

MIAMI-DADE COUNTY EXAM DESCRIPTIONS 2019

The following are the examination descriptions for Miami-Dade County for 2019. Note that all examinations are available in English, Spanish, or Haitian Creole. Please make sure to let the Licensing Agency know of your language preference when applying for your examination.

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BUILDING CONTRACTOR

Building Contractor is a contractor whose services are limited to construction of commercial buildings and single dwelling or multiple dwelling residential buildings, which commercial or residential buildings do not exceed three (3) 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 and has a qualifying agent with the experience, knowledge, and skill gained by not less than four (4) years' experience for a State of Florida certified or registered general, general building, building or sub-general contractor with at least one (1) year as either a superintendent or foreman or has an accredited college-level education in a construction related field equivalent thereto, or any combination thereof, with at least one year of proven experience as a superintendent or foreman and who has satisfactorily passed a building contractors' examination. A building contractor may construct, contract for, and take out permits for the work of any specialty building contractor subject to the limitations contained herein.

Number of Questions	75
Time allowed (hours)	3
Subject Area	# Quest.
Plan Reading & Estimating	9
Sitework	5
Concrete	12
Masonry	8

Structural Steel	4
Carpentry & Metal Framing	10
Roofing	4
Associated Trades	3
Interior Finishes	4
Exterior Finishes	4
Safety	7
Hurricane Zone Building Contractor	5

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 BUILDING MAINTENANCE

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	75
Time allowed (hours)	3
Subject Area	# Quest.
Concrete	4
Carpentry	14
Doors & Windows	4
Drywall	6
Painting	12
Interior Finishes	6
Exterior Finishes	6

Thermal & Moisture Protection	3
Safety	9
Hurricane Zones for Building Maintenance	11

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>.

BUSINESS PROCEDURES

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	75
Time allowed (hours)	3

Subject Area	# Quest.
Business Organization	3
Licensing	3
Lien laws	4
Tax Laws	5
Safety OSHA	5
Labor Laws	8
Contract Management	10
Project Management	8
Estimating & Bidding	9
Financial Management	9
Risk Management	6
Dade County Municipal Code - Chapter 10	5

References

- **Dade County Municipal Code - Chapter 10**, 2015. Dade County Florida, FL. Available at www.municode.com/Library/FL/Miami_-_Dade_County. Candidate printed versions permitted in testing room if exam is open ...
- **FLORIDA - NASCLA Contractors Guide to Business, Law and Project Management**, 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.

CONCRETE FORMING AND PLACING

A Concrete Forming and Placing is qualified and certified to proportion, batch and mix aggregates, cement and water to agreed specifications; to construct forms and framework for the casting and shaping of concrete, including but not limited to columns, beams, decks and window frames; to place and erect reinforcing steel and miscellaneous embedded steel; and to pour, place and finish concrete, including terrazzo.

Number of Questions	75
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading & Estimating	6
Properties of Concrete	8
Preparation for Placement	5
Reinforcement	6
Formwork	7
Placement & Finishing	13
Specialized Installations & Finishes	8
Quality Control & Curing	17
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 SLAB SAWING & CORE DRILLING CONTRACTOR

SCOPE: Concrete Slab Sawing and Core Drilling Contractor is a contractor qualified and certified to cut and/or core concrete, asphalt or any masonry combination thereof. Where cutting or coring is done on any structural member of any building or structure, it shall be under the direct supervision of the general or prime contractor and professional engineer who is responsible for that building or structure. All cutting or coring is to be approved by and coordinated between the general or prime contractor and the specialty or subcontractor as to the layout of the work to be performed. 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	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading & Estimating	4
Properties of Concrete	16
Tools & Equipment	5
Reinforcement	10
Types of Concrete Construction	20
Rigging Equipment & Practices	6
Safety	7
Building and Municipal Codes	7

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 2014**, 2014. ISBN: 0133823059. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

DEMOLITION

A Demolition Contractor is a contractor qualified and certified to demolish, wreck or disassemble buildings or other structures or parts thereof and remove the debris there from in such a manner that adjoining structures and properties and parts thereof and workmen and other persons may be kept safe.

Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
Plan Reading & Interpretation	10
Structural Concrete	8
Structural Masonry	6
Structural Framing	5
Structural Steel	7
Blasting	6
Rigging and Cranes	22
Safety	11

References

- **Carpentry Level One, Carpentry Fundamentals 2013**, 2013. 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**, 2013. ISBN: 0133402487. 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.

DRYWALL

A Drywall is qualified and certified to install gypsum drywall products to studs, joists and suspended ceiling channels and to fabricate and install metal accessories and all necessary trim in connection therewith including metal studs, runners, hangers, channels, drywall metal suspension accessories and prefabricated ceiling materials, provided that any plaster work or trowelled material, application of block or wood partitions shall not be a part of the scope of such work.

