subject Area | # Quest. |
| Communication Systems | 4 |
| Equipment for General Use | 6 |
| General Electrical Theory & Principles | 9 |
| Motors & Controls | 3 |
| Plan Reading | 4 |
| Special Conditions | 3 |
| Special Equipment | 3 |
| Special Occupancies | 2 |
| Wiring & Protection | 14 |
| Wiring Methods & Materials | 22 |

References

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- NFPA 70 National Electric Code 2017, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Journeyman Electrician 2020

A Journeyman Electrician is qualified and tested to perform work in the electrical trades while employed by a Master Electrician.

| Number of Questions | 75 |
|--|----------|
| Time allowed (hours) | 3 |
| | |
| Subject Area | # Quest. |
| Communication Systems | 5 |
| Equipment for General Use | 6 |
| General Electrical Theory & Principles | 12 |
| Motors & Controls | 4 |
| Special Conditions | 3 |
| Special Equipment | 3 |
| Special Occupancies | 4 |
| Wiring & Protection | 14 |
| Wiring Methods & Materials | 24 |

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Journeyman Electrician 2020 (Spanish)

A Journeyman Electrician is qualified and tested to perform work in the electrical trades while employed by a Master Electrician.

| Number of Questions | 70 |
|--|----------|
| Time allowed (hours) | 3 |
| | |
| Subject Area | # Quest. |
| Communication Systems | 4 |
| Equipment for General Use | 6 |
| General Electrical Theory & Principles | 9 |
| Motors & Controls | 3 |
| Plan Reading | 4 |
| Special Conditions | 3 |
| Special Equipment | 3 |
| Special Occupancies | 2 |
| Wiring & Protection | 14 |
| Wiring Methods & Materials | 22 |
| | |

References

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Journeyman Plumber with Gas (Spanish)

Tests a candidate's knowledge of the installation, repair, maintenance, and extension of any plumbing system, including drains, waste, sanitary vents, water supply, fixtures, and indirect wastes; installation, repair, and maintenance of gas piping systems, including gas piping, appliances, vents, flues, tanks, and other related appurtenances.

| Number of Questions Time allowed (hours) | 100 2 |
|---|----------|
| Subject Area | # Quest. |
| Drain, Waste & Vent Systems | 14 |
| Fixtures & Fittings | 7 |
| General Knowledge | 10 |
| Isometrics & Plan Reading | 10 |
| Plumbing Math | 11 |
| Storm & Roof Drainage | 8 |
| Water Heaters | 7 |
| Water Supply and Distribution | 12 |
| Fuel Gas Systems | 14 |
| Safety | 7 |

References

- Florida Building Code 2023 Fuel Gas, 2023. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2023 Plumbing, 2023. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Plumbing Basics for Contractors, 4th Edition, 2024. ISBN: 9780137783229. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.

Journeyman Residential Electrical 2020

Tests a candidate's knowledge of the planning, installation, repair, alteration, and maintenance of electric conductors, raceways, and equipment for light, heat, and power in one-, two- and three-family dwellings.

| Number of Questions Time allowed (hours) | 65 3 |
|---|----------|
| Subject Area | # Quest. |
| General Electrical Knowledge | 15 |
| Wiring & Protection | 15 |
| Wiring Methods & Materials | 10 |
| Equipment for General Use | 7 |
| Special Occupancies | 3 |
| Special Equipment | 2 |
| Special Conditions | 3 |
| Communication Systems | 5 |
| Motors & Controls | 5 |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Journeyman Sign Electrician 2020

Tests a candidate's knowledge of the planning, installation, repair, alteration, and maintenance of electric conductors, raceways, and equipment associated with electric signs. The branch circuit supplying power to the sign shall originate from an existing disconnect or power outlet.

| Number of Questions | 40 |
|-------------------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Electrical Signs & Outline Lighting | 13 |
| Grounding & Bonding | 5 |
| General Electrical Knowledge | 6 |
| Motors & Controls | 3 |
| Transformers | 3 |
| Wiring & Protection | 6 |

Wiring Methods & Materials

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References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americanelectricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Lightning Protection 2017

Those who are qualified to install, maintain, repair or alter any lightning protection system, including all terminals, conductors, ground rods, fittings and all other system fastenings, connections and bonding necessary to complete a system designed to protect structures and open spaces. Electrical installation required to make the system operational may be included in the contract for work but must be subcontracted to a Certified Electrical Contractor.

