# **PINELLAS COUNTY - EXAM DESCRIPTIONS**

# **Table of Contents**

Pinellas County - Exam Descriptions 1
Aluminum Construction & Limited Concrete 1
Building Contractor (English or Spanish) 2
Business and Law (English or Spanish)2
Carpentry (English or Spanish)2
Commercial Paving3
Commercial Swimming Pool3
Concrete Forming and Placing (English or Spanish) 3
Demolition (English or Spanish)3
Drywall4
Electrical Sign Contractor 2011 4
Electrical Sign Contractor 2014 4
Fencing (English or Spanish)5
Finish Carpentry (English or Spanish)5
Garage Door Installer Contractor 5
General Contractor 6
Glass & Glazing7
Irrigation Sprinkler (English or Spanish)7
Journeyman Air Conditioning (English or Spanish) . 7
Journeyman Electrician (English or Spanish) 2011 8
Journeyman Electrician (English or Spanish) 2014 8
Journeyman Gasfitter 8
Journeyman Plumber (English or Spanish)9
Masonry (English or Spanish)9
Master AC (Limited) (English or Spanish)9
Master AC (Unlimited) (English or Spanish)9
Master Electrician (English or Spanish) 2011 10
Master Electrician (English or Spanish) 2014 10
Master Mechanical 10
Master Plumber (English or Spanish) 11

Master Plumber with Gas (English or Spanish)	11
Plastering & Lathing (English or Spanish)	12
Pool Maintenance	12
Residential Contractor	13
Residential Swimming Pool	13
Roofing (English or Spanish)	13
Roofing Unlimited	14
Sign Contractor (Non-Electric)	14
Structural Steel	. 14
Tile & Marble	14
Underground Utilities	15
Unlimited Painting	. 15

# **ALUMINUM CONSTRUCTION & LIMITED CONCRETE**

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

50
2

Subject Area	# Quest.
Miscellaneous Aluminum Structures & Gutters	6
Concrete	7
Plan Reading & Estimating	7
Safety	6
Screen Rooms, Carports & Patio Covers	8
Screen Enclosures	8
Siding, Soffit & Fascia	8

- AAF Guide to Aluminum Construction in High Wind Areas, 2010. Aluminum Association of Florida, 13165 McCrory Place, Suite 185, Orlando, FL 33432. Available at http://www.aaof.org/. (Also permitted is the Guide to Aluminum Construction in High-Wind Area ASCE7 Supplement to the 2010 Guide)
- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Study Guide for Residential Carpentry & Repair, 2nd edition, 2014.

ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

# **BUILDING CONTRACTOR (ENGLISH OR SPANISH)**

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

Number of Questions	70
Time allowed (hours)	3

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

### References

- 2012 Study Guide for Structural Steel, 2012. ISBN: 978-1-269-08432 Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- ACI 530 Building Code Requirements and Specification for Masonry Structures 2013, 2013. ISBN: 978-1-929081-43-1. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org OR http://www.techstreet.com/searches/16672726 OR amazon.com
- Concrete Finishing Level Two, 1999. ISBN: 978-0-13-014860-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Masonry Level Three, 2014. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
- Study Guide for Commercial Carpentry, 2nd Edition, 2014. ISBN: 978-1-269-78661-4. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

### **BUSINESS AND LAW (ENGLISH OR SPANISH)**

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

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Business Organization	2
Licensing	3
Lien laws	2
Tax Laws	5
Safety OSHA	3
Labor Laws	8
Contract Management	9
Project Management	6
Estimating & Bidding	4
Financial Management	5
Risk Management	3

#### References

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

### **CARPENTRY (ENGLISH OR SPANISH)**

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

50

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

### References

**Number of Questions** 

- <u>Basic Safety.</u> ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Study Guide for Residential Carpentry & Repair, 2nd edition, 2014.
   ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

#### **COMMERCIAL PAVING**

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

Number of Questions	50
Time allowed (hours)	3

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

#### References

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

### **COMMERCIAL SWIMMING POOL**

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

Number of Questions	50
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading & Estimating	4

Site Preparation, Excavation and Backfilling	5
Pool Shell Construction	14
Interior Surface Preparation and Finishing	10
Tile, Coping and Trimwork	4
Accessory Work	3
Care and Operation	6
Safety	4

#### References

- <u>Basic Safety.</u> ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Swimming Pools: Design and Construction, Fourth Edition. ISBN: 978-0419235903. Taylor and Francis, 270 Madison Avenue, New York, NY 10016. Available at www.amazon.com.

