PALM BEACH COUNTY - EXAM DESCRIPTIONS

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ACOUSTICAL/SUSPENDED ACOUSTICAL CEILING CONTRACTOR

Tests a candidate's knowledge of the installation, repair, alteration and extension of any acoustical or suspended acoustical ceiling.

| Number of Questions | 30 |
|---------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 8 |
| Materials | 7 |
| Acoustical Installation | 10 |
| Safety | 5 |

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Drywall Level 1</u>, 2007. ISBN: 978-0-13-604512-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Drywall Level 2</u>, 2009. ISBN: 978-0-13-604480-2. 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

ALUMINUM CONSTRUCTION & LIMITED CONCRETE

Tests a candidate's knowledge of the fabrication, installation, repair, alteration and extension of aluminum structures, including screen rooms with solid or screen roofs, metal siding, soffits, gutters, and awnings, with limited concrete work incidental to these structures for footings and slabs.

| Number of Questions | 50 |
|---|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Miscellaneous Aluminum Structures & Gutters | 6 |
| Concrete | 7 |
| Plan Reading & Estimating | 7 |
| Safety | 6 |
| Screen Rooms, Carports & Patio Covers | 8 |
| Screen Enclosures | 8 |
| Siding, Soffit & Fascia | 8 |

References

- <u>AAF Guide to Aluminum Construction in High Wind Areas</u>, 2010. Aluminum Association of Florida, 13165 McCrory Place, Suite 185, Orlando, FL 33432. Available at http://www.aaof.org/. (Also permitted is the Guide to Aluminum Construction in High-Wind Area ASCE7 Supplement to the 2010 Guide)
- <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>Study Guide for Residential Carpentry & 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

ALUMINUM SIDING

A Siding Contractor is qualified to install siding and similar accessories. As regulated under Florida Statute, a person who has passed a competency examination as a Siding Contractor may perform these or related tasks or may supervise persons in his employ in the execution of these tasks.

| Number of Questions | 25 |
|---------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Acoustical Installation | 8 |
| Materials | 8 |
| Plan Reading & Estimating | 3 |
| Safety | 3 |
| Substrates | 3 |

References

- <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
- Florida Building Code 2020 Residential, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Study Guide for Residential Carpentry & 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

ALUMINUM SPECIALTIES CONTRACTOR

(A) Aluminum Specialties Contractors are those whose services are limited to the execution of contracts requiring the experience, knowledge and skill necessary for the fabrication, assembling, handling, erection, installation, dismantling, adjustment, alteration, repair, servicing and design work when not prohibited by law, in accordance with accepted engineering data and/or according to manufacturers specifications in the aluminum metal, vinyl and fiberglass screening material construction trade.

(B) The scope of such work shall include and be limited to screened porches, screened enclosures, pool enclosures, preformed panel-post and beam roofs, mobile home panel roof-overs, residential glass window enclosures, vinyl panel window enclosures, single story self-contained aluminum utility storage structures (not to exceed 500 sq. ft.), siding, soffit, fascia, gutters, hurricane shutters, awnings, railings, decorative metals aluminum and fences. (C). The scope of such work shall include masonry and concrete work and to be limited to foundations, slabs, block kneewalls, and walls not to exceed six (6) feet on a zero lot line property, confined or limited to the aluminum and allied materials construction work. The aluminum specialties contractor, whose services are limited, shall not perform any work that alters the structural integrity of the building including but not limited to, roof trusses, lintels, load bearing walls and foundations. Aluminum specialties contractors shall subcontract to a licensed qualified

contractor in the field concerned, all other work specified herein as being the exclusive work of a plumbing, electrical and mechanical contractor.

| Number of Questions | 50 |
|---|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 7 |
| Concrete & Masonry | 7 |
| Carpentry, Windows & Doors | 7 |
| Siding, Soffit & Fascia | 6 |
| Screen Enclosures | 6 |
| Screen Rooms, Carports & Patio Covers | 6 |
| Miscellaneous Aluminum Structures & Gutters | 5 |
| Safety | 6 |

References

 <u>AAF Guide to Aluminum Construction in High Wind Areas</u>, 2010. Aluminum Association of Florida, 13165 McCrory Place, Suite 185, Orlando, FL 33432. Available at http://www.aaof.org/. (Also permitted is the Guide to Aluminum Construction in High-Wind Area ASCE7 Supplement to the 2010 Guide)

- <u>Core Curriculum: Introductory Craft Skills Basic Safety</u>, 2009. ISBN: 978-0-136-09875-1. NCCER, 13614 Progress Blvd., Alachua, FL 32615. Available at http://nccer.pearsonconstructionbooks.com.
- 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
- <u>Masonry and Sitework for the Residential Contractor, 2nd edi-</u> <u>tion</u>, 2nd. ISBN: 978-1-269-78556-3. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- <u>Study Guide for Residential Carpentry & 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

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 selfsupporting, 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 |

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Fabric Awning & 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 & Repair, 2nd edition, 2014. ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

BUILDING CONTRACTOR

Building Contractor means a contractor whose services are limited to construction of commercial and single-dwelling or multiple-dwelling residential buildings, which commercial or residential buildings do not exceed three stories in height, and accessory use structures in connection therewith or a contractor whose services are limited to remodeling, repair, or improvement of any size building if the services do not affect the structural members of the building. As regulated under Florida Statute, a person who has passed a competency examination as a Building Contractor may perform these or related tasks or may supervise persons in his employ in the execution of these tasks.

| Number of Questions Time allowed (hours) Subject Area Plan Reading & Estimating Sitework Concrete Masonry Structural Steel Carpentry & Metal Framing Roofing Associated Trades Interior Finishes Exterior Finishes | 70 3 # Quest. 10 5 11 8 4 9 4 4 4 4 |
|--|---|
| | |
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References

- <u>2012 Study Guide for Structural Steel</u>, 2012. ISBN: 978-1-269-08432-1. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- ACI 530 Building Code Requirements and Specification for Masonry Structures 2013, 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
- <u>Concrete Construction Level 2</u>, 2021. ISBN: 978-0-13-689832-0. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0136898327
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Masonry Level Three</u>, 2014. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
- <u>Study Guide for Commercial Carpentry, 2nd Edition</u>, 2014. ISBN: 978-1-269-78661-4. 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.
- 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.
- <u>NFPA 70 National Electrical Code 2020</u>, 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 ALARM ELECTRICAL 2020

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 |

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- 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 | 50 |
|-----------------------|----------|
| Time allowed (hours) | 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 <u>Project Management</u>, 2nd. NASCLA, 23309 N. 17th Drive, Build-ing 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

| Number of Questions Time allowed (hours) Subject Area Plan Reading & Estimating Floor Systems Wall & Ceiling Framing Roof Framing Thermal & Moisture Protection Exterior Finishing Cold-Formed Steel Framing Windows, Doors & Stairs Interior Trim | 50 3 # Quest. 6 4 8 8 4 4 5 4 2 |
|---|---|
| | 2 |
| Safety | 5 |

References

• <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>Study Guide for Residential Carpentry & 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 - FINISH CONTRACTOR

Carpentry-Finish Contractor are those who have the knowledge and skill to install, maintain, alter or extend finish wood products and their replacement products, including but not limited to paneling, cabinets/shelving, wood countertops, wood flooring, stair treads, risers, handrails, interior doors and frames and all hardware incidental therein, and non-structural incidental framing modifications. Also includes the work of the wood flooring contractor.

| Number of Questions | 50 |
|---|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 6 |
| Building Materials, Fasteners & Adhesives | 7 |
| Windows & Exterior Doors | 2 |
| Exterior Finishing | 5 |
| Doors & Hardware | 5 |
| Interior Trim | 7 |
| Cabinet Installation | 6 |
| Wood Flooring | 8 |
| Safety | 4 |

References

- <u>Study Guide for Siding & Finish Carpentry</u>, 2012. ISBN: 978-1-256-61081-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Wood Flooring: A Complete Guide to Layout, Installation & Finishing. The Taunton Press, 63 South Main St., P.O. Box 5506, Newton, CT 06470.

CARPENTRY CONTRACTOR

Those who have a knowledge and skill to install, maintain, repair, alter or extend any wood products and their replacement products in or on a building including, but not limited to, rough framing, structural and nonstructural trusses, conventional rafters and metal framing and wooden fencing, including the work of the carpentry-finish contractor.

| Number of Questions | 50 |
|---|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 5 |
| Building Materials, Fasteners & Adhesives | 4 |
| Floor Systems | 5 |
| Wall & Ceiling Framing | 7 |
| Roof Framing | 7 |
| Thermal & Moisture Protection | 3 |
| Finish Carpentry & Cabinetry | 7 |
| Windows, Doors & Stairs | 5 |
| Fencing | 4 |

Safety

CONCRETE FORMING AND PLACING

References

- Fences and Retaining Walls, 1990. ISBN: 0-934041-53-9. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. Available at www.craftsman-book.com.
- 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
- Study Guide for Residential Carpentry & Repair, 2nd edition, 2014. ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- <u>Study Guide for Siding & Finish Carpentry</u>, 2012. ISBN: 978-1-256-61081-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Wood Flooring: A Complete Guide to Layout, Installation & Finishing. The Taunton Press, 63 South Main St., P.O. Box 5506, Newton, CT 06470.