| Number of Questions | 50 |
|------------------------------|----------|
| Time allowed (hours) | 2 |
| | |
| Subject Area | # Quest. |
| General Electrical Knowledge | 10 |
| Hazardous Structures | 5 |
| Heavy Duty Stacks | 5 |
| Ordinary Structures | 10 |
| Safety | 5 |
| Special Occupancies | 5 |
| Wind Turbines and Watercraft | 5 |
| Explosive Materials | 5 |
| | |

References

American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americanelectricians-handbook-sixteenth-edition-croft-

hartwell/9780071798808.html

- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- NFPA 780 Standard for the Installation of Lightning Protection
 Systems, 2011. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Limited Insulation

Tests a candidate's knowledge of insulation installation, maintenance, repair, alteration, and extension to prevent loss or gain of heat from rooms or buildings. This includes installation, repair, maintenance, and extension of acoustical insulation.

Number of Questions

50

Time allowed (hours)

| iest. |
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References

- Basic Safety, 2015. ISBN: 0-13-412901-6. NCCER MATS Testing, 13614 Progress Blvd, Alachua, FL 32615. Available at http://nccer.pearsonconstructionbooks.com
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2020 Energy Conservation, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Insulating Level One, 2018. ISBN: 0-13-413099-5. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at https://www.pearson.com/en-us.html
- Introduction to Construction Drawings, 2015. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available @ mypearsonstore.com
- Thermal and Moisture Protection, 2013. ISBN: 0-13-377903-3. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

Low Voltage (Spanish) 2014

Qualified and certified to install, fabricate, erect, repair, alter, add to or change any electrical wiring, fixtures, appliances, thermostats, apparatus, raceways and conduit, or any part thereof, not to exceed ninety-eight (98) volts, which generates, transmits, transforms or utilizes electrical energy, when those items are for the purpose of transmitting any form of light, heat or communications, including but not limited to telephone, radio, computer and data. A low voltage specialty electrical contractor may connect to an existing separate circuit of approved capacity, which is terminated in an approved outlet, junction box or fused disconnect within six (6) feet of the equipment to be energized.

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| General Electrical Knowledge | 12 |
| Wiring & Protection | 4 |
| Wiring Methods & Materials | 10 |
| Equipment for General Use | 6 |
| Special Occupancies | 6 |
| Special Equipment | 3 |
| Special Conditions | 4 |
| Communication Systems | 5 |

References

<u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545,

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Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americanelectricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html

- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

Low Voltage 2017

Qualified and certified to install, fabricate, erect, repair, alter, add to or change any electrical wiring, fixtures, appliances, thermostats, apparatus, raceways and conduit, or any part thereof, not to exceed ninety-eight (98) volts, which generates, transmits, transforms or utilizes electrical energy, when those items are for the purpose of transmitting any form of light, heat or communications, including but not limited to telephone, radio, computer and data. A low voltage specialty electrical contractor may connect to an existing separate circuit of approved capacity, which is terminated in an approved outlet, junction box or fused disconnect within six (6) feet of the equipment to be energized.

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| General Electrical Knowledge | 12 |
| Wiring and Protection | 5 |
| Wiring Methods & Materials | 10 |
| Equipment for General Use | 3 |
| Special Occupancies | 4 |
| Special Equipment | 4 |
| Special Conditions | 4 |
| Communication Systems | 8 |
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References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electric Code 2017, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

Low Voltage 2017 (Spanish)

Qualified and certified to install, fabricate, erect, repair, alter, add to or change any electrical wiring, fixtures, appliances, thermostats, apparatus, raceways and conduit, or any part thereof, not to exceed ninety-eight (98) volts, which generates, transmits, transforms or utilizes electrical energy, when those items are for the purpose of transmitting any form of light, heat or communications, including but not limited to telephone, radio, computer and data. A low voltage specialty electrical contractor may connect to an existing separate circuit of approved capacity, which is terminated in an approved outlet, junction box or fused disconnect within six (6) feet of the equipment to be energized.

