

Contents

BROWARD COUNTY MECHANICAL EXAMINING BOARD - EXAM DESCRIPTIONS.....	1
BUSINESS PROCEDURES.....	1
CLASS A AIR CONDITIONING CONTRACTOR.....	1
CLASS B AIR CONDITIONING CONTRACTOR.....	2
INSULATION CONTRACTOR.....	3
INSULATION JOURNEYMAN.....	3
MECHANICAL CONTRACTOR.....	4
SHEET METAL CONTRACTOR.....	4
TRANSPORT ASSEMBLY CONTRACTOR.....	5

BUSINESS PROCEDURES

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

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

References

- **Broward County Code Chapter 9 Contractors**, 2016. ISBN: No ISBN. Board of County Commissioners of Broward County, Broward, FL. <https://www.municode.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.

CLASS A AIR CONDITIONING CONTRACTOR

Class A air conditioning contractor means a contractor whose services are unlimited in the execution of contracts requiring the experience, knowledge and skill to install, maintain, repair, fabricate, alter, extend or design, when not prohibited by law, central air conditioning, refrigeration, heating and ventilating systems, including duct work in connection with a complete system only to the extent such duct work is performed by the contractor as is necessary to make complete an air-distribution system, boiler and unfired pressure vessel systems, and all appurtenances, apparatus, or equipment used in connection therewith; and any duct cleaning and equipment sanitizing which requires at least a partial disassembling of the system; to install, maintain, repair, fabricate, alter, extend or design, when not prohibited by law, piping, insulation of pipes, vessels and ducts, pressure and process piping, and pneumatic control piping; to disconnect or reconnect power wiring on the load side of the disconnect switch and low-voltage heating, ventilating, and air conditioning control wiring; and to install 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. The scope of work for such contractor shall also include any excavation work incidental thereto, but shall not include any work such as liquefied petroleum or natural gas fuel lines within buildings, except for disconnecting or reconnecting changeouts of liquefied petroleum or natural gas appliances within buildings; potable water lines or connections thereto; sanitary sewer lines; swimming pool piping and filters; or electrical power wiring on the line side of the disconnect switch.

Number of Questions	100
Time allowed (hours)	4
Subject Area	# Quest.
Code Compliance	14
Ducts-Systems and Sizing	12
Load Calculations	5
General Knowledge	24
Maintenance and Service	7
Controls	5

Piping	6
Psychometrics	4
Fuel Gas Systems	7
Cooling Systems	5
Heating Systems	5
Safety	6

References

- **ACCA Duct slide rule**, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at www.acca.org
- **Broward County Code Chapter 9 Contractors**, 2016. ISBN: No ISBN. Board of County Commissioners of Broward County, Broward, FL. <https://www.municode.com>
- **Code of Federal Regulations, Title 29, Labor, Pt. 1926, Revised as of July 1, 2019**, 2019. National Archives and Records Administration, College Park, MD. <https://bookstore.gpo.gov/products/cfr-title-29-pt-1926-code-federal-regulations-paper-2019>
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Duct Construction Standards***. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209.
- **Modern Refrigeration and Air Conditioning**, 20th Edition. ISBN: 978-1-63126-354=5. Goodheart-Wilcox Company, Inc., 18604 West Creek Dr., Tinley Park, IL 60477-6243. Available @ www.g-w.com
- **Trade Knowledge**. Prov, 13614 Progress Blvd., Alachua, FL 32615. This reference is not a book for purchase. This reference represents the general knowledge that a candidate gains through experience in their trade.

The scope of work for such contractor shall also include any excavation work incidental thereto, but shall not include any work such as liquefied petroleum or natural gas fuel lines within buildings, except for disconnecting or reconnecting changeouts of liquefied petroleum or natural gas appliance within buildings; potable water lines or connections thereto; sanitary sewer lines, swimming pool piping and filters; or electrical power wiring on the line side of the disconnect switch.

