

**TEXAS DEPARTMENT OF LICENSING AND REGULATION**

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## Environmental Air - Class B

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.

### References

The following reference materials may be purchased directly from the publishers or from any one of numerous book stores located throughout the country. Use the most recent edition available unless otherwise noted below.

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

**OR**

Modern Refrigeration and Air Conditioning - Goodheart and Wilcox - 1996 or 2001 Editions

Uniform Mechanical Code - 2000 Edition, International Association of Plumbing and Mechanical Officials  
2001 E. Walnut Drive South, Walnut, CA 91789-1815

**OR**

International Mechanical Code - 2000 Edition, International Code Council, Inc. and  
International Fuel Gas Code - 2000 Edition, International Code Council, Inc.

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 Occupations Code, 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 Air Conditioning Contractors Manual - Contractors Institute, Maidens, VA

Texas Business Manual - Contractors Institute, Maidens, VA

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 B

### Content Outline

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