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 | |

References

- ACI 318 Building Code Requirements for Structural Concrete 2014, 2014. ISBN: 978-0-87031-930-3. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org/.
- <u>Concrete Construction Level 1</u>, 2021. ISBN: 978-0-13-686828-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0136868282
- <u>Concrete Construction Level 2</u>, 2021. ISBN: 978-0-13-689832-0. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0136898327

Tests a candidate's knowledge of the components, construction and installation of horizontal and vertical formwork, both site built and prefabricated as well as the installation of reinforcement. Includes the placement and finishing of concrete in forms or on grade and shoring and reshoring of horizontal formwork.

| Number of Questions | 50 |
|--------------------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 6 |
| Properties of Concrete | 6 |
| Preparation for Placement | 5 |
| Reinforcement | 6 |
| Formwork | 5 |
| Placement & Finishing | 8 |
| Specialized Installations & Finishes | 3 |
| Quality Control & Curing | 6 |
| Safety | 5 |

References

- ACI 318 Building Code Requirements for Structural Concrete 2014, 2014. ISBN: 978-0-87031-930-3. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org/.
- <u>Concrete Construction Level 1</u>, 2021. ISBN: 978-0-13-686828-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0136868282
- <u>Concrete Construction Level 2</u>, 2021. ISBN: 978-0-13-689832-0. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0136898327

CONCRETE FORMING AND PLACING CONTRACTOR

Tests a candidate's knowledge of the components, construction and installation of horizontal and vertical formwork, both site built and prefabricated as well as the installation of reinforcement. Includes the placement and finishing of concrete in forms or on grade and shoring and reshoring of horizontal formwork.

| Number of Questions | 50 |
|--------------------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 6 |
| Properties of Concrete | 6 |
| Preparation for Placement | 5 |
| Reinforcement | 6 |
| Formwork | 5 |
| Placement & Finishing | 8 |
| Specialized Installations & Finishes | 3 |
| Quality Control & Curing | 6 |
| Safety | 5 |

- ACI 318 Building Code Requirements for Structural Concrete 2014, 2014. ISBN: 978-0-87031-930-3. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org/.
- <u>Concrete Construction Level 1</u>, 2021. ISBN: 978-0-13-686828-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0136868282
- <u>Concrete Construction Level 2</u>, 2021. ISBN: 978-0-13-689832-0. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0136898327

CONCRETE PLACING AND FINISHING

Concrete Placing and Finishing Contractor means a contractor whose services are generally limited to pouring, placing and finishing concrete flatwork (floors, slabs on grade, sidewalks, etc.) including placement of edge forms, mesh reinforcement and plastic vapor barriers incidental thereto.

| Number of Questions | 40 |
|--------------------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 4 |
| Properties of Concrete | 6 |
| Preparation for Placement | 5 |
| Reinforcement | 3 |
| Placement & Finishing | 7 |
| Specialized Installations & Finishes | 4 |
| Quality Control & Curing | 6 |
| Safety | 5 |

References

- <u>ACI 318 Building Code Requirements for Structural Concrete</u> 2014, 2014. ISBN: 978-0-87031-930-3. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org/.
- <u>Concrete Construction Level 1</u>, 2021. ISBN: 978-0-13-686828-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0136868282
- <u>Concrete Construction Level 2</u>, 2021. ISBN: 978-0-13-689832-0. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0136898327

COUNTERTOP CONTRACTOR

Those who have the knowledge and skill to install, maintain, repair, alter or extend any natural/artificial stone, concrete, wooden countertops including their modern replacement products (Excluding custom fabricated glass).

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

| Plan Reading & Estimating | 6 |
|---------------------------|----|
| Cabinet Installation | 4 |
| Countertop Materials | 12 |
| Countertop Substrate | 8 |
| Countertop Installation | 16 |
| Safety | 4 |

References

- <u>Core Curriculum: Introductory Craft Skills Basic Safety</u>, 2009. ISBN: 978-0-136-09875-1. NCCER, 13614 Progress Blvd., Alachua, FL 32615. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Corian, Fabrication Manual</u>. SurfaceNet, LLC, Solid Surface.com, FL. http://www2.dupont.com/Surfaces/en_US/assets/pdf/Fab-Manual-for-printing.pdf Candidate printed copies are allowed
- <u>Q & A: Expert Answers to Technical Questions</u>. Marble Institute of America, 28901 Clemons Road, Suite 100, Cleveland, OH 44145. Available at https://associationdatabase.com/aws/MIA/pt/sp/bookstore_layout_details?get_content_from_session=1&suppress_tcssharing=1 or https://www.naturalstoneinstitute.org/.
- <u>Residential Stone Countertop Installation</u>. Marble Institute of America, 28901 Clemons Road, Suite 100, Cleveland, OH 44145. Available at www.marble-institute.com
- <u>The Complete Guide to Cabinets and Countertops</u>. Black and Decker, Quayside Publishing Group DBA Cool Springs Press, 400 First Avenue North Suite 400, Minneapolis, MN 55401. http://www.homedepot.com1591865896/204758064

DECORATIVE METAL CONTRACTOR

Those qualified to fabricate, install, maintain, repair, alter or extend metal railings, columns hand rails and ornamental metals.

| Number of Questions | 50 |
|---------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Building Codes | 10 |
| Plan Reading & Estimating | 6 |
| Welding | 10 |
| Ornamental Iron | 5 |
| Stairs & Railings | 11 |
| Safety | 8 |

- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Introduction to Arc Welding</u>. ISBN: 0-13-215108-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Miscellaneous/Ornamental Ironworking</u>. ISBN: 978-0-13-292289-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Tools & Equipment of the Trade</u>, 2011. ISBN: 978-0-13-213803-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

- <u>Trade Math.</u> ISBN: 978-0-13-266447-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Trade Safety</u>, 2011. ISBN: 978-0-13-213801-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

DEMOLITION CONTRACTOR

Tests a candidate's knowledge of demolition and removal of structures and buildings. Tests a candidate's knowledge of demolition of structural steel, structural concrete, masonry and structural wood framing. Emphasis on cranes and crane safety as well as explosives and explosive safety. Focuses on interpreting plans and understanding of how components of various structures are assembled. Covers single and multi-story buildings and structures of the types mentioned above.

| Number of Questions | 50 |
|-------------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Interpretation | 6 |
| Structural Concrete | 5 |
| Structural Masonry | 5 |
| Structural Framing | 4 |
| Structural Steel | 6 |
| Blasting | 6 |
| Rigging and Cranes | 8 |
| Safety | 10 |

References

- <u>Carpentry Fundamentals (Level 1)</u>, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Code of Federal Regulations, Title 29, Part 1926</u>, 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.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Ironworking Level One</u>, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- **ISEE Blasters' Handbook.** ISBN: 978-1892396006. International Society of Explosives Engineers, 30325 Bainbridge Road, Cleveland, OH 44139. Available at www.isee.org.
- <u>Masonry Level One</u>, 2004. ISBN: 978-0-13-228718-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- NFPA 241 Safeguarding Construction, Alteration and Demolition Operations. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

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

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>FL DOT Utility Accommodation Manual</u>, 2010. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. Available at www2.dot.state.fl.us/proceduraldocuments/procedures/bin/710020001/710020001.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

DREDGING AND LAND FILLING CONTRACTOR

Tests a candidate's knowledge of mechanical and hydraulic dredging methods, equipment, sediment disposal and marine safety.

| Number of Questions | 40 |
|---------------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Dredging Principles & Practices | 12 |
| Dredging Equipment | 12 |
| Regulations | 8 |
| Safety | 8 |

References

• <u>Code of Federal Regulations, Title 29, Part 1926</u>, 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.

- <u>Code of Federal Regulations, Title 33, Parts 1 124</u>. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at www.ecfr.gov. Candidate printed versions permitted in testing room if exam is open book.
- <u>Code of Federal Regulations, Title 33, Parts 125-199</u>. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at www.ecfr.gov. Candidate printed versions permitted in testing room if exam is open book.
- <u>Code of Federal Regulations, Title 33, Parts 200 to 499</u>. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at www.ecfr.gov. Candidate printed versions permitted in testing room if exam is open book.
- <u>Fundamentals of Hydraulic Dredging</u>, 1996. ISBN: 9780784401477. American Society of Civil Engineers, 1800 Alexander Bell Drive, Reston, VA 20191. https://www.asce.org/tem-plates/publications-book-detail.aspx?id=7971

ELECTRICAL CONTRACTOR 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. |
| 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 | 2 |
| Wiring & Protection | 17 |
| Wiring Methods & Materials | 20 |

References

- <u>American Electrician's Handbook</u>, 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/american-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html
- <u>NFPA 70 National Electrical Code</u>, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

ELECTRICAL FIRE ALARM 2014

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

- <u>American Electrician's Handbook</u>, 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/american-electricians-handbook-sixteenth-edition-croft-hartwell/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.
- <u>NFPA 70 National Electrical Code</u>, 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.

