

# HILLSBOROUGH COUNTY - EXAM DESCRIPTIONS

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## 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	11
Sitework	6
Concrete	11
Masonry	10
Structural Steel	5
Carpentry & Metal Framing	5
Roofing	5
Associated Trades	3
Interior Finishes	5
Exterior Finishes	5
Safety	4

## 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](http://amazon.com)
- **Concrete Construction Level 2**, 2021. ISBN: 978-0-13-689832-0. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. <http://constructionbooks.com/store/product.aspx?isbn=0136868282> OR <https://provexam.com/bookstore/>.
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://www.iccsafe.org)
- **Study Guide for Commercial Carpentry, 2nd Edition**, 2014. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- **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).

## **Building Contractor (Spanish)**

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

**Number of Questions** 70  
**Time allowed (hours)** 3

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

### **References**

- **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 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://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. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- **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).

## **Business and Law, 2nd edition**

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

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

**Number of Questions** 50  
**Time allowed (hours)** 2

<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.

## **Business Procedures, 2nd edition**

### **(Spanish)**

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

**Number of Questions** 75  
**Time allowed (hours)** 3

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

### **References**

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

## 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, 2013 edition**, 2013. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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. [www.iccsafe.org](http://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](http://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](http://www.nfpa.org).

## Demolition (Spanish)

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

and multi-story buildings and structures of the types mentioned above.

<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 Fundamentals (Level 1)**, 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. [www.iccsafe.org](http://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](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).

## Drywall

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

<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
Construction Materials & Methods	6
Thermal & Moisture Protection	5
Drywall Installation	7
Drywall Finishing	8

Steel Framing	7
Exterior Cladding	3
Interior Specialties & Finishes	4
Safety	4

## References

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at [www.provbookstore.com](http://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 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://www.iccsafe.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>80</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	6

## 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](http://amazon.com)
- **Carpentry Level One, 2013 edition**, 2013. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Concrete Construction Level 2**, 2021. ISBN: 978-0-13-689832-0. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. <http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0136868282> OR <https://provexam.com/bookstore/>.

- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://www.iccsafe.org)
- **Study Guide for Commercial Carpentry, 2nd Edition**, 2014. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- **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).

## General Contractor (Spanish)

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

<b>Number of Questions</b>	<b>80</b>
<b>Time allowed (hours)</b>	<b>3</b>

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

## References

- **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 Fundamentals (Level 1)**, 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. [www.iccsafe.org](http://www.iccsafe.org)
- **Masonry Level Three**, 2005. ISBN: 978-0-13-109169-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Study Guide for Commercial Carpentry, 2nd Edition**, 2014. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- **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).

## Glass & Glazing

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

<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
Glass & Glazing	12
Plastic & Glazing	4
Sealants	10
Curtain Walls	6
Structural Glazing Systems	4
Bath Enclosures & Mirrors	4
Safety	5

### References

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

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

<b>Number of Questions</b>	<b>100</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
General Knowledge	20
Piping	10
Systems & Sizing	24
Equipment	10
Maintenance	24
Plan Reading	12

### 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. [www.iccsafe.org](http://www.iccsafe.org)
- **Florida Building Code 2020 - Mechanical**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://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](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).

## Journeyman Burglar Alarm 2020

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

<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**, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at <https://www.mhprofessional.com/american-electricians-handbook-seventeenth-edition-9781260457919-usa>
- **Low Voltage Wiring: Security/Fire-Alarm Systems**, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at [www.amazon.com](http://www.amazon.com).

- **NFPA 70 - National Electrical Code 2020**, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](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	10
Motors & Controls	3
Special Conditions	2
Special Equipment	3
Special Occupancies	4
Wiring & Protection	14
Wiring Methods & Materials	24

### **References**

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

## Journeyman Electrician 2020 (Spanish)

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

<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	10
Motors & Controls	2
Plan Reading	3
Special Conditions	3
Special Equipment	3
Special Occupancies	2
Wiring & Protection	14
Wiring Methods & Materials	23

### **References**

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

## Journeyman General Mechanical

**Journeyman General Mechanical:** The term Journeyman shall mean any person who possesses the required skill, knowledge and experience, as evidenced by three (3) years' proven experience in the trade or craft, or education equivalent thereto, or a combination thereof, but not more than one-half ( 1/2) of such experience may be education equivalent, and who has passed an examination in his or her particular trade or craft and possesses a valid certificate of competency as a journeyman in such trade or craft. There shall be at least one (1) journeyman for every three (3) trainees on each construction or installation job site for which a permit is required, and which involves a trade in which journeyman are required and certified. It shall be the responsibility of the employing contractor, and the qualifying agent, to provide journeymen on each job site in accordance with this section, and failure to do so shall be a violation of this chapter, subject to the penalties provided herein, and provided under Section 1-5 of this Code. In addition, any work in the trade concerned on any such job site wherein journeymen are not provided in accordance with this section shall be stopped by the enforcing agency or administrative agency concerned until journeymen are so provided. Further, any person working at a trade which requires journeymen on the job site where no journeyman or master in the trade concerned is present shall be in violation of this chapter and subject to the penalties provided herein, and provided under Section 1-5 of this Code. A journeyman may only work in the employ of a contractor holding a certificate of competency in the field in which the journeyman is certified. Journeymen shall be required in the electrical, plumbing and mechanical trades. Journeymen are required to earn continuing education credit during each term the personal certificate of competency is valid as established in this chapter and as required by the board through written rules or regulations commencing October 1, 1995.