## **CONCRETE FORMING AND PLACING (ENGLISH OR SPANISH)**

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

Number of Questions	50
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading & Estimating	6
Properties of Concrete	6
Preparation for Placement	5
Reinforcement	6
Formwork	5
Placement & Finishing	8
Specialized Installations & Finishes	3
Quality Control & Curing	6
Safety	5

## References

- ACI 318 Building Code Requirements for Structural Concrete 2014, 2014. ISBN: 978-0-87031-930-3. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org/.
- Concrete Finishing Level One, 1998. ISBN: 978-0-13-010246-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Concrete Finishing Level Two, 1999. ISBN: 978-0-13-014860-5.
  Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

## **DEMOLITION (ENGLISH OR SPANISH)**

Tests a candidate's knowledge of demolition and removal of structures and buildings. Tests a candidate's knowledge of demolition of structural steel, structural concrete, masonry and structural wood

framing. Emphasis on cranes and crane safety as well as explosives and explosive safety. Focuses on interpreting plans and understanding of how components of various structures are assembled. Covers single and multi-story buildings and structures of the types mentioned above.

Number of Questions	50
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading & Interpretation	6
Structural Concrete	5
Structural Masonry	5
Structural Framing	4
Structural Steel	6
Blasting	6
Rigging and Cranes	8
Safety	10

#### References

- Carpentry Level One, 2006. ISBN: 978-0-13-229268-9. Prentice Hall,
   P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Ironworking Level One</u>, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- ISEE Blasters' Handbook. ISBN: 978-1892396006. International Society of Explosives Engineers, 30325 Bainbridge Road, Cleveland, OH 44139. Available at www.isee.org.
- <u>Masonry Level One</u>, 2004. ISBN: 978-0-13-228718-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- NFPA 241 Safeguarding Construction, Alteration and Demolition Operations. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

# **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.

50
2

Subject Area	# Quest.
Plan Reading & Estimating	6
Construction Materials & Methods	6

Thermal & Moisture Protection	5
Drywall Installation	7
Drywall Finishing	8
Steel Framing	7
Exterior Cladding	3
Interior Specialties & Finishes	4
Safety	4

### References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Drywall Level 1</u>, 2007. ISBN: 978-0-13-604512-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Drywall Level 2</u>, 2009. ISBN: 978-0-13-604480-2. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

### **ELECTRICAL SIGN CONTRACTOR 2011**

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

Number of Questions	40
Time allowed (hours)	2

Subject Area	# Quest.
Basic Electricity & Wiring	6
Electrical Signs & Outline Lighting	16
Grounding & Bonding	4
Motors & Controls	3
Transformers	3
Wiring & Protection	4
Wiring Methods & Materials	4

### References

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

## **ELECTRICAL SIGN CONTRACTOR 2014**

The scope of certification includes the structural fabrication including concrete foundation, erection, installation, alteration, repair, service and wiring of electrical signs and outline lighting. The scope of

certification shall not include the provision of, or any electrical work beyond, the last disconnect mean or terminal points. However, a contractor certified under this section may provide the electrical entrance requirements for metering and main disconnect of remote billboards or signs which are independent of any structure or building and which require no more than twenty-five (25) kilowatts at two hundred fifty (250) volts maximum (61G6-7.001).

2
# Quest.
6
16
4
3
3
4
4

#### References

**Number of Questions** 

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

# FENCING (ENGLISH OR SPANISH)

Tests a candidate's knowledge of fencing installation.

Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	5
Layout & General Math	5
Wood Fencing	10
Masonry Fencing	10
Metal & Chain Link Fencing	10
Safety	10

### References

**Number of Questions** 

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Fences and Retaining Walls, 1990. ISBN: 0-934041-53-9. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. Available at www.craftsman-book.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

## FINISH CARPENTRY (ENGLISH OR SPANISH)

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

50

Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	6
Building Materials, Fasteners & Adhesives	8
Windows & Exterior Doors	5
Exterior Finishing	5
Doors & Hardware	8
Interior Trim	8
Cabinet Installation	5
Safety	5

#### References

40

50

**Number of Questions** 

- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Study Guide for Siding & Finish Carpentry, 2012. ISBN: 978-1-256-61081-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

## **GARAGE DOOR INSTALLER CONTRACTOR**

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

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

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- TDS 151 General Code Inspection Guidelines for Garage Doors.