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 Time allowed (hours) | 50 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 |

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- 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.
- <u>NFPA 70 National Electrical Code 2020</u>, 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 Time allowed (hours) | 40 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.
- 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) Subject Area Commercial Elevators & Lifts Construction Elevators Dumbwaiters Emergency Service & Signaling Devices Escalators General Electrical Knowledge Moving Walks Residential Elevators & Lifts | 50 2 # Quest. 15 4 3 5 5 5 5 3 5 5 |
|--|---|
| Residential Elevators & Lifts Safety | 5 5 |
| | |

References

- <u>American Electrician's Handbook</u>, 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/american-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html
- <u>ASME A17.1-2016 Safety Code for Elevators and Escalators</u>, 2016. ISBN: 9780791871096. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.
- <u>ASME A17.3 2015 Safety Code for Existing Elevators and Escala-</u> tors, 2015. ISBN: 9780791870259. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.
- <u>ASME A17.5-11 Elevator and escalator electrical equipment</u>, 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/.
- ASME A18.1 Safety Standard for Platform Lifts and Stairway Chairlifts, 2014. 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, Part 1926</u>, 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.
- <u>NFPA 70 National Electrical Code</u>, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

FABRIC AWNING CONTRACTORS

Fabric Awning Contractors are those who are qualified to manufacture, install, maintain, repair, alter or extend detachable cloth/synthetic cover material over a rigid metal designed to be used as a protection against sun and weather. Electrical wiring required for the purpose of lighting the awning 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. |
| Building Codes | 10 |
| Design, Plan Reading and Estimating | 12 |
| Awning Installation & Attachment | 19 |
| Safety | 9 |

- <u>All about Awnings</u>. Professional Awning Manufacturers Association, 1801 County Road B West, Roseville, MN 55113. http://www.awninginfo.com/commercial_awning_architects_resources.html Candidate printed copies allowable
- <u>Carpentry Fundamentals (Level 1)</u>, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

- <u>Core Curriculum: Introductory Craft Skills Basic Safety</u>, 2009. ISBN: 978-0-136-09875-1. NCCER, 13614 Progress Blvd., Alachua, FL 32615. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Florida Building Code 2020 Building</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

FENCE CONTRACTOR

Fencing Contractors are those who are qualified to construct, install, maintain, alter, extend or repair fencing, including wood, pre-cast concrete, pre-fabricated fences, child proof barrier (kiddies) fences for pools, mechanical swimming pool covers and gates in compliance with safety, zoning and building codes. Electrical installation 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. |
| Plan Reading & Estimating | 6 |
| Layout & General Math | 6 |
| Wood Fencing | 8 |
| Masonry Fencing | 10 |
| Metal & Chain Link Fencing | 10 |
| Safety | 10 |

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Fences and Retaining Walls, 1990. ISBN: 0-934041-53-9. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. Available at www.craftsman-book.com.
- 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

GARAGE DOOR CONTRACTOR

A Garage door installer is a person or firm qualified and certified to install, maintain, repair, alter or extend residential or commercial garage doors, including all hardware and operating devices. One-hundredtwenty-volt electrical installation required for the door operating devices may be included in the contract for work but must be subcontracted to a certified or registered electrical contractor.

| Number of Questions | 50 |
|---|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Garage Doors Installation | 18 |
| Garage Doors, Materials & Hardware | 17 |
| Garage Door Service, Repair & Maintenance | 9 |
| Safety | 6 |

- <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>TDS 151 General Code Inspection Guidelines for Garage Doors.</u> Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book.
- <u>TDS 156 Standard Wood Header and Jamb Detail Guidelines</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.asp Candidate printed versions allowed if exam is open book
- TDS 157 Garage Doors and Foam Plastic. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- **TDS 158 Glazing in Garage Doors.** Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 160 Sectional Garage Door Terminology</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- TDS 161 Connecting Garage Door Jambs to Building Framing. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 162 Wood Door Finishing Guidelines</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 163 Garage Door R-Value</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- TDS 164 Drywall Surfaces and the Mounting of Garage Door Hardware. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 165 Garage Door Manual Operation</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- TDS 166 Guidelines for Connecting a Drawbar Operator to a Sectional Garage Door. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-

tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book.

- TDS 167 Sectional Garage Door & Electric Operator Checklist for Home Inspectors and Consumers. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 172 Garage Door Labels</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- TDS 179 Wood Garage Door Inspection and Maintenance Guidelines. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book
- TDS 181 General Code Inspection Guidelines For Wind Load Rated Garage Doors. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnicaldata-sheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 182 Technical Considerations for Dock Doors</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 260 Common Rolling Steel Door Installation Problems</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- TDS 270 Recommended Rolling Door Maintenance Practices for Building Maintenance Supervisors. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book

GENERAL CONTRACTOR

Tests a candidate's knowledge of the construction, repair, alteration, remodeling, addition to, subtraction from, improvement, and demolition of any building or structure including related improvements to real estate excluding electrical, mechanical, plumbing, and liquefied petroleum gas work related thereto.

| Number of Questions Time allowed (hours) | 80 3 |
|---|----------|
| Subject Area | # Quest. |
| Plan Reading & Estimating | 11 |
| Sitework | 5 |
| Concrete | 12 |
| Masonry | 8 |
| Structural Steel | 10 |
| Carpentry & Metal Framing | 12 |
| Roofing | 4 |
| Associated Trades | 2 |

| Interior Finishes | 5 |
|-------------------|---|
| Exterior Finishes | 5 |
| Safety | 6 |

References

- <u>2012 Study Guide for Structural Steel</u>, 2012. ISBN: 978-1-269-08432-1. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- ACI 530 Building Code Requirements and Specification for Masonry Structures 2013, 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
- <u>Carpentry Level One</u>, 2013 edition, 2013. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Concrete Construction Level 2</u>, 2021. ISBN: 978-0-13-689832-0. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0136898327
- 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 Commercial Carpentry, 2nd Edition</u>, 2014. ISBN: 978-1-269-78661-4. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

GLASS & GLAZING CONTRACTOR

Those who are qualified to select, cut, assemble, and install all makes and kinds of glass and glasswork and execute the glazing of frames, panels, sash and door and holding metal frames, ornamental decoration, mirrors, tub and shower enclosures.

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| Plan Reading & Estimating | 5 |
| Glass & Glazing | 12 |
| Plastic & Glazing | 4 |
| Sealants | 10 |
| Curtain Walls | 6 |
| Structural Glazing Systems | 4 |
| Bath Enclosures & Mirrors | 4 |
| Safety | 5 |

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Florida Building Code 2020 Building</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

- <u>GANA Glazing Manual</u>, 50th Anniversary Edition. Glass Association of North America, 800 SW Jackson Street, STE. 1500, Ste. A, Topeka, KS 66612-1200. Available at www.glasswebsite.com.
- <u>GANA Sealant Manual</u>, 2008. Glass Association of North America, 800 SW Jackson Street, STE. 1500, Ste. A, Topeka, KS 66612-1200.

GUNITE

Tests a candidate's knowledge of preparing, forming, mixing, and applying concrete to various surfaces by hydraulic or pneumatic methods.

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| Plan Reading & Estimating | 5 |
| Preparation for Placement | 15 |
| Proportioning and Preconstruction Testing | 3 |
| Batching and Mixing | 3 |
| Shotcrete Construction | 20 |
| Safety | 4 |

References

- <u>Concrete Finishing Level One</u>, 1998. ISBN: 978-0-13-010246-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Concrete Finishing Level Two</u>, 1999. ISBN: 978-0-13-014860-5. 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
- <u>Guide to Shotcrete, 506R.90</u>, 1995. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. https://www.concrete.org/store.aspx

HARV CONTRACTOR

Tests a candidate's knowledge of the design, installation, maintenance, repair, fabrication, alteration & extension of Ac/refrigeration, piping vessels, warm air heating, low and high pressure boilers, ventilation systems, duct systems, insulation & related appurtenances within a complete system unlimited in horsepower or tonnage.

| Number of Questions Time allowed (hours) Subject Area | 100 4 # Quest. |
|---|----------------------|
| Piping | 18 |
| Equipment | 14 |
| Maintenance | 22 |
| Plan Reading | 7 |
| Systems & Sizing | 20 |
| General Knowledge | 19 |

References

- <u>Advanced Mechanical Study Guide</u>, <u>2nd edition</u>, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Florida Building Code 2020 Building</u>, 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
- Florida Building Code 2020 Fuel Gas, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2020 Mechanical, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>HVAC Basics for Contractors,3rd Edition</u>, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Intermediate Mechanical Study Guide</u>, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Manual N Commercial Load Calculations</u>, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.amazon.com
- <u>Residential Load Calculations Manual J.</u> Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

HURRICANE SHUTTER/AWNING CONTRACTOR

Metal Awning and Storm Shutter Contractor is qualified and certified to fabricate, erect and install awnings or canopies of metal including other materials, incidental thereto, in or on buildings or other structures, and which may be, in whole or part, supported from a building wall erected and provided by others, or may be self-supporting, and including footings or slabs on grade in connection therewith. Such contractor shall have a qualifying agent with experience and skill gained by at least one (1) year's practical work in this field and who has passed a designated examination.

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| Plan Reading & Estimating | 7 |
| Concrete and Reinforcement | 6 |
| Metal Storm Panel Shutters | 6 |
| Wood Storm Shutters | 4 |
| Installation & Anchorage | 16 |
| Building and Municipal Codes | 7 |
| Safety | 4 |

References

 <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.

- <u>Carpentry Fundamentals (Level 1)</u>, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Florida Building Code 2020 Building</u>, 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, Form T450 is allowed if exam is open book.

