# HIGHLANDS COUNTY – EXAM DESCRIPTIONS

# Table of Contents

Highlands County	1
AC Commercial	1
Aluminum Construction	2
Aluminum Construction & Limited Concrete.	3
Aluminum Siding	3
Aluminum Structures & Specialties	4
Building Contractor (English or Spanish)	5
Burglar Alarm Electrical 2017 (English or Spanish)	5
Business and Law (English or Spanish)	6
Carpentry (English or Spanish)	6
Commercial Swimming Pool	7
Concrete Forming and Placing (English or Spanish)	8
Concrete Placing and Finishing (English or Spanish)	8
Demolition (English or Spanish)	9
Drywall	10
Fencing (English or Spanish)	10
Finish Carpentry (English or Spanish)	11
Garage Door Installer Contractor	11
General Contractor (English or Spanish)	14
HARV Contractor	15
Heating Contractor	16
HVAC	16
Irrigation Sprinkler (English or Spanish)	17
Journeyman Air Conditioning (English or Spanish)	17
Journeyman Electrician 2017 (English or Spanish)	18
Journeyman Plumber (English or Spanish)	18
Low Voltage 2017	19

Marine Construction19
Masonry (English or Spanish)20
Master AC (Unlimited) (English or Spanish) 21
Master Electrician (English or Spanish) 2017 21
Master Mechanical22
Painting and Decorating (English or Spanish)23
Pool Maintenance24
Residential Swimming Pool (English or Spanish) 24
Roofing (English or Spanish)25
Screen Enclosure25
Siding, Windows & Doors26
Sign Contractor (Non-Electric)27
Solar Water Heating Contractor27
Swimming Pool Maintenance Unlimited
Tile & Marble28
Unlimited Painting (English or Spanish)29

# AC COMMERCIAL

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

Number of Questions	100
Time allowed (hours)	4
Subject Area	# Quest.
Equipment	20
General Knowledge	27
Maintenance	30

Piping	11
Plan Reading	2
Systems & Sizing	10

# References

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

#### ALUMINUM CONSTRUCTION

Tests a candidate's knowledge of the fabrication, installation, repair, alteration, and extension of aluminum structures, including screen rooms with solid or screen roofs, metal siding, soffits, gutters, and awnings.

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

- AAF Guide to Aluminum Construction in <u>High Wind Areas</u>, 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 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

#### ALUMINUM CONSTRUCTION & LIMITED CONCRETE

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

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

## References

- AAF Guide to Aluminum Construction in <u>High Wind Areas</u>, 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 2020 Building, 2020. International Code Council, 4051

West Flossmoor Road, Country Club Hills, IL 60478.

• <u>Study Guide for Residential Carpentry &</u> <u>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

#### ALUMINUM SIDING

A Siding Contractor is qualified to install siding and similar accessories. As regulated under Florida Statute, a person who has passed a competency examination as a Siding Contractor may perform these or related tasks or may supervise persons in his employ in the execution of these tasks.

Number of Questions	25
Time allowed (hours)	2
Subject Area	# Quest.
Acoustical Installation	8
Materials	8
Plan Reading & Estimating	3
Safety	3
Substrates	3

- <u>Basic Safety</u>. ISBN: 9781323676189.
   Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

- <u>Florida Building Code 2020 Residential</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Study Guide for Residential Carpentry &</u> <u>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

#### ALUMINUM STRUCTURES & SPECIALTIES

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

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

#### Safety

- 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>ASTM D4756-06 Standard Practice for</u> <u>Installation of Rigid PVC Siding & Soffit</u>, 2006. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/. Candidate printed versions allowed if exam is open book.
- <u>Basic Safety</u>. ISBN: 9781323676189.
   Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Florida Building Code 2020 Building</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Masonry and Sitework for the Residential</u> <u>Contractor, 2nd edition</u>, 2nd. ISBN: 978-1-269-78556-3. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- <u>Study Guide for Residential Carpentry &</u> <u>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