<b>Number of Questions</b>	<b>60</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
General Knowledge	9
Piping	6
Equipment	13
Maintenance	10
Plan Reading	4
Systems & Sizing	18

### **References**

- **Advanced Mechanical Study Guide , 2nd edition**, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at [www.provbookstore.com](http://www.provbookstore.com).

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

## **Journeyman General Mechanical (Spanish)**

Journeyman General Mechanical: The term Journeyman shall mean any person who possesses the required skill, knowledge and experience, as evidenced by three (3) years' proven experience in the trade or craft, or education equivalent thereto, or a combination thereof, but not more than one-half ( 1/2) of such experience may be education equivalent, and who has passed an examination in his or her particular trade or craft and possesses a valid certificate of competency as a journeyman in such trade or craft. There shall be at least one (1) journeyman for every three (3) trainees on each construction or installation job site for which a permit is required, and which involves a trade in which journeyman are required and certified. It shall be the responsibility of the employing contractor, and the qualifying agent, to provide journeymen on each job site in accordance with this section, and failure to do so shall be a violation of this chapter, subject to the penalties provided herein, and provided under Section 1-5 of this Code. In addition, any work in the trade concerned on any such job site wherein journeymen are not provided in accordance with this section shall be stopped by the enforcing agency or administrative agency concerned until journeymen are so provided. Further, any person working at a trade which requires journeymen on the job site where no journeyman or master in the trade concerned is present shall be in violation of this chapter and subject to the penalties provided herein, and provided under Section 1-5 of this Code. A journeyman may only work in the employ of a contractor holding a certificate of competency in the field in which the journeyman is certified. Journeymen shall be required in the electrical, plumbing and mechanical trades. Journeymen are required to earn continuing education credit during each term the personal certificate of competency is valid as established in this chapter and as required by

the board through written rules or regulations commencing October 1, 1995.

<b>Number of Questions</b>	<b>60</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
General Knowledge	9
Piping	6
Equipment	13
Maintenance	10
Plan Reading	4
Systems & Sizing	18

### **References**

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

## **Journeyman Heating**

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

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

### **References**

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

## Journeyman Plumber

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

<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. [www.iccsafe.org](http://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](http://www.provbookstore.com).

## Journeyman Plumber (Spanish)

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. [www.iccsafe.org](http://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](http://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..

<b>Number of Questions</b>	<b>75</b>
<b>Time allowed (hours)</b>	<b>3</b>

<b>Subject Area</b>	<b># Quest.</b>
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](http://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](http://www.gpo.gov). Candidate-printed versions allowed if exam is open book. Also available at <http://www.provbookstore.com>
- **Florida Building Code 2020 - Mechanical**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://www.iccsafe.org)
- **Florida Building Code 2020 - Plumbing**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://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 Sign Electrician 2020

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

<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	13
Grounding & Bonding	5
General Electrical Knowledge	6
Motors & Controls	3
Transformers	3
Wiring & Protection	6
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 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 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).
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- **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 Calculation - Manual J**, 8th, Version 2.5. ISBN: 9781892765253. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206.

## Master AC (Limited) (Spanish)

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

<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**

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- **Florida Building Code 2020 - Mechanical**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://www.iccsafe.org)
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- **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).
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- **Florida Building Code 2020 - Mechanical**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://www.iccsafe.org)
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- **Residential Load Calculation - Manual J**, 8th, Version 2.5. ISBN: 9781892765253. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206.

## Master AC (Unlimited) (Spanish)

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

<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).
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- **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 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	5
Plan Reading	2
Special Conditions	4
Special Equipment	4
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. Available at <https://www.mhprofessional.com/american-electricians-handbook-seventeenth-edition-9781260457919-usa>
- **NFPA 70 - National Electrical Code 2020**, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).

## Master Electrician (Spanish) 2020

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

<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. Available at <https://www.mhprofessional.com/american-electricians-handbook-seventeenth-edition-9781260457919-usa>
- **NFPA 70 - National Electrical Code 2020**, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).

