

**HVACR EXAM INFORMATION SHEET
CITY OF ELKHART, IN
229 S. SECOND ST
ELKHART, IN 46516**

NEXT EXAMINATION DATE: _____

APPLICATION DEADLINE: _____

TYPES:

- A Heating, air-conditioning, ventilation, and exhaust systems including any ducting necessary to make a complete system. (4-hrs)
- AA Boilers and hydronic piping, including auxiliary equipment, air handlers, and controls. (3-hrs)
- AAA Refrigeration that is intended to be used for the purpose of food and product preservation and/or processing and is not to be used for comfort systems. (3-hrs)

LOCATION:

TIME: 8:00 a.m.

APPLICATION: Application must be made in person at the City Building, 229 South Second Street, no less than 30 days prior to the exam date. (Photo ID required)

FEES: \$100.00 per exam category. Fees must be paid upon application. Fees are not refundable and cannot be applied to future exams.

RULES: Examinations are open book. A rule and information packet, listing approved reference material will be provided upon application. These rules will be strictly enforced. No radios, cellphones, pagers, or beepers will be allowed in the exam room.

RESULTS: A score of 75% or better is considered passing. Test results will be mailed to the applicant's home address in 3 to 4 weeks. **Results will not be given by phone.**

Only one examination class may be taken per exam date

Retain this sheet as a reference

If you have any questions, call 574-294-5471 ext. 1004

Experior

EXAMINATION RULES AND INFORMATION

A. CALCULATORS

The use of calculators will be permitted only if the machine is completely silent, cordless, produces no tape, and is small enough that it will not infringe on other applicants' space. Computers, programmable calculators or calculators with data entry capability, (keys with letters of the alphabet), will not be allowed.

B. REFERENCES

Each applicant must provide his/her own references. No material of any sort may be shared by applicants.

Only those books and references listed on the approved reference list will be permitted in the examination room. No beepers, pagers or cell phones are permitted. All briefcases, books, etc., may be inspected by the proctors. Questions will come from these references.

No notes of any sort will be allowed.

No marks, highlighting or notes of any sort may be made in the reference materials during the examination. Highlighting, and permanent tabbing of references prior to the examination is acceptable.

Sample notes or problems written on or attached to reference materials are not allowed in the examination room. No

photocopies of reference materials may be used when taking an examination.

NOTE: BEFORE THE EXAMINATION BEGINS, ALL REFERENCES WILL BE INSPECTED BY PROCTORS TO BE CERTAIN THAT YOU ARE NOT IN VIOLATION OF ANY OF THE ABOVE RULES. ANY VIOLATION WILL RESULT IN THE EXPULSION OF THE APPLICANT FROM THE EXAM ROOM. NO EXCEPTIONS WILL BE PERMITTED.

C. SCRATCH PAPER:

No paper of any sort is to be brought to the examination. Use the back of the pages in the examination for scratch paper.

D. NOTE TAKING:

No part of the examination may be copied or reproduced in any manner or removed from the examination room. If notes are made in references, the proctor will pick up the references and turn them into the exam board.

E. TALKING:

No talking will be permitted in the examination room.

F. SMOKING:

No smoking will be permitted in the examination room.

G. APPLICANT NUMBER:

Use the assigned application number on your questions booklet, answer sheet, drawings booklet, (if one is listed on the cover of the questions booklet).

VIOLATION OF ANY OF THE ABOVE RULES WILL DISQUALIFY THE APPLICANT AND NO GRADE WILL BE ISSUED. LEGAL AND DISCIPLINARY ACTION WILL BE TAKEN BY EXPERIOR AND THE EXAMINING BOARD.

H. QUESTIONS:

No technical questions of any sort will be answered by the proctors. If you do not understand a question on the examination, do your best to answer it. If you feel a question has an error in it, notify the proctor. Answer all questions. There is no penalty for guessing.

1. MATERIALS:

Bring all references. A #2 pencil, eraser, calculator and identification documents, (one with your picture), and your letter of admission.

Master Limited Air Conditioning

CATALOG NUMBER: 31523
EXAM NUMBER: 915258
EFFECTIVE DATE: 01/29/2007

License Information

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

Examination Outline

Open Book

100 Questions - Four-hour time limit

75% Correct Required to Pass

SUBJECT AREA	PERCENTAGE
HARV GENERAL	25
WARM AIR HEATING	8
CONTROLS	16
VENTILATION	15
PIPING	12
FUEL GAS SYSTEMS	8
LOAD CALCULATTONS	8
INSULATION	5
SAFETY	3

References

The following references ARE allowed in the testing center:

1. *Code of Federal Regulations, Title 29, Part 1926 (OSHA)*, 2006, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, www.access.gpo.gov.
AND/OR Candidates may use
OSHA Excerpts for Contractors, Fourth Edition, Prometric, 1260 Energy Lane, St. Paul, MN 55108.
2. *NFPA 58 -Standard for the Storage and Handling of Liquefied Petroleum Gases (LP Gas Code)*, 2004 Edition. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, www.nfpa.org.
3. *International Mechanical Code*, 2006, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org.
4. *International Fuel Gas Code*, 2006, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478- 5795, www.iccsafe.org.
5. *Manual D - Residential Duct Systems*, 1995 Edition, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.