#### BUILDING CONTRACTOR (ENGLISH OR SPANISH)

Building Contractor means a contractor whose services are limited to construction of commercial and single-dwelling or multipledwelling 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

- <u>2012 Study Guide for Structural Steel</u>, 2012. ISBN: 978-1-269-08432-1.
   Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- <u>ACI 530 Building Code Requirements</u> and Specification for Masonry
   <u>Structures 2013</u>, 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/1
   6672726 OR amazon.com
- <u>Concrete Finishing Level Two</u>, 1999.
   ISBN: 978-0-13-014860-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
   Available at http://nccer.pearsonconstructionbooks. com.
- <u>Florida Building Code 2020 Building</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Masonry Level Three</u>, 2014. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
- <u>Study Guide for Commercial Carpentry,</u> <u>2nd Edition</u>, 2014. ISBN: 978-1-269-78661-4. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at <u>www.provbookstore.com</u>

## References

# BURGLAR ALARM ELECTRICAL 2017 (ENGLISH OR SPANISH)

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

**Number of Questions** 

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.

		contractors.	
Time allowed (hours)	2	Number of Questions	50
Subject Area	# Quest.	Time allowed (hours)	2
Acoustical Installation	10	Subject Area	# Quest.
General Electrical Knowledge	5	Business Organization	2
Intrusion Detection	17	Licensing	2
Notification Appliances & Signaling Circuits	s 9	Lien laws	3
Power Supplies	5	Tax Laws	4
Supervisory Stations	4	Safety OSHA	4
References		Labor Laws	7
Contract Management     American Electrician's Handbook, 17th Edition.			9
ISBN: 978-1260457919. McGraw Hill Publishing Project Management			6
Inc., P.O. Box 182604, Columbus, C	OH 43272.	Estimating & Bidding	4
• <u>Low Voltage Wiring: Security/Fire</u> 2001. ISBN: 978-0071376747. McG	- <mark>Alarm Syste</mark> Graw Hill Gler	<b>ms</b> , Financial Management Icoe	6
			3
Available at www.amazon.com.			

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MFPA 70 - National Electric Code 2017, 2017. ISReferences
 978-145591277-3. National Fire Protection
 Association, 1 Batterymarch Park, Quincy, MA
 02169-7471. Available at www.nfpa.org.
 FLORIDA
 Law and
 024324

• Understanding and Servicing Alarm Systems, 3rd

Ed., 1999. ISBN: 978-0750672061. Butterworth-

Heinemann, 225 Wildwood Ave., Woburn, MA

01801. Available at www.amazon.com.

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.

BUSINESS AND LAW (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

b and using	activat	were in all de la set and the second	
hardware		work includes layout, excavation, operatio	
Number of Questions	50	construction pumps for dewatering purpos steelwork, installation of light niches,	ses,
Time allowed (hours)	2	construction of floors, guniting, fiber glassing,	
Subject Area	# Quest.	installation of tile and coping, installation of all perimeter and filter piping, installation of all	
Cold-Formed Steel Framing	5	filter equipment and chemical feeders of any	
Exterior Finishing	4	type, plastering of the interior, construction of decks (slabs incidental to the pool),	
Floor Systems	4	construction of equipment rooms or housi	-
Interior Trim	2	pool equipment, and installation of packag pool heaters. (However, the scope of work	
Plan Reading & Estimating	6	such Contractor shall not include direct connections to a sanitary sewer or to pota	ble
Safety	5	water lines.) Such Contractors may contract	ct for
Roof Framing	8	screen enclosures if a sublicensed specialist performs such work, and contracted with pool	
Thermal & Moisture Protection	4	work.	
Wall & Ceiling Framing	8	Number of Questions	50
Windows, Doors & Stairs	4	Time allowed (hours)	2
		Subject Area	# Quest.
References		Plan Reading & Estimating	4
<ul> <li><u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, Site Preparation, Excavation and Backfilling 5</li> <li>P.O. Box 11071, Des Moines, IA 50336. Available at</li> </ul>			
www.provbookstore.com.		Pool Shell Construction	14
• Florida Building Code 2020 - Building, 2020.		Interior Surface Preparation and Finishing	10
International Code Council, 4051 West Flossmoo Road, Country Club Hills, IL 60478.		Tile, Coping and Trimwork	4
• <u>Study Guide for Residential Carpe</u>	entry & Repai	Accessory Work	3
<b>2nd edition</b> , 2014. ISBN: 978-1-26	9-78561-7.	Care and Operation	6
Pearson, 501 Boylston Street, Suit MA 02116. Available at www.prov	e 900, Bostor bookstore.cc	n, "m <sup>afety</sup>	4