  Door and Access Systems Manufacturers Association International,
  1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at
  http://www.dasma.com/PubTechData.asp. Candidate printed versions
  allowed if exam is open book.
- <u>TDS 156 Standard Wood Header and Jamb Detail Guidelines.</u> Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book

- <u>TDS 157 Garage Doors and Foam Plastic.</u> Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 158 Glazing in Garage Doors.</u> Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 160 Sectional Garage Door Terminology</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 161 Connecting Garage Door Jambs to Building Framing.</u> Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 162 Wood Door Finishing Guidelines.</u> Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 163 Garage Door R-Value.</u> Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- TDS 164 Drywall Surfaces and the Mounting of Garage Door

  Hardware. Door and Access Systems Manufacturers Association
  International, 1300 Sumner Avenue, Cleveland, OH 44115-7333.

  Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 165 Garage Door Manual Operation</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- TDS 166 Guidelines for Connecting a Drawbar Operator to a Sectional Garage Door.

  Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book.
- TDS 167 Sectional Garage Door & Electric Operator Checklist for

  Home Inspectors and Consumers.

  Door and Access Systems

  Manufacturers Association International, 1300 Sumner Avenue,
  Cleveland, OH 44115-7333. Available at

  http://www.dasma.com/PubTechData.asp. Candidate printed versions
  allowed if exam is open book
- <u>TDS 172 Garage Door Labels.</u> Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- TDS 179 Wood Garage Door Inspection and Maintenance Guidelines.

  Door and Access Systems Manufacturers Association International,
  1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at
  http://www.dasma.com/PubTechData.asp. Candidate printed versions
  allowed if exam is open book

- TDS 181 General Code Inspection Guidelines For Wind Load Rated Garage Doors. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 182 Technical Considerations for Dock Doors.</u> Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 260 Common Rolling Steel Door Installation Problems.</u> Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- TDS 270 Recommended Rolling Door Maintenance Practices for Building Maintenance Supervisors.

  Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book

## **GENERAL CONTRACTOR**

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

Number of Questions	80
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading & Estimating	10
Sitework	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

- <u>2012 Study Guide for Structural Steel</u>, 2012. ISBN: 978-1-269-08432 Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- ACI 530 Building Code Requirements and Specification for Masonry Structures 2013, 2013. ISBN: 978-1-929081-43-1. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org OR http://www.techstreet.com/searches/16672726 OR amazon.com
- Carpentry Level One, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

- ISBN: 978-0-13-014860-5. ■ Concrete Finishing Level Two, 1999. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Masonry Level Three, 2005. ISBN: 978-0-13-109169-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Study Guide for Commercial Carpentry, 2nd Edition, 2014. ISBN: 978-1-269-78661-4. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

### **GLASS & GLAZING**

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

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

### References

- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- GANA Glazing Manual, 50th Anniversary Edition. Glass Association of North America, 800 SW Jackson Street, STE. 1500, Ste. A, Topeka, KS 66612-1200. Available at www.glasswebsite.com.
- GANA Sealant Manual, 2008. Glass Association of North America, 800 SW Jackson Street, STE. 1500, Ste. A, Topeka, KS 66612-1200.

## IRRIGATION SPRINKLER (ENGLISH OR SPANISH)

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

Number of Questions	50
Time allowed (hours)	2

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

#### References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Administrative Code, Ch. 62-610, Reuse of Reclaimed Water & Land Application, 2012. State of Florida, 2600 Blair Stone Road M.S. Tallahassee, 32399. http://www.dep.state.fl.us/legal/Rules/wastewater/62-610.pdf Candidate printed versions permitted in testing room if exam is open
- Florida Building Code 2017 Plumbing, 2017. ISBN: 978-1-60983-689-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Turf Irrigation Manual The Complete Guide to Landscape Irrigation Design, 5th Ed., 1994. ISBN: 978-0963509604. Weathermatic, P.O. Box 180205, Dallas, TX 75218-0205. Available at www.amazon.com.