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| Communication Systems | 5 |
| Equipment for General Use | 6 |
| General Electrical Knowledge | 12 |
| Special Conditions | 4 |
| Special Equipment | 3 |
| Special Occupancies | 6 |
| Wiring & Protection | 4 |
| Wiring Methods & Materials | 10 |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electric Code 2017, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

Low Voltage 2020

Qualified and certified to install, fabricate, erect, repair, alter, add to or change any electrical wiring, fixtures, appliances, thermostats, apparatus, raceways and conduit, or any part thereof, not to exceed ninety-eight (98) volts, which generates, transmits, transforms or utilizes electrical energy, when those items are for the purpose of transmitting any form of light, heat or communications, including but not limited to telephone, radio, computer and data. A low voltage specialty electrical contractor may connect to an existing separate circuit of approved capacity, which is terminated in an approved outlet, junction box or fused disconnect within six (6) feet of the equipment to be energized.

| Number of Questions | 50 |
|------------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| General Electrical Knowledge | 12 |
| Wiring and Protection | 5 |
| Wiring Methods & Materials | 10 |
| Equipment for General Use | 3 |
| Special Occupancies | 4 |
| Special Equipment | 4 |
| Special Conditions | 4 |
| Communication Systems | 8 |

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

Maintenance Electrician (Spanish) 2020

Tests a candidate's knowledge of the maintenance of existing electrical systems operating at 480 volts or less. Exam is limited to the repair, alteration, and relocation of existing electrical branch circuits and equipment

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| General Electrical Knowledge | 15 |
| Safety | 5 |
| Servicing Applications | 8 |
| Wiring & Protection | 13 |
| Wiring Methods & Materials | 9 |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Maintenance Electrician 2017

Tests a candidate's knowledge of the maintenance of existing electrical systems operating at 480 volts or less. Exam is limited to the repair, alteration, and relocation of existing electrical branch circuits and equipment.

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| General Electrical Knowledge | 15 |
| Safety | 5 |
| Servicing Applications | 8 |
| Wiring & Protection | 13 |
| Wiring Methods & Materials | 9 |

References

American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa

NFPA 70 - National Electric Code 2017, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Maintenance Electrician 2020

Tests a candidate's knowledge of the maintenance of existing electrical systems operating at 480 volts or less. Exam is limited to the repair, alteration, and relocation of existing electrical branch circuits and equipment.

| Number of Questions Time allowed (hours) | 51 2 |
|---|---------|
| | |
| Electrical Signs & Outline Lighting | 16 |
| Grounding & Bonding | 4 |
| General Electrical Knowledge | 6 |
| Motors & Controls | 3 |
| Transformers | 3 |
| Wiring & Protection | 4 |
| Wiring Methods & Materials | 4 |

References

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- NFPA 70 National Electric Code, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Masonry

Tests a candidate's knowledge of the selection, cutting, and laying of brick, stone, and masonry products. This includes structural glass brick or block, insulated concrete units, and the placement of reinforcing steel, including concrete forming and placing incorporated into the masonry work.

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| Plan Reading & Estimating | 8 |
| Masonry Units | 8 |
| Mortar | 8 |
| Reinforcement | 7 |
| Masonry Installation | 12 |
| Safety | 7 |

References

ACI 530 Building Code Requirements and Specification for Masonry

<u>Structures 2013</u>, 2013. ISBN: 978-1-929081-43-1. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org OR http://www.techstreet.com/searches/16672726 OR amazon.com

- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Study Guide for Masonry Contractors, 2nd Edition</u>, 2014. ISBN: 978-1-269-78558-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

Masonry (Spanish)

Tests a candidate's knowledge of the selection, cutting, and laying of brick, stone, and masonry products. This includes structural glass brick or block, insulated concrete units, and the placement of reinforcing steel, including concrete forming and placing incorporated into the masonry work.

| Number of Questions | 50 |
|---------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Masonry Installation | 12 |
| Mortar | 8 |
| Masonry Units | 8 |
| Plan Reading & Estimating | 8 |
| Reinforcement | 7 |
| Safety | 7 |

References

- ACI 530 Building Code Requirements and Specification for Masonry <u>Structures 2013</u>, 2013. ISBN: 978-1-929081-43-1. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org OR http://www.techstreet.com/searches/16672726 OR amazon.com
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Study Guide for Masonry Contractors, 2nd Edition, 2014. ISBN: 978-1-269-78558-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

Master Electrician (Spanish) 2014

Those who have the knowledge and skill to install, repair, alter, add to or change any electrical wires, fixtures, appliances, apparatus, raceways, conduit or any part thereof; which generates, transmits, transforms or utilizes electrical energy in any form for light, heat, power or communications, all in compliance with applicable plans, specifications, codes, laws and regulations.