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

## References

COMMERCIAL SWIMMING POOL

- <u>Basic Safety</u>. ISBN: 9781323676189.
   Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Swimming Pools: Design and</u> <u>Construction</u>, 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

- <u>ACI 318 Building Code Requirements</u> <u>for Structural Concrete 2014</u>, 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/.
- <u>Concrete Finishing Level One</u>, 1998.
   ISBN: 978-0-13-010246-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
   Available at http://nccer.pearsonconstructionbooks. com.
- <u>Concrete Finishing Level Two</u>, 1999.
   ISBN: 978-0-13-014860-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
   Available at http://nccer.pearsonconstructionbooks. com.

# CONCRETE PLACING AND FINISHING (ENGLISH OR SPANISH)

Concrete Placing and Finishing Contractor means a contractor whose services are generally limited to pouring, placing and finishing concrete flatwork (floors, slabs on grade, sidewalks, etc.) including placement of edge forms, mesh reinforcement and plastic vapor barriers incidental thereto.

Number of Questions	40
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	4
Properties of Concrete	6
Preparation for Placement	5

Reinforcement	3
Placement & Finishing	8
Specialized Installations & Finishes	4
Quality Control & Curing	6
Safety	4

# References

- <u>ACI 318 Building Code Requirements</u> <u>for Structural Concrete 2014</u>, 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/.
- <u>Concrete Finishing Level One</u>, 1998. ISBN: 978-0-13-010246-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks. com.
- <u>Concrete Finishing Level Two</u>, 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

- <u>Carpentry Level One</u>, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks. com.
- <u>Code of Federal Regulations, Title 29,</u> <u>Part 1926</u>, 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.

- <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.
- 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.

## DRYWALL

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

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	6
Construction Materials & Methods	6
Thermal & Moisture Protection	5

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

# References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Drywall Level 1, 2007. ISBN: 978-0-13-604512-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Drywall Level 2, 2009. ISBN: 978-0-13-604480-2.
   Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Florida Building Code 2020 Building</u>, 2020.
   International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

#### FENCING (ENGLISH OR SPANISH)

Tests a candidate's knowledge of fencing installation.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	5
Layout & General Math	6
Wood Fencing	10
Masonry Fencing	10

Metal & Chain Link Fencing	9
Safety	10

# References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Fences and Retaining Walls</u>, 1990. ISBN: 0-934041-53-9. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. Available at www.craftsman-book.com.
- <u>Florida Building Code 2020 Building</u>, 2020.
   International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

#### FINISH CARPENTRY (ENGLISH OR SPANISH)

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

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	6
Building Materials, Fasteners & Adhesives	8
Windows & Exterior Doors	5
Exterior Finishing	5
Doors & Hardware	8
Interior Trim	8
Cabinet Installation	5
Safety	5

## References

- <u>Florida Building Code 2020 Building</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Study Guide for Siding & Finish</u>
   <u>Carpentry</u>, 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 gualified and certified to install, maintain, repair, alter or extend residential or commercial garage doors, including all hardware and operating devices. One-hundred-twenty-volt electrical installation required for the door operating devices may be included in the contract for work but must be subcontracted to a certified or registered electrical contractor.

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

- <u>Basic Safety</u>. ISBN: 9781323676189.
   Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051

West Flossmoor Road, Country Club Hills, IL 60478.