### **JOURNEYMAN AIR CONDITIONING (ENGLISH OR SPANISH)**

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

Number of Questions	100
Time allowed (hours)	3

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

- Advanced Mechanical Study Guide , 2nd edition, 2nd. 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Energy Conservation, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Mechanical, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road,

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

- HVAC Basics for Contractors,3rd Edition, 3rd Edition. ISBN:
   13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston,
   MA 02116. Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221.
   Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

### **JOURNEYMAN ELECTRICIAN (ENGLISH OR SPANISH) 2011**

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

Number of Questions	70
Time allowed (hours)	3

Subject Area	# Quest.
Communication Systems	4
Equipment for General Use	6
General Electrical Theory & Principles	9
Motors & Controls	3
Plan Reading	4
Special Conditions	3
Special Equipment	3
Special Occupancies	2
Wiring & Protection	14
Wiring Methods & Materials	22

### References

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

## JOURNEYMAN ELECTRICIAN (ENGLISH OR SPANISH) 2014

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

Number of Questions	70
Time allowed (hours)	3

Subject Area	# Quest.
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

### **JOURNEYMAN GASFITTER**

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

Number of Questions	50
Time allowed (hours)	3

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

#### References

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

## **JOURNEYMAN PLUMBER (ENGLISH OR SPANISH)**

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

Number of Questions	80
Time allowed (hours)	3

Subject Area	# Quest.
Drain, Waste & Vent Systems	14
Fixtures & Fittings	6
General Knowledge	10
Isometrics & Plan Reading	10
Plumbing Math	5
Storm & Roof Drainage	8
Water Heaters	8
Water Supply and Distribution	12
Safety	7

#### References

- Florida Building Code 2017 Plumbing, 2017. ISBN: 978-1-60983-689 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Plumbing Basics for Contractors, 3rd Edition, 2014. ISBN: 978-1-269-78624-9. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

## MASONRY (ENGLISH OR SPANISH)

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

Number of Questions	50
Time allowed (hours)	2

Subject Area	# Quest.
Masonry Installation	12
Mortar	8
Masonry Units	8
Plan Reading & Estimating	8
Reinforcement	7
Safety	7

### References

- ACI 530 Building Code Requirements and Specification for Masonry Structures 2013, 2013. ISBN: 978-1-929081-43-1. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org OR http://www.techstreet.com/searches/16672726 OR amazon.com
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Study Guide for Masonry Contractors, 2nd Edition, 2014. ISBN: 978-1-269-78558-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

### MASTER AC (LIMITED) (ENGLISH OR SPANISH)

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

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

#### References

- Advanced Mechanical Study Guide , 2nd edition, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Energy Conservation, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Fuel Gas, 2017. ISBN: 978-1-60983-691 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Mechanical, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- HVAC Basics for Contractors,3rd Edition, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221.
   Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Manual N Commercial Load Calculations, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at http://www.acca.org.
- Residential Load Calculations Manual J. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

## MASTER AC (UNLIMITED) (ENGLISH OR SPANISH)

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

Number of Questions	100
Time allowed (hours)	4

# Quest.
18
14
22
7
20
19

#### References

- Advanced Mechanical Study Guide , 2nd edition, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Energy Conservation, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Fuel Gas, 2017. ISBN: 978-1-60983-691 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Mechanical, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- HVAC Basics for Contractors,3rd Edition, 3rd Edition. ISBN:
   13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston,
   MA 02116. Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221.
   Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Manual N Commercial Load Calculations, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at http://www.acca.org.
- Residential Load Calculations Manual J. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

### MASTER ELECTRICIAN (ENGLISH OR SPANISH) 2011

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

Number of Questions	75
Time allowed (hours)	3
Subject Area	# Quest.
General Electrical Knowledge	12
Communication Systems	3
Equipment for General Use	6
Motors & Controls	4
Plan Reading	4
Special Conditions	4

Special Equipment	3
Special Occupancies	2
Wiring & Protection	17
Wiring Methods & Materials	20