Number of Questions	75
Time allowed (hours)	3

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

References

- **ACCA Duct slide rule**. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at www.acca.org
- **Broward County Code Chapter 9 Contractors**, 2016. ISBN: No ISBN. Board of County Commissioners of Broward County, Broward, FL. <https://www.municode.com>
- **Code of Federal Regulations, Title 29, Labor, Pt. 1926, Revised as of July 1, 2019**, 2019. National Archives and Records Administration, College Park, MD. <https://bookstore.gpo.gov/products/cfr-title-29-pt-1926-code-federal-regulations-paper-2019>
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Duct Construction Standards***. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209.
- **Modern Refrigeration and Air Conditioning**, 20th Edition. ISBN: 978-1-63126-354=5. Goodheart-Wilcox Company, Inc., 18604 West Creek Dr., Tinley Park, IL 60477-6243. Available @ www.g-w.com
- **Trade Knowledge**. Prov, 13614 Progress Blvd., Alachua, FL 32615. This reference is not a book for purchase. This reference represents the general knowledge that a candidate gains through experience in their trade.

CLASS B AIR CONDITIONING CONTRACTOR

Class B air conditioning contractor means a contractor whose services are limited to twenty-five (25) tons of cooling and five hundred thousand (500,000) Btu of heating in any one (1) system in the execution of contracts requiring the experience, knowledge and skill to install, maintain, repair, fabricate, alter, extend or design, when not prohibited by law, central air conditioning, refrigeration, heating and ventilating systems, including duct work in connection with a complete system only to the extent such duct work is performed by the contractor as is necessary to make complete an air-distribution system being installed under this classification; and any duct cleaning and equipment sanitizing which requires at least a partial disassembling of the system; to install, maintain, repair, fabricate, alter, extend or design, when not prohibited by law, piping and insulation of pipes, vessels and ducts; to disconnect or reconnect power wiring on the load side of the disconnect switch and low-voltage heating, ventilating and air conditioning control wiring; and to install 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.

INSULATION CONTRACTOR

Insulation Category--Class "I": The scope of work of a Class "I" specialty building contractor shall include and be limited to the fabrication, installation, and application of thermal or fire-retardant materials to and within existing walls, floors, and ceilings by mechanical or adhesive methods, in such manner that, under an agreed specification, satisfactory insulation can be accomplished. A Class "I" specialty building contractor may also install metal channels, hangers, and suspension systems for the support of thermal or fire-retardant materials. A Class "I" specialty building contractor shall not insulate any pipes, vessels, or ducts, built-up refrigeration boxes or rooms, nor insulate the top of a roof deck where such insulation is attached over the top by adhesive. In order to be eligible to be certified as a Class "I" specialty building contractor by the board, the applicant shall have at least one (1) year of practical experience in the category.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	7
Theory	6
Insulation Materials & Accessories	14
Insulation Installation	10
Code Compliance	8
Safety	5

References

- **Broward County Code Chapter 9 Contractors**, 2016. ISBN: No ISBN. Board of County Commissioners of Broward County, Broward, FL. <https://www.municode.com>
- **Code of Federal Regulations, Title 29, Labor, Pt. 1926, Revised as of July 1, 2019**, 2019. National Archives and Records Administration, College Park, MD. <https://bookstore.gpo.gov/products/cfr-title-29-pt-1926-code-federal-regulations-paper-2019>
- **Florida Building Code 2017 - Building**, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Insulating Level Three**, 1999. ISBN: 978-0-13-909458-3. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Insulating Level Two**, 1999. ISBN: 978-0-13-909417-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Study Guide for Insulation**. ISBN: 978-0-136-06315-5. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at <http://nccer.pearsonconstructionbooks.com>
- **Trade Knowledge**. Prov, 13614 Progress Blvd., Alachua, FL 32615. This reference is not a book for purchase. This reference represents the general knowledge that a candidate gains through experience in their trade.