- <u>TDS 151 General Code Inspection</u> <u>Guidelines for Garage Doors</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book.
- <u>TDS 156 Standard Wood Header and</u> <u>Jamb Detail Guidelines</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.asp . Candidate printed versions allowed if exam is open book
- <u>TDS 157 Garage Doors and Foam</u> <u>Plastic</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.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 https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book

# TDS 160 - Sectional Garage Door Terminology. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book

- <u>TDS 161 Connecting Garage Door</u> <u>Jambs to Building Framing</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 162 Wood Door Finishing</u> <u>Guidelines</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.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 https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 164 Drywall Surfaces and the</u> <u>Mounting of Garage Door Hardware</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-

pages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book

- <u>TDS 165 Garage Door Manual</u> <u>Operation</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 166 Guidelines for Connecting a</u> <u>Drawbar Operator to a Sectional</u> <u>Garage Door</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book.
- <u>TDS 167 Sectional Garage Door &</u> <u>Electric Operator Checklist for Home</u> <u>Inspectors and Consumers</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.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 https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book

- <u>TDS 179 Wood Garage Door</u> <u>Inspection and Maintenance</u> <u>Guidelines</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 181 General Code Inspection</u> <u>Guidelines For Wind Load Rated</u> <u>Garage Doors</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 182 Technical Considerations for</u> <u>Dock Doors</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 260 Common Rolling Steel Door</u> <u>Installation Problems</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book
- <u>TDS 270 Recommended Rolling Door</u> <u>Maintenance Practices for Building</u> <u>Maintenance Supervisors</u>. Door and Access Systems Manufacturers

Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-datasheets.asp. Candidate printed versions allowed if exam is open book

#### GENERAL CONTRACTOR (ENGLISH OR SPANISH)

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

Number of Questions	80
Time allowed (hours)	3
Subject Area	# Quest.
Plan Reading & Estimating	10
Sitework	6
Concrete	12
Masonry	8
Structural Steel	7
Carpentry & Metal Framing	12
Roofing	5
Associated Trades	3
Interior Finishes	5
Exterior Finishes	6
Safety	6

## References

• <u>2012 Study Guide for Structural Steel</u>, 2012. ISBN: 978-1-269-08432-1. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

- ACI 530 Building Code Requirements and Specification for Masonry
   Structures 2013, 2013. ISBN: 978-1-929081-43-1. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org OR http://www.techstreet.com/searches/1 6672726 OR amazon.com
- <u>Carpentry Level One</u>, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks. com.
- <u>Concrete Finishing Level Two</u>, 1999. ISBN: 978-0-13-014860-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks. com.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Masonry Level Three, 2005. ISBN: 978-0-13-109169-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at

http://nccer.pearsonconstructionbooks. com.

 Study Guide for Commercial Carpentry, 2nd Edition, 2014. ISBN: 978-1-269-78661-4. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

#### HARV CONTRACTOR

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

- Number of Questions100Time allowed (hours)3Subject Area# Quest.General Knowledge22
- Piping10Systems & Sizing26Equipment15Maintenance22Plan Reading5

#### References

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

- Florida Building Code 2020 Fuel Gas, 2020.
   International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Mechanical, 2020.
   International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <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.
- <u>Manual N Commercial Load Calculations</u>, 2008.
   ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.amazon.com
- <u>Residential Load Calculations Manual J</u>. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org
- <u>SMACNA-Residential Comfort System Installation</u> <u>Standards Manual</u>, 7th. ISBN: 978-1617210648.
   Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. https://www.smacna.org/store/product/residential-

comfort-systems-installation-standards-manual

#### HEATING CONTRACTOR

Heating Contractor is a specialty mechanical contractor, qualified and certified to install, maintain, repair, alter, add to or change systems of heating, whether by water, steam or hot air furnaces and all appurtenances and duct work used in conjunction therewith.  Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