INSULATION CONTRACTOR

Tests a candidate's knowledge of insulation installation, repair, maintenance and extension to control the gain or loss of heat from all sources in buildings, rooms, pipes, vessels, ducts, process equipment, refrigerated rooms, and boxes. This includes installation, repair, maintenance, and extension of acoustical insulation.

| Number of Questions Time allowed (hours) | 50 3 |
|---|----------|
| Subject Area | # Quest. |
| Plan Reading & Estimating | 5 |
| Theory | 5 |
| Insulation Materials & Accessories | 12 |
| Insulation Installation | 13 |
| Systems Insulation | 10 |
| Safety | 5 |

References

- 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 Three, 1999. ISBN: 978-0-13-909458-3. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Insulating Level Two, 1999. ISBN: 978-0-13-909417-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Study Guide for Insulation</u>. ISBN: 978-0-136-06315-5. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at http://nccer.pearsonconstructionbooks.com

IRRIGATION SPRINKLER

Install, repair, maintain, alter or extend all piping and sprinkler heads for the irrigation of lawns including incidental connections to a water pump (but not direct connection to potable water lines).

| Number of Questions | 50 |
|---------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 4 |

| Planning & Layout | 8 |
|---|----|
| Materials | 8 |
| Controls | 6 |
| Irrigation Installation | 10 |
| Cross Contamination & Backflow Prevention | 5 |
| Reclaimed Water | 3 |
| Safety | 6 |

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Administrative Code, Ch. 62-610, Reuse of Reclaimed Water & Land Application, 2012. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. http://www.dep.state.fl.us/legal/Rules/wastewater/62-610.pdf Candidate printed versions permitted in testing room if exam is open book.
- Florida Building Code 2020 Plumbing, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Turf Irrigation Manual The Complete Guide to Landscape Irri-</u> <u>gation Design</u>, 5th Ed., 1994. ISBN: 978-0963509604. Weathermatic, P.O. Box 180205, Dallas, TX 75218-0205. Available at www.amazon.com.

IRRIGATION SPRINKLER CONTRACTOR

Install, repair, maintain, alter or extend all piping and sprinkler heads for the irrigation of lawns including incidental connections to a water pump (but not direct connection to potable water lines).

| Number of Questions | 50 |
|---|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 4 |
| Planning & Layout | 8 |
| Materials | 8 |
| Controls | 6 |
| Irrigation Installation | 10 |
| Cross Contamination & Backflow Prevention | 5 |
| Reclaimed Water | 3 |
| Safety | 6 |

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Administrative Code, Ch. 62-610, Reuse of Reclaimed Water & Land Application, 2012. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. http://www.dep.state.fl.us/legal/Rules/wastewater/62-610.pdf Candidate printed versions permitted in testing room if exam is open book.
- Florida Building Code 2020 Plumbing, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

• Turf Irrigation Manual - The Complete Guide to Landscape Irrigation Design, 5th Ed., 1994. ISBN: 978-0963509604. Weathermatic, P.O. Box 180205, Dallas, TX 75218-0205. Available at www.amazon.com.

JOURNEYMAN AC (LIMITED)

Tests a candidate's knowledge of the installation, maintenance, repair, fabrication, alteration, and extension of air conditioning, refrigeration, heating, ventilation, duct systems, piping vessels, insulation, and related appurtenances within a complete system, limited to 25 tons cooling and 500,000 BTU heating.

| Number of Questions Time allowed (hours) | 100 4 |
|---|----------|
| Subject Area | # Quest. |
| General Knowledge | 22 |
| Piping | 10 |
| Systems & Sizing | 25 |
| Equipment | 15 |
| Maintenance | 22 |
| Plan Reading | 6 |

References

- <u>Advanced Mechanical Study Guide</u>, <u>2nd edition</u>, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- Florida Building Code 2020 Mechanical, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>HVAC Basics for Contractors,3rd Edition</u>, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

JOURNEYMAN AIR CONDITIONING

Qualified to install, maintain, repair, alter, fabricate or extend air conditioning, refrigeration systems, piping vessels, warm air heating, low pressure boilers, ventilation systems, duct systems, insulation, and related appurtenances within a complete system unlimited in horsepower or tonnage.

| Number of Questions Time allowed (hours) | 100 3 |
|---|----------|
| Subject Area | # Quest. |
| General Knowledge | 20 |
| Piping | 10 |
| Systems & Sizing | 24 |
| Equipment | 10 |
| Maintenance | 24 |

Plan Reading

References

- <u>Advanced Mechanical Study Guide</u>, <u>2nd edition</u>, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- Florida Building Code 2020 Mechanical, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>HVAC Basics for Contractors,3rd Edition</u>, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

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 journeyman 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 | 50 |
|--|----------|
| Time allowed (hours) | 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>, 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/american-electricians-handbook-sixteenth-edition-croft-hartwell/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.
- <u>NFPA 70 National Electrical Code</u>, 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 journeyman 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.
- 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.

JOURNEYMAN ELECTRICIAN 2011

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 | 10 |
| Plan Reading | 2 |
| 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 | 5 |

References

- <u>American Electricians' Handbook</u>, 15th Edition. ISBN: 978-0-07-149462-5. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- <u>NFPA 70 National Electrical Code</u>, 2011. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

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

- <u>American Electrician's Handbook</u>, 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/american-electricians-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.

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 | 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

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

JOURNEYMAN GENERAL MECHANICAL

Journeyman General Mechanical: The term 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 journeyman 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. In addition, any work in the trade concerned on any such job site wherein journeymen are not provided in accordance

with this section shall be stopped by the enforcing agency or administrative agency concerned until journeymen are so provided. Further, any person working at a trade which requires journeymen on the job site where no journeyman or master in the trade concerned is present shall be in violation of this chapter and 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 | 60 |
|----------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| General Knowledge | 9 |
| Piping | 6 |
| Equipment | 13 |
| Maintenance | 10 |
| Plan Reading | 4 |
| Systems & Sizing | 18 |

- <u>Advanced Mechanical Study Guide</u>, 2nd edition, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- Florida Building Code 2020 Energy Conservation, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2020 Fuel Gas, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2020 Mechanical, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>HVAC Basics for Contractors,3rd Edition</u>, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>HVAC Level Three Trainee Guide</u>, 2008. ISBN: 978-0-13-604492-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>HVAC Level Two Trainee Guide</u>, 2007. ISBN: 978-0-13-614385-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Manual N Commercial Load Calculations</u>, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.amazon.com

JOURNEYMAN HEATING

Tests a candidate's knowledge of the installation, maintenance, repair, fabrication, alteration, and extension of heating, duct systems, and related appurtenances, including hot water, low pressure steam, and warm air furnace systems.

| Number of Questions Time allowed (hours) | 80 3 # Orrest |
|---|---------------------|
| Subject Area | # Quest. |
| General Knowledge | 24 |
| Piping | 17 |
| Systems & Sizing | 15 |
| Equipment | 10 |
| Maintenance | 9 |
| Plan Reading | 5 |

References

- 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 Fuel Gas, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2020 Mechanical, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>HVAC Basics for Contractors,3rd Edition</u>, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>HVAC Level Three Trainee Guide</u>, 2008. ISBN: 978-0-13-604492-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>HVAC Level Two Trainee Guide</u>, 2007. ISBN: 978-0-13-614385-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Intermediate Mechanical Study Guide</u>, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

JOURNEYMAN PLUMBER

Perform work under the supervision and in the employ of a state certified plumber or a locally licensed master plumber.

| Number of Questions | 80 |
|-----------------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Drain, Waste & Vent Systems | 14 |
| Fixtures & Fittings | 6 |
| General Knowledge | 10 |
| Isometrics & Plan Reading | 10 |
| Plumbing Math | 5 |

| Storm & Roof Drainage | 8 |
|-------------------------------|----|
| Water Heaters | 8 |
| Water Supply and Distribution | 12 |
| Safety | 7 |

References

- Florida Building Code 2020 Plumbing, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Plumbing Basics for Contractors, 3rd Edition, 2014. ISBN: 978-1-269-78624-9. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

LIGHTNING PROTECTION 2014

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

- <u>American Electrician's Handbook</u>, 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/american-electricians-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.

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

- <u>American Electrician's Handbook</u>, 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/american-electricians-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.

LIGHTNING PROTECTION SYSTEMS CONTRACTOR 2011

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 | 48 |
|------------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| General Electrical Knowledge | 9 |
| Safety | 4 |
| Ordinary Structures | 10 |
| Special Occupancies | 5 |
| Heavy Duty Stacks | 5 |
| Hazardous Structures | 5 |
| Explosive Materials | 5 |
| Wind Turbines and Watercraft | 5 |

References

 <u>American Electricians' Handbook</u>, 15th Edition. ISBN: 978-0-07-149462-5. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com

- <u>NFPA 70 National Electrical Code</u>, 2011. 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) | 2 |
| Subject Area | # Quest. |
| Insulation Installation | 12 |
| Insulation Materials & Accessories | 15 |
| Plan Reading & Estimating | 9 |
| Safety | 9 |
| Theory | 5 |

References

- 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
- <u>Study Guide for Insulation</u>, 2nd. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at https://provexam.com/books/

LIMITED ROOFING

Tests a candidate's knowledge of the installation, repair, and replacement of steep roof coverings, including the fabrication and installation of sheet metal incidental to steep coverings, and installation of shingles, shakes, roll roofing materials, tile, slate, and other prefabricated shingle products.

| Number of Questions | 50 |
|---------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 9 |
| Deck & Underlayment | 9 |
| Flashing | 8 |
| High Slope Roofing | 16 |
| Safety | 8 |

References

 Florida Building Code 2020 - Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

- <u>Roofing Study Guide</u>, 2018. ISBN: 978132388055. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- Or, if the book above is unavailable, it may be substituted by the following. Substitute references shown below..
- <u>Core 2015, 27202-13 Roofing Applications, & 27403-14 Advanced</u> <u>Roof Systems</u>. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.

LOW VOLTAGE 2011

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.

| Time allowed (hours) 2 | |
|---------------------------------|------|
| Subject Area # Que | est. |
| 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 Electricians' Handbook</u>, 15th Edition. ISBN: 978-0-07-149462-5. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2011. 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 ninetyeight (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 |

References

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- 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 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 |

References

 <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.

