

Table of Contents

| | |
|--|-----------|
| Exam Descriptions | 1 |
| AC Commercial | 2 |
| Acoustical Ceilings | 3 |
| Aluminum Construction | 3 |
| Aluminum Construction & Limited Concrete..... | 3 |
| Aluminum Siding | 3 |
| Aluminum Structures & Specialties..... | 4 |
| Ammonia Refrigeration Contractor | 4 |
| Asphalt Sealing & Coating..... | 4 |
| Boiler (Unlimited) | 5 |
| Building Contractor (English or Spanish) | 5 |
| Building Maintenance (English or Spanish) | 6 |
| Burglar & Fire Alarm Electrical 2011 | 6 |
| Burglar Alarm Electrical 2011 | 6 |
| Business and Law (English or Spanish) | 6 |
| Carpentry (English or Spanish) | 7 |
| Commercial Paving | 7 |
| Commercial Swimming Pool..... | 7 |
| Concrete Forming and Placing (English or Spanish) 8 | |
| Concrete Placing and Finishing | 8 |
| Demolition (English or Spanish)..... | 8 |
| Dredging | 9 |
| Drywall..... | 9 |
| Drywall & Lathing..... | 9 |
| Electrical Sign Contractor 2011..... | 10 |
| Excavation Contractor..... | 10 |
| Fence (English or Spanish) | 10 |
| Finish Carpentry..... | 10 |
| Garage Door Installer Contractor | 11 |
| General Contractor (English or Spanish) | 12 |

| | |
|---|-----------|
| Glass & Glazing | 12 |
| HARV Contractor | 12 |
| Heating Contractor..... | 13 |
| HVAC..... | 13 |
| Insulation Journeyman | 14 |
| Interlocking Pavers..... | 14 |
| Irrigation Sprinkler (English or Spanish) | 14 |
| Journeyman AC (Limited)..... | 15 |
| Journeyman Air Conditioning (English or Spanish) 15 | |
| Journeyman Electrician (English or Spanish) 2011. 15 | |
| Journeyman Fire Alarm 2011 | 15 |
| Journeyman Fire Sprinkler | 16 |
| Journeyman Gasfitter | 17 |
| Journeyman General Mechanical (English or Spanish) | 17 |
| Journeyman Heating | 18 |
| Journeyman Pipefitter | 18 |
| Journeyman Plumber (English or Spanish) | 18 |
| Journeyman Plumbing with Gas..... | 18 |
| Journeyman Pressure & Process Piping | 19 |
| Journeyman Refrigeration | 19 |
| Journeyman Residential Plumber | 19 |
| Journeyman Residential Plumber with Gas..... | 20 |
| Journeyman Room Air Conditioning | 20 |
| Journeyman Sheet Metal..... | 20 |
| Journeyman Warm Air Heating..... | 21 |
| Limited Insulation..... | 21 |
| Limited Painting | 21 |
| Limited Roofing | 22 |
| Low Pressure Boiler | 22 |
| Low Voltage (English or Spanish) 2011 | 22 |
| Marine Construction..... | 22 |

| | | | |
|--|-----------|--|-----------|
| Masonry (English or Spanish) | 23 | Roofing (English or Spanish) | 34 |
| Master AC (Limited) (English or Spanish) | 23 | Roofing Unlimited | 34 |
| Master AC (Unlimited) (English or Spanish)..... | 24 | Screen Enclosure..... | 34 |
| Master Electrician (English or Spanish) 2011..... | 24 | Siding, Windows & Doors | 35 |
| Master Gasfitter | 24 | Sign Contractor (Non-Electric)..... | 35 |
| Master Mechanical | 25 | Solar Water Heating Contractor..... | 35 |
| Master Pipefitter | 25 | Structural Steel..... | 35 |
| Master Plumber (English or Spanish) | 26 | Swimming Pool Maintenance Contractor (Limited) | 36 |
| Master Plumber with Gas (English or Spanish)..... | 26 | | 36 |
| Master Residential Plumber | 26 | Swimming Pool Maintenance Unlimited..... | 36 |
| Master Sheet Metal | 26 | Swimming Pool Piping | 36 |
| Master Sign Electrician 2011 | 27 | Tile & Marble | 37 |
| Master Warm Air Heating Contractor..... | 27 | Tile, Terrazzo & Marble..... | 37 |
| Mechanical Maintenance (English or Spanish) | 27 | Underground Utilities..... | 37 |
| Metal Awning & Storm Shutter Contractor (English | 28 | Unit Masonry, Marble & Exterior Veneer Contractor | 38 |
| or Spanish) | 28 | (English or Spanish) | 38 |
| Metal Decking & Siding..... | 28 | Unlimited Insulation (English or Spanish) | 38 |
| Miscellaneous Metals Contractor | 28 | Unlimited Painting | 38 |
| Painting and Decorating | 29 | | |
| Plastering & Lathing (English or Spanish) | 29 | | |
| Plumbing Maintenance..... | 30 | | |
| Pool Maintenance..... | 30 | | |
| Prestressed, Precast Concrete Erection Contractor | 30 | | |
| (English or Spanish) | 30 | | |
| Refrigeration & Air Conditioning Contractor | 31 | | |
| Refrigeration (Limited)..... | 31 | | |
| Refrigeration (Unlimited)..... | 31 | | |
| Reinforcing Steel Placing Contractor..... | 32 | | |
| Remodeling Contractor | 32 | | |
| Residential AC..... | 32 | | |
| Residential Contractor | 33 | | |
| Residential Swimming Pool | 33 | | |
| Roof Deck | 33 | | |

AC COMMERCIAL

Tests a candidate's knowledge of the installation, maintenance, repair, fabrication, alteration, and extension of commercial air conditioning, warm air heating, ventilation, duct systems, and related appurtenances unlimited in horsepower or tonnage.

| | |
|-----------------------------|------------|
| Number of Questions | 100 |
| Time allowed (hours) | 4 |

| Subject Area | # Quest. |
|---------------------|-----------------|
| Equipment | 20 |
| General Knowledge | 27 |
| Maintenance | 30 |
| Piping | 11 |
| Plan Reading | 2 |
| Systems & Sizing | 10 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-

7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. 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
- **HVAC Basics for Contractors, 3rd Edition**, 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.

ACOUSTICAL CEILINGS

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

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Drywall Level 1**, 2007. ISBN: 978-0-13-604512-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Drywall Level 2**, 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 2017 - Building**, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

ALUMINUM CONSTRUCTION

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.

| | |
|-----------------------------------|-----------------|
| Number of Questions | 50 |
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Carports & Patio Covers | 7 |
| Miscellaneous Aluminum Structures | 7 |
| Plan Reading & Estimating | 10 |
| Safety | 6 |

| | |
|-------------------|----|
| Screen Rooms | 10 |
| Screen Enclosures | 10 |

References

- **AAF Guide to Aluminum Construction in High Wind Areas**, 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)
- **Basic Safety**. 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

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

- **AAF Guide to Aluminum Construction in High Wind Areas**, 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)
- **Basic Safety**. 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
- **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

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

- **Basic Safety.** 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
- **Florida Building Code 2017 - Residential,** 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Study Guide for 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

ALUMINUM STRUCTURES & SPECIALTIES

A contractor whose services consist of the installation, fabrication, maintenance (except for cleaning), repair or design with aluminum, vinyl and fiberglass screen material. The aluminum contractor may work on foundation, slabs on grade and block knee walls, wood decks (self-standing) and utility sheds (wood studs only) less than 501 square feet, necessary to and incidental to the aluminum construction work. The aluminum contractor shall not perform any work that alters the structural integrity of the building and shall not use wood products for rafters, trusses and wood beams.

| | |
|---|-----------------|
| Number of Questions | 50 |
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Plan Reading & Estimating | 8 |
| Concrete & Masonry | 7 |
| Carpentry, Windows & Doors | 7 |
| Siding, Soffit & Fascia | 5 |
| Screen Enclosures | 6 |
| Screen Rooms, Carports & Patio Covers | 6 |
| Miscellaneous Aluminum Structures & Gutters | 6 |
| Safety | 5 |

References

- **AAF Guide to Aluminum Construction in High Wind Areas,** 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)
- **ASTM D4756-06 Standard Practice for Installation of Rigid PVC Siding & Soffit,** 2006. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>. Candidate printed versions allowed

if exam is open book.

- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Florida Building Code 2017 - Building,** 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Masonry and Sitework for the Residential Contractor, 2nd edition,** 2nd. ISBN: 978-1-269-78556-3. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- **Residential Home Builder Study Guide.** ISBN: 9781323550915. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- **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

AMMONIA REFRIGERATION CONTRACTOR

An Ammonia Refrigeration Contractor is a specialty mechanical contractor, qualified and certified to install, maintain, repair, alter or extend any system of refrigeration using ammonia as a refrigerant including all appliances and appurtenances thereto.

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

| | |
|---------------------|-----------------|
| Subject Area | # Quest. |
| General Knowledge | 12 |
| Piping | 19 |
| Maintenance | 4 |
| Plan Reading | 3 |
| Systems & Sizing | 12 |

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 - Fuel Gas,** 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical,** 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors, 3rd Edition,** 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.

ASPHALT SEALING & COATING

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

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

BOILER (UNLIMITED)

Tests a candidate's knowledge of the installation, maintenance, repair, and alteration of steam and hot water boilers, including both low and high pressure boilers, related piping vessels, and related appurtenances.

| | |
|-----------------------------|------------|
| Number of Questions | 100 |
| Time allowed (hours) | 4 |

| Subject Area | # Quest. |
|---------------------------|-----------------|
| General Knowledge | 30 |
| Maintenance | 7 |
| Piping | 26 |
| Plan Reading & Estimating | 9 |
| Systems & Sizing | 28 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

- **HVAC Basics for Contractors,3rd Edition**, 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.