INSULATION JOURNEYMAN

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

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Code Compliance	18
Insulation	22
Safety	10

References

- **Broward County Code Chapter 9 Contractors**, 2016. ISBN: No ISBN. Board of County Commissioners of Broward County, Broward, FL. <https://www.municode.com>
- **Florida Building Code 2017 - Energy Conservation**, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Insulating Level Three**, 1999. ISBN: 978-0-13-909458-3. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Insulating Level Two**, 1999. ISBN: 978-0-13-909417-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Study Guide for Insulation**. ISBN: 978-0-136-06315-5. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at <http://nccer.pearsonconstructionbooks.com>
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MECHANICAL CONTRACTOR

Mechanical contractor means a contractor whose services are unlimited in the execution of contracts requiring the experience, knowledge, and skill to install, maintain, repair, fabricate, alter, extend, or design, when not prohibited by law, central air conditioning, refrigeration, heating, and ventilating systems, including duct work in connection with a complete system, only to the extent such duct work is performed by the contractor as is necessary to make complete an air-distribution system, boiler, and unfired pressure vessel systems, lift station equipment, and piping, and all appurtenances, apparatus, or equipment used in connection therewith, and any duct cleaning and equipment sanitizing, therewith; to install, maintain, repair, fabricate, alter, extend, or design, when not prohibited by law, piping, insulation of pipes, vessels and ducts, pressure and process piping, pneumatic control piping, gasoline tanks and pump installations and piping for same, standpipes, air piping, vacuum line piping, oxygen lines, nitrous oxide piping, ink and chemical lines, fuel transmission lines, gaseous and liquefied hydrogen systems, liquefied petroleum gas lines within buildings, and natural gas fuel lines within buildings; to disconnect or reconnect power wiring on the load side of the disconnect switch and low-voltage heating, ventilating, and air conditioning control wiring; and to install 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. The scope of work for such contractor shall also include any excavation work incidental thereto, but shall not include any work such as potable water lines or connections thereto, sanitary sewer lines, swimming pool piping and filters, or electrical power wiring.

Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
General Knowledge	12
Piping	9
Systems & Sizing	18
Equipment	12
Maintenance	12
Plan Reading	6
Safety	6

References

- **ACCA Duct slide rule.** Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at www.acca.org
- **Architectural Sheet Metal**, 7th. ISBN: none available. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. Available At www.smacna.org
- **Broward County Code Chapter 9 Contractors**, 2016. ISBN: No ISBN. Board of County Commissioners of Broward County, Broward, FL. <https://www.municode.com>
- **Code of Federal Regulations, Title 29, Labor, Pt. 1926, Revised as of July 1, 2019**, 2019. National Archives and Records Administration, College Park, MD. <https://bookstore.gpo.gov/products/cfr-title-29-pt-1926-code-federal-regulations-paper-2019>
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- **Florida Building Code 2017 - Fuel Gas**, 2017. ISBN: 978-1-60983-691-

7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **HVAC Duct Construction Standards**, 3rd. 2005. ISBN: 978-1-61721-030-3. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. Available at www.bnibooks.com.
- **Modern Refrigeration and Air Conditioning**, 19th Edition. ISBN: 978-1-61960-199-4. Goodheart-Wilcox Company, Inc., 18604 West Creek Dr., Tinley Park, IL 60477-6243. Available at www.g-w.com.
- **Trade Knowledge**. Prov, 13614 Progress Blvd., Alachua, FL 32615. This reference is not a book for purchase. This reference represents the general knowledge that a candidate gains through experience in their trade.

SHEET METAL CONTRACTOR

Sheet metal contractor means a contractor whose services are unlimited in the sheet metal trade and who has the experience, knowledge, and skill necessary for the manufacture, fabrication, assembling, handling, erection, installation, dismantling, conditioning, adjustment, insulation, alteration, repair, servicing, or design, when not prohibited by law, of ferrous or nonferrous metal work of U.S. No. 10 gauge, or lighter gauge, or its equivalent and of other materials, including but not limited to fiberglass, used in lieu thereof and of air-handling systems, including the setting of air-handling equipment and reinforcement of same and including the balancing of air-handling systems and any duct cleaning and equipment sanitizing which requires at least a partial disassembling of the system.

