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## ALUMINUM STRUCTURES & SPECIALTIES

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

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

### References

- **AAF Guide to Aluminum Construction in High Wind Areas**, 2010. Aluminum Association of Florida, 13165 McCrory Place, Suite 185, Orlando, FL 32832. Available at <http://www.aaof.org/>. (Also permitted is the Guide to Aluminum Construction in High-Wind Area ASCE7 Supplement to the 2010 Guide )
- **ASTM D4756-06 Standard Practice for Installation of Rigid PVC Siding & Soffit**, 2006. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>. Candidate printed versions allowed if exam is open book.
- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at [www.provbookstore.com](http://www.provbookstore.com).
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://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](http://www.provbookstore.com)

## BOILER (UNLIMITED)

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

<b>Number of Questions</b>	<b>100</b>
<b>Time allowed (hours)</b>	<b>4</b>
<b>Subject Area</b>	<b># Quest.</b>
General Knowledge	30
Maintenance	7
Piping	26
Plan Reading & Estimating	9
Systems & Sizing	28

### References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://www.provbookstore.com).
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Fuel Gas**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Mechanical**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://www.provbookstore.com).
- **Intermediate Mechanical Study Guide**, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://www.provbookstore.com).

**BUILDING CONTRACTOR**

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

<b>Number of Questions</b>	<b>70</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
Plan Reading & Estimating	10
Sitework	5
Concrete	11
Masonry	8
Structural Steel	4
Carpentry & Metal Framing	9
Roofing	4
Associated Trades	4
Interior Finishes	4
Exterior Finishes	4
Safety	7

**References**

- **2012 Study Guide for Structural Steel**, 2012. ISBN: 978-1-269-08432-1. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://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](http://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 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://www.provbookstore.com)

**BURGLAR & FIRE ALARM ELECTRICAL 2020**

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

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

**References**

- **American Electrician's Handbook**, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- **Low Voltage Wiring: Security/Fire-Alarm Systems**, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at [www.amazon.com](http://www.amazon.com).
- **NFPA 70 - National Electric Code 2017**, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://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](http://www.amazon.com).

**BURGLAR ALARM ELECTRICAL 2020**

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

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

**References**

- **American Electrician's Handbook**, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- **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](http://www.amazon.com).
- **NFPA 70 - National Electric Code 2017**, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://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](http://www.amazon.com).

**BURGLAR ALARM ELECTRICAL 2020 (SPANISH)**

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

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

**References**

- **American Electrician's Handbook**, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- **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](http://www.amazon.com).
- **NFPA 70 - National Electric Code 2017**, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://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](http://www.amazon.com).

**BUSINESS AND LAW**

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.

<b>Number of Questions</b>	<b>50</b>
<b>Time allowed (hours)</b>	<b>2</b>
<b>Subject Area</b>	<b># Quest.</b>
Business Organization	2
Licensing	3
Lien laws	2
Tax Laws	5
Safety OSHA	3
Labor Laws	8
Contract Management	9
Project Management	5
Estimating & Bidding	5
Financial Management	5
Risk Management	3

**References**

- **FLORIDA - NASCLA Contractors Guide to Business, Law and Project Management**, 1st. ISBN: 1-934234-92-3 OR 978-1-934234-92-1. NASCLA, 23309 N. 17th Drive, Building 1, Unit 110, Phoenix, AZ 85027. Available at [www.nascla.org](http://www.nascla.org) or [www.provbookstore.com](http://www.provbookstore.com).

**BUSINESS AND LAW, 2ND EDITION**

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

<b>Number of Questions</b>	<b>50</b>
<b>Time allowed (hours)</b>	<b>2</b>
<b>Subject Area</b>	<b># Quest.</b>
Business Organization	4
Licensing	3
Lien laws	3
Tax Laws	6
Safety OSHA	4
Labor Laws	6
Contract Management	5
Project Management	5
Estimating & Bidding	5
Financial Management	5
Risk Management	4

**References**

- **FLORIDA - NASCLA Contractors Guide to Business, Law and Project Management**, 2nd. NASCLA, 23309 N. 17th Drive, Building 1, Unit 110, Phoenix, AZ 85027.