BUILDING CONTRACTOR (ENGLISH OR SPANISH)

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 | 70 |
| Time allowed (hours) | 3 |

| Subject Area | # Quest. |
|---------------------------|-----------------|
| Plan Reading & Estimating | 10 |
| Sitework | 5 |
| Concrete | 11 |
| Masonry | 8 |
| Structural Steel | 4 |
| Carpentry & Metal Framing | 10 |
| Roofing | 4 |
| Associated Trades | 3 |
| Interior Finishes | 4 |
| Exterior Finishes | 4 |
| Safety | 7 |

References

- **2012 Study Guide for Structural Steel**, 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
- **Concrete Finishing Level Two**, 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 2017 - Building**, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Masonry Level Three**, 2014. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
- **Study Guide for Commercial Carpentry, 2nd Edition**, 2014. ISBN: 978-1-269-78661-4. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

BUILDING MAINTENANCE (ENGLISH OR SPANISH)

A Building Maintenanceman is a person qualified and certified by examination to maintain buildings and structures owned or occupied by the person, firm or corporation by which the building maintenanceman is regularly employed. The work of a building maintenanceman shall be confined to the erection, repair or relocation of nonbearing interior partitions, painting, the patching of stucco and plaster, the repair of floors of all types, the repair of cabinets and counters of wood, metal or plastic, the repair of awnings and canopies, the repair of wall and floor tile. A building maintenanceman may make only repairs to bearing walls, both interior and exterior, and roofing work shall be limited to stoppage of leaks. A building maintenanceman shall not make addition to or change the outline of any building or structure, and the work of a building maintenanceman shall not include plumbing, electrical, mechanical or liquefied petroleum gas work of any kind.

Number of Questions 50
Time allowed (hours) 2

| Subject Area | # Quest. |
|-------------------------------|----------|
| Concrete | 3 |
| Carpentry | 6 |
| Drywall | 6 |
| Doors & Windows | 4 |
| Exterior Finishes | 6 |
| Interior Finishes | 6 |
| Painting | 8 |
| Safety | 8 |
| Thermal & Moisture Protection | 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
- **Painting Level One**, 1997. ISBN: 978-0-13-771239-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **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

BURGLAR & FIRE ALARM ELECTRICAL 2011

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

- **American Electricians' Handbook**, 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
- **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.
- **Understanding and Servicing Alarm Systems**, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

BURGLAR ALARM ELECTRICAL 2011

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. |
|--|----------|
| General Electrical Knowledge | 5 |
| Installation | 10 |
| Power Supplies | 5 |
| Intrusion Detection | 17 |
| Notification Appliances & Signaling Circuits | 9 |
| Supervisory Stations | 4 |

References

- **American Electricians' Handbook**, 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
- **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.
- **Understanding and Servicing Alarm Systems**, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

BUSINESS AND LAW (ENGLISH OR SPANISH)

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

Number of Questions 50
Time allowed (hours) 2

| Subject Area | # Quest. |
|-----------------------|----------|
| Business Organization | 2 |
| Licensing | 3 |
| Lien laws | 2 |

| | |
|----------------------|---|
| Tax Laws | 5 |
| Safety OSHA | 3 |
| Labor Laws | 8 |
| Contract Management | 9 |
| Project Management | 6 |
| Estimating & Bidding | 4 |
| Financial Management | 5 |
| Risk Management | 3 |

References

- **FLORIDA - NASCLA Contractors Guide to Business, Law and Project Management**, 1st. ISBN: 1-934234-92-3 OR 978-1-934234-92-1. NASCLA, 23309 N. 17th Drive, Building 1, Unit 110, Phoenix, AZ 85027. Available at www.nascla.org or www.provbookstore.com. Please note, the Florida Business and Law Study Guide for Contractors (published by Prov) is permitted as a substitute.

CARPENTRY (ENGLISH OR SPANISH)

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

| | |
|-----------------------------|-----------|
| Number of Questions | 50 |
| Time allowed (hours) | 2 |

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

References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Florida Building Code 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

COMMERCIAL PAVING

Tests a candidate's knowledge of the construction of roads, airport runways and aprons, parking lots, sidewalks, curbs and gutters, property line walls, patios and driveways, storm drainage facilities, and the performance of related excavating and grading.

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

| Subject Area | # Quest. |
|--|----------|
| Plans & Specifications | 3 |
| Survey & Layout | 3 |
| Earthwork, Compaction & Stabilization | 5 |
| Asphalt Paving Procedures | 7 |
| Asphalt Properties and General Uses | 7 |
| Use & Application of Asphalt Emulsions | 7 |
| Asphalt Preservation & Maintenance | 7 |
| Concrete and Reinforcement | 8 |
| Safety | 3 |

References

- **Highway/Heavy Construction Level 1**. ISBN: 978-0-13-061611-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **MS-16 Asphalt in Pavement, Preservation & Maintenance**, 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.
- **MS-19 Basic Asphalt Emulsion Manual**, 4th edition. ISBN: 978-1-934154-56-4. The Asphalt Institute, 2696 Research Park Drive, Lexington, KY 40511-8480. Available at www.asphaltinstitute.org.
- **Standard Specifications for Road and Bridge Construction**. 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.

COMMERCIAL SWIMMING POOL

Shall include the construction, repair, water treatment, and servicing of any swimming pool or hot tub or spa, whether public or private or otherwise, regardless of use. The scope of such work includes layout, excavation, operation of construction pumps for dewatering purposes, steelwork, installation of light niches, construction of floors, guniting, fiber glassing, installation of tile and coping, installation of all perimeter and filter piping, installation of all filter equipment and chemical feeders of any type, plastering of the interior, construction of decks (slabs incidental to the pool), construction of equipment rooms or housing for pool equipment, and installation of package pool heaters. (However, the scope of work of such Contractor shall not include direct connections to a sanitary sewer or to potable water lines.) Such Contractors may contract for screen enclosures if a sublicensed specialist performs such work, and contracted with pool work.

| | |
|-----------------------------|-----------|
| 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 | 10 |
| Tile, Coping and Trimwork | 4 |
| Accessory Work | 3 |
| Care and Operation | 6 |
| Safety | 4 |

References

- **Basic Safety.** 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
- **Swimming Pools: Design and Construction,** Fourth Edition. ISBN: 978-0419235903. Taylor and Francis, 270 Madison Avenue, New York, NY 10016. Available at www.amazon.com.

CONCRETE FORMING AND PLACING (ENGLISH OR SPANISH)

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/>.
- **Concrete Finishing Level One,** 1998. ISBN: 978-0-13-010246-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Concrete Finishing Level Two,** 1999. ISBN: 978-0-13-014860-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

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 | 8 |
| Specialized Installations & Finishes | 4 |
| Quality Control & Curing | 6 |
| Safety | 4 |

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/>.
- **Concrete Finishing Level One,** 1998. ISBN: 978-0-13-010246-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Concrete Finishing Level Two,** 1999. ISBN: 978-0-13-014860-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

DEMOLITION (ENGLISH OR SPANISH)

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

- **Carpentry Level One,** 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Code of Federal Regulations, Title 29, Part 1926,** 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at <http://bookstore.gpo.gov>. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- **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
- **Ironworking Level One,** 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **ISEE Blasters' Handbook.** ISBN: 978-1892396006. International

Society of Explosives Engineers, 30325 Bainbridge Road, Cleveland, OH 44139. Available at www.isee.org.

- **Masonry Level One**, 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.

DREDGING

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

- **Code of Federal Regulations, Title 29, Part 1926**, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at <http://bookstore.gpo.gov>. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- **Code of Federal Regulations, Title 33, Parts 1 - 124**. 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.
- **Code of Federal Regulations, Title 33, Parts 125-199**. 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.
- **Code of Federal Regulations, Title 33, Parts 200 to 499**. 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.
- **Fundamentals of Hydraulic Dredging**, 1996. ISBN: 9780784401477. American Society of Civil Engineers, 1800 Alexander Bell Drive, Reston, VA 20191. <https://www.asce.org/templates/publications-book-detail.aspx?id=7971>

DRYWALL

Tests a candidate's knowledge of installation of gypsum drywall products to wood and metal studs, wood and steel joists, and metal runners, including the preparation of the surface over which the drywall product is to be applied, and the placement of metal studs, runners, and all necessary trim.

Number of Questions 50
Time allowed (hours) 2

| Subject Area | # Quest. |
|----------------------------------|----------|
| Plan Reading & Estimating | 6 |
| Construction Materials & Methods | 6 |
| Thermal & Moisture Protection | 5 |
| Drywall Installation | 7 |
| Drywall Finishing | 8 |
| Steel Framing | 7 |
| Exterior Cladding | 3 |
| Interior Specialties & Finishes | 4 |
| Safety | 4 |

References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Drywall Level 1**, 2007. ISBN: 978-0-13-604512-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Drywall Level 2**, 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 2017 - Building**, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

DRYWALL & LATHING

Specialty building contractor shall include and be limited to the installation of gypsum drywall products to existing studs, joists, or suspended ceiling channels; the fabrication and installation of all necessary and incidental metal accessories, including non-load bearing studs, runners, hangers, channels, drywall metal suspension accessories, and prefabricated ceiling materials, and the preparation and finish of the drywall surface. In order to be eligible to be certified as a Class "DL" specialty building contractor by the board, the applicant shall have at least two (2) years of practical experience in the category.

Number of Questions 50
Time allowed (hours) 2

| Subject Area | # Quest. |
|---------------------------------|----------|
| Plan Reading & Estimating | 6 |
| Materials | 7 |
| Lathing | 7 |
| Drywall Installation | 7 |
| Drywall Finishing | 5 |
| Steel Framing | 7 |
| Exterior Cladding | 3 |
| Interior Specialties & Finishes | 4 |
| Safety | 4 |

References

- **ASTM C1063-12a - Standard Specification for Installation of Lathing & Furring to Receive Interior & Exterior Portland Cement Based Plaster**, 2012. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>. Candidate printed versions allowed if exam is open book.

- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Drywall Level 1,** 2007. ISBN: 978-0-13-604512-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Drywall Level 2,** 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 2017 - Building,** 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

ELECTRICAL SIGN CONTRACTOR 2011

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

- **American Electricians' Handbook,** 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.