## HVAC

Tests a candidate's knowledge of the **Number of Questions** 100 installation, maintenance, repair, fabrication, Time allowed (hours) 3 alteration, and extension of AC/refrigeration, heating, ventilation systems, duct systems, **Subject Area** # Quest. warm air systems, low pressure boiler and unfired pressure vessel systems, solar heating General Knowledge 18 and cooling systems and related appurtenances 25 Piping unlimited in horsepower and tonnage. Systems & Sizing 25 Number of Questions 100 7 Equipment Time allowed (hours) 4 Maintenance 16 **Subject Area** # Quest. 9 **Plan Reading** General Knowledge 19 19 Piping References Systems & Sizing 19 Advanced Mechanical Study Guide , 2nd edition,

 Systems & Sizing
 19

 • Advanced Mechanical Study Guide , 2nd edition,
 19

 2nd. ISBN: 9781323725184. Pearson, 501 BoyIst & Quipment
 19

 Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
 19

 • Florida Building Code 2020 - Building, 2020.
 Plan Reading
 5

•

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

- <u>Florida Building Code 2020 Fuel Gas</u>, 2020.
   International Code Council, 4051 West FlossmooReferences Road, Country Club Hills, IL 60478.
- <u>Florida Building Code 2020 Mechanical</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <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.

## IRRIGATION SPRINKLER (ENGLISH OR SPANISH)

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

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

- <u>Basic Safety</u>. 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 <u>Reclaimed Water & Land Application</u>, 2012. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. http://www.dep.state.fl.us/legal/Rules/wastewater/62-

610.pdf Candidate printed versions permitted in testing room if exam is open book.

- <u>Florida Building Code 2020 Plumbing</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Turf Irrigation Manual The Complete Guide to</u> <u>Landscape Irrigation Design</u>, 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	Motors & Controls	3	
Plan Reading	5	Plan Reading	4	
		Special Conditions	3	
References		Special Equipment	3	
<ul> <li><u>Advanced Mechanical Study Gu</u> 2nd. ISBN: 9781323725184. Pea</li> </ul>			2	
Street, Suite 900, Boston, MA 02			14	
www.provbookstore.com.		Wiring Methods & Materials	22	
<ul> <li>Florida Building Code 2020 - Building Code Council, 4052</li> <li>Road, Country Club Hills, IL 6047</li> </ul>	L West Flossm	noor References		
<ul> <li>Florida Building Code 2020 - Me International Code Council, 4052 Road, Country Club Hills, IL 6047</li> </ul>	L West Flossm	ICDNI O70 12COAE7010 NAcCra	w Hill Publishing	
HVAC Basics for Contractors,3rd Edition. ISBN: 13:978132372514 Boylston Street, Suite 900, Bosto Available at www.provbookstore	6. Pearson, 5 on, MA 02116 e.com.	01 978-145591277-3. National Fire Association, 1 Batterymarch Pa 02169-7471. Available at www.	e Protection rk, Quincy, MA	
<ul> <li>Intermediate Mechanical Study 9781323725221. Pearson, 501 B</li> </ul>			NICH)	
Suite 900, Boston, MA 02116. Available at www.provbookstore.com.		Perform work under the supervision and in the employ of a state certified plumber or a locally licensed master plumber.		
JOURNEYMAN ELECTRICIAN 2017 (ENGLIS	H OR	Number of Questions	80	
SPANISH)		Time allowed (hours)	3	
A Journeyman Electrician is qualified and to perform work in the electrical trades		Subject Area	# Quest.	
employed by a Master Electrician.		Drain, Waste & Vent Systems	14	
Number of Questions	70	Fixtures & Fittings	6	
Time allowed (hours)	3	General Knowledge	10	
Subject Area	# Quest.	Isometrics & Plan Reading	10	
Communication Systems	4	Plumbing Math	5	
Equipment for General Use	6	Storm & Roof Drainage	8	
General Electrical Theory & Principles	9	Water Heaters	8	

Water Supply and Distribution	12
Safety	7

# References

- Florida Building Code 2020 Plumbing, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Plumbing Basics for Contractors, 3rd Edition, 2014. ISBN: 978-1-269-78624-9. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

#### LOW VOLTAGE 2017

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

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
References	

#### MARINE CONSTRUCTION

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

Number of Questions	75
Time allowed (hours)	3
Subject Area	# Quest.
Carpentry	10
Florida Building Code application to Marine Structures	e10
Piles	10
Plan Reading & Estimating	6
Safety	9
Sitework	10
Structures	10
Concrete and Reinforcement	10
References	

- <u>Code of Federal Regulations, Title 29,</u> <u>Part 1926</u>, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- DESIGN OF COASTAL REVETMENTS, SEAWALLS, AND BULKHEADS, 1995. US Army Corps of Engineers, Washington, DC. Available at http://www.delmar.ca.us/DocumentCe nter/View/1899 Candidate printed versions permitted in testing room if exam is open book.