## COMMERCIAL SWIMMING POOL

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

<b>Number of Questions</b>	<b>50</b>
<b>Time allowed (hours)</b>	<b>2</b>
<b>Subject Area</b>	<b># Quest.</b>
Plan Reading & Estimating	4
Site Preparation, Excavation and Backfilling	5
Pool Shell Construction	14
Interior Surface Preparation and Finishing	10
Tile, Coping and Trimwork	4
Accessory Work	3
Care and Operation	6
Safety	4

### References

- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at [www.provbookstore.com](http://www.provbookstore.com).
- **Florida Building Code 2020 - Building.** 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Swimming Pools: Design and Construction.** Fourth Edition. ISBN: 978-0419235903. Taylor and Francis, 270 Madison Avenue, New York, NY 10016. Available at [www.amazon.com](http://www.amazon.com).

## DEMOLITION

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

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

### References

- **Carpentry Level One.** 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Code of Federal Regulations, Title 29, Part 1926.** 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at <http://bookstore.gpo.gov>. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- **Florida Building Code 2020 - Building.** 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://www.isee.org).
- **Masonry Level One.** 2004. ISBN: 978-0-13-228718-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **NFPA 241 Safeguarding Construction, Alteration and Demolition Operations.** National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).

## DIRECT BURIAL CABLE TELEVISION (CATV) CONTRACTOR 2017

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

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

### References

- **Basic Safety**, ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at [www.provbookstore.com](http://www.provbookstore.com).
- **FL DOT Utility Accommodation Manual**, 2010. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. Available at [www2.dot.state.fl.us/proceduraldocuments/procedures/bin/710020001/710020001.pdf](http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/710020001/710020001.pdf). Candidate printed versions permitted in testing room if exam is open book.
- **NFPA 70 - National Electrical Code**, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).
- **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](http://www.provbookstore.com)

## ELECTRICAL FIRE ALARM 2020

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

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

### References

- **American Electrician's Handbook**, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- **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](http://www.amazon.com).
- **NFPA 70 - National Electric Code 2017**, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://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](http://www.amazon.com).

## ELECTRICAL SIGN CONTRACTOR 2020

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

<b>Number of Questions</b>	<b>40</b>
<b>Time allowed (hours)</b>	<b>2</b>
<b>Subject Area</b>	<b># Quest.</b>
Basic Electricity & Wiring	6
Electrical Signs & Outline Lighting	16
Grounding & Bonding	4
Motors & Controls	3
Transformers	3
Wiring & Protection	4
Wiring Methods & Materials	4

### References

- **American Electrician's Handbook**, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- **NFPA 70 - National Electric Code 2017**, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).

## ELEVATOR INSTALLATION AND MAINTENANCE CATEGORY CLASS "E" (2017)

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

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

### References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at <https://www.mheducation.com/highered/product/american-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html>
- **ASME A17.1-2016 Safety Code for Elevators and Escalators**, 2016. ISBN: 9780791871096. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at <http://www.asme.org/shop/>.
- **ASME A17.3 2015 Safety Code for Existing Elevators and Escalators**, 2015. ISBN: 9780791870259. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at <http://www.asme.org/shop/>.
- **ASME A17.5-11 Elevator and escalator electrical equipment**, 2011. ISBN: 978-1-55436-757-3. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at <http://www.asme.org/shop/>.
- **ASME A18.1 Safety Standard for Platform Lifts and Stairway Chairlifts**, 2014. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at <http://www.asme.org/shop/>.
- **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](http://www.nfpa.org).