EXCAVATION CONTRACTOR

Tests a candidate's knowledge of the excavation or removal of materials such as rock, gravel and sand to construct or excavate canals, lakes, levees, including the clearing of land of surface debris; and vegetation, the grubbing of roots, the removal of debris; and leveling of related surfaces.

| | |
|-----------------------------|-----------|
| Number of Questions | 50 |
| Time allowed (hours) | 2 |

| Subject Area | # Quest. |
|---------------------------|-----------------|
| Plan Reading & Estimating | 10 |
| General Knowledge | 6 |
| Survey & Layout | 5 |
| Clearing & Grubbing | 4 |
| Excavating | 7 |
| Dewatering | 3 |
| Grading | 8 |
| Safety | 7 |

References

- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Study Guide for Excavation Contractors, 2nd edition,** 2014. ISBN: 978-1-269-78572-3. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

FENCE (ENGLISH OR SPANISH)

Tests a candidate's knowledge of fencing installation.

| | |
|-----------------------------|-----------|
| Number of Questions | 50 |
| Time allowed (hours) | 2 |

| Subject Area | # Quest. |
|----------------------------|-----------------|
| Plan Reading & Estimating | 5 |
| Layout & General Math | 5 |
| Wood Fencing | 10 |
| Masonry Fencing | 10 |
| Metal & Chain Link Fencing | 10 |
| Safety | 10 |

References

- **Basic Safety.** 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

FINISH CARPENTRY

Tests a candidate's knowledge of finish carpentry construction materials and methods including trim installation.

| | |
|-----------------------------|-----------|
| Number of Questions | 50 |
| Time allowed (hours) | 2 |

| Subject Area | # Quest. |
|---|-----------------|
| Plan Reading & Estimating | 6 |
| Building Materials, Fasteners & Adhesives | 8 |
| Windows & Exterior Doors | 5 |
| Exterior Finishing | 5 |
| Doors & Hardware | 8 |

| | |
|----------------------|---|
| Interior Trim | 8 |
| Cabinet Installation | 5 |
| Safety | 5 |

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
- **Study Guide for Siding & Finish Carpentry**, 2012. ISBN: 978-1-256-61081-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

GARAGE DOOR INSTALLER 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-hundred-twenty-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 |

References

- **Basic Safety**. 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
- **TDS 151 - General Code Inspection Guidelines for Garage Doors**. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at <http://www.dasma.com/PubTechData.asp>. Candidate printed versions allowed if exam is open book.
- **TDS 156 - Standard Wood Header and Jamb Detail Guidelines**. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at <http://www.dasma.com/PubTechData.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 <http://www.dasma.com/PubTechData.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 <http://www.dasma.com/PubTechData.asp>. Candidate printed versions allowed if exam is open book.
- **TDS 160 - Sectional Garage Door Terminology**. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue,

Cleveland, OH 44115-7333. Available at <http://www.dasma.com/PubTechData.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 <http://www.dasma.com/PubTechData.asp>. Candidate printed versions allowed if exam is open book.
- **TDS 162 - Wood Door Finishing Guidelines**. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at <http://www.dasma.com/PubTechData.asp>. Candidate printed versions allowed if exam is open book.
- **TDS 163 - Garage Door R-Value**. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at <http://www.dasma.com/PubTechData.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 <http://www.dasma.com/PubTechData.asp>. Candidate printed versions allowed if exam is open book.
- **TDS 165 - Garage Door Manual Operation**. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at <http://www.dasma.com/PubTechData.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 <http://www.dasma.com/PubTechData.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 <http://www.dasma.com/PubTechData.asp>. Candidate printed versions allowed if exam is open book.
- **TDS 172 - Garage Door Labels**. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at <http://www.dasma.com/PubTechData.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 <http://www.dasma.com/PubTechData.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 <http://www.dasma.com/PubTechData.asp>. Candidate printed versions allowed if exam is open book.
- **TDS 182 - Technical Considerations for Dock Doors**. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at <http://www.dasma.com/PubTechData.asp>. Candidate printed versions allowed if exam is open book.
- **TDS 260 - Common Rolling Steel Door Installation Problems**. Door and Access Systems Manufacturers Association International, 1300

Sumner Avenue, Cleveland, OH 44115-7333. Available at <http://www.dasma.com/PubTechData.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 <http://www.dasma.com/PubTechData.asp>. Candidate printed versions allowed if exam is open book

GENERAL CONTRACTOR (ENGLISH OR SPANISH)

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 80
Time allowed (hours) 3

| Subject Area | # Quest. |
|---------------------------|----------|
| Plan Reading & Estimating | 10 |
| Sitework | 6 |
| Concrete | 12 |
| Masonry | 8 |
| Structural Steel | 7 |
| Carpentry & Metal Framing | 12 |
| Roofing | 5 |
| Associated Trades | 3 |
| Interior Finishes | 5 |
| Exterior Finishes | 6 |
| Safety | 6 |

References

- **2012 Study Guide for Structural Steel**, 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
- **Carpentry Level One**, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Concrete Finishing Level Two**, 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 2017 - Building**, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Masonry Level Three**, 2005. ISBN: 978-0-13-109169-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Study Guide for Commercial Carpentry, 2nd Edition**, 2014. ISBN: 978-1-269-78661-4. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

GLASS & GLAZING

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 50
Time allowed (hours) 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 |

References

- **Basic Safety**. 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
- **GANA Glazing Manual**, 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.
- **GANA Sealant Manual**, 2008. Glass Association of North America, 800 SW Jackson Street, STE. 1500, Ste. A, Topeka, KS 66612-1200.

HARV CONTRACTOR

Install, maintain, repair, alter or extend air conditioning, refrigeration, heating, and ventilation systems, unlimited in horsepower or tons, including all duct systems, sheet metal, incinerators, boilers and unfired pressure vessel systems, solar heating and cooling systems and all appurtenances, apparatus or equipment used in connection therewith, also piping, ductwork, insulation of piping, vessels and ducts.

Number of Questions 100
Time allowed (hours) 3

| Subject Area | # Quest. |
|-------------------|----------|
| General Knowledge | 22 |
| Piping | 10 |
| Systems & Sizing | 26 |
| Equipment | 15 |
| Maintenance | 22 |
| Plan Reading | 5 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors, 3rd Edition**, 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.
- **Manual N - Commercial Load Calculations**, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at <http://www.acca.org>.
- **Residential Load Calculations - Manual J**. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org
- **SMACNA-Residential Comfort System Installation Standards Manual**, 7th. ISBN: 978-1617210648. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. <https://www.smacna.org/store/product/residential-comfort-systems-installation-standards-manual>

HEATING CONTRACTOR

Heating Contractor is a specialty mechanical contractor, qualified and certified to install, maintain, repair, alter, add to or change systems of heating, whether by water, steam or hot air furnaces and all appurtenances and duct work used in conjunction therewith.

| | |
|-----------------------------|------------|
| Number of Questions | 100 |
| Time allowed (hours) | 3 |

| Subject Area | # Quest. |
|-------------------|----------|
| General Knowledge | 18 |
| Piping | 25 |
| Systems & Sizing | 25 |
| Equipment | 7 |
| Maintenance | 16 |
| Plan Reading | 9 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors, 3rd Edition**, 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.

HVAC

Tests a candidate's knowledge of the installation, maintenance, repair, fabrication, alteration, and extension of AC/refrigeration, heating, ventilation systems, duct systems, warm air systems, low pressure boiler and unfired pressure vessel systems, solar heating and cooling systems and related appurtenances unlimited in horsepower and tonnage.

| | |
|-----------------------------|------------|
| Number of Questions | 100 |
| Time allowed (hours) | 4 |

| Subject Area | # Quest. |
|-------------------|----------|
| General Knowledge | 19 |
| Piping | 19 |
| Systems & Sizing | 19 |
| Equipment | 19 |
| Maintenance | 19 |
| Plan Reading | 5 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors, 3rd Edition**, 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.

INSULATION JOURNEYMAN

Journeyman Insulation: 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 70
Time allowed (hours) 3

| Subject Area | # Quest. |
|-----------------|----------|
| Code Compliance | 23 |
| Insulation | 35 |
| Safety | 12 |

References

- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. 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>.
- **Study Guide for Insulation**. ISBN: 978-0-136-06315-5. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at <http://nccer.pearsonconstructionbooks.com>

INTERLOCKING PAVERS

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

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

IRRIGATION SPRINKLER (ENGLISH OR SPANISH)

A Master Lawn Sprinkler is qualified and certified to install, maintain, repair, alter or extend a lawn sprinkling system and appliances and devices used in connection with such systems, except that such systems shall not include the drilling of wells or the connecting of such systems to potable water. Sprinkler and irrigation systems used for agricultural purposes shall not be included within the scope of this subsection.

Number of Questions 50
Time allowed (hours) 2

| Subject Area | # Quest. |
|---|----------|
| Plan Reading & Estimating | 6 |
| Planning & Layout | 8 |
| Materials | 6 |
| Controls | 6 |
| Irrigation Installation | 10 |
| Cross Contamination & Backflow Prevention | 5 |
| Reclaimed Water | 4 |
| Safety | 5 |

References

- **Basic Safety**. 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 2017 - Plumbing**, 2017. ISBN: 978-1-60983-689-4. 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 100
Time allowed (hours) 4

| Subject Area | # Quest. |
|-------------------|----------|
| General Knowledge | 22 |
| Piping | 10 |
| Systems & Sizing | 25 |
| Equipment | 15 |
| Maintenance | 22 |
| Plan Reading | 6 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors,3rd Edition**, 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 (ENGLISH OR SPANISH)

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 100
Time allowed (hours) 3

| Subject Area | # Quest. |
|-------------------|----------|
| General Knowledge | 22 |
| Piping | 10 |
| Systems & Sizing | 24 |
| Equipment | 11 |
| Maintenance | 28 |
| Plan Reading | 5 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors,3rd Edition**, 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 ELECTRICIAN (ENGLISH OR SPANISH) 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. |
|--|----------|
| Communication Systems | 4 |
| Equipment for General Use | 6 |
| General Electrical Theory & Principles | 9 |
| Motors & Controls | 3 |
| Plan Reading | 4 |
| Special Conditions | 3 |
| Special Equipment | 3 |
| Special Occupancies | 2 |
| Wiring & Protection | 14 |
| Wiring Methods & Materials | 22 |

References

- **American Electricians' Handbook**, 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.