## 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

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- **Florida Building Code 2020 - Mechanical**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://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>.
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- **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. Available at <https://www.mhprofessional.com/american-electricians-handbook-seventeenth-edition-9781260457919-usa>
- **NFPA 70 - National Electrical Code 2020**, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).

## **Master Sign Electrician 2020 (Spanish)**

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

<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. Available at <https://www.mhprofessional.com/american-electricians-handbook-seventeenth-edition-9781260457919-usa>

- **NFPA 70 - National Electrical Code 2020**, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at [www.nfpa.org](http://www.nfpa.org).

## **Metal Awning & Storm Shutter Contractor**

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

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

### **References**

- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at [www.provbookstore.com](http://www.provbookstore.com).
- **Carpentry Fundamentals (Level 1)**, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://www.iccsafe.org)
- **Hurricane Shutter Designs**. APA - The Engineered Wood Association, 7011 S. 19th ST, Tacoma, WA 98466. Available at [www.apawood.org](http://www.apawood.org) Candidate's printed versions, Form T450 is allowed if exam is open book.

## **Metal Awning & Storm Shutter Contractor (Spanish)**

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

<b>Number of Questions</b>	<b>49</b>
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<b>Time allowed (hours)</b>	<b>2</b>
<b>Subject Area</b>	<b># Quest.</b>
Plan Reading & Estimating	8
Concrete and Reinforcement	7
Metal Storm Panel Shutters	6
Wood Storm Shutters	5
Installation & Anchorage	13
Building and Municipal Codes	7
Safety	3

#### References

- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at [www.provbookstore.com](http://www.provbookstore.com).
- **Carpentry Fundamentals (Level 1),** 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Florida Building Code 2020 - Building,** 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://www.iccsafe.org)
- **Hurricane Shutter Designs.** APA - The Engineered Wood Association, 7011 S. 19th ST, Tacoma, WA 98466. Available at [www.apawood.org](http://www.apawood.org)  
Candidate's printed versions, Form T450 is allowed if exam is open book.

## Metal Decking & Siding

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

<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	12
Metal Decking	18
Metal Siding	10
Welding & Cutting	8
Doors & Windows	4
Rigging Equipment & Practices	9
Safety	14

#### References

- **Florida Building Code 2020 - Building,** 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://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>.

## Plastering & Lathing

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

<b>Number of Questions</b>	<b>50</b>
<b>Time allowed (hours)</b>	<b>3</b>

<b>Subject Area</b>	<b># Quest.</b>
Plan Reading & Estimating	5
Framing	10
Lathing	10
Materials	10
Application & Finishing	10
Safety	5

#### References

- **ASTM C1007-11a Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories,** 2011. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>. Candidate-printed versions allowed if exam is open book.
- **ASTM C1063-12a - Standard Specification for Installation of Lathing & Furring to Receive Interior & Exterior Portland Cement Based Plaster,** 2012. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>. Candidate-printed versions allowed if exam is open book.
- **ASTM C926-15b Standard Specification for Application of Portland Cement-Based Plaster,** 2015. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>.
- **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. [www.iccsafe.org](http://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](http://www.amazon.com).

- **Introduction to Construction Math**, 2015. NCCER MATS Testing, 13614 Progress Blvd, Alachua, FL 32615.

## **Plastering & Lathing (Spanish)**

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

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

### **References**

- **ASTM C1007-11a Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories**, 2011. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>. Candidate-printed versions allowed if exam is open book.
- **ASTM C1063-12a - Standard Specification for Installation of Lathing & Furring to Receive Interior & Exterior Portland Cement Based Plaster**, 2012. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>. Candidate-printed versions allowed if exam is open book.
- **ASTM C926-12a - Standard Specification for Application of Portland Cement Based Plaster**. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at <http://www.astm.org/>. Candidate-printed versions allowed if exam is open book.
- **Basic Safety**. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at [www.provbookstore.com](http://www.provbookstore.com).
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://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](http://www.amazon.com).

- **Introduction to Construction Math**, 2015. NCCER MATS Testing, 13614 Progress Blvd, Alachua, FL 32615.

## **Swimming Pool Maintenance Contractor (Limited)**

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

<b>Number of Questions</b>	<b>75</b>
<b>Time allowed (hours)</b>	<b>3</b>
<b>Subject Area</b>	<b># Quest.</b>
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](http://www.floridahealth.gov/environmental-health/swimming-pools/_documents/64E-9_FAC_Draft_Rev7_no_strike.pdf) Candidate-printed versions allowed if exam is open book
- **Florida Building Code 2020 - Building**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://www.iccsafe.org)
- **Florida Building Code 2020 - Residential**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://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](http://www.nspf.org).

## **Swimming Pool Maintenance Unlimited**

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

<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. [www.iccsafe.org](http://www.iccsafe.org)
- **Florida Building Code 2020 - Residential**, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. [www.iccsafe.org](http://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](http://www.nspf.org).