## GENERAL CONTRACTOR

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

<b>Number of Questions</b>	<b>81</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
Plan Reading & Estimating	11
Sitework	5
Concrete	12
Masonry	8
Structural Steel	10
Carpentry & Metal Framing	12
Roofing	4
Associated Trades	2
Interior Finishes	5
Exterior Finishes	5
Safety	7

### References

- **2012 Study Guide for Structural Steel**, 2012. ISBN: 978-1-269-08432-1. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://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](http://amazon.com)
- **Carpentry Level One**, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Concrete Finishing Level Two**, 1999. ISBN: 978-0-13-014860-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Masonry Level Three**, 2005. ISBN: 978-0-13-109169-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Study Guide for Commercial Carpentry, 2nd Edition**, 2014. ISBN: 978-1-269-78661-4. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://www.provbookstore.com)

## IRRIGATION SPRINKLER

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

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

### References

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

## JOURNEYMAN BURGLAR ALARM 2020

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

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

### References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at <https://www.mheducation.com/highered/product/american-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html>
- **Low Voltage Wiring: Security/Fire-Alarm Systems**, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at [www.amazon.com](http://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](http://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](http://www.amazon.com).

## JOURNEYMAN ELECTRICIAN 2020

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

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

### References

- **American Electrician's Handbook**, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- **NFPA 70 - National Electric Code 2017**, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).

## 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.

<b>Number of Questions</b>	<b>50</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
General Knowledge	8
Isometrics & Plan Reading	5
LP gas	5
Pipefitting Math	5
Safety	5
Sizing and Design	5
System installation	12
Venting	5

### References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at [www.provbookstore.com](http://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 2020 - Fuel Gas**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://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 PLUMBER

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

<b>Number of Questions</b>	<b>80</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
Drain, Waste & Vent Systems	14
Fixtures & Fittings	6
General Knowledge	10
Isometrics & Plan Reading	10
Plumbing Math	5
Storm & Roof Drainage	8
Water Heaters	8
Water Supply and Distribution	12
Safety	7

### References

- **Florida Building Code 2020 - Plumbing**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://www.provbookstore.com)

## JOURNEYMAN SIGN ELECTRICIAN 2014

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

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

### References

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

## LIGHTNING PROTECTION 2017

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

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

### References

- **American Electrician's Handbook**, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at <https://www.mheducation.com/highered/product/american-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html>
- **NFPA 70 - National Electrical Code**, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).
- **NFPA 780 Standard for the Installation of Lightning Protection Systems**, 2011. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).

**LOW VOLTAGE 2017**

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

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

**References**

- **American Electrician's Handbook**, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- **NFPA 70 - National Electric Code 2017**, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://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](http://www.amazon.com).

**LOW VOLTAGE 2020**

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

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

**References**

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

## MAINTENANCE ELECTRICIAN 2014

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

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

### References

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

## MAINTENANCE ELECTRICIAN 2017

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

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

### References

- **American Electrician's Handbook**, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- **NFPA 70 - National Electric Code 2017**, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).

## MARINE CONSTRUCTION

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

<b>Number of Questions</b>	<b>75</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
Carpentry	10
Florida Building Code application to Marine Structures	10
Piles	10
Plan Reading & Estimating	6
Safety	9
Sitework	10
Structures	10
Concrete and Reinforcement	10

### References

**Code of Federal Regulations, Title 29, Part 1926**, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at <http://bookstore.gpo.gov>. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.

**DESIGN OF COASTAL REVETMENTS, SEAWALLS, AND BULKHEADS**, 1995. US Army Corps of Engineers, Washington, DC. Available at <http://www.delmar.ca.us/DocumentCenter/View/1899> Candidate printed versions permitted in testing room if exam is open book.

**FLDOT Structures Detailing Manual, 2013**, 2013. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. [http://www.dot.state.fl.us/structures/StructuresManual/CurrentRelease/Vol2\\_SDM.pdf](http://www.dot.state.fl.us/structures/StructuresManual/CurrentRelease/Vol2_SDM.pdf) Candidate printed versions allowed if exam is open book.

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

**Fundamentals of Hydraulic Dredging**, 1996. ISBN: 9780784401477. American Society of Civil Engineers, 1800 Alexander Bell Drive, Reston, VA 20191. <https://www.asce.org/templates/publications-book-detail.aspx?id=7971>

**Pile Design and Construction Practice**, 5th. ISBN: 978-0415385824. Taylor and Francis, 270 Madison Avenue, New York, NY 10016. Available at [www.Contractors-books.com](http://www.Contractors-books.com)

**Standard Specifications for Road and Bridge Construction**, 2013. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. Available at [www.dot.state.fl.us](http://www.dot.state.fl.us). Candidate printed versions allowed if exam is open book.