JOURNEYMAN FIRE ALARM 2011

Journeyman Fire Alarm: 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 journeymen are required and certified. It shall be the responsibility of the employing contractor, and the qualifying agent, to provide journeymen on each job site in accordance with this section, and failure to do so shall be a violation of this chapter, subject to the penalties provided herein, and provided under Section 1-5 of this Code. 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.

trade or craft and possesses a valid certificate of competency as a journeyman in such trade or craft. There shall be at least one (1) journeyman for every three (3) trainees on each construction or installation job site for which a permit is required, and which involves a trade in which journeymen are required and certified. It shall be the responsibility of the employing contractor, and the qualifying agent, to provide journeymen on each job site in accordance with this section, and failure to do so shall be a violation of this chapter, subject to the penalties provided herein, and provided under Section 1-5 of this Code. 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 | 50 |
| Time allowed (hours) | 2 |

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

| Subject Area | # Quest. |
|--|-----------------|
| General Electrical Knowledge | 5 |
| Initiating Devices | 10 |
| Installation Requirements Electrical | 11 |
| Notification Appliances & Signaling Circuits | 12 |
| Systems Testing | 10 |
| Supervisory Stations | 2 |

| Subject Area | # Quest. |
|---|-----------------|
| Code & General Knowledge | 7 |
| Plan Reading | 6 |
| Wet Fire Sprinkler Systems | 8 |
| Dry-Pipe Sprinkler Systems | 6 |
| Water Supply, Storage & Distribution | 6 |
| Materials & Methods | 7 |
| Underground Pipe, Hydrants & Stand Pipe | 3 |
| Systems | |
| Safety | 5 |
| Hangers & Supports | 2 |

References

References

- **American Electricians' Handbook**, 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
- **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.
- **Understanding and Servicing Alarm Systems**, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

- **NFPA 13 Standard for the Installation of Sprinkler Systems, 2010**, 2010. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- **NFPA 13D Standard for the Installation of Sprinkler Systems in One & Two-Family Dwellings and Manufactured Homes**, 2010. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- **NFPA 13R Standard for the Installation of Sprinkler Systems in Residential Occupancies up to & Including Four Stories in Height**, 2010. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- **Sprinkler Fitting Level 2**, 2010. ISBN: 978-0-13-280614-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Sprinkler Fitting Level 3**, 2007. ISBN: 978-0-13-614436-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

JOURNEYMAN FIRE SPRINKLER

Journeyman Fire Sprinkler: 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

- **Sprinkler Fitting Level One**, 2007. ISBN: 978-0-13-228611-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

JOURNEYMAN GASFITTER

Tests a candidate's knowledge of the installation, maintenance, repair, alteration, and extension of gas piping, gas mains, lines, laterals, tanks, appliances, and related appurtenances.

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

| Subject Area | # Quest. |
|---------------------------|----------|
| General Knowledge | 8 |
| Isometrics & Plan Reading | 5 |
| LP gas | 5 |
| Pipefitting Math | 5 |
| Safety | 5 |
| Sizing and Design | 5 |
| System installation | 12 |
| Venting | 5 |

References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Drawings and Detail Sheets**, 2006. ISBN: 0-13-613596-X. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Identifying and Installing Valves**, 2006. ISBN: 0-13-613598-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **NFPA 58: Liquefied Petroleum Gas Code**, 2014. ISBN: 978-145590711-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. available at www.nfpa.org
- **Pipefitting Power Tools**, 2006. ISBN: 0-13-229023-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Pipefitting Trade Math**, 2006. ISBN: 0-13-613599-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Socket Weld Pipe Fabrication**, 2006. ISBN: 978-0-13-613601-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Threaded Pipe Fabrication**, 2006. ISBN: 0-13-613600-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

JOURNEYMAN GENERAL MECHANICAL (ENGLISH OR SPANISH)

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 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors,3rd Edition**, 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 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 | 80 |
| Time allowed (hours) | 3 |

| Subject Area | # Quest. |
|---------------------|-----------------|
| General Knowledge | 24 |
| Piping | 17 |
| Systems & Sizing | 15 |
| Equipment | 10 |
| Maintenance | 9 |
| Plan Reading | 5 |

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 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors, 3rd Edition**, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- **HVAC Level Three Trainee Guide**, 2008. ISBN: 978-0-13-604492-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **HVAC Level Two Trainee Guide**, 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.

JOURNEYMAN PIPEFITTER

Tests a candidate's knowledge of the layout, installation, maintenance, repair, and alteration of piping systems and related appurtenances that provide control of environmental conditions for air conditioning and manufacturing processes, including compressed air, fuel gas, manufacturing gases, steam, vacuum piping, process piping, and specialty piping.

| | |
|-----------------------------|-----------|
| Number of Questions | 75 |
| Time allowed (hours) | 3 |

| Subject Area | # Quest. |
|------------------------------------|-----------------|
| General Knowledge | 20 |
| Installation, Valves & Connections | 19 |
| Piping | 33 |
| Safety | 3 |

References

- **Study Guide for Pipefitters**. ISBN: 978-1-269-26208-8. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at <http://nccer.pearsonconstructionbooks.com>
- **The Pipe Fitters Blue Book**, 2002. ISBN: 0-9708321-2-5. Graves Publishing Company, P.O. Box 953, Clinton, NC 28329. <https://pipefitter.com/store/pipe-fitters-blue-book.html#product-details-tab-specification>

JOURNEYMAN PLUMBER (ENGLISH OR SPANISH)

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 2017 - Plumbing**, 2017. ISBN: 978-1-60983-689-4. 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

JOURNEYMAN PLUMBING WITH GAS

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

| | |
|-----------------------------|------------|
| Number of Questions | 100 |
| Time allowed (hours) | 2 |

| Subject Area | # Quest. |
|-------------------------------|-----------------|
| Drain, Waste & Vent Systems | 14 |
| Fixtures & Fittings | 7 |
| General Knowledge | 10 |
| Isometrics & Plan Reading | 10 |
| Plumbing Math | 11 |
| Storm & Roof Drainage | 8 |
| Water Heaters | 7 |
| Water Supply and Distribution | 12 |

| | |
|------------------|----|
| Fuel Gas Systems | 14 |
| Safety | 7 |

References

- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Plumbing**, 2017. ISBN: 978-1-60983-689-4. 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

JOURNEYMAN PRESSURE & PROCESS PIPING

A Pressure and Process Piping Journeyman may only work in the employ of a Pressure and Process Piping Contractor holding a certificate of competency to install, maintain, repair, alter or extend any systems of piping, tubing, vessels, containers, pumps, apparatus, and appurtenances, in connection with such pressure piping used for circulation, transporting, holding or processing of any gas, vapor, fluid, liquid, semi-liquid or any combination thereof; provided, however that boilers, boiler piping as defined by the Boiler and Pressure Vessel Code (1965) of the American Society of Mechanical Engineers, piping used to convey potable water, sanitary sewage, liquefied petroleum, manufactured or natural gas or refrigeration, air conditioning, and comfort heating piping shall NOT be a part of the scope of such work..

| | |
|----------------------|----|
| Number of Questions | 75 |
| Time allowed (hours) | 3 |

| Subject Area | # Quest. |
|-------------------------|----------|
| Code Compliance | 14 |
| Controls | 6 |
| Piping | 37 |
| Maintenance and Service | 6 |
| Safety | 12 |

References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Code of Federal Regulations, Title 29. Part 1910**, 2012. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at www.gpo.gov. Candidate printed versions allowed if exam is open book. Also available at <http://www.provbookstore.com>
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Plumbing**, 2017. ISBN: 978-1-60983-689-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Pipefitting Level Four**, 2007. ISBN: 978-0-13-614429-8. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Pipefitting Level Three**, 2007. ISBN: 978-0-13-227284-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at

<http://nccer.pearsonconstructionbooks.com>.

- **Pipefitting Level Two**, 2006. ISBN: 978-0-13-227314-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Process Control Theory**, 2003. ISBN: 0131032674. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Troubleshooting and Repairing Pumps**, 2008. ISBN: 0136104355. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

JOURNEYMAN REFRIGERATION

A Refrigeration Journeyman may only work in the employ of a Refrigeration Contractor (Unlimited) holding a certificate of competency to install, maintain, repair or alter any system of refrigeration unlimited to tons or horsepower, provided, however, that such refrigeration is intended to be used for the purpose of food and product preservation and/or processing and is not to be used for comfort systems; and further provided that this scope of work does NOT include ammonia refrigeration systems.

| | |
|----------------------|----|
| Number of Questions | 75 |
| Time allowed (hours) | 3 |

| Subject Area | # Quest. |
|-------------------|----------|
| General Knowledge | 22 |
| Piping | 25 |
| Maintenance | 5 |
| Plan Reading | 3 |
| Systems & Sizing | 20 |

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 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors, 3rd Edition**, 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 RESIDENTIAL PLUMBER

Tests a candidate's knowledge of the installation, repair, maintenance, and extension of a plumbing system, including drains, waste, sanitary vents, water supply, and fixtures as it applies to one and two-family residences, also multiple single-family dwellings (townhouses) not more than three stories in height.

| | |
|-------------------------------|-----------------|
| Number of Questions | 75 |
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Drain, Waste & Vent Systems | 10 |
| Fixtures & Fittings | 8 |
| General Knowledge | 10 |
| Isometrics & Plan Reading | 10 |
| Plumbing Math | 9 |
| Storm & Roof Drainage | 4 |
| Water Heaters | 10 |
| Water Supply and Distribution | 10 |
| Safety | 4 |

References

- **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
- **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

JOURNEYMAN RESIDENTIAL PLUMBER WITH GAS

Tests a candidate's knowledge of the installation, repair, maintenance, and extension of a plumbing system, including drains, waste, sanitary vents, water supply, and fixtures; installation, maintenance, and repair of a gas system, including piping, appliances, vents, flues, tanks, and related appurtenances as it applies to one- and two-family residences, also multiple single-family dwellings (townhouses) not more than three stories in height.

| | |
|-------------------------------|-----------------|
| Number of Questions | 75 |
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| Drain, Waste & Vent Systems | 14 |
| Fuel Gas Systems | 6 |
| Fixtures & Fittings | 8 |
| General Knowledge | 12 |
| Isometrics & Plan Reading | 10 |
| Plumbing Math | 10 |
| Safety | 4 |
| Storm & Roof Drainage | 3 |
| Water Heaters | 4 |
| Water Supply and Distribution | 4 |

References

- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. 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
- **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

JOURNEYMAN ROOM AIR CONDITIONING

Journeyman Room Air Conditioning: 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 | 50 |
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| General Knowledge | 12 |
| Maintenance and Service | 10 |
| Control Circuits | 5 |
| Carpentry | 5 |
| Masonry | 5 |
| Insulation | 5 |
| Safety | 8 |

References

- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Study Guide for Room Air Conditioning**, 2013. ISBN: 133525953. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at <http://nccer.pearsonconstructionbooks.com>

JOURNEYMAN SHEET METAL

Tests a candidate's knowledge of sheet metal fabrication, intended for the installation, replacement, repair, alteration, and extension of ferrous and Non-ferrous ducting in ventilation and exhaust systems.