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Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
Plan Reading & Estimating	7
Construction Materials & Methods	10
Thermal & Moisture Protection	5
Drywall Installation	12
Drywall Finishing	12
Steel Framing	12
Exterior Cladding	7
Interior Specialties & Finishes	5
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

FENCE

A Fence Contractor is a contractor qualified and certified to fabricate, assemble, erect and install fences of masonry, wire, concrete, wood and other fence materials, in such manner that an acceptable fence can be erected complying with applicable regulations including zoning regulations.

Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
Plan Reading & Estimating	7
Layout & General Math	11
Wood Fencing	15
Masonry Fencing	14
Metal & Chain Link Fencing	12
Safety	12
Hurricane zone Fencing	4

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

GENERAL CONTRACTOR

General Contractor is a contractor whose services are unlimited as to the type of work, height, area or complexity of construction, and has a qualifying agent with the experience, knowledge and skill gained by not less than four (4) years' experience for a State of Florida certified or registered general contractor with at least one (1) year as either a superintendent or foreman or four (4) years' experience as a State of Florida certified or registered building contractor or sub-general contractor or has an accredited college-level education in a construction-related field equivalent thereto, or any combination thereof, with at least one year of proven experience as a superintendent or foreman and who has satisfactorily passed a general contractors' examination. A general contractor may do, contract for, and take out permits for the work of any specialty building contractor subject to the limitations contained herein.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading & Estimating	10
Sitework	5
Concrete	10
Masonry	5
Structural Steel	10
Carpentry & Metal Framing	10
Roofing	4
Associated Trades	2
Interior Finishes	5
Exterior Finishes	5
Safety	4
Hurricane Zone Building Contractor	5

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, Carpentry Fundamentals 2013**, 2013. 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**, 2014. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.

GLASS & GLAZING

A Glass and Glazing is qualified and certified to fabricate, install and attach windows of any type, fixed or movable, and swinging or sliding glass doors to building walls or columns erected by others including installation of glass-holding or supporting mullions or horizontal bars which in turn are attached to building walls or columns erected by others, including the cutting and installation of glass, and shall also include metal accessories and prefabricated glass, metal or plastic curtain walls or panels. The scope of work shall include the caulking incidental to all such work and shall include the fabrication and installation of garage and industrial doors and shower and tub enclosure doors and metal fascias, store front awnings or canopies.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading & Estimating	5
Glass & Glazing	18
Plastic & Glazing	4
Sealants	15
Curtain Walls	8
Structural Glazing Systems	5
Bath Enclosures & Mirrors	6
Safety	7
Hurricane Zone Glass and Glazing.	7

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.

JOURNEYMAN AIR CONDITIONING

A Journeyman Air Conditioning may only work in the employ of an Air Conditioning Contractor (Unlimited) holding a certificate of competency to install, repair, alter, add to or change any system of air conditioning, heating and ventilating, unlimited in horsepower or tons, including any or all duct systems necessary to make complete an 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 that boilers or unfired pressure vessels shall not be a part of the scope of work.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Knowledge	20
Piping	8
Systems & Sizing	20

Equipment	8
Maintenance	15
Plan Reading	4

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.

JOURNEYMAN BURGLAR ALARM 2014

A Burglar Alarm Journeyman may only work in the employ of a Burglar Alarm Specialty Electrical Contractor holding a certificate of competency to install, repair, alter, add to or change any system electrically energized, in whole or in part, for the detection, prevention or control of burglary. The scope of these systems shall include conductors and raceways, radio frequency carriers, laser beams, light beams, sonic beams, and any other means of signal transmissions, as well as all apparatus pertaining to burglar alarm systems. A burglar alarm 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 switch within six (6) feet of the equipment to be energized.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Electrical Knowledge	9
Intrusion Detection	20
Acoustical Installation	24
Notification Appliances & Signaling Circuits	16
Power Supplies	4
Supervisory Stations	2

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at 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**, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

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

JOURNEYMAN ELECTRICIAN 2014

A Journeyman Electrician may only work in the employ of an Electrical Contractor holding a certificate of competency in the field; 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 including the electrical installations and systems within plants and substations, all in such manner as to comply with all plans, specifications, codes, laws and regulations applicable and his scope of work shall include that of a room air-conditioning contractor, installation only.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Electrical Theory & Principles	15
Plan Reading	5
Wiring & Protection	14
Wiring Methods & Materials	18
Motors & Controls	5
Equipment for General Use	6
Special Occupancies	2
Special Equipment	3
Special Conditions	2
Communication Systems	5

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- **NFPA 70 - National Electrical Code**, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