- 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.

LOW VOLTAGE CONTRACTOR

Those who are qualified to install, maintain, repair, alter, wire or extend burglar alarm systems and communication and sound systems in single family homes, duplexes, mobile homes, multifamily dwellings, and commercial buildings at less than 98 volts. The scope of work may also include installation of raceways, computer wiring, conduit for private telephone, cable television systems (CCTV), video security systems, intercom, public address systems, and/or landscaping lighting to include plug & play devices but cannot install fire alarm systems. Scope of work must also be compliant of the National Electrical Code (NFPA 70) and Florida Building Code (FBC). Any electrical installation above 98 volts 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. |
| Installation | 8 |
| Communication and Sound | 5 |
| General Electrical Knowledge | 5 |
| Intrusion Detection | 15 |
| Notification Appliances & Signaling Circuits | 8 |
| Power Supplies | 5 |
| Supervisory Stations | 4 |

References

- 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, 2011. 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.
- Wiring Diagrams Pal -The Reference Guide for Electrical Wiring Installations. ISBN: 0-9652171-4-0. Pal Publications, 374 Circle of Progress, Pottstown, PW 19464-3810.

LOW VOLTAGE CONTRACTOR 2014

Those who are qualified to install, maintain, repair, alter, wire or extend burglar alarm systems and communication and sound systems in single family homes, duplexes, mobile homes, multifamily dwellings, and commercial buildings at less than 98 volts. The scope of work may also include installation of raceways, computer wiring, conduit for private telephone, cable television systems (CCTV), video security systems, intercom, public address systems, and/or landscaping lighting to include plug & play devices but cannot install fire alarm systems. Scope of work must also be compliant of the National Electrical Code (NFPA 70) and Florida Building Code (FBC). Any electrical installation above 98 volts 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 | 5 |
| Intrusion Detection | 15 |
| Acoustical Installation | 8 |
| Notification Appliances & Signaling Circuits | 8 |
| Communication and Sound | 5 |
| Power Supplies | 5 |
| Supervisory Stations | 4 |

References

- 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.
- <u>NFPA 70 National Electrical Code</u>, 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.
- Wiring Diagrams Pal -The Reference Guide for Electrical Wiring <u>Installations</u>. ISBN: 0-9652171-4-0. Pal Publications, 374 Circle of Progress, Pottstown, PW 19464-3810.

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

- <u>American Electrician's Handbook</u>, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- 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.

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 Structures 2013, 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.

MASTER AC (LIMITED)

Tests a candidate's knowledge of the design, installation, maintenance, repair, fabrication, alteration, and extension of air conditioning, refrigeration, heating, ventilation, duct systems, piping vessels, insulation, and related appurtenances within a complete system, limited to 25 tons cooling and 500,000 BTU heating.

| Number of Questions Time allowed (hours) Subject Area | 100 4 # Quest. |
|---|----------------------|
| General Knowledge | 18 |
| Piping | 10 |
| Systems & Sizing | 20 |
| Equipment | 15 |
| Maintenance | 23 |
| Plan Reading | 5 |
| | |

References

- <u>Advanced Mechanical Study Guide</u>, 2nd edition, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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

- Florida Building Code 2020 Energy Conservation, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2020 Fuel Gas, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2020 Mechanical, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>HVAC Basics for Contractors,3rd Edition</u>, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Manual N Commercial Load Calculations</u>, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.amazon.com
- <u>Residential Load Calculations Manual J.</u> Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

MASTER AC (UNLIMITED)

Tests a candidate's knowledge of the design, installation, maintenance, repair, fabrication, alteration & extension of Ac/refrigeration, piping vessels, warm air heating, low and high pressure boilers, ventilation systems, duct systems, insulation & related appurtenances within a complete system unlimited in horsepower or tonnage.

| Number of Questions | 100 |
|----------------------|----------|
| Time allowed (hours) | 4 |
| Subject Area | # Quest. |
| Piping | 18 |
| Equipment | 14 |
| Maintenance | 22 |
| Plan Reading | 7 |
| Systems & Sizing | 20 |
| General Knowledge | 19 |

- <u>Advanced Mechanical Study Guide</u>, <u>2nd edition</u>, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Florida Building Code 2020 Building</u>, 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
- Florida Building Code 2020 Fuel Gas, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

- Florida Building Code 2020 Mechanical, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>HVAC Basics for Contractors,3rd Edition</u>, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Intermediate Mechanical Study Guide</u>, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Manual N Commercial Load Calculations</u>, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.amazon.com
- <u>Residential Load Calculations Manual J</u>. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.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 | 75 |
|------------------------------|----------|
| Time allowed (hours) | 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 | 2 |
| Wiring & Protection | 17 |
| Wiring Methods & Materials | 20 |

References

- <u>American Electrician's Handbook</u>, 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/american-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html
- <u>NFPA 70 National Electrical Code</u>, 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>, 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/american-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html
- <u>NFPA 70 National Electrical Code 2020</u>, 2020. ISBN: 9781455922970. 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 | 40 |
|-------------------------------------|----------|
| Time allowed (hours) | 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.
- 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 connector may connect to an existing separate circuit of approved capacity, which is terminated to an approved outlet, junction box.

| Number of Questions | 75 |
|---|----------|
| Time allowed (hours) | 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

- <u>American Electrician's Handbook</u>, 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/american-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html
- <u>Code of Federal Regulations, Title 29, Part 1926</u>, 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.
- <u>NFPA 70 National Electrical Code</u>, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

METAL AWNING & STORM SHUTTER CONTRACTOR

Metal Awning and Storm Shutter Contractor is qualified and certified to fabricate, erect and install awnings or canopies of metal including other materials, incidental thereto, in or on buildings or other structures, and which may be, in whole or part, supported from a building wall erected and provided by others, or may be self-supporting, and including footings or slabs on grade in connection therewith. Such contractor shall have a qualifying agent with experience and skill gained by at least one (1) year's practical work in this field and who has passed a designated examination.

| Number of Questions | 50 |
|----------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 7 |
| Concrete and Reinforcement | 6 |

| Metal Storm Panel Shutters | 6 |
|------------------------------|----|
| Wood Storm Shutters | 4 |
| Installation & Anchorage | 16 |
| Building and Municipal Codes | 7 |
| Safety | 4 |

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Carpentry Fundamentals (Level 1)</u>, 2006. ISBN: 978-0-13-229268-9. 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
- <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, Form T450 is allowed if exam is open book.

METAL DECKING & SIDING

A Metal Decking and Siding Contractor is a contractor qualified and certified to erect metal decking and siding or other material incidental thereto that may be used for enclosing buildings or other structures including welding, bolting or other attachments in connection therewith and including such minor field fabrication as may be necessary and also the installation of industrial doors and windows in connection therewith

| Number of Questions | 75 |
|-------------------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 12 |
| Metal Decking | 18 |
| Metal Siding | 10 |
| Welding & Cutting | 8 |
| Doors & Windows | 4 |
| Rigging Equipment & Practices | 9 |
| Safety | 14 |

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

PAINTING CONTRACTOR

Specialty building contractor shall include and be limited to the cleaning, caulking, and sizing of surfaces, including roofs, in preparation for the application of paint and related liquid or viscous products by brush, roller, or spray methods in such a manner that, under an agreed specification, satisfactory painting can be accomplished. A "PU" specialty building contractor is qualified to clean, sandblast, caulk, and prime surfaces in preparation for, and to apply, waterproofing products by brush, roller, or spray method in such a manner that, under agreed specifications, satisfactory waterproofing can be accomplished either inside or outside (vertical surfaces only). A "PU" specialty building contractor is also qualified to clean surfaces in preparation of waterproofing or painting (engraving, cutting, or cleaning glass or stone or removing scale for metals). The scope of work may include pressure spraying to clean exterior surfaces of homes or buildings.

| Number of Questions | 80 |
|---------------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Safety | 6 |
| Substrates & Preparation | 15 |
| Materials | 17 |
| Application | 18 |
| Job Planning & Estimating | 8 |
| Paint Failures & Remedies | 6 |
| Equipment | 10 |

References

- <u>Painting Industrial Level 4</u>, 1998. ISBN: 978-0-13-910100-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Painting Level One</u>, 1997. ISBN: 978-0-13-771239-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Painting Level Three</u>, 1998. ISBN: 978-0-13-949041-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Painting Level Two</u>, 1997. ISBN: 978-0-13-771296-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

PAVER BRICK/PAVER SYSTEMS CONTRACTOR

Tests a candidate's knowledge of interlocking paver units including material selection, site preparation, subbases, bases, installation methods and concrete work related to the paver system.

| Number of Questions | 50 |
|---|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 8 |
| Soil Characteristics & Compaction | 6 |
| Base Materials, Bedding & Edge Restraints | 7 |
| Paving Materials | 7 |
| Paver Installation | 16 |
| Safety | 6 |

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>ICPI Concrete Paver Installer Course Manual, 7th Edition</u>, 2000. Interlocking Concrete Pavement Institute, 13921 Park Center Road, Suite 270, Herndon, VA 20171. Available at www.icpi.org.