Number of Questions 60
Time allowed (hours) 3

| Subject Area | # Quest. |
|---------------------------------|----------|
| Plan Reading, Estimating & Math | 8 |
| Code & General Knowledge | 8 |
| Layout & Fabrication | 10 |
| Installation | 10 |
| Air Properties & Distribution | 8 |
| Air Distribution Accessories | 6 |
| Architectural Sheet Metal | 4 |
| Safety | 6 |

References

- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Sheet Metal Level One**, 2008. ISBN: 978-0-13-604482-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Sheet Metal Level Three**, 2009. ISBN: 978-0-13-609962-8. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Sheet Metal Level Two**, 2008. ISBN: 978-0-13-604484-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

JOURNEYMAN WARM AIR HEATING

A Warm Air Heating Journeyman may only work in the employ of a Warm Air Heating Contractor holding a certificate of competency to install, maintain, repair or alter a system of warm air furnace heating and all appliances and appurtenances in connection therewith, including duct work, vents and flue connections.

Number of Questions 80
Time allowed (hours) 3

| Subject Area | # Quest. |
|-------------------|----------|
| General Knowledge | 15 |
| Piping | 20 |
| Equipment | 9 |
| Maintenance | 18 |
| Systems & Sizing | 18 |

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 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors, 3rd Edition**, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston,

MA 02116. Available at www.provbookstore.com.

- **HVAC Level Two Trainee Guide**, 2007. ISBN: 978-0-13-614385-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

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 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 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Study Guide for Insulation**. ISBN: 978-0-136-06315-5. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at <http://nccer.pearsonconstructionbooks.com>

LIMITED PAINTING

Tests a candidate's knowledge of painting and decorating, including spray application and pressure washing. Does not include sandblasting or application of plural component roof materials, waterproofing, or damp-proofing.

Number of Questions 75
Time allowed (hours) 3

| Subject Area | # Quest. |
|--------------------------------------|----------|
| Plan Reading & Estimating & Planning | 6 |
| Substrates & Preparation | 24 |
| Materials | 19 |
| Application | 20 |
| Safety | 6 |

References

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

- **Painting Level Two**, 1997. ISBN: 978-0-13-771296-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

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

- **Core 2015, 27202-13 Roofing Applications, & 27403-14 Advanced Roof Systems**. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- **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
- **Roofing - Study Guide**, 2018. ISBN: 978132388055. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.

LOW PRESSURE BOILER

Tests knowledge of the installation, maintenance, repair, and alteration of steam and hot water boilers, low pressure boilers, related piping vessels and related appurtenances.

Number of Questions 70
Time allowed (hours) 3

| Subject Area | # Quest. |
|-------------------|----------|
| General Knowledge | 17 |
| Maintenance | 13 |
| Piping | 18 |
| Plan Reading | 4 |
| Systems & Sizing | 18 |

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 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road,

Country Club Hills, IL 60478. www.iccsafe.org

- **HVAC Basics for Contractors, 3rd Edition**, 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.

LOW VOLTAGE (ENGLISH OR SPANISH) 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.

Number of Questions 50
Time allowed (hours) 2

| Subject Area | # Quest. |
|------------------------------|----------|
| General Electrical Knowledge | 12 |
| Wiring & Protection | 4 |
| Wiring Methods & Materials | 10 |
| Equipment for General Use | 6 |
| Special Occupancies | 6 |
| Special Equipment | 3 |
| Special Conditions | 4 |
| Communication Systems | 5 |

References

- **American Electricians' Handbook**, 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.
- **Understanding and Servicing Alarm Systems**, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

MARINE CONSTRUCTION

Marine Contractors are those who are qualified with the experience and skill to construct, maintain, alter, install or repair seawalls, bulkheads, revetments, docks, piers, wharfs, groins, boat lifts, davits and other marine structures, including pile driving.

Number of Questions 75
Time allowed (hours) 3

| Subject Area | # Quest. |
|--------------|----------|
| Carpentry | 10 |

| | |
|--|----|
| Florida Building Code application to Marine Structures | 10 |
| Piles | 10 |
| Plan Reading & Estimating | 6 |
| Safety | 9 |
| Sitework | 10 |
| Structures | 10 |
| Concrete and Reinforcement | 10 |

References

- **Code of Federal Regulations, Title 29, Part 1926**, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at <http://bookstore.gpo.gov>. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- **DESIGN OF COASTAL REVETMENTS, SEAWALLS, AND BULKHEADS**, 1995. US Army Corps of Engineers, Washington, DC. Available at <http://www.delmar.ca.us/DocumentCenter/View/1899> Candidate printed versions permitted in testing room if exam is open book.
- **FLDOT Structures Detailing Manual, 2013**, 2013. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. http://www.dot.state.fl.us/structures/StructuresManual/CurrentRelease/Vol2_SDM.pdf Candidate printed versions 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
- **Fundamentals of Hydraulic Dredging**, 1996. ISBN: 9780784401477. American Society of Civil Engineers, 1800 Alexander Bell Drive, Reston, VA 20191. <https://www.asce.org/templates/publications-book-detail.aspx?id=7971>
- **Pile Design and Construction Practice**, 5th. ISBN: 978-0415385824. Taylor and Francis, 270 Madison Avenue, New York, NY 10016. Available at www.Contractors-books.com
- **Standard Specifications for Road and Bridge Construction**, 2013. 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.
- **Study Guide for General Engineering, 3rd edition**, 2014. ISBN: 978-1-269-78657-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- **The Dock Manual: Designing/Building/Maintaining**, 1999. ISBN: 978-1-58017-098-7. Storey Publishing, 210 MASS MoCA Way, North Adams, MA 01247. <https://www.storey.com/books/the-dock-manual/#>

MASONRY (ENGLISH OR SPANISH)

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

| | |
|----------------------|----------|
| Number of Questions | 50 |
| Time allowed (hours) | 2 |
| Subject Area | # Quest. |
| Masonry Installation | 12 |
| Mortar | 8 |

| | |
|---------------------------|---|
| Masonry Units | 8 |
| Plan Reading & Estimating | 8 |
| Reinforcement | 7 |
| Safety | 7 |

References

- **ACI 530 Building Code Requirements and Specification for Masonry 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 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 Masonry Contractors, 2nd Edition**, 2014. ISBN: 978-1-269-78558-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

MASTER AC (LIMITED) (ENGLISH OR SPANISH)

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 | 100 |
| Time allowed (hours) | 4 |

| | |
|-------------------|----------|
| Subject Area | # Quest. |
| General Knowledge | 18 |
| Piping | 19 |
| Systems & Sizing | 20 |
| Equipment | 15 |
| Maintenance | 23 |
| Plan Reading | 5 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors, 3rd Edition**, 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.

- **Manual N - Commercial Load Calculations**, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at <http://www.acca.org>.

- **Residential Load Calculations - Manual J**. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

MASTER AC (UNLIMITED) (ENGLISH OR SPANISH)

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 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors,3rd Edition**, 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.
- **Manual N - Commercial Load Calculations**, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at <http://www.acca.org>.
- **Residential Load Calculations - Manual J**. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

MASTER ELECTRICIAN (ENGLISH OR SPANISH) 2011

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

Number of Questions 75
Time allowed (hours) 3

| Subject Area | # Quest. |
|------------------------------|----------|
| General Electrical Knowledge | 12 |
| Communication Systems | 3 |
| Equipment for General Use | 6 |
| Motors & Controls | 4 |
| Plan Reading | 4 |
| Special Conditions | 4 |
| Special Equipment | 3 |
| Special Occupancies | 2 |
| Wiring & Protection | 17 |
| Wiring Methods & Materials | 20 |

References

- **American Electricians' Handbook**, 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.

MASTER GASFITTER

Tests a candidate's knowledge of the design, installation, maintenance, repair, alteration, and extension of gas piping, gas mains, lines, laterals, tanks, appliances, and related appurtenances.

Number of Questions 50
Time allowed (hours) 3

| Subject Area | # Quest. |
|---------------------------|----------|
| General Knowledge | 8 |
| Isometrics & Plan Reading | 5 |
| Sizing and Design | 5 |
| Pipefitting Math | 5 |
| System installation | 12 |
| LP gas | 5 |
| Venting | 5 |
| Safety | 5 |

References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Drawings and Detail Sheets**, 2006. ISBN: 0-13-613596-X. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-

7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Identifying and Installing Valves**, 2006. ISBN: 0-13-613598-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
 - **NFPA 58: Liquefied Petroleum Gas Code**, 2014. ISBN: 978-145590711-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. available at www.nfpa.org
 - **Pipefitting Power Tools**, 2006. ISBN: 0-13-229023-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
 - **Pipefitting Trade Math**, 2006. ISBN: 0-13-613599-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
 - **Socket Weld Pipe Fabrication**, 2006. ISBN: 978-0-13-613601-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
 - **Threaded Pipe Fabrication**, 2006. ISBN: 0-13-613600-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

MASTER MECHANICAL

Master Mechanical shall mean any person whose services are unlimited in the execution of contracts requiring the experience, knowledge, and skill to perform the following; install maintain, repair, fabricate, alter, extend or design (when not prohibited by law) central air conditioning, refrigeration, heating and ventilation (including duct work in connection with a complete system only to the extent such duct work is performed by the Contractor necessary to make complete an air distribution system) boiler and unfired pressure vessel systems, lift stations, equipment and piping and all appurtenances, apparatus, or equipment used in connection therewith; also piping, insulation of pipes, vessels and ducts, pressure and process piping, pneumatic control piping, gasoline tanks and pump installation and piping for same, fire sprinkling systems and standpipes, air piping, vacuum line piping, oxygen lines, nitrous oxide piping, ink and chemical lines, fuel transmission lines and installation of a condensate drain from an air conditioning unit to an existing safe waste or other approved disposal other than a direct connection to a sanitary system, all in such a manner to comply with all plans, specifications, codes, laws and regulations applicable thereto. The scope of work for such Contractor shall not include any work such as liquefied petroleum or natural gas fuel lines within buildings, potable waterlines or connections thereto, sanitary sewer lines, swimming pool piping and filters and electrical power wiring.