**Study Guide for General Engineering, 3rd edition**, 2014. ISBN: 978-1-269-78657-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://www.provbookstore.com)

**The Dock Manual: Designing/Building/Maintaining**, 1999. ISBN: 978-1-58017-098-7. Storey Publishing, 210 MASS MoCA Way, North Adams, MA 01247. <https://www.storey.com/books/the-dock-manual>

**MASTER AC (LIMITED)**

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

<b>Number of Questions</b>	<b>100</b>
<b>Time allowed (hours)</b>	<b>4</b>
<b>Subject Area</b>	<b># Quest.</b>
General Knowledge	18
Piping	19
Systems & Sizing	20
Equipment	15
Maintenance	23
Plan Reading	5

**References**

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://www.provbookstore.com).
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Energy Conservation**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Fuel Gas**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Mechanical**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://www.provbookstore.com).
- **Intermediate Mechanical Study Guide**, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://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. [www.amazon.com](http://www.amazon.com)
- **Residential Load Calculations - Manual J**. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. [www.acca.org](http://www.acca.org)

**MASTER AC (UNLIMITED)**

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

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

**References**

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://www.provbookstore.com).
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Energy Conservation**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Fuel Gas**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Mechanical**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://www.provbookstore.com).
- **Intermediate Mechanical Study Guide**, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://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. [www.amazon.com](http://www.amazon.com)
- **Residential Load Calculations - Manual J**. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. [www.acca.org](http://www.acca.org)

**MASTER ELECTRICIAN (SPANISH) 2020**

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

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

**References**

- **American Electrician's Handbook**, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- **NFPA 70 - National Electric Code 2017**, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).

**MASTER ELECTRICIAN 2014**

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

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

**References**

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



## MASTER ELECTRICIAN 2020

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

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

### References

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

## MASTER GASFITTER

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

<b>Number of Questions</b>	<b>50</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
General Knowledge	9
Isometrics & Plan Reading	5
Sizing and Design	5
Pipefitting Math	5
System installation	9
LP gas	7
Venting	5
Safety	5

### References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at [www.provbookstore.com](http://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 2020 - Fuel Gas**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://www.nfpa.org)
- **Pipefitting Power Tools**, 2006. ISBN: 0-13-229023-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Pipefitting Trade Math**, 2006. ISBN: 0-13-613599-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Socket Weld Pipe Fabrication**, 2006. ISBN: 978-0-13-613601-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Threaded Pipe Fabrication**, 2006. ISBN: 0-13-613600-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

## MASTER MECHANICAL

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

<b>Number of Questions</b>	<b>100</b>
<b>Time allowed (hours)</b>	<b>4</b>
<b>Subject Area</b>	<b># Quest.</b>
General Knowledge	16
Piping	12
Systems & Sizing	31
Equipment	16
Maintenance	16
Plan Reading	9

### References

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://www.provbookstore.com).
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Energy Conservation**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Fuel Gas**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Mechanical**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

- **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](http://www.provbookstore.com).
- **Intermediate Mechanical Study Guide**, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://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. [www.amazon.com](http://www.amazon.com)
- **Residential Load Calculations - Manual J**. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. [www.acca.org](http://www.acca.org)

## MASTER PLUMBER

Those who have the knowledge and skill to install, maintain, repair, alter or extend plumbing, sanitary drainage or storm drainage facilities, venting systems, public and private water supply systems, septic tanks, drainage and supply wells, swimming pool piping; irrigation systems; or solar heating water systems and all appurtenances, apparatus, or equipment used in connection therewith, including boilers and pressure process piping and including the installation of water and storm and sewer lines, water and sewer plants and substations.