#### References

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

## MASTER ELECTRICIAN (ENGLISH OR SPANISH) 2014

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

Number of Questions	75
Time allowed (hours)	3

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

### References

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

## **MASTER MECHANICAL**

Master Mechanical shall mean any person whose services are unlimited in the execution of contracts requiring the experience, knowledge, and skill to perform the following; install maintain, repair, fabricate, alter, extend or design (when not prohibited by law) central air conditioning, refrigeration, heating and ventilation (including duct work in connection with a complete system only to the extent such duct work is performed by the Contractor necessary to make complete an air distribution system) boiler and unfired pressure vessel systems, lift stations, equipment and piping and all appurtenances, apparatus, or equipment used in connection therewith; also piping, insulation of

pipes, vessels and ducts, pressure and process piping, pneumatic control piping, gasoline tanks and pump installation and piping for same, fire sprinkling systems and standpipes, air piping, vacuum line piping, oxygen lines, nitrous oxide piping, ink and chemical lines, fuel transmission lines and installation of a condensate drain from an air conditioning unit to an existing safe waste or other approved disposal other than a direct connection to a sanitary system, all in such a manner to comply with all plans, specifications, codes, laws and regulations applicable thereto. The scope of work for such Contractor shall not include any work such as liquefied petroleum or natural gas fuel lines within buildings, potable waterlines or connections thereto, sanitary sewer lines, swimming pool piping and filters and electrical power wiring.

Number of Questions	100
Time allowed (hours)	4

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

#### References

- Advanced Mechanical Study Guide , 2nd edition, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Energy Conservation, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Fuel Gas, 2017. ISBN: 978-1-60983-691 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Mechanical, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>HVAC Basics for Contractors,3rd Edition</u>, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Manual N Commercial Load Calculations, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at http://www.acca.org.
- Residential Load Calculations Manual J. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

### MASTER PLUMBER (ENGLISH OR SPANISH)

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

Number of Questions	100
Time allowed (hours)	3

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

### References

- Florida Building Code 2017 Plumbing, 2017. ISBN: 978-1-60983-689 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Plumbing Basics for Contractors, 3rd Edition, 2014. ISBN: 978-1-269-78624-9. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

# MASTER PLUMBER WITH GAS (ENGLISH OR SPANISH)

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

Number of Questions	100
Time allowed (hours)	3

Subject Area	# Quest.
Drain, Waste & Vent Systems	15

Fuel Gas Systems	15
Fixtures & Fittings	8
General Knowledge	10
Isometrics & Plan Reading	8
Plumbing Math	6
Safety	6
Storm & Roof Drainage	8
Water Heaters	12
Water Supply and Distribution	12

### References

- Florida Building Code 2010 Fuel Gas, 2010. ISBN: Item #:5661L10. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at www.iccsafe.org.
- Florida Building Code 2010 Plumbing, 2010. ISBN: Item #:5621L10. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at www.iccsafe.org.
- Plumbing Basics for Contractors, 3rd Edition, 2014. ISBN: 978-1-269-78624-9. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

# PLASTERING & LATHING (ENGLISH OR SPANISH)

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

Time allowed (hours)	3
Subject Area	# Quest.
Plan Reading & Estimating	5
Framing	10
Lathing	10
Materials	10
Application & Finishing	10
Safety	5

### References

**Number of Questions** 

- ASTM C1007-11a Standard Specification for Installation of Load

  Bearing (Transverse and Axial) Steel Studs and Related Accessories,

  2011. American Society for Testing and Materials, 100 Barr Harbor

  Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at

  http://www.astm.org/. Candidate printed versions allowed if exam is
  open book.
- ASTM C1063-12a Standard Specification for Installation of Lathing &

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

- ASTM C926-12a Standard Specification for Application of Portland Cement Based Plaster. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/. Candidate printed versions allowed if exam is open book.
- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Gypsum Construction Handbook, 2009. ISBN: 978-0876292587. United States Gypsum Corporation, 350 Burnhamthorpe Road West, 5th Floor, Mississauga, ON. Available at www.amazon.com.
- Introduction to Construction Math, 2015. NCCER MATS Testing, 13614 Progress Blvd, Alachua, FL 32615.