Number of Questions 100
Time allowed (hours) 4

| Subject Area | # Quest. |
|-------------------|----------|
| General Knowledge | 16 |
| Piping | 12 |
| Systems & Sizing | 31 |
| Equipment | 16 |
| Maintenance | 16 |
| Plan Reading | 9 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors, 3rd Edition**, 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.
- **Manual N - Commercial Load Calculations**, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at <http://www.acca.org>.
- **Residential Load Calculations - Manual J**. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

MASTER PIPEFITTER

Tests a candidate's knowledge of the design, layout, installation, maintenance, repair, and alteration of piping systems and related appurtenances that provide control of environmental conditions for air conditioning and manufacturing processes, including compressed air, fuel gas, manufacturing gases, steam, vacuum piping, process piping, and specialty piping.

Number of Questions 75
Time allowed (hours) 3

| Subject Area | # Quest. |
|------------------------------------|----------|
| General Knowledge | 14 |
| Piping | 35 |
| Installation, Valves & Connections | 16 |
| Safety | 10 |

References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Study Guide for Pipefitters**. ISBN: 978-1-269-26208-8. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at <http://nccer.pearsonconstructionbooks.com>
- **The Pipe Fitters Blue Book**, 2002. ISBN: 0-9708321-2-5. Graves Publishing Company, P.O. Box 953, Clinton, NC 28329. <https://pipefitter.com/store/pipe-fitters-blue-book.html#product-details-tab-specification>

MASTER PLUMBER (ENGLISH OR SPANISH)

The scope of work of a Master Plumber shall include the knowledge and skill to install, maintain, repair, alter or extend plumbing, septic tanks, drainage and supply wells, swimming pool and piping or solar heating systems and all appurtenances, apparatus or equipment used in connection therewith, including boilers and pressure and process piping and including the installation of water, gas, storm and sanitary sewer lines, and for the mechanical installation of gas, water and sewage plants and substations. The scope shall also include the installation, maintenance, repair, alteration or extension of air piping, vacuum line piping, oxygen line piping, nitrous oxide piping, fire line standpipes and fire sprinklers to the extent allowed by law, up to five (5) sprinkler heads out of potable water lines, ink and chemical lines, gasoline piping and tank and pump installation (excepting bulk storage plants) and pneumatic control piping systems. The scope of work does not include the installation

| | |
|-----------------------------|------------|
| Number of Questions | 100 |
| Time allowed (hours) | 3 |

| | |
|-------------------------------|-----------------|
| Subject Area | # Quest. |
| Drain, Waste & Vent Systems | 18 |
| Fixtures & Fittings | 8 |
| General Knowledge | 12 |
| Isometrics & Plan Reading | 13 |
| Plumbing Math | 10 |
| Storm & Roof Drainage | 8 |
| Water Heaters | 10 |
| Water Supply and Distribution | 14 |
| Safety | 7 |

References

- **Florida Building Code 2017 - Plumbing**, 2017. ISBN: 978-1-60983-689-4. 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

MASTER PLUMBER WITH GAS (ENGLISH OR SPANISH)

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 2010 - Fuel Gas**, 2010. ISBN: Item #:5661L10. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at www.iccsafe.org.
- **Florida Building Code 2010 - Plumbing**, 2010. ISBN: Item #:5621L10. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at 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

MASTER RESIDENTIAL PLUMBER

Tests a candidate's knowledge of the design, installation, repair, maintenance, and extension of a plumbing system, including drains, waste, sanitary vents, water supply, fixtures, and indirect wastes as it applies to one- and two-family residences, also multiple single-family dwellings (townhouses) not more than three stories in height.

| | |
|-----------------------------|------------|
| Number of Questions | 100 |
| Time allowed (hours) | 3 |

| | |
|-------------------------------|-----------------|
| Subject Area | # Quest. |
| Drain, Waste & Vent Systems | 17 |
| Fixtures & Fittings | 10 |
| General Knowledge | 12 |
| Isometrics & Plan Reading | 15 |
| Plumbing Math | 12 |
| Safety | 4 |
| Storm & Roof Drainage | 3 |
| Water Heaters | 12 |
| Water Supply and Distribution | 15 |

References

- **Florida Building Code 5th edition - Residential**, 2014. ISBN: Item #:5610L14. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at 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

MASTER SHEET METAL

Sheet Metal Contractor is a specialty mechanical contractor qualified and certified to manufacture, assemble, cast, cut, shape, stamp, forge, fabricate, weld, repair, recondition, adjust and install sheet and rolled metal of any kind or combination and all other materials used in lieu

thereof, and including all air-veyor systems and air handling systems regardless of materials used including all equipment and all reinforcements in connection therewith.

| | |
|-----------------------------|-----------|
| Number of Questions | 75 |
| Time allowed (hours) | 3 |

| Subject Area | # Quest. |
|---------------------------------|-----------------|
| Plan Reading, Estimating & Math | 8 |
| Code & General Knowledge | 13 |
| Layout & Fabrication | 12 |
| Installation | 10 |
| Air Properties & Distribution | 8 |
| Air Distribution Accessories | 8 |
| Chimneys, Flues & Exhaust | 6 |
| Architectural Sheet Metal | 4 |
| Safety | 6 |

References

- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Sheet Metal Level Four**, 2009. ISBN: 978-0-13-609964-2. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Sheet Metal Level One**, 2008. ISBN: 978-0-13-604482-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Sheet Metal Level Three**, 2009. ISBN: 978-0-13-609962-8. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Sheet Metal Level Two**, 2008. ISBN: 978-0-13-604484-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

MASTER SIGN ELECTRICIAN 2011

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 |
| Grounding & Bonding | 4 |
| General Electrical Knowledge | 6 |
| Motors & Controls | 3 |
| Transformers | 3 |
| Wiring & Protection | 4 |
| Wiring Methods & Materials | 4 |

References

- **American Electricians' Handbook**, 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.

MASTER WARM AIR HEATING CONTRACTOR

A Warm Air Heating Contractor is a specialty mechanical Contractor qualified and certified to install, maintain, repair or alter a system of warm air furnace heating and all appliances and appurtenances in connection therewith, including duct work, vents and flue connections.

| | |
|-----------------------------|------------|
| Number of Questions | 100 |
| Time allowed (hours) | 3 |

| Subject Area | # Quest. |
|---------------------|-----------------|
| General Knowledge | 25 |
| Piping | 25 |
| Equipment | 6 |
| Maintenance | 14 |
| Systems & Sizing | 30 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors,3rd Edition**, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- **HVAC Level Two Trainee Guide**, 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.

MECHANICAL MAINTENANCE (ENGLISH OR SPANISH)

Mechanical Maintenance man is a person qualified and certified by examination to maintain mechanical installations. The work of a mechanical maintenance man shall be confined to repairing, maintaining, servicing of existing systems involving air conditioning, refrigeration, heating, ventilation and pressure and process piping contained and used upon the premises or building owned, occupied or otherwise controlled by the person, firm or corporation by whom the mechanical maintenance man is regularly employed. A certified mechanical master or journeyman shall automatically qualify as a mechanical maintenance man.

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

| Subject Area | # Quest. |
|---------------------|-----------------|
| General Knowledge | 6 |
| Piping | 6 |
| Equipment | 10 |
| Maintenance | 18 |
| Plan Reading | 3 |
| Systems & Sizing | 7 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors, 3rd Edition**, 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.

METAL AWNING & STORM SHUTTER CONTRACTOR (ENGLISH OR SPANISH)

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 | 6 |
| Concrete and Reinforcement | 6 |
| Metal Storm Panel Shutters | 6 |
| Wood Storm Shutters | 5 |
| Installation & Anchorage | 16 |
| Building and Municipal Codes | 7 |
| Safety | 4 |

References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Carpentry Level One**, 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 2017 - Building**, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Hurricane Shutter Designs**. APA - The Engineered Wood Association, 7011 S. 19th ST, Tacoma, WA 98466. Available at www.apawood.org
Candidate printed versions 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 |

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

MISCELLANEOUS METALS CONTRACTOR

A Miscellaneous Metals Contractor is qualified and certified to fabricate, apply, erect and install miscellaneous appurtenances, appendages, parts or equipment of metal, including other materials incidental thereto, in or on buildings or other structures and shall also

include all work involving: metal awnings and storm shutters, canvas awnings, metal cabinets and store fixtures, screen enclosures and all work incidental thereto, metal partitions, flagpoles, ornamental metals including structural railings, and metal sunshades. The work of a miscellaneous metals contractor shall not include the work of a metal decking and siding contractor, reinforcing steel placing contractor, or structural steel contractor

Number of Questions 75
Time allowed (hours) 3

| Subject Area | # Quest. |
|--|----------|
| Characteristics and Properties of Metals | 13 |
| Metal Cutting | 20 |
| Safety | 5 |
| Welding Practices | 18 |
| Weld Quality Control | 7 |
| Welding Symbols & Detail Drawings | 12 |

References

- **Advanced Topics in Welding: Aluminum**, 2010. ISBN: 978-0-13-213722-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Code of Federal Regulations, Title 29, Part 1926**, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at <http://bookstore.gpo.gov>. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- **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
- **Welding Level 1 2015**, 2015. ISBN: 978-0-13-413110-8. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Welding Level 2 2015**, 2015. ISBN: 978-0-13-431110-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

PAINTING AND DECORATING

Use paint spraying equipment and hand tools to apply paint to interior and exterior surfaces; includes painting concrete, sealing river rock, sandblasting and general coating except roof applications.

Number of Questions 50
Time allowed (hours) 3

| Subject Area | # Quest. |
|---------------------------|----------|
| Safety | 6 |
| Substrates & Preparation | 12 |
| Materials | 10 |
| Application | 12 |
| Job Planning & Estimating | 5 |
| Equipment | 5 |

References

- **Painting Level One**, 1997. ISBN: 978-0-13-771239-7. Prentice Hall,

P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

- **Painting Level Two**, 1997. ISBN: 978-0-13-771296-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

PLASTERING & LATHING (ENGLISH OR SPANISH)

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

Number of Questions 50
Time allowed (hours) 3

| Subject Area | # Quest. |
|---------------------------|----------|
| Plan Reading & Estimating | 5 |
| Framing | 10 |
| Lathing | 10 |
| Materials | 10 |
| Application & Finishing | 10 |
| Safety | 5 |

References

- **ASTM C1007-11a Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories**, 2011. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>. Candidate printed versions allowed if exam is open book.
- **ASTM C1063-12a - Standard Specification for Installation of Lathing & Furring to Receive Interior & Exterior Portland Cement Based Plaster**, 2012. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>. Candidate printed versions allowed if exam is open book.
- **ASTM C926-12a - Standard Specification for Application of Portland Cement Based Plaster**. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>. Candidate printed versions allowed if exam is open book.
- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Florida Building Code 2017 - Building**, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

- **Gypsum Construction Handbook**, 2009. ISBN: 978-0876292587. United States Gypsum Corporation, 350 Burnhamthorpe Road West, 5th Floor, Mississauga, ON. Available at www.amazon.com.
- **Introduction to Construction Math**, 2015. NCCER MATS Testing, 13614 Progress Blvd, Alachua, FL 32615.