JOURNEYMAN FIRE ALARM 2014

A Fire Alarm Journeyman may only work in the employ of a Fire Alarm Contractor holding a certificate of competency to install, repair, alter, add to or change any system, electrically energized, in whole or in part, for the detection, prevention or control of fire, noxious gases, liquids or atomic radiation. The scope of these systems shall include conductors and raceways, radio frequency carriers, laser beams, light beams, sonic beams, and any other means of signal transmissions as well as all apparatus pertaining to fire alarm systems. A fire alarm 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 switch within six (6) feet of the equipment to be energized.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Electrical Knowledge	12
Initiating Devices	18
Installation Requirements Electrical	18
Notification Appliances & Signaling Circuits	15
Systems Testing	11
Supervisory Stations	1

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. 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**, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- **NFPA 72 - National Fire Alarm and Signaling Code**, 2010. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- **Understanding and Servicing Alarm Systems**, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

JOURNEYMAN 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 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	64
Time allowed (hours)	3

Subject Area	# Quest.
Code & General Knowledge	8
Plan Reading	6
Wet Fire Sprinkler Systems	14
Dry-Pipe Sprinkler Systems	13
Water Supply, Storage & Distribution	7
Materials & Methods	12
Underground Pipe, Hydrants & Stand Pipe Systems	3
Safety	0
Hangers & Supports	1

References

- **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 1 2013**, 2013. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
- **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 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	75
Time allowed (hours)	3

Subject Area	# Quest.
General Knowledge	12
Isometrics & Plan Reading	8
LP gas	9
Pipefitting Math	8
Safety	6
Sizing and Design	8
System installation	18
Venting	6

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

A Journeyman General Mechanical may only work in the employ of an General Mechanical Contractor holding a certificate of competency; to install, maintain, repair, alter or extend air conditioning, refrigeration, heating, ventilating, boiler and unfired pressure vessel systems, and all appurtenances, apparatus or equipment used in connection therewith; also, piping, duct work, insulation of pipes, vessels and ducts, pressure and process piping, installation of chilled water lines and related work incidental thereto, pneumatic control piping, gasoline tank and pump installations, piping for gasoline tank and pump installations, fire sprinkler systems and standpipes, air piping, vacuum line piping, oxygen lines, nitrous oxide piping, ink and chemical lines, fuel transmission lines, mechanical sections of sewage disposal and water treatment plants and installing 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 as to comply with all plans, specifications, codes, laws and regulations applicable; including any excavation work incidental thereto, such as but not limited to liquefied petroleum or natural gas fuel lines within buildings, potable water lines, or connections thereto, sanitary sewer lines, swimming pool piping and filters and electrical work; also including the work of a specialty mechanical contractor, except for elevator and transporting assembly installations.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Knowledge	12
Piping	9
Equipment	14
Maintenance	13

Plan Reading	7
Systems & Sizing	20

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

A Journeyman Heating may only work in the employ of a Heating Contractor holding a certificate of competency 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	75
Time allowed (hours)	3

Subject Area	# Quest.
General Knowledge	21
Piping	15
Systems & Sizing	16
Equipment	9
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**, 2008. ISBN: 978-0-13-604492-5. 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 INSULATION

A Journeyman Insulation may only work in the employ of an Insulation Contractor holding a certificate of competency to install, maintain, repair, alter or extend any insulation primarily installed to prevent loss or gain of heat from internal or external sources in pipes, vessels, ducts or in built-up refrigerated boxes or rooms, and such installations to include any protective coating thereof involved with insulation.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Code Compliance	9
Insulation	51
Safety	15

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>

JOURNEYMAN PLUMBER

A Journeyman Plumber may only work in the employ of a Plumbing Contractor holding a certificate of competency 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 of chilled water lines or related work incidental thereto.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Drain, Waste & Vent Systems	10
Fixtures & Fittings	5
General Knowledge	8
Isometrics & Plan Reading	9
Plumbing Math	5
Storm & Roof Drainage	8
Water Heaters	5
Water Supply and Distribution	9
Safety	7
Fuel Gas Systems	6
Hurricane zone items for Plumbing	3

References

- **Florida Building Code 2017 - Building**, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - 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 Journeyman Refrigeration 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 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	75
Time allowed (hours)	3

Subject Area	# Quest.
General Knowledge	12
Maintenance and Service	14
Control Circuits	13
Carpentry	9
Masonry	9
Insulation	7
Safety	11

References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at 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
- **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 & Non-ferrous ducting in ventilation and exhaust systems.

Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
Plan Reading, Estimating & Math	10
Code & General Knowledge	10
Layout & Fabrication	12
Installation	12
Air Properties & Distribution	12
Air Distribution Accessories	7
Architectural Sheet Metal	7
Safety	5

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 SIGN ELECTRICIAN 2014

An Journeyman Sign Electrician may only work in the employ of a Electrical Sign Contractor holding a certificate of competency to install, repair, alter, add to or change any electrical wires, apparatus, raceways, conduit or any part thereof, on electrical signs. Such contractor may connect to an existing sign circuit, beyond the last overcurrent device, and may contract for and take out building permits for the erection of signs.

Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
Electrical Signs & Outline Lighting	20
Grounding & Bonding	14
General Electrical Knowledge	15
Motors & Controls	8
Transformers	6
Wiring & Protection	7
Wiring Methods & Materials	5

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.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 75
Time allowed (hours) 3

Subject Area	# Quest.
General Knowledge	15
Piping	20
Equipment	9
Maintenance	15
Systems & Sizing	16

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>.

LATHING & PLASTERING

A Lathing and Plastering Contractor is a contractor qualified and certified to apply and affix wood, gypsum or metal lath or any other product prepared or manufactured, including the placing of metal studs and runners to which lath is to be applied, to provide key or suction bases for the support of plaster coatings, to provide hangers, channels and other mechanical suspension work for the support of lath or acoustical tile or other prefabricated ceiling materials, including the channel iron work for the support of metal or other fire resistive lath on walls, ceilings or soffits, or for solid plaster partitions; and to coat surfaces with a mixture of sand or other aggregate, gypsum, plaster, Portland cement or quick lime and water or any combination of such materials as to create a permanent surface coating and which coatings are usually applied with a plasterer's trowel or by pneumatic pressure on any surface which offers a mechanical key for the support of such coatings or to which the coating will adhere by suction. The scope of work shall not include the erection of wood stud or masonry walls. Such contractor may perform the work of a drywall contractor.

Number of Questions	75
Time allowed (hours)	3
Subject Area	# Quest.
Plan Reading & Estimating	5
Framing	16
Lathing	16
Materials	13
Application & Finishing	13
Safety	12

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**, 2009. ISBN: 978-0-13-609877-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

MAINTENANCE ELECTRICIAN 2014

A Maintenance Electrician is a person qualified and certified by examination to maintain electrical installations. A maintenance electrician can perform or supervise the work of other personnel under a premise permit providing that such work shall be confined to the repair of existing branch circuits, fixtures, apparatus or equipment connected thereto, and shall include the relocation of existing branch circuits and the switching and de-energizing of existing facilities for safety purposes, contained and used upon the premises or building, owned, occupied or otherwise controlled by the person, firm or corporation by whom the maintenance electrician is regularly employed. The maintenance electrician's work shall not include the installation, alteration, or replacement of service equipment or any feeder to any center or centers of service equipment.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Electrical Knowledge	22
Wiring & Protection	14
Wiring Methods & Materials	14
Servicing Applications	18
Safety	7

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- **NFPA 70 - National Electrical Code**, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- **Trade Knowledge**. Prov, 13614 Progress Blvd., Alachua, FL 32615. This reference is not a book for purchase. This reference represents the general knowledge that a candidate gains through experience in their trade.

MASTER AC (LIMITED)

A Master Air Conditioning (Limited) is a specialty mechanical contractor qualified and certified to install, repair, alter, or extend any system of air conditioning and warm air heating and ventilation in connection therewith, of a size not exceeding fifteen (15) tons in any type of building providing the total conditioning load in any common area does not exceed fifteen (15) tons, including any or all duct systems necessary to make complete an air conditioning system, and including the installation of a condensate drain from such an air conditioning unit to an existing safe waste or other approved disposal other than a direct connection to a sanitary disposal system; provided that boiler and unfired pressure vessels shall not be part of the scope of work.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Knowledge	12
Piping	14
Systems & Sizing	25
Equipment	12
Maintenance	8
Plan Reading	4

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, 2nd Edition**, 2013. ISBN: 978-1-269-23865-6. 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)

A Master Air Conditioning (Unlimited) is a specialty mechanical contractor qualified and certified to install, repair, alter, add to or change any system of air conditioning, heating and ventilating, unlimited in horsepower or tons, including any or all duct systems necessary to make complete an 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 that boilers or unfired pressure vessels shall not be a part of the scope of work.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Piping	14
Equipment	10
Maintenance	10
Plan Reading	6
Systems & Sizing	25
General Knowledge	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 - Building**, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
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- **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.

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 AMMONIA REFRIGERATION

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	75
Time allowed (hours)	3

Subject Area	# Quest.
General Knowledge	19
Piping	37
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.

MASTER BURGLAR ALARM 2014

Burglar Alarm Electrical is a contractor qualified to install, repair, alter, add to or change any system electrically energized, in whole or in part, for the detection, prevention or control of burglary. The scope of these systems shall include conductors and raceways, radio frequency carriers, laser beams, light beams, sonic beams, and any other means of signal transmissions, as well as all apparatus pertaining to burglar alarm systems. A burglar alarm 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 switch within six (6) feet of the equipment to be energized. Such

contractor shall have as a qualifying agent a burglar alarm master. Also burglar alarm journeymen are required in this trade.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Electrical Knowledge	10
Acoustical Installation	10
Power Supplies	5
Intrusion Detection	36
Notification Appliances & Signaling Circuits	10
Supervisory Stations	4

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at 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**, 2014. ISBN: 9781455906727. 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.