PAVING CONTRACTOR

Those who are qualified with the experience and skill to construct roads, alter or repair, airport runways, parking lots, sidewalks, curbs, gutters, modular retaining walls, storm drainage facilities, residential driveways, using Portland cement, concrete or asphaltic concrete, paver brick/paver systems and to perform the excavating, clearing and grading incidental thereto. Electrical work for lighting that area may be included in the contract but must be subcontracted to a certified electrical contractor. Scope also includes the work of the Seal Coating/Striping Contractor.

| Number of Questions | 50 |
|--|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Plans & Specifications | 3 |
| Survey & Layout | 5 |
| Earthwork, Compaction & Stabilization | 5 |
| Asphalt Paving Procedures | 7 |
| Asphalt Properties and General Uses | 6 |
| Use & Application of Asphalt Emulsions | 7 |
| Asphalt Preservation & Maintenance | 7 |
| Concrete and Reinforcement | 7 |
| Safety | 3 |

- <u>Damage Prevention Guide</u>. Sunshine State One Call of Florida, Inc., 11 Plantation Road, DeBary, FL 32713. Available at http://www.sunshine811.com/ Candidate printed versions permitted in testing room if exam is open book.
- <u>ES-12 Asphalt Surface Treatments</u>, 1988. The Asphalt Institute, 2696 Research Park Drive, Lexington, KY 40511-8480. Available at https://www.contractorcampus.com/.
- <u>Highway/Heavy Construction Level 1</u>. ISBN: 978-0-13-061611-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>MS-16 Asphalt in Pavement, Preservation & Maintenance</u>, 4th edition, 2009. ISBN: 978-1-934154-58-8. The Asphalt Institute, 2696 Research Park Drive, Lexington, KY 40511-8480. Available at www.asphaltinstitute.org.
- <u>MS-19 Basic Asphalt Emulsion Manual</u>, 4th edition. ISBN: 978-1-934154-56-4. The Asphalt Institute, 2696 Research Park Drive, Lexington, KY 40511-8480. Available at www.asphaltinstitute.org.
- <u>Standard Specifications for Road and Bridge Construction</u>. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. Available at www.dot.state.fl.us. Candidate printed versions allowed if exam is open book.

PLASTERING CONTRACTOR

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 | # Ouest |
| Plan Reading & Estimating | 5 |
| Framing | 10 |
| Lathing | 10 |
| Materials | 10 |
| Application & Finishing | 10 |
| Safety | 5 |

References

- <u>ASTM C1007-11a Standard Specification for Installation of Load</u> <u>Bearing (Transverse and Axial) Steel Studs and Related Accesso-</u> <u>ries</u>, 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.
- <u>ASTM C1063-12a</u> <u>Standard Specification for Installation of Lathing & 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.
- <u>ASTM C926-15b Standard Specification for Application of Port-</u> <u>land 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.
- <u>Florida Building Code 2020 Building</u>, 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.
- <u>Introduction to Construction Math</u>, 2015. NCCER MATS Testing, 13614 Progress Blvd, Alachua, FL 32615.

PLUMBING CONTRACTOR

Those who have the knowledge and skill to install, maintain, repair, alter or extend plumbing, sanitary drainage or storm drainage facilities, venting systems, public and private water supply systems, septic tanks, drainage and supply wells, swimming pool piping; irrigation systems; or solar heating water systems and all appurtenances, apparatus, or equipment used in connection therewith, including boilers and pressure process piping and including the installation of water and storm and sewer lines, water and sewer plants and substations; And who are qualified to install, service, modify, alter or repair apparatus, piping, vents, flues, tanks, tubing, appliances, equipment & L.P. and/or Natural gas systems, unlimited with regards to residential or commercial systems.

| Number of Questions | 100 |
|-------------------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Drain, Waste & Vent Systems | 15 |
| Fuel Gas Systems | 15 |
| Fixtures & Fittings | 8 |
| General Knowledge | 10 |
| Isometrics & Plan Reading | 8 |
| Plumbing Math | 6 |
| Safety | 6 |
| Storm & Roof Drainage | 8 |
| Water Heaters | 12 |
| Water Supply and Distribution | 12 |

References

- Florida Building Code 2020 Fuel Gas, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2020 Plumbing, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Plumbing Basics for Contractors, 3rd Edition, 2014. ISBN: 978-1-269-78624-9. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

RE-SCREENER/SCREEN REPAIR CONTRACTOR

A Re-screener/Screen Repair Contractor is a contractor whose services are limited to re-screening or the removal, repair, and replacement of existing structural elements that are incidental to rescreening; all other structural alterations or repairs must be performed by an appropriately licensed contractor (excluding removable window screens/sliding screen doors).

| Number of Questions | 25 |
|------------------------------|----------|
| Time allowed (hours) | 1.5 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 4 |
| Building and Municipal Codes | 4 |
| Window and Door Screens | 3 |
| Screen Rooms | 4 |
| Pool Enclosures | 5 |
| Safety | 5 |

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Building Screen Rooms: Creating Backyard Retreats, Screening</u> <u>in Existing Structures, A Complete How-to Guide</u>, 2004. Sunset books, P.O. Box 62375, Tampa, FL 33662. Available at www.amazon.com
- <u>How to Build & Install a Window Screen</u>. Ehow, FL. available at http://www.ehow.com/how_5298583_build-install-window-screen.html Candidate printed copies allowable
- <u>How to install fiberglass window screens</u>. Ehow, FL. Available at http://www.ehow.com/how_5043259_install-fiberglass-windowscreens.html Candidate printed copies allowable
- <u>How to Re-screen a Pool Cage</u>. Ehow, FL. Available at http://www.ehow.com/how_6718471_re_screen-pool-cage.html Candidate printed copies allowable
- <u>How to repair a hole in a pool screen</u>. Ehow, FL. Available at http://www.ehow.com/how_12008987_repair-hole-pool-screen.html Candidate printed copies allowable
- Palm Beach County Amendments to the 5th edition Florida Building Code 2015. FL - Palm Beach County Contractor Certification, 2300 North Jog Road, West Palm Beach, FL 33411. Available at municodes.com - Candidate printed versions allowed
- <u>Screen-Spline Roller Instructions</u>. Ehow, FL. available at http://www.ehow.com/how_7593695_screenspline-roller-instructions.html
- <u>Tips on rescreening your screen room</u>. Ehow, FL. Available at http://www.ehow.com/list_6218467_tips-rescreening-screenroom.html

REFRIGERATION (LIMITED)

Tests a candidate's knowledge of the installation, maintenance, repair, and alteration of refrigeration systems and related appurtenances intended to be used for the purpose of food and product preservation, and limited to five tons.

| Number of Questions Time allowed (hours) | 100 3 |
|---|----------|
| Subject Area | # Quest. |
| General Knowledge | 28 |
| Piping | 35 |
| Maintenance | 5 |
| Plan Reading | 2 |
| Systems & Sizing | 30 |

References

 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 Fuel Gas, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2020 Mechanical, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>HVAC Basics for Contractors,3rd Edition</u>, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

REFRIGERATION (UNLIMITED)

Tests knowledge of the installation, maintenance, repair, and alteration of refrigeration systems and related appurtenances intended to be used for the purpose of food and product preservation, unlimited in tonnage or horsepower.

| Number of Questions | 80 |
|----------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| General Knowledge | 22 |
| Piping | 23 |
| Systems & Sizing | 24 |
| Maintenance | 7 |
| Plan Reading | 4 |

References

- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Florida Building Code 2020 Fuel Gas</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Florida Building Code 2020 Mechanical</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>HVAC Basics for Contractors,3rd Edition</u>, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Intermediate Mechanical Study Guide</u>, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

REINFORCING STEEL CONTRACTOR

Reinforcing Steel Placing Contractor is a contractor qualified and certified to fabricate, place, tie and weld steel reinforcing bars (rods) that are or may be used to reinforce concrete buildings or structures.

| Number of Questions | 50 |
|----------------------|----|
| Time allowed (hours) | 3 |

| Subject Area | # Quest. |
|---------------------------------|----------|
| Plan Reading & Estimating | 6 |
| Reinforcement Placement | 14 |
| Reinforcement Connections | 12 |
| Reinforcement Cutting & Bending | 5 |
| Rigging Equipment & Practices | 5 |
| Safety | 8 |

References

- <u>ACI 318 Building Code Requirements for Structural Concrete</u> <u>2014</u>, 2014. ISBN: 978-0-87031-930-3. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org/.
- <u>Florida Building Code 2020 Building</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Reinforcing Ironwork Level One</u>, 2005. ISBN: 978-0-13-228220-8.
 Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.

