

TEXAS DEPARTMENT OF LICENSING AND REGULATION

PO Box 12157 · Austin, Texas 78711 · (800)803-9202 · (512)463-8245 · FAX (512)475-2871
www.license.state.tx.us Examinations@license.state.tx.us

Class A & B Environmental Air Conditioning

This is a three (3) hour open book examination. Loose pages or notes will not be allowed into the testing site. Highlighting and tabs are permissible, but no notations or markings will be allowed during the examination. Photo ID and name previously registered with the department must match when going to take to the exam.

References

The following reference materials may be purchased directly from the publisher or from a bookstore. Use the most recent edition unless otherwise specified below.

Air Conditioning and Refrigeration - ARI 1815 Fort Meyer DR. Arlington, VA 22209

OR

Modern Refrigeration and Air Conditioning - Goodheart and Wilcox - 2004 Edition

Uniform Mechanical Code - 2003 Edition, International Association of Plumbing and Mechanical Officials

OR

International Mechanical Code - 2003 Edition, International Code Council, Inc. and

International Fuel Gas Code - 2003 Edition, International Code Council, Inc.

(These two references must be used together in place of the Uniform Mechanical Code.)

Pipefitters Handbook - 1967, Industrial Press 200 Madison Ave. NY, NY 10016

High Pressure Boilers - 1994, American Technical Publishers Homewood, IL 60430

Low Pressure Boilers - 2001, American Technical Publishers Homewood, IL 60430

These references are used to answer the Business and Law portions of the examination.

OSHA CFR 1926 Construction Standards 2207 - OSHA Washington, DC

Texas Boiler Law Health and Safety Act, Chapter 755 - State of Texas

Rules of the Texas Department of Licensing and Regulation 16 TAC Chapter 65 - State of Texas

Texas Air Conditioning and Refrigeration Contractors License Law – 8 TOC Chapter 1302

- State of Texas

Rules of the Texas Department of Licensing and Regulation, 16 TAC Chapter 75 - State of Texas

Texas Workers Compensation Act and Rules - State of Texas

Texas Unemployment Compensation Act and Rules - State of Texas

Circular E - Internal Revenue Service

OR

Texas Business and Law Reference Manual, First Edition, 2004 - Contractors Institute, Maidens, VA

OR

Texas Contractor Business Reference Manual – Texas Air Conditioning Contractors Association

Manual J Load Calculations for Summer and Winter Residential Structures - ACCA

Manual N Load Calculations for Summer and Winter Commercial Structures - ACCA

ACCA Ductulator - ACCA

OR

Trane Ductulator - American Standard, Inc. Form No. D100-10176

Environmental Air

Class A		Content Outline	Class B	
% of Exam	# of Items	Topic Area	% of Exam	# of Items
8	10	Air Conditioning Heat Loads Manual J, Manual N, and basic heat load calculation principles.	8	8
9	11	Air Distribution Practices and Principles of Design and application of air distribution systems.	10	10
3	4	Air Properties Psychrometrics, Indoor Air Quality	3	3
3	3	Basic Refrigeration Components Identification and operation of basic systems.	3	3
12	15	Boilers and Pressure Vessels Piping, Safety, Installation, and Specific Services.	10	10
12	15	Business and Law General Business Practices. Knowledge of Laws other than Construction Codes.	15	15
3	4	Combustion Air General Practice and requirements for combustion air to fuel burning equipment.	4	4
4	5	Controls and Control Circuits	5	5
1	1	Design Responsibility Contractor Responsibility for interface with other systems and building components.	1	1
6	7	Equipment Requirements Required Clearances, Access Openings, Mounting Materials and Practices.	7	7
3	4	Exhaust Systems Residential Bath and Kitchen and Commercial Kitchen, Bath, and Hood.	4	4
5	6	HVAC Systems Recognize and Identify different types of systems and their components.	2	2
6	7	Refrigeration Principles Basic properties and applications of mechanical refrigeration and refrigerants.	5	5
6	7	Piping Refrigerant, Process Fluid, Fuel, and Condensate Piping practices and requirements.	4	4
3	3	Pressure Relief Protection Locations, Piping, and Practice	3	3
3	3	Service/ Troubleshooting/ Startup Diagnostics	3	3
6	7	Testing and Inspection of Equipment Pre-Final Inspection Practices	5	5
3	3	Ventilation Air Movement, Air Circulation, Fresh Air	3	3
4	5	Venting Terminations, Flue Types, Clearances	5	5
100	120	TOTAL	100	100