# • FLDOT Structures Detailing Manual,

**2013**, 2013. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399.

http://www.dot.state.fl.us/structures/S tructuresManual/CurrentRelease/Vol2\_ SDM.pdf Candidate printed versions allowed if exam is open book.

- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Fundamentals of Hydraulic Dredging, 1996. ISBN: 9780784401477. American Society of Civil Engineers, 1800 Alexander Bell Drive, Reston, VA 20191. https://www.asce.org/templates/public ations-book-detail.aspx?id=7971
- <u>Pile Design and Construction Practice</u>, 5th. ISBN: 978-0415385824. Taylor and Francis, 270 Madison Avenue, New York, NY 10016. Available at www.Contractor-books.com
- <u>Standard Specifications for Road and</u> <u>Bridge Construction</u>, 2013. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. Available at www.dot.state.fl.us. Candidate printed versions allowed if exam is open book.
- <u>Study Guide for General Engineering,</u> <u>3rd edition</u>, 2014. ISBN: 978-1-269-78657-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- <u>The Dock Manual:</u> <u>Designing/Building/Maintaining</u>, 1999.
   ISBN: 978-1-58017-098-7. Storey Publishing, 210 MASS MoCA Way, North Adams, MA 01247.
   https://www.storey.com/books/thedock-manual/#

#### MASONRY (ENGLISH OR SPANISH)

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

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Masonry Installation	12
Mortar	8
Masonry Units	8
Plan Reading & Estimating	8
Reinforcement	7
Safety	7

- 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
- <u>Florida Building Code 2020 Building</u>, 2020.
   International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Study Guide for Masonry Contractors, 2nd Edition</u>, 2014. ISBN: 978-1-269-78558-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

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

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

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

## References

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

West Flossmoor Road, Country Club Hills, IL 60478.

- Florida Building Code 2020 Mechanical, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <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. www.amazon.com
  - <u>Residential Load Calculations Manual J</u>. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

#### MASTER ELECTRICIAN (ENGLISH OR SPANISH) 2017

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

Time allowed (hours)

Subject Area

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

# Quest.

## References

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

#### 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

 <u>Advanced Mechanical Study Guide , 2nd</u> <u>edition</u>, 2nd. ISBN: 9781323725184.
 Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

- <u>Florida Building Code 2020 Building</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Energy Conservation, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Fuel Gas, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Mechanical, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <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.
- <u>Manual N Commercial Load Calculations</u>, 2008. ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.amazon.com
- <u>Residential Load Calculations Manual J</u>. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

## PAINTING AND DECORATING (ENGLISH OR SPANISH)

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

Number of Questions	50
Time allowed (hours)	3
Subject Area	# Quest.
Safety	6
Substrates & Preparation	12
Materials	10
Application	12
Job Planning & Estimating	5
Equipment	5

# References

 Painting Level One, 1997. ISBN: 978-0-13-771239-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.

com.

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

#### POOL MAINTENANCE

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

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

# References

- <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, <u>Public Swimming Pools & Bathing Places</u>, 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 2020 Building, 2020.
   International Code Council, 4051 West
   Flossmoor Road, Country Club Hills, IL 60478.
- <u>Florida Building Code 2020 Residential</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

# RESIDENTIAL SWIMMING POOL (ENGLISH OR SPANISH)

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 50 Time allowed (hours) 3 **Subject Area** # Quest. Plan Reading & Estimating 5 Site Preparation, Excavation and Backfilling 5 **Pool Shell Construction** 14 Interior Surface Preparation and Finishing 6 Tile, Coping and Trimwork 5 5 Accessory Work 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.