6. *Manual J -Residential Load Calculation*, Eighth Edition, 2002, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
7. *ACCA Duct Slide Rule*, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
8. *TRANE Ductulator*, TRANE Company, c/o Inland Marketing Services, 3030 Airport Road, La Crosse, WI 54603, WWW.trane.com/bookstore.

The following references have been used to create exam questions but are NOT allowed in the testing center:

1. *Modern Refrigeration and Air Conditioning*, Eighteenth Edition, 2004, Goodheart-Willcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243 www.g-w.com.
2. *Pipefitters Handbook*, Third Edition, 1967, Industrial Press, Inc., 989 Avenue of the Americas, New York, NY 10018, www.industrialpress.com.

For information on how to obtain examination references, please call toll-free 877.624.2562.

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Unlimited Boiler

CATALOG NUMBER: 34923
EXAM NUMBER: 916558
EFFECTIVE DATE: 03/05/2009

License Information

Scope- Tests a candidate's knowledge of the installation, maintenance, repair, and alteration of steam and hot water boilers, including both low and high pressure boilers, related piping vessels, and related appurtenances.

Examination Outline

Open Book

80 Questions - Three-hour time limit

75% Correct Required to Pass

SUBJECT AREA	PERCENTAGE
LOW AND HIGH PRESSURE BOILERS	20
STEAM AND HOT WATER PIPING	20
FUEL, GAS AND OIL	10
BURNERS	10
CONTROLS	10
FLUES, VENTS AND EXHAUST	10
ESTIMATING	5
SAFETY AND INSPECTIONS	10

References

The following references ARE allowed in the testing center:

1. *Code of Federal Regulations. Title 29, Part 1926 (OSHA).* Revised July 1, 2008, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, www.access.gpo.gov.
2. *International Mechanical Code, 2006, International Code Council,* 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org.
3. *International Fuel Gas Code, 2006, International Code Council,* 405 I West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org.

The following references have been used to create exam questions but are NOT allowed in the testing center:

1. *Low Pressure Boilers, Third Edition, 2008, American Technical Publishers (ATP),* 1155 West 175" Street, Homewood, IL 60430-4600, www.go2atp.com.
2. *High Pressure Boilers, Third Edition, 2003, American Technical Publishers (ATP),* 1155 West 175" Street, Homewood, IL 60430-4600, www.go2atp.com.
3. *Oil Heat Technician's Manual, 2008, National Oil Heat Research Alliance (NORA),* P.O. Box 314, Watertown, MA 02471, www.norastore.org

For information on how to obtain examination references, please call toll-free 877.614.2562.

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Unlimited Refrigeration

CATALOG NUMBER: 34523
EXAM NUMBER, 916158
EFFECTIVE DATE: 01/29/2007

License Information

Scope- Tests a candidate's knowledge of the installation, maintenance, repair, and alteration of refrigeration systems and related appurtenances intended to be used for the purpose of food and product preservation, unlimited in tonnage or horsepower.

Examination Outline

Open Book
80 Questions - Three-hour time limit
75% Correct Required to Pass

SUBJECT AREA	PERCENTAGE
HARV GENERAL	25
COMMERCIAL REFRIGERATION SYSTEMS	25
CONTROLS	15
VENTILATION	10
PIPING AND TUBING	10
FUELGAS	5
Box CONSTRUCTION	5
SAFETY	5

References

The following references ARE allowed in the testing center:

1. *Code of Federal Regulations, Title 29, Part 1926 (OSHA)*, 2006, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, www.access.gpo.gov.
AND/OR Candidates may use
OSHA Excerpts for Contractors, Fourth Edition, Prometric, 1260 Energy Lane, St. Paul, MN 55108.
2. *International Mechanical Code*, 2006, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org.
3. *International Fuel Gas Code*, 2006, International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org.

The following references have been used to create e.-cam questions but are NOT allowed in the testing center:

1. *Carrier System Design Manual Part III: Piping Design*, Carrier, 1960 Edition, Carrier Air Conditioning Company, Literature Distribution, Bldg. TR-2, Syracuse, NY 13221-4804, www.global.carrier.com.
2. *Modern Refrigeration and Air Conditioning*, Eighteenth Edition, 2004, Goodheart-Willcox Company, Inc., 186(14 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.coIII
3. *Pipefitters Handbook*, Third Edition, 1967, Industrial Press, Inc., 989 Avenue of the Americas, New York, NY 10018, www.industrialpress.com.
4. *TRANE Air Conditioning Manual*, Revised Edition, 1996, TRANE Company, c/o Inland Marketing Services, 3030 Airport Road, La Crosse, WI 54603, www.trane.com/bookstore.

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