PLUMBING MAINTENANCE

Plumbing Maintenance man is a person qualified and certified by examination to maintain plumbing installations. The work of the maintenance plumber shall be confined to maintenance repairs involving only the working parts of a faucet or valve, the clearance of stoppages, repairing of leaks and the replacement of defective faucets or valves contained and used upon the premises or building owned, occupied or otherwise controlled by the person, firm or corporation by whom the maintenance plumber is regularly employed. Maintenance plumbers' work shall not include the cutting into, connecting to or extension of potable water lines, or drain waste and vent systems. A certified master or journeyman plumber shall automatically qualify as a maintenance plumber.

Number of Questions 75
Time allowed (hours) 3

| Subject Area | # Quest. |
|--|----------|
| Servicing of Fixtures, Valves, and Faucets | 14 |
| Fixtures & Fittings | 14 |
| General Knowledge | 12 |
| Installing Fixtures, Valves, and Faucets. | 9 |
| Introduction to Water Distribution Systems | 9 |
| Plumbing Drawings | 5 |
| Compressed Air | 4 |
| Types of Valves | 3 |
| Safety | 5 |

References

- **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
- **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

POOL MAINTENANCE

Tests a candidate's knowledge of service, maintenance, and treatment of water in all swimming pools, spas, and hot tubs. Includes equipment, pumps, filters, chemical feeders, and minor repairs to pool masonry, patching cracks, and repainting and resurfacing pool walls and bottoms.

Number of Questions 50
Time allowed (hours) 3

| Subject Area | # Quest. |
|--------------|----------|
| Calculations | 8 |
| Filtration | 6 |
| Circulation | 8 |

| | |
|--------------|---|
| Disinfection | 7 |
| Testing | 8 |
| Management | 3 |
| Repairs | 4 |
| Safety | 6 |

References

- **Certified Pool/Spa Operator Handbook**, 2009. National Swimming Pool Foundation, 4775 Granby Circle, Colorado Springs, CO 80919. Available at www.nspf.org.
- **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 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

PRESTRESSED, PRECAST CONCRETE ERECTION CONTRACTOR (ENGLISH OR SPANISH)

Prestressed Precast Concrete Erection Contractor is a contractor qualified and certified to erect structural precast concrete units such as decks, beams, girders, walls, columns and stairs that are or may be used as structural members for buildings and structures, including welding and rigging in connection therewith and to erect precast concrete units for guard rails and decorative panels above the ground floor, including such minor field fabrication as may be necessary.

Number of Questions 75
Time allowed (hours) 2

| Subject Area | # Quest. |
|------------------------------|----------|
| Plan Reading & Estimating | 9 |
| Preconstruction Plan | 8 |
| Practices & Procedures | 18 |
| Equipment | 8 |
| Tolerances | 8 |
| Quality Control | 9 |
| Building and Municipal Codes | 6 |
| Safety | 9 |

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/>.
- **Carpentry Level Three**, 2007. ISBN: 978-0-13-228600-8. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Erector's Manual: Standards and guidelines for the erection of precast concrete products**. Precast/Prestressed Concrete Institute, 9626

REFRIGERATION & AIR CONDITIONING CONTRACTOR

A Refrigeration and Air Conditioning Contractor is a specialty mechanical contractor qualified and certified to install, repair alter, add to or change any system of refrigeration, air conditioning, heating and ventilating, unlimited in horsepower or tons, including any or all duct systems necessary to make complete a refrigeration or air conditioning system and including the installation of a condensate drain from an air conditioning unit to an existing safe waste or other approved disposal other than a direct connection to a sanitary disposal system; provided, however, ammonia refrigeration, boilers or unfired vessels shall not be a part of the scope of such work.

| | |
|-----------------------------|-----------------|
| Number of Questions | 100 |
| Time allowed (hours) | 3 |
| Subject Area | # Quest. |
| General Knowledge | 18 |
| Piping | 18 |
| Equipment | 15 |
| Maintenance | 21 |
| Plan Reading | 10 |
| Systems & Sizing | 18 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Intermediate Mechanical Study Guide**, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

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 | 100 |
|----------------------------|------------|

| | |
|-----------------------------|----------|
| Time allowed (hours) | 3 |
|-----------------------------|----------|

| | |
|---------------------|-----------------|
| Subject Area | # Quest. |
| General Knowledge | 27 |
| Piping | 33 |
| Maintenance | 5 |
| Plan Reading | 5 |
| Systems & Sizing | 30 |

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 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors,3rd Edition**, 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 | 20 |
| Piping | 23 |
| Systems & Sizing | 24 |
| Maintenance | 5 |
| Plan Reading | 8 |

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 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Basics for Contractors,3rd Edition**, 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.

REINFORCING STEEL PLACING 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

- **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/>.
- **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
- **Reinforcing Ironwork Level One**, 2005. ISBN: 978-0-13-228220-8. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.

REMODELING CONTRACTOR

Tests a candidate's knowledge of residential building remodeling, including foundations, framing, trusses, sheathing, paneling, trim, cabinetry, doors, windows, and stairs. Does not include electrical, plumbing, or foundation installation or repair.

Number of Questions 60
Time allowed (hours) 3

| Subject Area | # Quest. |
|----------------------------|----------|
| Plan Reading & Estimating | 5 |
| Sitework & Foundations | 4 |
| Concrete and Reinforcement | 4 |
| Masonry | 4 |
| Carpentry | 12 |
| Roofing | 6 |
| Interior Finishes | 6 |
| Exterior Finishes | 6 |
| Associated Trades | 8 |
| Safety | 5 |

References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Florida Building Code 2017 - Residential**, 2017. ISBN: 978-1-60983-

692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

- **Masonry and Sitework for the Residential Contractor, 2nd edition**, 2nd. ISBN: 978-1-269-78556-3. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- **Residential Home Builder Study Guide**. ISBN: 9781323550915. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- **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

RESIDENTIAL AC

Tests a candidate's knowledge of the installation, maintenance, repair, alteration, and extension of residential air conditioning systems, related warm air heating, ventilation, and duct systems, not to exceed five tons cooling capacity per unit.

Number of Questions 100
Time allowed (hours) 3

| Subject Area | # Quest. |
|-------------------|----------|
| Equipment | 16 |
| General Knowledge | 16 |
| Maintenance | 24 |
| Piping | 8 |
| Plan Reading | 2 |
| Systems & Sizing | 34 |

References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. 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
- **HVAC Basics for Contractors, 3rd Edition**, 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.

RESIDENTIAL 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 |

References

- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **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
- **Masonry and Sitework for the Residential Contractor, 2nd edition,** 2nd. ISBN: 978-1-269-78556-3. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- **Residential Home Builder Study Guide.** ISBN: 9781323550915. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- **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

RESIDENTIAL SWIMMING POOL

Tests a candidate's knowledge of the construction, service, and repair of residential swimming pools. Does not include direct connections to a sanitary sewer system nor to potable water lines, nor the grounding and bonding of metal surfaces, nor the making of any electrical connections.

Number of Questions 51
Time allowed (hours) 3

| Subject Area | # Quest. |
|--|----------|
| Plan Reading & Estimating | 5 |
| Site Preparation, Excavation and Backfilling | 6 |
| Pool Shell Construction | 14 |
| Interior Surface Preparation and Finishing | 6 |
| Tile, Coping and Trimwork | 5 |

| | |
|--------------------|---|
| Accessory Work | 5 |
| Care and Operation | 6 |
| Safety | 4 |

References

- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Builder's Guide to Swimming Pool Construction,** 2005. ISBN: 978-1889892504. Builder's Book, Inc., 8001 Canoga Avenue, Canoga Park, CA 91304. Available at www.amazon.com.
- **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

ROOF DECK

Roof Deck Contractor is a contractor qualified and certified to erect, construct, fabricate and install roof decks of Portland cement or gypsum concrete, using lightweight aggregate, on joists or other supporting members erected by others, and shall include the placing of forms and welding of supporting members for forms and miscellaneous reinforcing of the deck and the proportioning, mixing and placing of cement, aggregate and water, provided, however, that roof decks of wood, metal, heavy aggregate concrete, glass or plastic and the application of roofing felts or other water resistant membranes shall not be a part of the scope of such work. The experience requirement for the qualifying agent for a roof deck contractor shall be one (1) year.

Number of Questions 50
Time allowed (hours) 2

| Subject Area | # Quest. |
|------------------------------|----------|
| Plan Reading & Estimating | 5 |
| Formwork | 10 |
| Welding & Cutting | 6 |
| Steel Joists & Metal Decking | 6 |
| Lightweight Concrete | 9 |
| Safety | 14 |

References

- **ASTM C956-04 Standard Specification for Installation of Cast-In-Place Reinforced Gypsum Concrete.** 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/Standards/C956.htm> Candidate printed versions allowed if exam is open book.
- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Concrete Finishing Level Two,** 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 2017 - Building,** 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Guide for Structural Lightweight-Aggregate Concrete - ACI 213R-03.** American Concrete Institute, 38800 International Way, Country Club Dr,

P.O. Box 9094, Farmington Hills, MI 48333. Available at <http://www.concrete.org/general/home.asp>

- **Introduction to Basic Rigging**, 2015. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. available @ www.mypearsonstore.com
- **Ironworking Level One**, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Ironworking Level Two**, 2011. ISBN: 978-0-13-257822-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

ROOFING (ENGLISH OR SPANISH)

A Roofing Contractor is a contractor qualified and certified to install, repair and replace roof systems, as defined in the South Florida Building Code, and the waterproofing thereof. Work may include, but shall not be limited to, roof deck insulation, roof coating, painting and covering, including use of sheet metal and installation of other sheet metal products incidental to roofing work, including gutters and downspouts, and other material in connection therewith or any combination thereof and including installation of nonstructural decking and siding. During the repair or replacement process of a roof system, a roofing contractor shall be allowed to repair and/or replace damaged decking and/or damaged wood structural or nonstructural members of the roof framing, provided that such replacement and/or repair conforms to the requirements of the South Florida Building Code and the repair or replacement of damaged decking and wood structural or nonstructural members of the roof framing constitutes less than fifty (50) percent of the value of the total work performed.

| | |
|-----------------------------|-----------|
| Number of Questions | 50 |
| Time allowed (hours) | 2 |

| Subject Area | # Quest. |
|---------------------------|-----------------|
| Deck & Underlayment | 6 |
| Flashing | 5 |
| High Slope Roofing | 15 |
| Low Slope Roofing | 9 |
| Plan Reading & Estimating | 8 |
| Safety | 7 |

References

- **Core 2015, 27202-13 Roofing Applications, & 27403-14 Advanced Roof Systems**. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- **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
- **Roofing - Study Guide**, 2018. ISBN: 978132388055. 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

- **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
- **Roofing - Study Guide**, 2018. ISBN: 978132388055. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- **Core 2015, 27202-13 Roofing Applications, & 27403-14 Advanced Roof Systems**. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.