MASTER ELECTRIC UTILITY

A Utility Electrical Contractor is qualified and certified to install, repair, alter, add to or change any electrical wires, apparatus, raceways, conduit, or any part thereof, on underground or overhead electric utilities transmission and distribution lines or distribution systems including such distribution work within power plants and sub-stations. The scope of work in this classification shall be limited to the work directly involved in performing contract work for the construction of electric utility distribution systems and shall include any excavation and paving work incidental thereto.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading & Estimating	6
Earthwork	14
Paving	3
Underground Pipe Assembly & Installation	10
Concrete Forming, Reinforcement & Placing	14
Electrical	16
Splicing and Terminations	5
Safety	7

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.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.

- **Damage Prevention Guide**. Sunshine State One Call of Florida, Inc., 11 Plantation Road, DeBary, FL 32713. Available at <http://www.sunshine811.com/> Candidate printed versions permitted in testing room if exam is open book.
- **FL DOT Utility Accommodation Manual**, 2010. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. Available at www2.dot.state.fl.us/proceduraldocuments/procedures/bin/710020001/710020001.pdf. Candidate printed versions permitted in testing room if exam is open book.
- **Public Works Manual Part 1: Standard Details**. Public Works Department of Metropolitan Dade County, 111 NW 1st St. Suite 1600, Miami, FL 33128-1970. To purchase call: Miami-Dade County, Public Works and Waste Management Dept., Reproduction Services 305-375-2690.
- **Public Works Manual Part 2: Design and Construction**. Public Works Department of Metropolitan Dade County, 111 NW 1st St. Suite 1600, Miami, FL 33128-1970. To purchase call: Miami-Dade County, Public Works and Waste Management Dept., Reproduction Services 305-375-2690.
- **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
- **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

MASTER ELECTRICIAN 2014

An Electrical Contractor is a contractor whose principal contracting business consists of the execution of contracts requiring the experience, financial means, 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 including the electrical installations and systems within plants and substations, all in such manner as to comply with all plans, specifications, codes, laws and regulations applicable and his scope of work shall include that of a room air-conditioning contractor, installation only. The scope of such contractor's work shall apply to private and public property and shall include any excavation and paving work incidental thereto, and shall include the work of all specialty electrical contractors. Such contractors shall subcontract with a qualified contractor in the field concerned, all other work incidental to the work, but which is specified herein as being the work of a trade other than that of an electrical contractor.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Electrical Knowledge	10
Communication Systems	5
Equipment for General Use	4
Motors & Controls	4
Plan Reading	6
Special Conditions	6
Special Equipment	6

Special Occupancies	6
Wiring & Protection	10
Wiring Methods & Materials	18

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. 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**, 2014. ISBN: 9781455906727. 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.

MASTER FIRE ALARM 2014

A Master Fire Alarm is a specialty electrical contractor qualified and certified to install, repair, alter, add to, or change any system, electrically energized, in whole or in part, for the detection, prevention or control of fire, noxious gases, liquids or atomic radiation. The scope of these systems shall include conductors and raceways, radio frequency carriers, laser beams, light beams, sonic beams, and any other means of signal transmissions as well as all apparatus pertaining to fire alarm systems. A fire alarm 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 switch within six (6) feet of the equipment to be energized. Such contractor shall have as a qualifying agent a fire alarm master. Also fire alarm journeymen are required in this trade.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Electrical Knowledge	19
Installation Requirements Electrical	12
Initiating Devices	20
Notification Appliances & Signaling Circuits	11
Systems Testing	11
Supervisory Stations	2

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at 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**, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- **NFPA 72 - National Fire Alarm and Signaling Code**, 2010. 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.

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	75
Time allowed (hours)	3

Subject Area	# Quest.
General Knowledge	10
Isometrics & Plan Reading	7
LP gas	8
Pipefitting Math	9
Safety	8
Sizing and Design	10
System installation	15
Venting	8

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 GENERAL MECHANICAL

A Master General Mechanical is a contractor whose contracting business consists of the execution of contracts requiring the experience, financial means, knowledge and skill to perform the following: install, maintain, repair, alter or extend air conditioning,

refrigeration, heating, ventilating, boiler and unfired pressure vessel systems, and all appurtenances, apparatus or equipment used in connection therewith; also, piping, duct work, insulation of pipes, vessels and ducts, pressure and process piping, installation of chilled water lines and related work incidental thereto, pneumatic control piping, gasoline tank and pump installations, piping for gasoline tank and pump installations, fire sprinkler systems and standpipes, air piping, vacuum line piping, oxygen lines, nitrous oxide piping, ink and chemical lines, fuel transmission lines, mechanical sections of sewage disposal and water treatment plants and installing 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 as to comply with all plans, specifications, codes, laws and regulations applicable. Such contractor shall have as qualifying agent a general mechanical master. The scope of work of such contractor shall also include any excavation work incidental thereto, but shall not include any work specified in this chapter as being the work of any other trade or contractor, such as but not limited to liquefied petroleum or natural gas fuel lines within buildings, potable water lines, or connections thereto, sanitary sewer lines, swimming pool piping and filters and electrical work. The scope of the work of such a contractor shall also include the work of a specialty mechanical contractor, except for elevator and transporting assembly installations; and if there is work incidental to such contractor's authorized scope of work to be performed pursuant to contract for which such contractor does not hold a certificate of competency, such work shall be subcontracted to a qualified contractor in the trade concerned.

Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
General Knowledge	12
Piping	12
Systems & Sizing	20
Equipment	12
Maintenance	13
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 - 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.

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- **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 HEATING

A Master Heating 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 75
Time allowed (hours) 3

Subject Area	# Quest.
General Knowledge	12
Piping	20
Systems & Sizing	20
Equipment	6
Maintenance	12
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 - 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.

MASTER INSULATION

An Master Insulation is a specialty mechanical contractor qualified and certified to install, maintain, repair, alter or extend any insulation primarily installed to prevent loss or gain of heat from internal or external sources in pipes, vessels, ducts or in built-up refrigerated boxes or rooms, and such installations to include any protective coating thereof involved with insulation.

Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
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Plan Reading & Estimating	8
Theory	6
Insulation Materials & Accessories	20
Insulation Installation	18
Systems Insulation	13
Safety	10

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>

MASTER LAWN SPRINKLER

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	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading & Estimating	6
Planning & Layout	6
Materials	12
Controls	10
Irrigation Installation	18
Cross Contamination & Backflow Prevention	9
Reclaimed Water	6
Safety	8

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.

MASTER LOW VOLTAGE 2014

A Master Low Voltage Contractor is 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. The scope of the work of such a contractor shall not include the work of burglar alarm and fire alarm specialty electrical contractors.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Electrical Knowledge	26
Wiring & Protection	4
Wiring Methods & Materials	16
Equipment for General Use	6
Special Occupancies	7
Special Equipment	4
Special Conditions	7
Communication Systems	5

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- **NFPA 70 - National Electrical Code**, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- **Understanding and Servicing Alarm Systems**, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

MASTER PLUMBER

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 of chilled water lines or related work incidental thereto.

Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
Drain, Waste & Vent Systems	8
Fixtures & Fittings	8
General Knowledge	8
Isometrics & Plan Reading	8
Plumbing Math	8
Storm & Roof Drainage	5
Water Heaters	8
Water Supply and Distribution	10
Safety	5
Fuel Gas Systems	4
High wind zone items for Plumbing	3

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

MASTER 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 75
Time allowed (hours) 3

Subject Area	# Quest.
General Knowledge	12
Piping	10
Equipment	11
Maintenance	12
Plan Reading	10
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 - 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.

MASTER REFRIGERATION LIMITED

A Master Refrigeration (Limited) is a mechanical contractor, qualified and certified to install, maintain, repair or alter any system of refrigeration not exceeding five (5) horsepower, self-contained or with remote compressor, where such refrigeration system is for the purpose of food preservation and/or processing, other than human-comfort refrigeration systems. The scope of work of a Refrigeration Contractor (Limited) shall be limited to refrigeration systems using Group I refrigerants only.

Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
General Knowledge	20
Piping	25
Maintenance	5
Plan Reading	5
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.

MASTER REFRIGERATION UNLIMITED

A Master Refrigeration (Unlimited) is a mechanical contractor qualified and certified 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	20
Piping	20
Systems & Sizing	22
Maintenance	6
Plan Reading	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 - 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.

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 2014

Master Sign Electrician is qualified and certified to install, repair, alter, add to or change any electrical wires, apparatus, raceways, conduit or any part thereof, on electrical signs. Such contractor may connect to an existing sign circuit, beyond the last overcurrent device, and may contract for and take out building permits for the erection of signs.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Basic Electricity & Wiring	15
Electrical Signs & Outline Lighting	22
Grounding & Bonding	11
Motors & Controls	8
Transformers	3
Wiring & Protection	10
Wiring Methods & Materials	6

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- **NFPA 70 - National Electrical Code**, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

MASTER STEAM GENERATING BOILER & BOILER PIPING

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Knowledge	15
Piping	12
Boiler Construction	12
Systems and Sizing	14
Maintenance and Repair	14

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 - 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.
- **Advanced Rigging**, 2012. ISBN: 0-13-292237-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available @ <http://nccer.pearsonconstructionbooks.com>
- **Steam Plant Operation**, 10th edition. ISBN: 9781259641336. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. available <https://www.mheducation.com>
- **Boiler Operator's Guide**, 4th edition. ISBN: 978-0070365742. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.