<b>Number of Questions</b>	<b>100</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
Drain, Waste & Vent Systems	18
Fixtures & Fittings	8
General Knowledge	12
Isometrics & Plan Reading	13
Plumbing Math	10
Storm & Roof Drainage	8
Water Heaters	10
Water Supply and Distribution	14
Safety	7

### References

- **Florida Building Code 2020 - Plumbing**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://www.provbookstore.com)

## MASTER PLUMBER WITH GAS

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

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

### References

- **Florida Building Code 2020 - Fuel Gas**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Plumbing**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://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.

<b>Number of Questions</b>	<b>75</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
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 2020 - Mechanical**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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 2020

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

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

### References

- **American Electrician's Handbook**, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- **NFPA 70 - National Electric Code 2017**, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).

## MASTER TV ANTENNA 2017

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

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

### References

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

## RESIDENTIAL CONTRACTOR

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

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

### References

- **Basic Safety**, ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at [www.provbookstore.com](http://www.provbookstore.com).
- **Florida Building Code 2020 - Residential**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://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](http://www.provbookstore.com)
- **Or, if the book above is unavailable, it may be substituted by the following**. Substitute references shown below..
- **Residential Home Builder Study Guide**. ISBN: 9781323550915. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://www.provbookstore.com).

## RESIDENTIAL SWIMMING POOL

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

<b>Number of Questions</b>	<b>51</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
Plan Reading & Estimating	5
Site Preparation, Excavation and Backfilling	6
Pool Shell Construction	14
Interior Surface Preparation and Finishing	6
Tile, Coping and Trimwork	5
Accessory Work	5
Care and Operation	6
Safety	4

### References

- **Basic Safety**, ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at [www.provbookstore.com](http://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](http://www.amazon.com).
- **Florida Building Code 2020 - Residential**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

## ROOFING UNLIMITED

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

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

### References

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

## SIDING, WINDOWS & DOORS

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

<b>Number of Questions</b>	<b>50</b>
<b>Time allowed (hours)</b>	<b>2</b>
<b>Subject Area</b>	<b># Quest.</b>
Plan Reading & Estimating	6
Building Materials, Fasteners & Adhesives	4
Windows & Exterior Doors	6
Thermal & Moisture Protection	8
Exterior Finishing	15
Doors & Hardware	6
Safety	5

### References

- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Study Guide for Siding & Finish Carpentry**, 2012. ISBN: 978-1-256-61081-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://www.provbookstore.com).

## SIGN CONTRACTOR (NON-ELECTRIC)

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

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

### References

- **Carpentry Level One, Carpentry Fundamentals 2013**, 2013. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Carpentry Level Three 2014**, 2014. ISBN: 0133823059. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Ironworking Level One**, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

## SOLAR WATER HEATING CONTRACTOR

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

<b>Number of Questions</b>	<b>50</b>
<b>Time allowed (hours)</b>	<b>2</b>
<b>Subject Area</b>	<b># Quest.</b>
Plan Reading & Estimating	5
Florida Building Code application to Solar Heating	5
Solar Concepts	6
Solar Water Heating Systems	6
Solar Water Heating System Installation	6
Solar Water Heating System Troubleshooting	6
Swimming Pool Heating Systems	6
Materials	5
Safety	5

### References

- **Florida Building Code 2020 - Energy Conservation**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Mechanical**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **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](http://www.provbookstore.com)
- **Solar Water and Pool Heating Manual**, 2006. ISBN: FSEC-IN-24. University of Central Florida - UCF FL Solar Energy Center, 1679 Clearlake Road, Cocoa, FL 32922-5703. <https://secure.fsec.ucf.edu/fsestore/do/product/Publications/SWPHManual>

## SWIMMING POOL MAINTENANCE UNLIMITED

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

<b>Number of Questions</b>	<b>75</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
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](http://www.floridahealth.gov/environmental-health/swimming-pools/_documents/64E-9_FAC_Draft_Rev7_no_strike.pdf) Candidate printed versions allowed if exam is open book
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Florida Building Code 2020 - Residential**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- **Pool & Spa Operator Handbook**, 2012. ISBN: 0-9815803-9-5. National Swimming Pool Foundation, 4775 Granby Circle, Colorado Springs, CO 80919. [www.nspf.org](http://www.nspf.org)

## UNDERGROUND UTILITIES

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

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

### References

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