RENTAL APARTMENT MAINTENANCE REPAIR TECHNICIAN

Apartment Maintenance Repair technicians are those workers employed by an apartment community or apartment management company of at least 100 apartments at a single location that make minor repairs to existing electric water heaters or to existing electric heating, ventilation and air-conditionsing systems.

| Number of Questions Time allowed (hours) | 100 4 |
|---|----------|
| Subject Area | # Quest. |
| Licensing Laws and Municipal Codes | 14 |
| Electrical Knowledge | 12 |
| HVAC General Knowledge | 10 |
| Basic HVAC Maintenance | 10 |
| HVAC Control Circuits and Motors | 8 |
| HVAC Cooling | 8 |
| HVAC Heat Pumps | 8 |
| Water Heaters | 12 |
| Safety | 18 |

References

- <u>Basic Electricity</u>, 2013. ISBN: 0-13-340285-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Basic Maintenance</u>. ISBN: 0-13-378002-3. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Control Circuit and Motor Troubleshooting</u>. ISBN: 978-0-13-378109-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2020 Plumbing, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

- Florida Statutes 489.105. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. available at http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0400-0499/0489/Sections/0489.105.html Candidate printed versions will be permitted.
- Leak Detection, Evacuation, Recovery, and Charging. ISBN: 0-13-377998-X. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Palm Beach County Apartment Maintenance Technician. Palm Beach County, Florida, FL. Available at http://discover.pbcgov.org/pzb/contractors/Pages/Forms-Licensing.aspx Candidate printed versions will be permitted
- <u>Service Plumbing</u>. ISBN: 0-13-378279-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsoncon-structionbooks.com.
- <u>Troubleshooting Cooling</u>. ISBN: 978-0-13-382406-3. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Troubleshooting Heat Pumps</u>. ISBN: 978-0-13-378119-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

RESIDENTIAL BUILDING CONTRACTOR

Residential Contractor means a contractor whose services are limited to construction, remodeling, repair, or improvement of one-family, two-family, or three-family residences not exceeding two (2) habitable stories above no more than one uninhabitable story and accessory use structure in connection therewith. As regulated under Florida Statute, a person who has passed a competency examination as a Residential Contractor may perform these or related tasks or may supervise persons in his employ in the execution of these tasks.

| Number of Questions | 60 |
|----------------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Plan Reading | 6 |
| Sitework & Foundations | 5 |
| Concrete and Reinforcement | 8 |
| Masonry | 8 |
| Carpentry | 10 |
| Roofing | 4 |
| Interior Finishes | 5 |
| Exterior Finishes | 5 |
| Associated Trades | 4 |
| Safety | 5 |

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Florida Building Code 2020 Residential</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Masonry and Sitework for the Residential Contractor, 2nd edition</u>, 2nd. ISBN: 978-1-269-78556-3. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

- <u>Study Guide for Residential Carpentry & 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
- Or, if the book above is unavailable, it may be substituted by the following. Substitute references shown below..
- <u>Residential Home Builder Study Guide</u>. ISBN: 9781323550915.
 Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

ROOFING CONTRACTOR

Tests a candidate's knowledge of the installation, repair, and replacement of roof coverings, including roof deck insulation, roof coating, painting, covering, use of sheet metal products incidental to roofing work or other related material, and installation of nonstructural decking and siding.

| Number of Questions | 50 |
|---------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 8 |
| Deck & Underlayment | 6 |
| Flashing | 5 |
| High Slope Roofing | 15 |
| Low Slope Roofing | 9 |
| Safety | 7 |

References

- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Roofing Study Guide</u>, 2018. ISBN: 978132388055. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- Or, if the book above is unavailable, it may be substituted by the following. Substitute references shown below..
- Core 2015, 27202-13 Roofing Applications, & 27403-14 Advanced <u>Roof Systems</u>. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.

ROOFING UNLIMITED

Tests a candidate's knowledge of the installation, repair, and replacement of roof coverings, including roof deck insulation, roof coating, painting, covering, use of sheet metal products incidental to roofing work or other related material, and installation of nonstructural decking and siding.

| Number of Questions | 50 |
|---------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 8 |
| Deck & Underlayment | 6 |
| Flashing | 5 |
| High Slope Roofing | 15 |
| Low Slope Roofing | 9 |
| Safety | 7 |

References

- <u>Florida Building Code 2020 Building</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Roofing Study Guide</u>, 2018. ISBN: 978132388055. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- Or, if the book above is unavailable, it may be substituted by the following. Substitute references shown below..
- Core 2015, 27202-13 Roofing Applications, & 27403-14 Advanced <u>Roof Systems</u>. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.

SEAL COATING/STRIPING CONTRACTOR

An engineering contractor who has a qualifying agent with the experience and skill gained by not less than one (1) year as a general superintendent for an engineering contractor and/or the education equivalent thereto, or a combination thereof, and qualified and certified to seal driveways and parking lots only; if cracks, holes or any repair is needed, it must be done by a certified paving contractor.

| Number of Questions | 50 |
|--|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Asphalt Principles & Properties | 4 |
| Use & Application of Asphalt Emulsions | 18 |
| Asphalt Surface Treatments | 18 |
| Asphalt Preservation & Maintenance | 5 |
| Safety | 5 |

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>ES-12 Asphalt Surface Treatments</u>, 1988. The Asphalt Institute, 2696 Research Park Drive, Lexington, KY 40511-8480. Available at https://www.contractorcampus.com/.
- <u>MS-16 Asphalt in Pavement, Preservation & Maintenance</u>, 4th edition, 2009. ISBN: 978-1-934154-58-8. The Asphalt Institute, 2696 Research Park Drive, Lexington, KY 40511-8480. Available at www.asphaltinstitute.org.
- <u>MS-19 Basic Asphalt Emulsion Manual</u>, 4th edition. ISBN: 978-1-934154-56-4. The Asphalt Institute, 2696 Research Park Drive, Lexington, KY 40511-8480. Available at www.asphaltinstitute.org.

SIDING, WINDOWS & DOORS

Tests a candidate's knowledge of siding, window and door installation including vinyl, wood or aluminum siding, soffit, fascia, gutters and all types of windows and doors. This includes the work necessary to prepare or repair the substrate to accomplish proper installation. Does not include any structural alterations.

Number of Questions

| Time allowed (hours) | 2 |
|---|----------|
| Subject Area | # Quest. |
| Plan Reading & Estimating | 6 |
| Building Materials, Fasteners & Adhesives | 4 |
| Windows & Exterior Doors | 6 |
| Thermal & Moisture Protection | 8 |
| Exterior Finishing | 15 |
| Doors & Hardware | 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
- <u>Study Guide for Siding & Finish Carpentry</u>, 2012. ISBN: 978-1-256-61081-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

SIGN CONTRACTOR (NON-ELECTRICAL)

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

| Number of Questions | 49 |
|----------------------------|---------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest |
| Plan Reading | 5 |
| Concrete and Reinforcement | 9 |
| Wood | 6 |
| Structural Steel | 7 |
| Welding | 7 |
| Non-Electric Sign | 8 |
| Safety | 7 |

References

- <u>Carpentry Level One</u>, 2013 edition, 2013. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Carpentry Level Three 2014</u>, 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
- <u>Ironworking Level One</u>, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

SIGN CONTRACTOR ELECTRICAL 2014

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>, 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/american-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html
- <u>NFPA 70 National Electrical Code</u>, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

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 | 50 |
|---------------------------|-----------------|
| Time allowed (hours) | 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 |
| Pinging and Cranes | 6 |
| | |
| Rigging and Cranes | 6 |
| Safety | 5 |

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

- <u>Ironworking Level Three</u>, 2012. ISBN: 978-0-13-257785-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Ironworking Level Two</u>, 2011. ISBN: 978-0-13-257822-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

STRUCTURAL STEEL ERECTION CONTRACTOR

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 | 50 |
|---------------------------|----------|
| Time allowed (hours) | 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
- <u>Ironworking Level One</u>, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Ironworking Level Three</u>, 2012. ISBN: 978-0-13-257785-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Ironworking Level Two</u>, 2011. ISBN: 978-0-13-257822-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

SWIMMING POOL CONSTRUCTION CONTRACTOR

Those who are qualified to excavate, construct, fabricate, install & equip swimming pools, spas and hot tubs and waterfalls, including the pumps, pool heaters, installation of pool heat pumps, filters, chlorinators & that piping incidental to the re-circulating system, including plumbing fixtures and potable water hook up. This contractor may install child proof (kiddie) barrier fences, mechanical swimming pool covers, railings, ladders, the slab for the pool deck, repair of concrete pavement damaged on site during pool installation & replace pigtailed equipment or identical controls & motors that are necessary to the operation of the pool. Such contractors shall subcontract to a qualified contractor in the field concerning all other work specified herein as being the exclusive work of a plumbing, electrical, gas contractor & other subcontractors responsible for the installation of any other required pool safety structure or device.

| Number of Questions | 50 |
|---|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 4 |
| Site Preparation, Excavation and Backfilling | 5 |
| Pool Shell Construction | 14 |
| Interior Surface Preparation and Finishing | 9 |
| Tile, Coping and Trimwork | 4 |
| Accessories, Railings, Ladders, Covers & Waterfalls | 4 |
| Care and Operation | 6 |
| Safety | 4 |

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- 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
- <u>Swimming Pools: Design and Construction</u>, Fourth Edition. ISBN: 978-0419235903. Taylor and Francis, 270 Madison Avenue, New York, NY 10016. Available at www.amazon.com.
- <u>Trade Knowledge</u>. Prov, 150 W Civic Center Drive, Suite 601, Sandy, UT 84070. This reference is not a book for purchase. This reference represents the general knowledge that a candidate gains through experience in their trade.