MASTER SWIMMING POOL MAINTENANCE (RESIDENTIAL)

A Swimming Pool Maintenance (Limited) is 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

MASTER SWIMMING POOL MAINTENANCE (COMMERCIAL)

A Master Swimming Pool Maintenance (Unlimited) is 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.

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

MASTER 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

MASTER TRANSPORTING ASSEMBLY INSTALLER

A Transporting Assembly Installation Contractor is a specialty mechanical contractor qualified and certified to install, maintain, alter & extend any transporting assembly, as defined by the South Florida Building Code. Transporting assemblies shall mean any permanent or semi-permanent device, manually or power-operated, other than elevators, dumbwaiters or escalators used for transporting material or persons in any horizontal, inclined or vertical direction, and such assemblies shall include but shall not be confined to the following: A. Amusement devices used to convey persons as a form of amusement. 2. Inclined devices, with or without seats, but not considered as escalators. 3. Man hoists, stage & orchestra lifts, tiering & piling machines, skip hoists & wharf ramps. 4. Belt, bucket, scoop, roller or similarly inclined or vertical freight conveyors. 5. Hoists which are used for handling material during construction of buildings & structures.

Number of Questions	67
Time allowed (hours)	3
Subject Area	# Quest.
Transporting Assemblies	20
Amusement Devices	14
Inclined Devices	5
Man Hoists	8
Belt, Bucket & Scoop, Rollers	5
Material Handling Hoists	6
Welding	0

Safety

9

References

- **ASME A90.1: Safety Standard for Belt Manlifts**, 2009. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at <http://www.asme.org/shop/>.
- **ASTM F2291-06a: Standard Practice for Design of Amusement Rides & Devices**, 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.
- **Millwright Level Five 2009**, 2009. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Millwright Level Four 2008**, 2008. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **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>.

MASTER TV ANTENNA 2014

A Master TV Antenna Specialty Electrical Contractor is qualified and certified to install, repair, alter, add to or change any privately owned TV antenna systems on and in multiple occupancy, residential or commercial buildings of three (3) or more tenants, rooms or apartments all connected to a central master system, as well as in theaters, schools and like public occupancies. Such systems may be electrically energized in whole or in part for the reception, amplification and distribution of TV signals. The scope of these systems shall include conductors and raceways, radio frequency carriers, laser beams and any other means of signal transmission as well as all apparatus pertaining to master TV antenna systems, including but not limited to amplifiers, splitters, cables and outlets for connecting individual TV sets. A master TV antenna specialty electrical contractor may connect to an existing separate circuit of approved capacity, which is terminated to an approved outlet, junction box, or fused disconnect switch within six (6) feet of the equipment to be energized.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Electrical Knowledge	15
Low Voltage, Signaling & Remote Control	8
Radio & Television Equipment	8
Community antenna television & radio distribution systems	12
Grounding & Bonding	24
Safety	8

References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.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.

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

MASTER WARM AIR HEATING

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 75
Time allowed (hours) 3

Subject Area	# Quest.
General Knowledge	20
Piping	20
Equipment	5
Maintenance	10
Systems & Sizing	20

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

A Mechanical Maintenance 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.

Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
General Knowledge	20
Piping	7
Equipment	18
Maintenance	20
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

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 75
Time allowed (hours) 3

Subject Area	# Quest.
Plan Reading & Estimating	15
Concrete and Reinforcement	10
Metal Storm Panel Shutters	6
Wood Storm Shutters	5
Installation & Anchorage	25
Building and Municipal Codes	7

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	10
Metal Decking	17
Metal Siding	10
Welding & Cutting	8
Doors & Windows	4
Rigging Equipment & Practices	6
Safety	12
High Velocity Hurricane Zone Metal Decking & Siding	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
- **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.
Building and Municipal Codes	6
Characteristics and Properties of Metals	13
Metal Cutting	15
Safety	5
Welding Practices	17
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>.

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

PNEUMATIC CONCRETING & PRESSURE GROUTING

Pneumatic Concreting and Pressure Grouting Contractor is a contractor qualified and certified to proportion and apply concrete to surfaces by pneumatic methods, chip loose concrete, sandblast and clean reinforcing, batch and proportion cement, sand and water, to erect forms and framework to which concrete is to be applied pneumatically and place miscellaneous reinforcing for repair of concrete and to proportion and place cement and intergrout by pneumatic pumping methods that under an agreed specifications subsurface load bearing capacities can be stabilized or previously settled structures raised or restored to plumb, grade or alignment.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Building and Municipal Codes	13
Foundation Grouting	6
Plan Reading & Estimating	10
Properties of Concrete & Grout	16
Safety	8
Shotcrete Construction	22

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

- **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 to Shotcrete, 506R.90**, 1995. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. <https://www.concrete.org/store.aspx>

PRESTRESSED, PRECAST CONCRETE ERECTION CONTRACTOR

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)	3

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 Upper Lewisburg Salem Road, Brookville, OH 45309. Available at www.pci.org/

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	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading & Estimating	12
Reinforcement Placement	16
Reinforcement Connections	16
Reinforcement Cutting & Bending	11

Rigging Equipment & Practices	8
Safety	11
Hurricane Zone Reinforcing Steel Placement	1

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.