Number of Questions 75
Time allowed (hours) 3

Subject Area	# Quest.
Plan Reading, Estimating & Math	8
Code & General Knowledge	13
Layout & Fabrication	12
Acoustical Installation	10
Air Properties & Distribution	8
Air Distribution Accessories	8
Chimneys, Flues & Exhaust	6
Architectural Sheet Metal	4
Safety	6

References

- **Broward County Code Chapter 9 Contractors**, 2016. ISBN: No ISBN. Board of County Commissioners of Broward County, Broward, FL. <https://www.municode.com>
- **Code of Federal Regulations, Title 29, Labor, Pt. 1926, Revised as of July 1, 2019**, 2019. National Archives and Records Administration, College Park, MD. <https://bookstore.gpo.gov/products/cfr-title-29-pt-1926-code-federal-regulations-paper-2019>
- **Florida Building Code 2017 - Mechanical**, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Sheet Metal Level Four**, 2009. ISBN: 978-0-13-609964-2. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

- **Sheet Metal Level One**, 2008. ISBN: 978-0-13-604482-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Sheet Metal Level Three**, 2009. ISBN: 978-0-13-609962-8. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Sheet Metal Level Two**, 2008. ISBN: 978-0-13-604484-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Trade Knowledge**. Prov, 13614 Progress Blvd., Alachua, FL 32615. This reference is not a book for purchase. This reference represents the general knowledge that a candidate gains through experience in their trade.

Material Handling Hoists	4
Welding	6
Municipal Codes	3
Safety	5

References

- **ASME A90.1: Safety Standard for Belt Manlifts**, 2009. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at <http://www.asme.org/shop/>.
- **ASTM F2291-20: Standard Practice for Design of Amusement Rides & Devices**, 2020. 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.
- **Broward County Code Chapter 9 Contractors**, 2016. ISBN: No ISBN. Board of County Commissioners of Broward County, Broward, FL. <https://www.municode.com>
- **Code of Federal Regulations, Title 29, Labor, Pt. 1926, Revised as of July 1, 2019**, 2019. National Archives and Records Administration, College Park, MD. <https://bookstore.gpo.gov/products/cfr-title-29-pt-1926-code-federal-regulations-paper-2019>
- **Millwright Level Five 2009**, 2009. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Millwright Level Four 2008**, 2008. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.
- **Trade Knowledge**. Prov, 13614 Progress Blvd., Alachua, FL 32615. This reference is not a book for purchase. This reference represents the general knowledge that a candidate gains through experience in their trade.
- **Welding Level 1 2015**, 2015. ISBN: 978-0-13-413110-8. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at <http://nccer.pearsonconstructionbooks.com>.

TRANSPORT ASSEMBLY CONTRACTOR

A transporting assembly installation contractor is a specialty mechanical contractor qualified and certified to install, maintain, alter and extend any Transporting Assemblies, as defined herein.. "Transporting Assemblies" shall mean any permanent or semi-permanent device, manually or power-operated, other than elevators, dumbwaiters or escalators used for transporting material or persons in any horizontal, inclined or vertical direction and such assemblies shall include but shall not be confined to the following:(1)Amusement devices used to convey persons as a form of amusement.(2)Inclined devices, with or without seats, but not considered as escalators.(3)Man hoists, stage and orchestra lifts, tiering and piling machines, skip hoists and wharf ramps.(4)Belt, bucket, scoop, roller or similarly inclined or vertical freight conveyors.(5)Hoists which are used for handling material during construction of buildings and structures.

Number of Questions	50
Time allowed (hours)	3

Subject Area	# Quest.
Transporting Assemblies	10
Amusement Devices	8
Inclined Devices	4
Man Hoists	6
Belt, Bucket & Scoop, Rollers	4