SWIMMING POOL MAINTENANCE & REPAIR CONTRACTOR

Those who are qualified to maintain both public & private pools, spas & hot tubs, both public & private, make minor repairs to existing pool masonry, such as patching cracks in pool bottoms & walls, repaint, resurface or reline the walls, bottoms of pools & resurface pool decks, install child proof (kiddie) barrier fences, mechanical swimming pool covers, railings, ladders, & perform preventive maintenance to equipment such as filters & chlorinators & to replace pigtailed equipment or identical controls & motors that are incidental to the operation of the pool This contractor may install pool heaters, including solar pool heaters & heat pumps. Such contractor shall subcontract to a qualified contractor all work being the exclusive work of a plumbing, electrical and mechanical contractor.

| Number of Questions | 50 |
|----------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Calculations | 6 |
| Circulation | 8 |
| Disinfection | 8 |
| Filtration | 8 |
| Management | 7 |
| Repairs | 5 |
| Safety | 4 |
| Testing | 4 |

- Florida Administrative Code, Ch. 64E-9, Public Swimming Pools
 <u>& Bathing Places</u>, 2009. State of Florida, 2600 Blair Stone Road
 M.S. 3500, Tallahassee, FL 32399. available at http://www.flori dahealth.gov/environmental-health/swimming-pools/_docu ments/64E-9_FAC_Draft_Rev7_no_strike.pdf Candidate printed ver sions allowed if exam is open book
- 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
- Pool & Spa Operator Handbook, 2012. ISBN: 0-9815803-9-5. National Swimming Pool Foundation, 4775 Granby Circle, Colorado Springs, CO 80919. www.nspf.org

SWIMMING POOL MAINTENANCE CONTRACTOR (LIMITED)

Swimming Pool Maintenance Contractor (limited) is a contractor qualified and certified to do any or all of the following, including, but not limited to, maintaining and treating the water in existing swimming pools, both public and private, making minor repairs to existing pool masonry such as patching cracks in pool bottoms and walls, repainting or resurfacing the walls and bottoms of pools, performing preventive maintenance and replacing existing equipment and appurtenances thereof of swimming pools, such as pumps, valves, filters and chlorinators; provided, such a contractor may only replace existing equipment and appurtenances in private pools of single-family residences.

| Number of Questions Time allowed (hours) | 75 3 |
|---|----------|
| Subject Area | # Quest. |
| Calculations | 8 |
| Circulation | 10 |
| Disinfection | 13 |
| Filtration | 13 |
| Management | 7 |
| Repairs | 4 |
| Safety | 10 |
| Testing | 10 |

References

- Florida Administrative Code, Ch. 64E-9, Public Swimming Pools
 <u>& Bathing Places</u>, 2009. State of Florida, 2600 Blair Stone Road
 M.S. 3500, Tallahassee, FL 32399. available at http://www.flori dahealth.gov/environmental-health/swimming-pools/_docu ments/64E-9_FAC_Draft_Rev7_no_strike.pdf Candidate printed ver sions allowed if exam is open book
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Florida Building Code 2020 Residential</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Pool & Spa Operator Handbook, 2012. ISBN: 0-9815803-9-5. National Swimming Pool Foundation, 4775 Granby Circle, Colorado Springs, CO 80919. www.nspf.org

SWIMMING POOL MAINTENANCE UNLIMITED

Swimming Pool Maintenance Contractor (unlimited) is a contractor qualified and certified to do the work of a swimming pool maintenance contractor (limited) and is covered by the same definition except that the swimming pool maintenance contractor (unlimited) shall be able to carry on all such work in connection with both private and public pools.

| Number of Questions | 75 |
|----------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Calculations | 9 |
| Circulation | 10 |
| Disinfection | 10 |
| Filtration | 14 |
| Management | 7 |
| Repairs | 5 |
| Safety | 10 |
| Testing | 10 |

References

- Florida Administrative Code, Ch. 64E-9, Public Swimming Pools & Bathing Places, 2009. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. available at http://www.floridahealth.gov/environmental-health/swimming-pools/_documents/64E-9_FAC_Draft_Rev7_no_strike.pdf Candidate printed versions allowed if exam is open book
- 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 Residential, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Pool & Spa Operator Handbook</u>, 2012. ISBN: 0-9815803-9-5. National Swimming Pool Foundation, 4775 Granby Circle, Colorado Springs, CO 80919. www.nspf.org

TENNIS COURT CONTRACTOR

Those qualified to construct, maintain, or repair tennis courts, including but not limited to the preparation of the surface, drainage, paving, surface topping, concrete, posts, and fencing. Lighting installation 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. |
| Plan Reading & Estimating | 4 |
| Sitework | 10 |
| Tennis Courts | 12 |
| Tennis Court Accessories | 5 |
| Tennis Court Repair, Reconstruction & Renovation | 5 |
| Tennis Court Surfacing Systems | 6 |
| Fencing | 5 |
| Safety | 3 |

References

- Damage Prevention Guide. Sunshine State One Call of Florida, Inc., 11 Plantation Road, DeBary, FL 32713. Available at http://www.sunshine811.com/ Candidate printed versions permitted in testing room if exam is open book.
- 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
- <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
- Tennis Courts A Construction and Maintenance Manual 7th Edition, 7th. ISBN: 478-1-9860051-1-7. American Sports Builders Association and United States Tennis Association, 8480 Baltimore National Pike #307, Ellicott City, MD 21043. http://sportsbuilders.org/publications/index.cfm

TILE, TERRAZZO & STONE CONTRACTOR

Tile, Terrazzo, and Stone Contractors are those who are qualified to install, prepare the base, including but not limited to backing material set, repair, regrout, removal/replacement and refinish, tile, terrazzo and marble, and any natural or artificial stone, to install laminate or non-nailable wood flooring and all stone and tile countertops.

| Number of Questions | 50 |
|---------------------------------------|----------|
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 4 |
| Substrates | 8 |
| Materials | 6 |
| Layout & Planning | 4 |
| Ceramic Tile Installation | 8 |
| Marble Installation | 4 |
| Stone Installation | 3 |
| Ceramic Tile Replacement & Regrouting | 4 |
| Terrazzo | 5 |
| Safety | 4 |

References

- <u>American National Standards Specifications for the Installation of</u> <u>Ceramic Tile</u>, Version 2011.1. American National Standards Institute, 25 West 43rd Street, 4th floor, New York, NY 10036. Available at http://www.tcnatile.com/.
- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>O & A: Expert Answers to Technical Questions</u>. Marble Institute of America, 28901 Clemons Road, Suite 100, Cleveland, OH 44145. Available at https://associationdatabase.com/aws/MIA/pt/sp/bookstore_layout_details?get_content_from_session=1&suppress_tcssharing=1 or https://www.naturalstoneinstitute.org/.
- <u>Residential Stone Countertop Installation</u>. Marble Institute of America, 28901 Clemons Road, Suite 100, Cleveland, OH 44145. Available at www.marble-institute.com

- <u>Setting Tile</u>, 1995 copyright. ISBN: 978-1561580804. Taunton Press, 63 South Main Street, P.O. Box 5506, Newtown, CT 06470-5506. Available at www.taunton.com.
- <u>TCNA Handbook for Ceramic, Glass, and Stone Tile Installation</u>. Tile Council of North America, 100 Clemson Research Blvd., Anderson, SC 29625. Available at www.tcnatile.com.
- <u>Terrazzo Specifications and Design Guide</u>, 1999. National Terrazzo and Mosaic Association, 110 East Market St., Leesburg, VA 20176. Available at http://naterrazzo.com/documents/Terrazzo_Specifications_amp_Design_Guide.pdf. Candidate printed versions allowed if exam is open book.
- <u>Tile Your World</u>, 2003. ISBN: 0-9742754-3-3. Mistflower Press, 6717 Mistflower Lane, Katy, TX 77449. Available at mistflower-press.com/index.html.

UNDERGROUND UTILITIES CONTRACTOR

Tests a candidate's knowledge of the installation, maintenance, repair, alteration, and extension of underground utilities.

| Number of Questions Time allowed (hours) | 50 2 |
|---|----------|
| Subject Area | # Quest. |
| Plan Reading & Estimating | 6 |
| Survey & Layout | 4 |
| Sitework | 15 |
| Underground Piping Materials & Fittings | 7 |
| Underground Pipe Assembly & Installation | 8 |
| Safety | 10 |

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Installation Guide for Ductile Iron Pipe, 2015. Ductile Iron Research Association, 245 Riverchase Pkwy East, Ste. O, Birmingham, AL 35244. Available at http://www.dipra.org/publications/
- <u>Study Guide for Utilities Contractors, 2nd edition</u>, 2014. ISBN: 978-1-269-78571-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

UNLIMITED INSULATION

Tests a candidate's knowledge of insulation installation, repair, maintenance and extension to control the gain or loss of heat from all sources in buildings, rooms, pipes, vessels, ducts, process equipment, refrigerated rooms, and boxes. This includes installation, repair, maintenance, and extension of acoustical insulation.

| Number of Questions | 50 |
|------------------------------------|----------|
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 5 |
| Theory | 5 |
| Insulation Materials & Accessories | 12 |
| Insulation Installation | 13 |
| Systems Insulation | 10 |

Safety

5

References

- 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 Three, 1999. ISBN: 978-0-13-909458-3. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Insulating Level Two, 1999. ISBN: 978-0-13-909417-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Study Guide for Insulation</u>. ISBN: 978-0-136-06315-5. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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 effect 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
- <u>Study Guide for Siding & Finish Carpentry</u>, 2012. ISBN: 978-1-256-61081-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

WOOD FLOORING CONTRACTOR

A Wood Flooring Contractor must demonstrate knowledge : all local/state/federal regulations and codes, as well as demonstrate proficiency in the installation and repair of laminate, parquet, wood strips, nail and non-nailed wood flooring and prefinished flooring which is prefabricated or cast-in place. Including but not limited to sub-flooring and finishing.

| Number of Questions | 25 |
|----------------------|----------|
| Time allowed (hours) | 1 |
| Subject Area | # Quest. |

| Flooring Finishing | 3 |
|----------------------------------|---|
| Flooring Installation | 6 |
| Flooring Materials & Accessories | 4 |
| Troubleshooting | 3 |
| Job Preparation | 4 |
| Subflooring | 5 |

- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Wood Flooring: A Complete Guide to Layout, Installation & Finishing. The Taunton Press, 63 South Main St., P.O. Box 5506, Newton, CT 06470.