RESIDENTIAL CONTRACTOR

Residential contractor is a contractor whose services are limited to construction, remodeling, repair, or improvement of one-family, two-family, or three-family residences not exceeding two habitable stories above no more than one uninhabitable story and accessory use structures in connection therewith and has a qualifying agent with the experience, knowledge and skill gained by not less than four (4) years' experience for a State of Florida certified or registered general, general building, building, sub-general, residential or sub-building contractor with at least one (1) year as either a superintendent or foreman or has an accredited college-level education in a construction-related field equivalent thereto, or any combination thereof, with at least one year of proven experience as a superintendent or foreman and who has satisfactorily passed a residential contractors' examination. A residential building contractor may do, contract for, and take out permits for the work of any specialty contractor subject to the limitations contained herein.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading	5
Sitework & Foundations	5
Concrete and Reinforcement	12
Masonry	9
Carpentry	12
Roofing	5
Interior Finishes	5
Exterior Finishes	5
Associated Trades	5
Safety	7
Hurricane Zone Residential	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
- **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

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)	3

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 Rigging**, 2009. ISBN: 978-0-13-609916-1. NCCER MATS Testing, 13614 Progress Blvd, Alachua, FL 32615. <http://nccer.pearsonconstructionbooks.com>
- **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>

- **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

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	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading & Estimating	9
Deck & Underlayment	10
Flashing	7
High Slope Roofing	16
Low Slope Roofing	16
Safety	7
High Wind Zone Roofing	10

References

- **Advanced Roof Systems**, 2014. ISBN: 0-13-378702-8. 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.
- **Core Level 1 2015**, 2015. 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
- **OR Roofing Study Guide - COMING soon**. Prov Bookstore, 13614 Progress Blvd, Alachua, FL 32615. Replaces Core Level 1 2015, 27403-14 Advanced Roof Systems and 27202-14 Roofing Applications
- **Roofing Applications**, 2013. ISBN: 0-13-377902-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at

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

ROOM AIR CONDITIONING CONTRACTOR

A Room Air Conditioning Contractor is a specialty mechanical contractor qualified and certified to install, service and repair any air conditioning unit consisting of and limited to a package unit, completely self-contained, air-cooled, usually called a room unit and not to exceed three (3) tons and attached to electric power only by the method of a plug-in receptacle. This unit, factory wired and supported only by window or wall supports, shall not have any duct work attached or any method of air distribution other than the unit's factory installed grill; provided that installation of any condensate drain or drains to the outside of the unit is not included in this work. (Ord. No. 69-11, § 9, 2-4-69)

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
General Knowledge	16
Installation	8
Maintenance and Service	15
Control Circuits	10
Associated Trades	10
Mechanical Code	10
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 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Refrigeration and Air Conditioning Technology**, 8th Edition. ISBN: 1305578295. Cengage Learning, PO Box 6904, Florence, KY 41022-6904. <http://www.cengage.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

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	75
Time allowed (hours)	3

Subject Area	# Quest.
Foundations and Concrete	9
Plan Reading & Estimating	18
Safety	16

Understand and apply the building code as it pertains to the construction of screen enclosures and associated work.	7
Screen Enclosures	25

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)
- **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

SIGN CONTRACTOR (NON-ELECTRIC)

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

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading	5
Concrete and Reinforcement	21
Wood	5
Structural Steel	9
Welding	8
Non-Electric Sign	8
Safety	19

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>.

STRUCTURAL STEEL ERECTION

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	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading & Estimating	7
Structural Steel	15
Welding & Cutting	10
Structural Steel-Bolting	6
Metal Decking	6
Metal Buildings	4
Metal Joists & Trusses	11
Rigging and Cranes	11
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

A Swimming Pool Contractor is a contractor whose scope of work involves two (2) or more building trades or crafts and is qualified and certified to excavate, construct, fabricate, install and equip swimming pools and such contractor shall subcontract to a qualified contractor, in the field concerned, all other work set forth in this chapter as being the exclusive work of a plumbing, electrical, mechanical or liquefied petroleum gas contractor.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading & Estimating	4
Site Preparation, Excavation and Backfilling	7
Pool Shell Construction	20
Interior Surface Preparation and Finishing	15
Pool Equipment & Piping	11
Accessory Work	3
Care and Operation	7
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/>.

- **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

<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.

UNIT MASONRY, MARBLE & EXTERIOR VENEER

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**, 2014. ISBN: 013377970X. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.