| Number of Questions | 75 |
|------------------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| General Electrical Knowledge | 12 |
| Communication Systems | 3 |
| Equipment for General Use | 6 |
| Motors & Controls | 4 |
| Plan Reading | 4 |

| Special Conditions | 4 |
|----------------------------|----|
| Special Equipment | 3 |
| Special Occupancies | 2 |
| Wiring & Protection | 17 |
| Wiring Methods & Materials | 20 |

References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americanelectricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Master Electrician (Spanish) 2020

Those who have the knowledge and skill to install, repair, alter, add to or change any electrical wires, fixtures, appliances, apparatus, raceways, conduit or any part thereof; which generates, transmits, transforms or utilizes electrical energy in any form for light, heat, power or communications, all in compliance with applicable plans, specifications, codes, laws and regulations.

| 75 | |
|----------|--|
| 3 | |
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| # Quest. | |
| 3 | |
| 6 | |
| 12 | |
| 4 | |
| 4 | |
| 4 | |
| 3 | |
| 2 | |
| 17 | |
| 20 | |
| | |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Master Electrician 2014

Those who have the knowledge and skill to install, repair, alter, add to or change any electrical wires, fixtures, appliances, apparatus, raceways, conduit or any part thereof; which generates, transmits, transforms or utilizes electrical energy in any form for light, heat, power or communications, all in compliance with applicable plans, specifications, codes, laws and regulations.

| Number of Questions Time allowed (hours) | 75 3 |
|---|----------|
| Subject Area | # Quest. |
| Communication Systems | 3 |
| Equipment for General Use | 6 |
| General Electrical Knowledge | 12 |
| Motors & Controls | 4 |
| Plan Reading | 4 |
| Special Conditions | 4 |
| Special Equipment | 3 |

Special Occupancies Wiring & Protection Wiring Methods & Materials

References

American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americanelectricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html

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- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727.
- National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Master Electrician 2020

Those who have the knowledge and skill to install, repair, alter, add to or change any electrical wires, fixtures, appliances, apparatus, raceways, conduit or any part thereof; which generates, transmits, transforms or utilizes electrical energy in any form for light, heat, power or communications, all in compliance with applicable plans, specifications, codes, laws and regulations.

| Number of Questions | 75 |
|------------------------------|----------|
| Time allowed (hours) | 3 |
| | |
| Subject Area | # Quest. |
| Communication Systems | 3 |
| Equipment for General Use | 6 |
| General Electrical Knowledge | 12 |
| Motors & Controls | 5 |
| Plan Reading | 2 |
| Special Conditions | 4 |
| Special Equipment | 4 |
| Special Occupancies | 2 |
| Wiring & Protection | 17 |
| Wiring Methods & Materials | 20 |
| | |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA

02169-7471. Available at www.nfpa.org.

Master Residential Electrical 2020

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of electrical conductors, raceways, and equipment for light, heat, and power in one-, two-, and three-family dwellings.

| Number of Questions Time allowed (hours) | 65 3 |
|---|----------|
| Subject Area | # Quest. |
| Communication Systems | 5 |
| Equipment for General Use | 8 |
| General Electrical Knowledge | 18 |
| Residential Motors | 5 |
| Special Equipment | 4 |
| Wiring & Protection | 13 |
| Wiring Methods & Materials | 12 |

References

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Master Sign Electrician 2017 (Spanish)

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of electric conductors, raceways, and equipment associated with electric signs. The branch circuit supplying power to the sign shall originate from an existing disconnect or power outlet.

| Number of Questions Time allowed (hours) | 40 2 |
|---|----------|
| Subject Area | # Quest. |
| Electrical Signs & Outline Lighting | 16 |
| General Electrical Knowledge | 6 |
| Grounding & Bonding | 4 |
| Motors & Controls | 3 |
| Transformers | 3 |
| Wiring & Protection | 4 |
| Wiring Methods & Materials | 4 |

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2017, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Master Sign Electrician 2020

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of electric conductors, raceways, and equipment associated with electric signs. The branch circuit supplying power to the sign shall originate from an existing disconnect or power outlet.

| Number of Questions Time allowed (hours) | 40 2 |
|---|----------|
| Subject Area | # Quest. |
| Electrical Signs & Outline Lighting | 16 |
| General Electrical Knowledge | 6 |
| Grounding & Bonding | 4 |
| Motors & Controls | 3 |
| Transformers | 3 |
| Wiring & Protection | 4 |
| Wiring Methods & Materials | 4 |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Master Sign Electrician 2020 (Spanish)