SCREEN ENCLOSURE

A Screen Enclosure Contractor is qualified and certified to fabricate, erect and install on grade only, screen enclosures with metal-supporting members, in whole or in part self-supporting, having walls and roof of screen except that the roof may be of metal or plastic where the area of solid wind resistant material does not exceed forty (40) percent of the area of screen roof. The scope of work shall include footings or slab on grade in connection therewith.

| | |
|-----------------------------|-----------|
| Number of Questions | 60 |
| Time allowed (hours) | 3 |

| Subject Area | # Quest. |
|---|-----------------|
| Foundations and Concrete | 7 |
| Plan Reading & Estimating | 14 |
| Safety | 12 |
| Understand and apply the building code as it pertains to the construction of screen enclosures and associated work. | 6 |
| Screen Enclosures | 21 |

References

- **AAF Guide to Aluminum Construction in High Wind Areas**, 2010. Aluminum Association of Florida, 13165 McCrory Place, Suite 185, Orlando, FL 32832. Available at <http://www.aaof.org/>. (Also permitted is the Guide to Aluminum Construction in High-Wind Area ASCE7 Supplement to the 2010 Guide)
- **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

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 50
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 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 Siding & Finish Carpentry**, 2012. ISBN: 978-1-256-61081-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

SIGN CONTRACTOR (NON-ELECTRIC)

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

- **Carpentry Level One, Carpentry Fundamentals 2013**, 2013. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Carpentry Level Three 2014**, 2014. ISBN: 0133823059. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Florida Building Code 2017 - Building**, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Ironworking Level One**, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

SOLAR WATER HEATING CONTRACTOR

Tests a candidate's knowledge of the installation, alteration, repair, and replacement of any solar heating system including swimming pool applications. Includes collectors, storage and expansion tanks, heat exchangers, piping, valves, pumps, sensors, and low voltage controls that connect to existing plumbing and electrical circuits.

Number of Questions 50
Time allowed (hours) 2

| Subject Area | # Quest. |
|--|----------|
| Plan Reading & Estimating | 5 |
| Florida Building Code application to Solar Heating | 5 |
| Solar Concepts | 6 |
| Solar Water Heating Systems | 6 |
| Solar Water Heating System Installation | 6 |
| Solar Water Heating System Troubleshooting | 6 |
| Swimming Pool Heating Systems | 6 |
| Materials | 5 |
| Safety | 5 |

References

- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. 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
- **Solar Water and Pool Heating Manual**, 2006. ISBN: FSEC-IN-24. University of Central Florida - UCF FL Solar Energy Center, 1679 Clearlake Road, Cocoa, FL 32922-5703. <https://secure.fsec.ucf.edu/fsecstore/do/product/Publications/SWPHManual>

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 |

| | |
|--------------------|---|
| Rigging and Cranes | 6 |
| Safety | 5 |

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

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 | 75 |
| Time allowed (hours) | 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 & 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 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 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 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 PIPING

Swimming Pool Piping Contractor is a contractor having the required financial means and having a qualifying agent as provided herein. Such qualifying agent shall have experience and skill gained by not less than one (1) year of experience, or its educational equivalent, or a combination of such experience and education, in installing swimming pool piping under the supervision of a plumbing contractor or a contractor making swimming pool piping installations. Such qualifying agent shall be qualified, examined, and certified to perform the functions within the scope of work of a swimming pool piping contractor as hereinafter provided. The scope of work of a swimming pool piping contractor shall permit such a contractor to install, maintain, repair, alter, or extend swimming pool piping systems including the pumps, filters, pool heaters and chlorinators incidental to

swimming pools and involving the means of disposing of pool water. The scope of work in this classification shall not include direct connection to a sanitary sewer system, potable water line or electrical supply, or the installation of package pool heaters.

Number of Questions 75
Time allowed (hours) 3

| Subject Area | # Quest. |
|--|----------|
| Plan Reading & Estimating | 7 |
| Site Preparation, Excavation and Backfilling | 6 |
| Pool Piping | 22 |
| Pool Equipment | 18 |
| Care and Operation | 12 |
| Safety | 10 |

References

- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Builder's Guide to Swimming Pool Construction,** 2005. ISBN: 978-1889892504. Builder's Book, Inc., 8001 Canoga Avenue, Canoga Park, CA 91304. Available at www.amazon.com.
- **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 2017 - Building,** 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

TILE & MARBLE

Mix and prepare the base for and set tile and marble.

Number of Questions 50
Time allowed (hours) 2

| Subject Area | # Quest. |
|-----------------------------|----------|
| Plan Reading & Estimating | 6 |
| Substrates | 11 |
| Materials | 6 |
| Layout & Planning | 6 |
| Ceramic Tile Installation | 11 |
| Marble & Stone Installation | 5 |
| Safety | 5 |

References

- **American National Standards Specifications for the Installation of Ceramic Tile,** Version 2011.1. American National Standards Institute, 25 West 43rd Street, 4th floor, New York, NY 10036. Available at <http://www.tcnatile.com/>.
- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Setting Tile,** 1995. The Taunton Press, 63 South Main St., P.O. Box 5506, Newton, CT 06470. Available at www.taunton.com.

- **TCNA Handbook for Ceramic, Glass, and Stone Tile Installation.** Tile Council of North America, 100 Clemson Research Blvd., Anderson, SC 29625. Available at www.tcnatile.com.
- **Tile Your World,** 2003. ISBN: 0-9742754-3-3. Mistflower Press, 6717 Mistflower Lane, Katy, TX 77449. Available at mistflowerpress.com/index.html.

TILE, TERRAZZO & MARBLE

Tile, Terrazzo, and Marble Contractors are those who are qualified to prepare the base, including backing material set, repair and refinish, tile, terrazzo and marble, and to install laminate or non-nailable wood flooring.

Number of Questions 50
Time allowed (hours) 2

| Subject Area | # Quest. |
|---------------------------|----------|
| Plan Reading & Estimating | 6 |
| Substrates | 10 |
| Materials | 6 |
| Layout & Planning | 6 |
| Ceramic Tile Installation | 8 |
| Marble Installation | 4 |
| Terrazzo | 5 |
| Safety | 5 |

References

- **American National Standards Specifications for the Installation of Ceramic Tile,** Version 2011.1. American National Standards Institute, 25 West 43rd Street, 4th floor, New York, NY 10036. Available at <http://www.tcnatile.com/>.
- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Setting Tile,** 1995 copyright. ISBN: 978-1561580804. Taunton Press, 63 South Main Street, P.O. Box 5506, Newtown, CT 06470-5506. Available at www.taunton.com.
- **TCNA Handbook for Ceramic, Glass, and Stone Tile Installation.** Tile Council of North America, 100 Clemson Research Blvd., Anderson, SC 29625. Available at www.tcnatile.com.
- **Terrazzo Specifications and Design Guide,** 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.
- **Tile Your World,** 2003. ISBN: 0-9742754-3-3. Mistflower Press, 6717 Mistflower Lane, Katy, TX 77449. Available at mistflowerpress.com/index.html.

UNDERGROUND UTILITIES

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

Number of Questions 50
Time allowed (hours) 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

- **Basic Safety.** 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/>
- **Study Guide for Utilities Contractors, 2nd edition,** 2014. ISBN: 978-1-269-78571-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

UNIT MASONRY, MARBLE & EXTERIOR VENEER CONTRACTOR (ENGLISH OR SPANISH)

A Unit Masonry, Marble & Exterior Veneer Contractor is qualified and certified to select, cut and lay brick and concrete block or any other unit masonry products, or clay products, rough cut and dress stone, artificial stone and precast blocks, structural glass brick or block, decor block and veneer, laid at random or in course with or without mortar, or to do any part of any combination thereof and shall include the application of tile to floors and exterior wall surfaces; provided, however that the scope of works shall not include the pouring, placing or finishing of cast-in-place concrete except for masonry or precast concrete fences.

| | |
|----------------------|----|
| Number of Questions | 75 |
| Time allowed (hours) | 3 |

| Subject Area | # Quest. |
|---------------------------|----------|
| Plan Reading & Estimating | 7 |
| Masonry Units | 13 |
| Mortar & Grout | 12 |
| Reinforcement | 12 |
| Masonry Installation | 15 |
| Marble & Tile | 9 |
| 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 2017 - Building,** 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Masonry Level One,** 2013. ISBN: 0133402487. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

- **Masonry Level Three,** 2005. ISBN: 978-0-13-109169-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Masonry Level Two,** 2005. ISBN: 978-0-13-109164-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Setting Tile,** 1995 copyright. ISBN: 978-1561580804. Taunton Press, 63 South Main Street, P.O. Box 5506, Newtown, CT 06470-5506. Available at www.taunton.com.

UNLIMITED INSULATION (ENGLISH OR SPANISH)

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. |
|------------------------------------|----------|
| Insulation Installation | 13 |
| Insulation Materials & Accessories | 12 |
| Plan Reading & Estimating | 5 |
| Safety | 5 |
| Systems Insulation | 10 |
| Theory | 5 |

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 - Energy Conservation,** 2017. ISBN: 978-1-60983-695-5. 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>.
- **Study Guide for Insulation.** ISBN: 978-0-136-06315-5. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at <http://nccer.pearsonconstructionbooks.com>

UNLIMITED PAINTING

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

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