#### POOL MAINTENANCE

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

Number of Questions	50
Time allowed (hours)	3
Subject Area	# Quest.
Calculations	# <b>Quest</b>
Filtration	6
Circulation	8
Disinfection	7
Testing	8
Management	3
Repairs	4
Safety	6

## References

50

- <u>Certified Pool/Spa Operator Handbook</u>, 2009. National Swimming Pool Foundation, 4775 Granby Circle, Colorado Springs, CO 80919. Available at www.nspf.org.
- Florida Administrative Code, Ch. 64E-9, Public Swimming Pools & Bathing Places, 2009. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. available at http://www.floridahealth.gov/environmental-health/swimming-pools/\_documents/64E-9\_FAC\_Draft\_Rev7\_no\_strike.pdf Candidate printed versions allowed if exam is open book
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

### **RESIDENTIAL CONTRACTOR**

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

Number of Questions	60
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading	6
Sitework & Foundations	5
Concrete and Reinforcement	8
Masonry	8
Carpentry	10
Roofing	4
Interior Finishes	5
Exterior Finishes	5
Associated Trades	4
Safety	5

#### References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Masonry and Sitework for the Residential Contractor, 2nd edition,
   2nd. ISBN: 978-1-269-78556-3. Pearson, 501 Boylston Street, Suite
   900, Boston, MA 02116. Available at www.provbookstore.com
- Residential Home Builder Study Guide. ISBN: 9781323550915.
  Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Study Guide for Residential Carpentry & Repair, 2nd edition</u>, 2014. ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

### **RESIDENTIAL SWIMMING POOL**

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

Number of Questions	51
Time allowed (hours)	3

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

Accessory Work	5
Care and Operation	6
Safety	4

#### References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Builder's Guide to Swimming Pool Construction, 2005. ISBN: 978-1889892504. Builder's Book, Inc., 8001 Canoga Avenue, Canoga Park, CA 91304. Available at www.amazon.com.
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

## ROOFING (ENGLISH OR SPANISH)

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

Number of Questions	50
Time allowed (hours)	2

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

- Core 2015, 27202-13 Roofing Applications, & 27403-14 Advanced Roof
   Systems. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Roofing Study Guide, 2018. ISBN: 978132388055. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.

#### **ROOFING UNLIMITED**

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

Number of Questions	50
Time allowed (hours)	2

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

### References

- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Roofing Study Guide, 2018. ISBN: 978132388055. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- Core 2015, 27202-13 Roofing Applications, & 27403-14 Advanced Roof
   Systems. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.

## SIGN CONTRACTOR (NON-ELECTRIC)

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

Number of Questions	49
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading	5
Concrete and Reinforcement	9
Wood	6
Structural Steel	7
Welding	7
Non-Electric Sign	8
Safety	7

## References

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

### STRUCTURAL STEEL

A Structural Steel Erection Contractor is a contractor qualified and certified to erect structural steel shapes and plates including such minor field fabrication as may be necessary, of any profile, perimeter or cross-section, that are or may be used as structural members for buildings and structures, including steel joists, steel decking and siding, and communication towers, and including riveting, welding and rigging only in connection therewith.

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
Plan Reading & Estimating	5
Structural Steel	10
Welding & Cutting	6
Structural Steel-Bolting	4
Metal Decking	6
Metal Buildings	3
Metal Joists & Trusses	5
Rigging and Cranes	6
Safety	5

#### References

- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Ironworking Level One</u>, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Ironworking Level Three</u>, 2012. ISBN: 978-0-13-257785-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Ironworking Level Two</u>, 2011. ISBN: 978-0-13-257822-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

### TILE & MARBLE

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

Number of Questions	50
Time allowed (hours)	2

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

### References

American National Standards Specifications for the Installation of Ceramic Tile, Version 2011.1. American National Standards Institute, 25 West 43rd Street, 4th floor, New York, NY 10036. Available at http://www.tcnatile.com/.

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Setting Tile**, 1995. The Taunton Press, 63 South Main St., P.O. Box 5506, Newton, CT 06470. Available at www.taunton.com.
- TCNA Handbook for Ceramic, Glass, and Stone Tile Installation. Tile Council of North America, 100 Clemson Research Blvd., Anderson, SC 29625. Available at www.tcnatile.com.
- <u>Tile Your World</u>, 2003. ISBN: 0-9742754-3-3. Mistflower Press, 6717 Mistflower Lane, Katy, TX 77449. Available at mistflowerpress.com/index.html.

#### **UNDERGROUND UTILITIES**

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

,	
Subject Area	# Quest.
Plan Reading & Estimating	6
Survey & Layout	4
Sitework	15
Underground Piping Materials & Fittings	7
Underground Pipe Assembly & Installation	8
Safety	10

#### References

**Number of Questions** 

Time allowed (hours)

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

### **UNLIMITED PAINTING**

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

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

#### References

50

2

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