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of electric conductors, raceways, and equipment associated with electric signs. The branch circuit supplying power to the sign shall originate from an existing disconnect or power outlet.

| Number of Questions Time allowed (hours) | 40 2 |
|---|----------|
| Subject Area | # Quest. |
| Electrical Signs & Outline Lighting | 16 |
| General Electrical Knowledge | 6 |
| Grounding & Bonding | 4 |
| Motors & Controls | 3 |
| Transformers | 3 |
| Wiring & Protection | 4 |
| Wiring Methods & Materials | 4 |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Master TV Antenna (2020 edition)

A Master TV Antenna Specialty Electrical Contractor is qualified and certified to install, repair, alter, add to or change any privately owned TV antenna systems on and in multiple occupancy, residential or commercial buildings of three (3) or more tenants, rooms or apartments all connected to a central master system, as well as in theaters, schools and like public occupancies. Such systems may be electrically energized in whole or in part for the reception, amplification and distribution of TV signals. The scope of these systems shall include conductors and raceways, radio frequency carriers, laser beams and any other means of signal transmission as well as all apparatus pertaining to master TV antenna systems, including but not limited to amplifiers, splitters, cables and outlets for connecting individual TV sets. A master TV antenna specialty electrical contractor may connect to an existing separate circuit of approved capacity, which is terminated to an approved outlet, junction box.

| Number of Questions Time allowed (hours) | 75 3 |
|---|----------|
| Subject Area | # Quest. |
| General Electrical Knowledge | 15 |
| Low Voltage, Signaling & Remote Control | 12 |
| Radio & Television Equipment | 9 |
| Community antenna television & radio | 12 |
| distribution systems | |
| Grounding & Bonding | 19 |
| Safety | 8 |

References

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Master TV Antenna 2017

A Master TV Antenna Specialty Electrical Contractor is qualified and certified to install, repair, alter, add to or change any privately owned TV antenna systems on and in multiple occupancy, residential or commercial buildings of three (3) or more tenants, rooms or apartments all connected to a central master system, as well as in theaters, schools and like public occupancies. Such systems may be electrically energized in whole or in part for the reception, amplification and distribution of TV signals. The scope of these systems shall include conductors and raceways, radio frequency carriers, laser beams and any other means of signal transmission as well as all apparatus pertaining to master TV antenna systems, including but not limited to amplifiers, splitters, cables and outlets for connecting individual TV sets. A master TV antenna specialty electrical contractor may connect to an existing separate circuit of approved capacity, which is terminated to an approved outlet, junction box.

| Number of Questions Time allowed (hours) | 75 3 |
|--|----------|
| Subject Area | # Quest. |
| General Electrical Knowledge | 16 |
| Low Voltage, Signaling & Remote Control | 8 |
| Radio & Television Equipment | 8 |
| Community antenna television & radio distribution systems | 12 |
| Grounding & Bonding | 20 |
| Safety | 11 |

References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americanelectricians-handbook-sixteenth-edition-croft-
- hartwell/9780071798808.html
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727.
 National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Plastering & Lathing

Lathing and Plastering Scope: A lathing and plastering contractor coats surfaces with a mixture of sand, gypsum plaster, quick-lime or hydrated lime and water, or sand and cement and water, or a combination of such other materials that create a permanent coating, including coatings for the purpose of soundproofing and fireproofing. These coatings are applied with a plasterer's trowel or sprayed over any surface which offers a mechanical means for the support of such coating and will adhere by suction. This contractor also installs lath (including metal studs) or any other material prepared or manufactured to provide a base or bond for such coating. A lathing and plastering contractor also applies and affixes wood and metal lath, or any other material prepared or manufactured to provide key or suction bases for the support of plaster coatings. This classification includes the channel work and metal studs for the support of metal or any other lathing material and for solid plaster partitions.

| Number of Questions Time allowed (hours) | 50 3 |
|---|----------|
| Subject Area | # Quest. |
| Plan Reading & Estimating | 5 |
| Framing | 10 |
| Lathing | 10 |
| Materials | 10 |
| Application & Finishing | 10 |
| Safety | 5 |

References

- ASTM C1007-11a Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories, 2011. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/. Candidate printed versions allowed if exam is open book.
- ASTM C1063-12a Standard Specification for Installation of Lathing & Furring to Receive Interior & Exterior Portland Cement Based Plaster, 2012. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/. Candidate printed versions allowed if exam is open book.
- ASTM C926-15b Standard Specification for Application of Portland <u>Cement-Based Plaster</u>, 2015. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/.
- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Gypsum Construction Handbook</u>, 2009. ISBN: 978-0876292587. United States Gypsum Corporation, 350 Burnhamthorpe Road West, 5th Floor, Mississauga, ON. Available at www.amazon.com.
- Introduction to Construction Math, 2015. NCCER MATS Testing, 13614
 Progress Blvd, Alachua, FL 32615.