- <u>Builder's Guide to Swimming Pool</u> <u>Construction</u>, 2005. ISBN: 978-1889892504. Builder's Book, Inc., 8001 Canoga Avenue, Canoga Park, CA 91304. Available at www.amazon.com.
- Florida Building Code 2020 Residential, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

#### ROOFING (ENGLISH OR SPANISH)

A Roofing Contractor is a contractor gualified 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.
	•

Flashing	5
High Slope Roofing	15
Low Slope Roofing	9
Plan Reading & Estimating	8
Safety	7

#### References

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

#### SCREEN ENCLOSURE

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

Number of Questions	60
Time allowed (hours)	3

Subject Area	# Quest.
Foundations and Concrete	7
Plan Reading & Estimating	14
Safety	12
Understand and apply the building code as	56

Understand and apply the building code as 6 it pertains to the construction of screen enclosures and associated work.

21

# References

- AAF Guide to Aluminum Construction in High Wind Areas, 2010. Aluminum Association of Florida, 13165 McCrory Place, Suite 185, Orlando, FL 33432. Available at http://www.aaof.org/. (Also permitted is the Guide to Aluminum Construction in High-Wind Area ASCE7 Supplement to the 2010 Guide )
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Study Guide for Residential Carpentry</u>
   <u>& 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

#### SIDING, WINDOWS & DOORS

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

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

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

## SIGN CONTRACTOR (NON-ELECTRIC)

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

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

## References

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

#### SOLAR WATER HEATING CONTRACTOR

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

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

- Florida Building Code 2020 Energy Conservation, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Florida Building Code 2020 Mechanical</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Plumbing Basics for Contractors, 3rd <u>Edition</u>, 2014. ISBN: 978-1-269-78624-9. Pearson, 501 Boylston Street, Suite 900,

Boston, MA 02116. Available at www.provbookstore.com

 <u>Solar Water and Pool Heating Manual</u>, 2006. ISBN: FSEC-IN-24. University of Central Florida - UCF FL Solar Energy Center, 1679 Clearlake Road, Cocoa, FL 32922-5703. https://secure.fsec.ucf.edu/fsecstore/do/pr oduct/Publications/SWPHManual

#### SWIMMING POOL MAINTENANCE UNLIMITED

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

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

- <u>Florida Building Code 2020 Building</u>, 2020.
   International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Florida Building Code 2020 Residential</u>, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Pool & Spa Operator Handbook</u>, 2012. ISBN: 0-9815803-9-5. National Swimming Pool Foundation, 4775 Granby Circle, Colorado Springs, CO 80919. www.nspf.org

Number of Questions	75	TILE & MARBLE	
Time allowed (hours)	3	Mix and prepare the base for and set tile and	
Subject Area	# Quest.	marble.	
Calculations	9	Number of Questions	50
Circulation	10	Time allowed (hours)	2
Disinfection	10	Subject Area	# Quest.
Filtration	14	Plan Reading & Estimating	6
Management	7	Substrates	11
Repairs	5	Materials	6
Safety	10	Layout & Planning	6
Testing	10	Ceramic Tile Installation	11
		Marble & Stone Installation	5
References		Safety	5
<ul> <li>Elorida Administrativa Coda Ch</li> </ul>	6/F-Q Dublic		

# Florida Administrative Code, Ch. 64E-9, Public Swimming Pools & Bathing Places, 2009. State of Florida, 2600 Blair Stone Road M.S. 3500,

# <u>American National Standards</u>

- 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/.
- <u>Basic Safety</u>. ISBN: 9781323676189.
   Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Setting Tile</u>, 1995. The Taunton Press, 63 South Main St., P.O. Box 5506, Newton, CT 06470. Available at www.taunton.com.
- <u>TCNA Handbook for Ceramic, Glass, and</u> <u>Stone Tile Installation</u>. 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.

## UNLIMITED PAINTING (ENGLISH OR SPANISH)

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

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

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