Plastering & Lathing (Spanish)

Lathing and Plastering Scope: A lathing and plastering contractor coats surfaces with a mixture of sand, gypsum plaster, quick-lime or hydrated lime and water, or sand and cement and water, or a combination of such other materials that create a permanent coating, including coatings for the purpose of soundproofing and fireproofing. These coatings are applied with a plasterer's trowel or sprayed over any surface which offers a mechanical means for the support of such coating and will adhere by suction. This contractor also installs lath (including metal studs) or any other material prepared or manufactured to provide a base or bond for such coating. A lathing and plastering contractor also applies and affixes wood and metal lath, or any other material prepared or manufactured to provide key or suction bases for the support of plaster coatings. This classification includes the channel work and metal studs for the support of metal or any other lathing material and for solid plaster partitions.

| Number of Questions | 50 |
|---------------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 5 |
| Framing | 10 |
| Lathing | 10 |
| Materials | 10 |
| Application & Finishing | 10 |
| Safety | 5 |

- ASTM C1007-11a Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories, 2011. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/. Candidate printed versions allowed if exam is open book.
- ASTM C1063-12a Standard Specification for Installation of Lathing & <u>Furring to Receive Interior & Exterior Portland Cement Based Plaster</u>, 2012. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/. Candidate printed versions allowed if exam is open book.
- ASTM C926-12a Standard Specification for Application of Portland <u>Cement Based Plaster</u>. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/. Candidate printed versions allowed if exam is open book.
- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Gypsum Construction Handbook**, 2009. ISBN: 978-0876292587. United States Gypsum Corporation, 350 Burnhamthorpe Road West, 5th Floor, Mississauga, ON. Available at www.amazon.com.
- Introduction to Construction Math, 2015. NCCER MATS Testing, 13614 Progress Blvd, Alachua, FL 32615.

Sign Contractor (Non-Electric)

Tests a candidate's knowledge of installation, repair, and modification of non-electrical signs.

| Number of Questions Time allowed (hours) | 49 2 |
|---|----------|
| Subject Area | # Quest. |
| Plan Reading | 4 |
| Concrete and Reinforcement | 9 |
| Wood | 6 |
| Structural Steel | 8 |
| Welding | 7 |
| Non-Electric Sign | 8 |
| Safety | 7 |

References

- Carpentry Level One, 2022 edition, 2022. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- Carpentry Level Three 2014, 2014. ISBN: 0133823059. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Ironworking Level One, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

Structural Steel

A Structural Steel Erection Contractor is a contractor qualified and certified to erect structural steel shapes and plates including such minor field fabrication as may be necessary, of any profile, perimeter or cross-section, that are or may be used as structural members for buildings and structures, including steel joists, steel decking and siding, and communication towers, and including riveting, welding and rigging only in connection therewith.

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| Plan Reading & Estimating | 5 |
| Structural Steel | 10 |
| Welding & Cutting | 6 |
| Structural Steel-Bolting | 4 |
| Metal Decking | 6 |
| Metal Buildings | 3 |
| Metal Joists & Trusses | 5 |
| Rigging and Cranes | 6 |
| Safety | 5 |

References

- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Ironworking Level One, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Ironworking Level Three, 2012. ISBN: 978-0-13-257785-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Ironworking Level Two, 2011. ISBN: 978-0-13-257822-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

Window & Door

Those who are qualified to install, repair, replace or alter windows and doors including hardware in connection therewith. This contractor shall not affect structural changes (Rev 1/1/2013)

| Number of Questions | 25 |
|---------------------------|----------|
| Time allowed (hours) | 1.5 |
| | |
| Subject Area | # Quest. |
| Building Codes | 4 |
| Doors & Windows | 14 |
| Plan Reading & Estimating | 4 |
| Safety | 3 |

References

Florida Building Code 2017 - Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Study Guide for Siding & Finish Carpentry, 2012. ISBN: 978-1-256-61081-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.